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ARTICLE INFO	Yili Lian and Yi Zhang (2012). Foreign institutional investors and China’s financial service industry: the intra-industry effects of the foreign acquisition of Shenzhen Development Bank. <i>Banks and Bank Systems</i> , 7(4)
RELEASED ON	Friday, 21 December 2012
JOURNAL	"Banks and Bank Systems"
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

0



NUMBER OF FIGURES

0



NUMBER OF TABLES

0

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## Foreign institutional investors and China's financial service industry: the intra-industry effects of the foreign acquisition of Shenzhen Development Bank

### Abstract

This paper analyzes the effects of the foreign acquisition of Shenzhen Development Bank (SDB) on both the bank's performance and the performance of its rival banks. The authors define two types of effects on rival banks around the acquisition event: a "competitive effect", whereby a more competitive SDB threatens its rivals, and an "entrance effect", whereby SDB's acquisition signals that more foreign banks will be able to enter the banking industry in China. The empirical results indicate that the competitive effect is significant for SDB's domestic rivals in mainland China and the small banks in Hong Kong, as these banks react negatively (positively) to positive (negative) news related to the foreign acquisition of SDB, whereas the large banks in Hong Kong are more sensitive to the entrance effect, as they react positively to positive news related to the foreign acquisition of SDB. In addition, it is found that SDB outperform its rival financial institutions in China 19 months after the acquisition.

**Keywords:** foreign acquisition, banking, China.

**JEL Classification:** G15, G21.

### Introduction

The existing literature studies bank privatization in many transition and developing countries. In general, these studies do not offer overwhelming support for the idea that privatization alone can improve the financial and operating performance of state-owned banks (Megginson, 2005). However, none of the previous studies on bank privatization includes mainland China (hereafter, "China"), the world's largest developing economy. In this paper we seek to address this gap in the literature by studying the effects of bank privatization in China.

Many domestic banks suffer from non-performing loans (NPL), capital inadequacy, and poor corporate governance. With China's entrance to WTO in 2001, the Chinese financial market has become more open to foreign financial institutions, which in turn has compelled the domestic banks to reform, for instance, via the privatization of state-owned banks. Among such privatizations, the 2004 acquisition of a controlling (17.89%) stake in Shenzhen Development Bank (SDB) by U.S. private equity firm Newbridge Capital Ltd is a milestone for China's financial industry, as it represents the first time that a state-owned bank has been controlled by a foreign financial institution since 1949. Thus, the foreign acquisition of SDB is a signal of the financial liberalization in China's banking industry.

This paper analyzes the reactions of China's and Hong Kong's financial sectors to the foreign acquisition of SDB.

Based on Laux et al. (1998), we argue that news announcements related to SDB's acquisition have two types of effects on rival banks, namely, a "competitive effect" and an "entrance effect". Under the competitive effect, rival banks react negatively (positively) to positive (negative) news about the acquisition of SDB, suggesting that the acquisition of SDB is expected to threaten the rivals' current and future business as it signals heightened competition. In contrast, similar to the contagion effect (Lang and Stulz, 1992) or the positive information effect (Othman, 2005), under the entrance effect rival banks react positively (negatively) to positive (negative) news about the acquisition of SDB, suggesting that the acquisition of SDB is expected to improve performance as it signals foreign banks' entrance into China's financial market and in turn increasing reforms.

The pre-acquisition negotiations provide three events around which we study the above effects. Event 1: Upon winning the bid to be the potential acquirer of SDB, Newbridge Capital formed a transition committee comprised of the managers from Newbridge Capital, on October 10, 2002. The corresponding news release is regarded as positive (acquisition-related) news. Event 2: The transition committee was dismissed in May 2003 when the Newbridge Capital and SDB shareholders concluded they could not form a consensus on the purchase price and how to solve the NPL problem. The corresponding news release is regarded as a negative news event. Event 3: After further negotiation between Newbridge Capital and SDB shareholders, the two companies reached an agreement on May 31, 2004 and the major shareholders of SDB transferred a controlling stake to Newbridge Capital. The corresponding news event is regarded as positive news.

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We thank the seminar participants at the Journal of Banking and Finance conference in Beijing for helpful comments and suggestions. All errors remain our own. We acknowledge financial support from the National Science Foundation of China (70972009).

Our results indicate that rival domestic banks, such as Shanghai Pudong Development Bank and China Minsheng Banking Corporation, are more affected by the competitive effect than the entrance effect. Specifically, we find that domestic rival banks react negatively to the positive news related to SDB's acquisition, i.e., the transition committee's formation and the share transfer to the acquirer, but they react positively to the negative news about the acquisition, i.e., the dismissal of the transition committee. Similarly, the small banks in Hong Kong, such as Wing Hang Bank, Wing Lung Bank, and Fubon Bank, are more affected by the competitive effect, reacting negatively (positively) to the positive (negative) news about the SDB acquisition. In contrast, the large banks in Hong Kong, such as HSBC, Hang Seng Bank, and Bank of East Asia, are more sensitive to the entrance effect, as they react positively to news of the transition committee formation and share transfer, but react insignificantly to news on the dismissal of the transition committee. In addition, we find that SDB outperforms its rival financial institutions in China 19 months following the acquisition. Thus, in contrast to the previous literature, we find evidence that privatization improves the performance of state-owned banks in China.

The remainder of this paper is organized as follows. Section 2 provides a discussion on the reform of China's banking industry. Section 2 discusses the related literature. Section 3 describes the data and Section 4 presents the methodology we use to analyze the reactions of both the banking industry and individual banks in China and Hong Kong to the news events relating to the acquisition of SDB. Section 5 presents the empirical results. Section 6 examines SDB's post-acquisition performance. The final section concludes.

## 1. China's banking industry

Under the terms of China's entry into the World Trade Organization in 2001, China agreed to open its banking sector to foreign competition over time, with full competition by the end of 2006. Because foreign banks are now able to conduct local-currency business in China, competition in the banking industry is expected to become fierce. However, serious problems plague the Chinese banking industry. First, the state-owned banks are heavily burdened by "policy loans," which are the source of most banks' non-performing loans. Second, managers of domestic banks lack an efficient incentive to improve banking services and management skills. Third, the owner, the government, is not able to effectively monitor bank managers. The Chinese government is eager to reform the financial industry. In order to better control bank risk, the China Bank-

ing Regulation Commission (CBRC), which now regulates the banking industry according to the Basel Capital Accord, requires capital reserves of 8%. However, due to the NPL problem, few banks, including SDB, can meet the target ratio. Those that fail to meet this ratio are required to restrict asset growth and the purchase of fixed assets, to reduce asset risk, to refrain from setting up new branches or launching new products and services, etc. The Chinese government has also been pushing forward the privatization of state-owned banks through initial public offerings or acquisitions by foreign or domestic institutions.

The level of financial integration between Hong Kong and China is high. As Chen et al. (2005) argue, financial institutions from Hong Kong provide important financial services to both Chinese and foreign companies operating in mainland China. Large banks such as HSBC and Hang Seng Bank have branches or representative offices in cities in China, and were allowed to provide services to foreigners and foreign institutions in China before China's accession to the WTO. In addition, since the 1990s, many small or medium banks in Hong Kong have set up representative offices or branches in China<sup>1</sup>.

As a consequence, the stock price of Hong Kong banks is expected to respond to the acquisition of SDB. On the one hand, the acquisition of SDB is a signal of China's banking reform, which aims to achieve improved organization and performance (Megginson et al., 1994) by means of increased competition in the financial market. Thus, the SDB acquisition signals that the Hong Kong banks' business in mainland China will be challenged. On the other hand, the acquisition of SDB is also a signal of China's financial liberalization, which will lead to a relaxation of restrictions on foreign bank operations in China and provide growth opportunities for foreign financial institutions in the mainland. Given the extent of the integration between the Chinese and Hong Kong financial institutions, Hong Kong's banks are particularly poised to take part in the privatization of China's banking industry and thereby enlarge their business.

## 2. Related literature

**2.1. Literature on bank privatization.** How can privatization improve Chinese banks' performance? The theoretical literature provides several explanations. First, privatization may improve banks' cor-

<sup>1</sup> For example, Dah Sing Banking Group has a branch in Shenzhen, Wing Lung Bank has two branches in Shenzhen and representative offices in Shanghai and Guangzhou, and Wing Hung Bank has two branches in Shenzhen and representative offices in Beijing, Shanghai, and Guangzhou.

porate governance and lower monitoring costs, which in turn can lead to changes in managers' incentives and objectives. For instance, Alchian (1965) argues that the state-owned enterprises have many principals who have no clear responsibility for monitoring, and Cornett et al. (2005) find evidence that differences in corporate governance are the primary reason for better performance of privately-owned banks. Second, state-owned banks have multiple goals to achieve, including both political and economic goals. Boycko et al. (1996) show that the increased objectives of state-owned banks lower their efficiency relative to privately-owned banks.

Notwithstanding, in general the empirical results on bank privatization are mixed. On the one hand, Nakane and Weintraub (2005) find that in Brazil, state-owned banks are less productive than their private peers over the long run, and thus that bank privatization has a positive impact on productivity. Focusing on the performance of Argentinean banks in the 1990s, Berger et al. (2005) also find that banks improve dramatically following privatization, but they argue that much of the measured improvement is likely due to non-performing loans being placed into residual entities, which leaves "good" privatized banks. From a slightly different perspective, Bonin et al. (2005) investigate the impact of bank privatization in six transition countries and find that foreign-owned banks are most efficient and government-owned banks are least efficient with respect to both cost and profit. On the other hand, Otchere (2005) analyzes the pre- and post-privatization operating performance and stock market performance of 18 privatized banks and their 28 rivals in middle- and low-income countries and finds that privatization announcements are associated with negative abnormal returns for rival banks and that privatized banks underperform the benchmark index in the long run. In a study of newly privatized banks in 22 developing countries, Boubakri et al. (2005) show that these banks exhibit an increase in profitability, but a significant decrease in efficiency and more credit risk exposure. Williams and Nguyen (2005) investigate the relationship between bank performance and bank governance for a sample of Southeast Asian banks from 1990 to 2003 and find that while state-owned banks underperform and banks taken over by foreign institutions record improved profit efficiency, the productivity of the acquired banks does not beat that of many of the state-owned banks.

**2.2. Literature on bank entry.** The literature on the potential benefits of foreign bank entry for a domestic economy asks whether better resource allocation and greater efficiency accompanies foreign entry. Comparing the financial sectors of 14 developed countries, Terrell (1986) finds that countries allow-

ing foreign bank entry on average experience lower gross interest margins, lower pre-tax profits, and lower operating costs. Similarly, Denizler (1999) finds that foreign entry reduces domestic bank profitability and overhead expenses in Turkey, and Unite and Sullivan (2003) find that interest rate spreads and operating expenses both decline with greater foreign bank entry in the Philippines. Barajas et al. (1999) compare the performance of foreign-owned versus domestic banks in Columbia and find that foreign entry, which began in 1990, improves bank performance by enhancing operative efficiency and competition. Clarke et al. (1999) find that in Argentina, foreign banks enter specific areas where they have a competitive advantage, putting pressure on the domestic banks that already focus on these areas. Claessens et al. (2001) find that the number of entrants matters rather than their market share, which suggests that foreign banks affect local bank competition upon entry rather than after they have gained substantial market share.

**2.3. Literature on intra-industry information transfer.** Previous studies examine intra-industry information transfer in the context of financial disclosure, dividend changes, bankruptcy announcements, etc. Given we focus in this paper on the effects surrounding a foreign acquisition of a state-owned bank, we limit our discussion of this literature to the papers on the intra-industry information transfer effects of mergers and acquisitions in the financial industry.

Akhigbe and Madura (1999) suggest that a bank acquisition can signal valuable information about the probability that other rival banks will be acquired, or about the prospects for the banking industry, and thus they find favorable intra-industry effects in response to bank acquisition announcements. Similarly, Akhigbe and Madura (2001) investigate the acquisitions of insurance companies and find positive and significant intra-industry information effects. Otchere and Chan (2003) examine the intra-industry effect of the privatization of Commonwealth Bank of Australia (CBA) and find that rival Australian banks react significantly negative to the privatization of CBA. Chen et al. (2005) study the partial privatization of Bank of China Hong Kong (BOCHK) and find that three non-bank financial institutions in Hong Kong have significantly negative reactions to the announcement of the BOCHK listing, but four out of five banks and non-bank financial institutions in mainland China react positively to the announcement.

### 3. Data

The period of analysis in this study is from September 12, 2001 (250 trading days before the first event



in the study) to December 31, 2005 (19 months after SDB's four main shareholders transfer stock to Newbridge Capital). SDB's rival financial institutions are the banks and non-bank financial institutions listed on the Hong Kong Exchange, Shenzhen Stock Exchange, and Shanghai Stock Exchange during the acquisition period (see Table 1 in Appendix). We include in the sample all the Hong Kong banks that have complete data during the data period. Due to the lack of listed banks in the mainland stock exchanges, we include in the sample all of the listed financial institutions in mainland China. The sample consists of 9 banks or financial institutions in mainland China and 11 banks in Hong Kong.

The announcement dates (as reported in Table 2 in Appendix) surrounding the acquisition are collected from newspapers. We obtain the adjusted daily stock prices and the market indices for the Hong Kong Exchange, the Hong Kong official cash rates, and the China interbank rates from Datastream. The adjusted stock return and indices return come from the SINOFIN database.

#### 4. Methodology

The purpose of the paper is to examine how SDB's rival financial institutions in China and Hong Kong reacted to the acquisition of SDB. As we argue above, there exist two opposing effects in response to news events related to SDB's acquisition. The response of a rival's stock price, therefore, depends on which effect dominates. If the investors of the rival financial institutions believe that the increased competition resulting from the acquisition of SDB will impact their banks' business more than the potential benefits associated with increased future privatization efforts, then the rivals' stock prices will react negatively to positive announcements about the acquisition, and vice versa. There are three key events in our study (see Table 2). Two of the events, the formation of the transition committee and the share transfer, represent positive news with respect to SDB's acquisition, while the dismissal of the transition committee represents negative news with respect to the acquisition. In this section we study both the industry-wide and the individual bank event-period reactions around these three news events.

**4.1. The industry's reaction.** We follow the method used by Eckel et al. (1997) and Chen et al. (2005). Similar to Chen et al., we construct two portfolios, a Hong Kong bank portfolio and a mainland China financial portfolio. For each portfolio of banks, we measure the industry's abnormal return (i.e., reaction) around an SDB acquisition news event using OLS. Specifically, we regress the following equation:

$$R_{it} = \alpha_i + \beta_{i1}R_{mt} + \beta_{i2}R_{mt-1} + \beta_{i3}R_{mt+1} + \tau_i I_t^U + \lambda_i D_t + e_{it}, \quad (1)$$

where  $R_{it}$  is portfolio  $i$ 's return on day  $t$ ,  $R_{mt}$  is the market return on day  $t$ ,  $I_t^U$  is the unanticipated change in interest rates orthogonalized by the market returns, and  $D_t$  is a dummy variable that equals one during the event period and zero otherwise.

Equation (1) includes several control variables. The first factor,  $R_{mt}$ , controls for general stock market movements. Its lag and lead variables take into account non-synchronous trading, especially for small financial institutions. The market returns are the returns of the exchange on which the financial institutions are listed. Thus, for the financial institutions listed in Hong Kong, the Hang Seng Stock Index is used, for those listed on the Shanghai Stock Exchange, the Shanghai A-share Index is used, and for those listed on the Shenzhen Stock Exchange, the Shenzhen A-share Index is used. We also control for changes in the interest rate as there is evidence that unexpected changes in interest rates are significant determinants of financial institutions' returns even after controlling for general market movements (Yourougou, 1990). The daily change in the interest rate is defined as  $I_t = \ln(CR_t/CR_{t-1})$ , where  $\ln CR_t$  is the logarithm of the cash rate on day  $t$ . In order to avoid the problem of multicollinearity between the market return and the change in the interest rate, the daily change in the interest rate is orthogonalized by regressing  $I_t$  on  $R_{mt}$ . The residuals of this regression,  $I_t^U$ , are used in equation (1).

The daily abnormal stock return for portfolio  $i$  over the event period,  $\lambda_i$ , captures the portfolio's reaction (abnormal return) to news relating to the acquisition of SDB. If the acquisition of SDB is expected to negatively affect the portfolio banks, this coefficient is expected to be less than zero, which means that positive acquisition news will lead to a negative return response but negative acquisition news will lead to a positive return response. Conversely, if the acquisition is expected to benefit the portfolio banks, this coefficient should be greater than zero.

Five different event windows are used in the estimation: days -2 to 2, days -2 to 0, days -2 to 1, days -3 to 0, and days -3 to 1, where day 0 is the news event date. The regressions are estimated for the period from  $t = -250$  to the latest event period.

**4.2. Specific financial institutions' reactions.** Similar to Eckel et al. (1997), Otchere and Chan (2003), and Chen et al. (2005), we use the seemingly unrelated regression (SUR) method based on Zellner (1962) to measure the reactions of specific rival financial institutions to news relating to the acquisition of SDB. We analyze rival-specific reactions

because the acquisition affects a number of financial institutions contemporaneously, and hence the assumption of independent and identically distributed residuals is violated when all the banks and non-bank financial institutions are considered as part of one group. By using SUR, we can measure the individual reactions of specific financial institutions, and in turn we can detect how different types of financial institutions react to the acquisition news announcements.

Specifically, we run the following model:

$$\begin{aligned} R_{1t} &= \alpha_{1t} + \beta_{11}R_{mt} + \beta_{12}R_{m-1} + \beta_{13}R_{m+1} + \tau_1 I_t^U + \lambda_1 D_t + e_{1t}, \\ R_{2t} &= \alpha_{2t} + \beta_{21}R_{mt} + \beta_{22}R_{m-1} + \beta_{23}R_{m+1} + \tau_2 I_t^U + \lambda_2 D_t + e_{2t}, \quad (2) \\ \vdots &\qquad\qquad\qquad \vdots \qquad\qquad\qquad \vdots \qquad\qquad\qquad \vdots \qquad\qquad\qquad \vdots \\ R_i &= \alpha_{it} + \beta_{i1}R_{mt} + \beta_{i2}R_{m-1} + \beta_{i3}R_{m+1} + \tau_i I_t^U + \lambda_i D_t + e_{it}. \end{aligned}$$

where  $R_{it}$  is financial institution  $i$ 's return on day  $t$ ,  $R_{mt}$  is the market return on day  $t$ ,  $I_t^U$  is the unanticipated change in interest rates orthogonalized with respect to the market returns, and  $D_t$  is a dummy variable that equals one during the event period and zero otherwise. The event parameter,  $\lambda_i$ , captures each rival financial institution's reaction (abnormal return) to acquisition news. Similar to the analysis above, this coefficient is expected to be less than zero if the acquisition of SDB is expected to negatively impact the rival financial institution's future profitability, and vice versa. The five event windows are the same as those used in the portfolio-level analysis.

## 5. Empirical results

**5.1. The industry's reaction.** In order to identify the overall reactions of SDB's domestic and Hong Kong rivals associated with the acquisition news events, equation (1) is run separately on portfolios of banks in Hong Kong and all the financial institutions in mainland China. Tables 3 (see Appendix) reports the daily portfolio returns around news events related to SDB's acquisition.

The first news event considered is the announcement that SDB formed a transition committee to manage the acquisition negotiation and process. The abnormal returns of the portfolio of Hong Kong banks are positive, which indicates that the establishment of the transition committee is taken to be good news for Hong Kong's banking industry. The abnormal returns are significant at the 5% level over most event windows, and at the 1% level for a few event windows. Thus, with respect to the first news event, the entrance effect appears to dominate for Hong Kong's banking industry. In contrast, SDB's domestic rivals react negatively to the first event (competitive effect), although the  $t$ -statistics are not

significant for the portfolio of Chinese financial institutions. This is mainly because the Chinese banks' investors anticipate that the foreign acquisition of SDB will enhance SDB's competitiveness, which in turn will threaten the domestic rivals' performance.

The second news event considered is announcement on the dismissal of the transition committee. For the Chinese portfolio of financial institutions, the reactions to the dismissal event are all positive, significant for all five event windows and significant at the 1% level for three out of the five event windows. This is not surprising in light of the earlier results, as the dismissal of the transition committee would be expected to retard SDB's reform, offering SDB's rival financial institutions in mainland China reprieve from increased competition. Thus, the competitive effect continues to dominate the entrance effect for mainland China's financial institutions. In contrast, the portfolio of Hong Kong banks reacts negatively to the dismissal news event, although the  $t$ -statistics are not significant, indicating that the entrance effect continues to dominate for the Hong Kong rival banks.

The third important news event considered is the announcement that SDB's four major shareholders reached an agreement with Newbridge Capital and would transfer 17.89% of SDB's shares to Newbridge Capital. The consummation of the acquisition sends the message that it is now possible for foreign banks to enter China's market via acquisitions, which is good news for Hong Kong's banking industry. Indeed, the abnormal returns of the portfolio of Hong Kong banks are positive and significant in all the event windows. Thus, the entrance effect continues to be significant for the Hong Kong banking industry. In contrast, the acquisition is bad news for SDB's rival financial institutions in mainland China, with the abnormal returns of the portfolio of financial institutions in mainland China being negative, although not significant.

**5.2. Specific financial institutions’ reactions.** We use SUR to measure each financial institution’s reaction to the three events under analysis. Daily returns of individual financial institutions around important acquisition news events are reported in Table 4 (see Appendix). With respect to the first news event, SDB’s main domestic rivals, Shanghai Pudong Development Bank (SPDB) and China Minsheng Banking Corporation (CMBC), record negative event-period reactions. In particular, Shanghai Pudong Development Bank observes a daily return of -1.0% in event windows  $[-2, 2]$  and  $[-2, 1]$ , significant at the 10% level, and China Minsheng Banking Corporation observes daily returns of -1.1% and -1.0% in the same event windows, significant at the

5% and 10% level, respectively. Thus, the negative announcement-period reaction suggests that investors expect that SPDB and CMBC will face a more competitive SDB, challenging SPDB's and CMBC's performance in the domestic market, and hence that the competitive effect is significant for SDB's two domestic rivals.

In contrast, the announcement-period stock response of HSBC and Hang Seng Bank, the two largest banks in Hong Kong, are positive and significant in four out of five event windows considered. This suggests that for Hong Kong's large banks, positive SDB acquisition news is good news, as it signals the possibility of subsequent entrance into China's banking industry. Hence, the entrance effect is more important than the competitive effect for Hong Kong's large banks. However, Hong Kong's small banks, such as Wing Lung Bank and Wing Hang Bank, suffer a loss around this positive news event. Because Wing Lung Bank and Wing Hang Bank have branches in mainland China, their business in mainland China is expected to be negatively affected by the increased competitive pressures associated with an SDB acquisition. Further, due to the capital constraints of Hong Kong's small banks, they are less likely to enter mainland China's domestic market through an acquisition. Thus, for Hong Kong's small banks, the entrance effect is less relevant for them than for the large banks, but the competitive effect is significant.

With respect to the second news event, the announcement of the dismissal of the transition committee is good news for SDB's rival banks in the Chinese domestic market and for the small banks in Hong Kong. All the event windows show that the stock return of SPDB and CMBC observes a daily gain, significant at the 1% level for most event windows considered. The positive reaction is similar for Hong Kong's small banks such as Wing Hang Bank and Fubon Bank, significant in two out of five event windows. Thus, consistent with the analysis for the first event, the domestic rivals and the small banks in Hong Kong are affected more by the competitive effect than by the entrance effect. For the large banks, the abnormal returns of HSBC and Hang Seng Bank are not significant for the event windows considered. Thus, there is weak evidence that the dismissal of the transition committee is negative news for the large banks in Hong Kong.

Turning to the third news event, the SDB shares transfer, most rival domestic banks and small banks in Hong Kong reacted negatively but not statistically significantly, to this news event. In contrast, the larger Hong Kong banks, HSBC and Hang Seng Bank, reacted positively to this third event. For instance, the positive abnormal returns of HSBC range

from 0.44% to 0.96% and are significant for all the event windows considered. The entrance effect, therefore dominates for Hong Kong's large banks in the third event.

In summary, the empirical results suggest that SDB's rival banks in mainland China are more sensitive to the competitive effect than the entrance effect. Thus, for domestic rival banks, the potential benefits of increased future privatization do not exceed the challenge of increased competition arising from the privatization of SDB. The finding of a competitive effect among domestic rivals is consistent with Otchere (2005), who finds that privatization announcements are associated with negative abnormal returns among rival banks. This finding is also consistent with the bank entry literature, which shows that the profitability of rivals declines after foreign entry (e.g., Unite and Sullivan, 2003; Sturm and Williams, 2004). For the large banks in Hong Kong, the entrance effect is more significant. Since China's entrance to WTO in 2001, the financial market has been opening gradually to the foreign investors. The acquisition of SDB sends the message that it is now possible for foreign financial institutions to enter China's banking industry. Given the extent to which Hong Kong and China's banking sectors are integrated, SDB's foreign acquisition means that Hong Kong's large banks have an opportunity to gain a first-mover advantage in the Chinese financial market and enlarge its current market share. However, this opportunity to enter mainland China via acquisitions is not available to the small banks in Hong Kong due to their capital constraints. Thus, the small banks in Hong Kong are more sensitive to the competitive effect.

## 6. Performance of SDB after the acquisition

In this section, we analyze the post-acquisition performance of SDB. While previous studies of privatization find that firm performance as measured by accounting profits improves after privatization (e.g., Megginson et al., 1994), the accounting data analyzed in these studies could have been manipulated by management. To avoid this problem, in our study we measure performance by focusing on stock price performance instead of accounting performance.

To compare the performance differences between SDB and its domestic rivals, we calculate the cumulative abnormal returns (CAR) of SDB and its domestic rivals, as the CARs are likely to reflect the share transfer's effect on SDB and its rivals. In particular, we calculate  $CAR(1,12)$  and  $CAR(1,19)$ , representing the cumulative abnormal return over months 1 to 12 and over months 1 to 19, respectively. We utilize the method of Campbell et al. (1997) to construct the  $t$ -statistics for CAR.



Table 5 (in Appendix) reports the results. The cumulative abnormal return of SDB is above zero 12 months and 19 months after the share transfer, with the  $t$ -statistic for CAR(1,19) significant at the 1% level. In addition, the cumulative abnormal return for the portfolio of Chinese financial institutions is significantly above zero in each period, which means that the performance of domestic rivals is better than the market. The difference between the CARs of SDB and its domestic rivals is significantly below zero for the first 12 months after the share transfer. However, the difference is significantly above zero 19 months after the share transfer, which means that SDB does not outperform its rivals immediately after the share transfer, but it does so after about one year, presuming after organizational changes have had time to be implemented following the control transfer. The  $t$ -statistics for the difference are both significant at the 1% level. Figure 1 (in Appendix) illustrates the results.

The long-term outperformance of SDB suggests that privatization improves the bank's competitiveness and, therefore, benefits its shareholders. The long-term outperformance result is also consistent with Otchere and Chan (2003), who find that CBA outperforms its rivals three years after its full privatization, and with the previous studies that suggest that among banks in six transition countries and sixteen Far East countries, foreign-owned banks are the most efficient and state-owned banks are the least efficient (e.g., Cornett et al., 2005; and Bonin et al., 2005).

## Conclusions

In this paper, we find that large banks in Hong Kong react positively to news about SDB's establishment

of a transition committee and to news about the ultimate share transfer, but they react insignificantly to the dismissal of the transition committee. These results suggest that SDB's acquisition by a foreign financial institution signals that it is possible for large Hong Kong banks to enter mainland China's financial market through acquisitions. Hence, for large Hong Kong banks, the entrance effect is more significant than the competitive effect around the three key news events.

In contrast, we find that the competitive effect dominates for small banks in Hong Kong and rival banks in mainland China. In particular, Hong Kong's small banks and the banks in mainland China react negatively to the first and the third news events (transition committee formation and share transfer), but positively to the second event (transition committee dismissal), suggesting that the investors of these banks believe the SDB's acquisition will intensify the competitive environment for these banks, threatening their current and future performance.

Finally, we find that SDB outperforms its domestic rivals in the long run following its acquisition by a foreign financial institution. The foreign acquisition of SDB affords an example of the effects of bank privatization in mainland China. In accordance with the terms of China's entrance to WTO in 2001, China has increasingly opened its domestic financial market to foreign banks over time. As a result, competition in China's financial service industry has become increasingly fierce. Our results suggest that the entrance of foreign strategic investors via acquisitions may help China's domestic banks improve their performance and meet the challenge.

## References

1. Akhigbe, A., Madura, J. (1999). Intra-industry signals embedded in bank acquisition announcements, *Journal of Banking and Finance*, 23, pp. 1637-1654.
2. Akhigbe, A., Madura, J. (2001). Intra-industry signals resulting from insurance company mergers, *Journal of Risk and Insurance*, 68, pp. 489-505.
3. Alchian, A. (1965). Some economics of property rights, *Politico*, 30, pp. 816-829.
4. Barajas, A., Steiner, R., Salazar, N. (1999). Foreign investment in Colombia's financial sector, IMF working paper.
5. Berger, A.N., Clarke, G.R.G., Cull, R., Klapper, L., Udell, G.F. (2005). Corporate governance and bank performance: A joint analysis of the static, selection, and dynamic effects of domestic, foreign, and state ownership, *Journal of Banking and Finance*, 29, pp. 2179-2221.
6. Bonin, J.P., Hasan, I., Wachtel, P. (2005). Privatization matters: Bank efficiency in transition countries, *Journal of Banking and Finance*, 29, pp. 2155-2178.
7. Boubakri, N., Cosset, J., Fischer, K., Guedhami, O. (2005). Privatization and bank performance in developing countries, *Journal of Banking and Finance*, 29, pp. 2015-2041.
8. Boycko, M., Shleifer, A., Vishny, R.W. (1996). A theory of privatization, *Economic Journal*, 106, pp. 309-319.
9. Campbell, J., Lo, A., Mackinlay, A. (1997). *The econometrics of financial markets*, Princeton University Press.
10. Chen, Z., Li, D., Moshirian, F. (2005). China's financial services industry: The intra-industry effects of privatization of the Bank of China Hong Kong, *Journal of Banking and Finance*, 29, pp. 2291-2324.
11. Claessens, S., Demirguc-Kunt, A., Huizinga, H. (2001). How does foreign entry affect domestic banking markets? *Journal of Banking and Finance*, 25, pp. 891-911.
12. Clarke, G., Cull, R., D'Amato, L., Molinan, A. (1999). The effect of foreign entry on Argentina's domestic banking sector, Working paper, The World Bank.



13. Cornett, M.M., Guo, L., Khaksari, S., Tehranian, H. (2005). The impact of corporate governance on performance differences in privately-owned versus state-owned banks: An international comparison, Working paper, World Bank, Southern Illinois University at Carbondale, Suffolk University and Boston College.
14. Denizer, C. (1999). Foreign entry in Turkey's banking sector, 1980-1997. Unpublished manuscript, IFC/World Bank.
15. Eckel, C., Eckel, D., Singal, V. (1997). Privatization and efficiency: Industry effects of the sale of British Airways, *Journal of Financial Economics*, 43, pp. 275-298.
16. Lang, L., Stulz, R. (1992). Contagion and competitive intra-industry effects of bankruptcy announcements, *Journal of Financial Economics*, 32, pp. 45-60.
17. Laux, P., Starks, L.T., Yoon, P.S. (1998). The relative importance of competition and contagion in intra-industry information transfers: An investigation of dividend announcements, *Financial Management*, 27, pp. 5-16.
18. Megginson, W.L., Nash, R.C., Van Randenborgh, M. (1994). The financial and operating performance of newly privatized firms: An international empirical analysis, *Journal of Finance*, 49, pp. 403-452.
19. Megginson, W.L. (2005). The economics of bank privatization, *Journal of Banking and Finance*, 29, pp. 1931-1980.
20. Nakane, M.I., Weintraub, D.B. (2005). Bank privatization and productivity: Evidence for Brazil, *Journal of Banking and Finance*, 29, pp. 2259-2289.
21. Otchere, I. (2005). Do privatized banks in middle- and low-income countries perform better than rival banks? An intra-industry analysis of bank privatization, *Journal of Banking and Finance*, 29, pp. 2067-2093.
22. Otchere, I., Chan, J. (2003). Intra-industry effects of bank privatization: A clinical analysis of the privatization of the Commonwealth Bank of Australia, *Journal of Banking and Finance*, 27, pp. 949-975.
23. Sturm, J., Williams, B. (2004). Foreign bank entry, deregulation and bank efficiency: Lessons from the Australian experience, *Journal of Banking and Finance*, 28, pp. 1775-1799.
24. Terrell, H.S. (1986). The role of foreign banks in domestic banking markets. In: Cheng, H. (Ed.), *Financial Policy and Reform in Pacific-Rim Countries*, Lexington Books, Lexington, MA.
25. Unite, A.A., Sullivan, M.J. (2003). The effect of foreign entry and ownership structure on the Philippine domestic banking market, *Journal of Banking and Finance*, 27, pp. 2323-2345.
26. Williams, J., Nguyen, N. (2005). Financial liberalization, crisis and restructuring: A comparative study of bank performance in South East Asia, *Journal of Banking and Finance*, 29, pp. 2119-2154.
27. Yourougou, P. (1990). Interest rate risk and the pricing of depository financial intermediaries' common stock: Empirical evidence, *Journal of Banking and Finance*, 14, pp. 803-820.
28. Zellner, A. (1962). An efficient method of estimating seemingly unrelated regressions and test for aggregate bias, *Journal of the American Statistical Association*, 57, pp. 348-368.

## Appendix

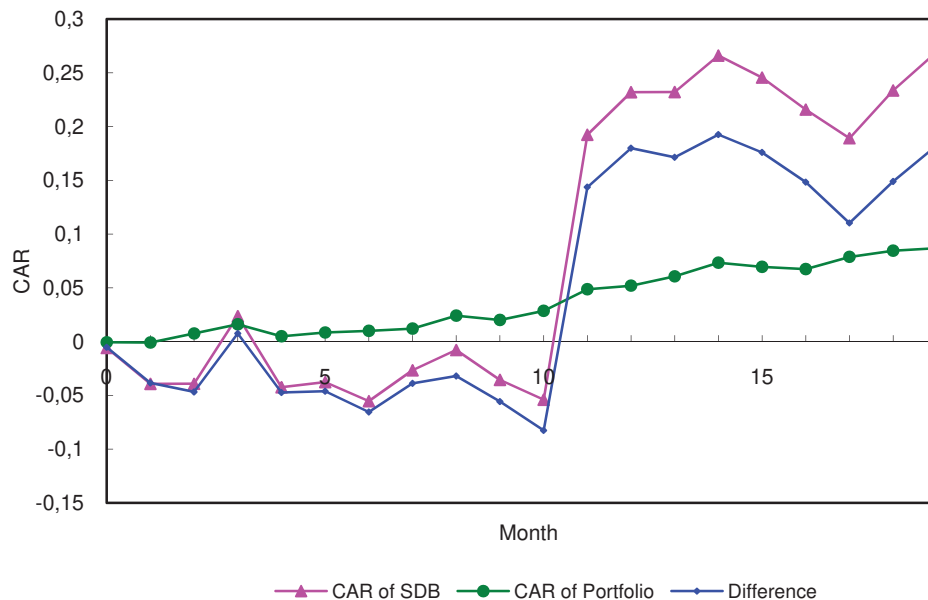


Fig. 1. Cumulative abnormal returns (CAR) of SDB and the portfolio of mainland China's financial institutions

Table 1. List of SDB and its rival financial institutions

Name	Industry	Listed exchange	Market cap.	Currency unit
HSBC Hdq.	Bank	Hong Kong	959,385.93	Million HK\$
Hang Seng Bank	Bank	Hong Kong	169,408.41	Million HK\$
Bank of East Asia	Bank	Hong Kong	20,995.22	Million HK\$
Dah Sing Finance Ltd.	Bank	Hong Kong	9,177.48	Million HK\$
Wing Hang Bank	Bank	Hong Kong	7,347.85	Million HK\$
ICBC(Asia)	Bank	Hong Kong	6,663.64	Million HK\$
Wing Lung Bank	Bank	Hong Kong	6,591.21	Million HK\$
CITIC Intl. Fin. Hdq.	Bank	Hong Kong	6,379.73	Million HK\$
Liu Chong Hing Bank	Bank	Hong Kong	3,069.80	Million HK\$
JCG HLD.	Bank	Hong Kong	2,824.44	Million HK\$
Fubon Bank	Bank	Hong Kong	2,152.09	Million HK\$
China Merchants Bank	Bank	Shanghai	54,614.25	Million RMB
Shanghai Pudong Dev. Bank	Bank	Shanghai	39,873.45	Million RMB
China Minsheng Banking Co.	Bank	Shanghai	29,617.96	Million RMB
Shenzhen Development Bank	Bank	Shenzhen	25,470.81	Million RMB
Huaxia Bank	Bank	Shanghai	25,025.00	Million RMB
Citic Secs. Co.	Securities	Shanghai	12,432.32	Million RMB
Hongyuan Secs. Co.	Securities	Shenzhen	4,876.20	Million RMB
Anshan tst. & Inv.	Trust	Shanghai	3,414.91	Million RMB
Shannxi Intl. Trust	Trust	Shenzhen	2,843.39	Million RMB

Note: Market capitalization is measured on October 10, 2002, the first event date.

Table 2. Events related to the acquisition of the Shenzhen Development Bank

Press date	Event descriptions
October 10, 2002	The transition committee, composed of the managers of Newbridge Capital, was established to manage the acquisition process.
May 12, 2003	SDB dismissed the transition committee.
May 31, 2004	The four main shareholders of SDB transferred 17.89% of SDB's shares to Newbridge Capital, making Newbridge Capital the largest shareholder after the acquisition, while the next-largest shareholder held just 3.2% of SDB's shares.

Table 3. Daily portfolio returns around acquisition events

Event window	Portfolio abnormal return				
	(-2,2)	(-2,0)	(-2,1)	(-3,0)	(-3,1)
Panel A: Portfolio of Chinese financial institutions					
October 10, 2002	-0.0012	-0.001	-0.00126	-0.0008	-0.0009
	-1.34	-0.98	-1.24	-0.74	-1.01
May 12, 2003	0.0015	0.0035	0.0021	0.003	0.002
	1.95*	3.62***	2.46**	3.63***	2.68***
May 31, 2004	-0.0003	-0.0003	-0.0002	-0.0003	-0.0002
	-0.41	-0.33	-0.32	-0.42	-0.4
Panel B: Portfolio of Hong Kong banks					
October 10, 2002	0.0059	0.0068	0.0078	0.0043	0.0056
	2.41**	2.18**	2.87***	1.58	2.29**
May 23, 2003	-0.0016	-0.002	-0.0023	-0.0034	-0.0034
	-0.65	-0.61	-0.83	-1.24	-1.37
May 31, 2004	0.0049	0.0081	0.0046	0.0061	0.0037
	2.4**	3.1***	2.02**	2.68***	1.82*

Note: The five columns report the abnormal returns and *t*-statistics corresponding to the event window given at the top of the column. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

Table 4. Daily returns of individual financial institutions around important acquisition events

	(-2,2)		(-2,0)		(-2,1)		(-3,0)		(-3,1)	
	Coefficient	<i>t</i>	Coefficient	<i>T</i>	Coefficient	<i>t</i>	Coefficient	<i>t</i>	Coefficient	<i>t</i>
Panel A: Event date: October 10, 2002										
Shanghai Pudong Dev. Bank	-0.0100	-1.9	-0.0080	-1.19	-0.0100	-1.77	-0.0050	-0.82	-0.0070	-1.39
China Minsheng Banking Co.	-0.0110	-2.02*	-0.0090	-1.34	-0.0100	-1.68*	-0.0060	-0.92	-0.0070	-1.28
Hongyuan Securities	-0.0060	-0.66	-0.0080	-0.68	-0.0060	-0.53	-0.0060	-0.58	-0.0040	-0.47
Shannxi Intl. Trust	-0.0070	-0.74	-0.0090	-0.81	-0.0070	-0.72	-0.0080	-0.81	-0.0070	-0.74
Anxin Trust	-0.0020	-0.25	0.0017	0.14	-0.0010	-0.11	0.0001	0	-0.0020	-0.21
HSBC Hdg.	0.0064	2.2*	0.0072	1.92*	0.0087	2.67***	0.0042	1.29	0.0060	2.05**
Hang Seng Bank	0.0059	1.67*	0.0082	1.8*	0.0071	1.81*	0.0079	2.01**	0.0071	2.01**
Bank of East Asia	-0.0005	-0.1	0.0045	0.72	-0.0010	-0.22	0.0026	0.47	-0.0020	-0.33
Wing Lung Bank	-0.0120	-1.81*	-0.0190	-2.18**	-0.0150	-2.06**	-0.0160	-2.21**	-0.0140	-2.13*
CITIC Intl. Fin. Hdg.	0.0074	0.96	-0.0020	-0.23	0.0071	0.82	-0.0060	-0.72	0.0021	0.27
Wing Hang Bank	-0.0100	-1.65*	-0.0150	-1.8*	-0.0130	-1.78*	-0.0180	-2.51***	-0.0150	-2.45**
ICBC (Asia)	-0.0030	-0.43	-0.0040	-0.48	-0.0060	-0.7	-0.0050	-0.65	-0.0060	-0.83
Dah Sing Finance Ltd.	0.0040	0.5	0.0100	0.96	0.0053	0.58	0.0082	0.9	0.0047	0.58
JCG HLD	0.0051	0.59	0.0068	0.62	0.0048	0.5	0.0028	0.3	0.0020	0.23
Fubon Bank	-0.0060	-1	-0.0120	-1.53	-0.0100	-1.43	-0.0070	-1.02	-0.0060	-0.99
Liu Chong Hing Bank	-0.0004	-0.08	0.0015	0.22	-0.0005	-0.09	-0.0007	-0.11	-0.0020	-0.35
Panel B: Event date: May 12, 2003										
Shanghai Pudong Dev. Bank	0.0194	2.81***	0.0483	5.06***	0.0233	2.96***	0.0483	5.06***	0.0233	2.96***
China Minsheng Banking Co.	0.0119	1.69*	0.0362	3.64***	0.0185	2.29*	0.0362	3.64***	0.0185	2.29*
Hongyuan Securities	-0.0060	-0.58	0.0097	0.61	-0.0030	-0.25	0.0097	0.61	-0.0030	-0.25
Shannxi Intl. Trust	0.0005	0.05	0.0127	0.97	0.0071	0.68	0.0127	0.97	0.0071	0.68
Anxin Trust	-0.0010	-0.15	0.0088	0.85	0.0049	0.59	0.0088	0.85	0.0049	0.59
HSBC Hdg.	0.0012	0.43	-0.0001	-0.03	-0.0007	-0.21	0.0018	0.57	0.0010	0.35
Hang Seng Bank	0.0038	1.25	0.0040	1.03	0.0038	1.11	0.0020	0.58	0.0022	0.71
Bank of East Asia	-0.0090	-1.49	-0.0100	-1.32	-0.0110	-1.7	-0.0080	-1.3	-0.0100	-1.66*
Wing Lung Bank	-0.0020	-0.33	-0.0040	-0.65	-0.0030	-0.62	-0.0010	-0.19	-0.0010	-0.22
CITIC Intl. Fin. Hdg.	0.0077	1.02	0.0009	0.09	0.0040	0.48	-0.0008	-0.09	0.0021	0.27
Wing Hang Bank	0.0092	1.54	0.0060	0.79	0.0125	1.88*	0.0051	0.77	0.0105	1.75
ICBC (Asia)	0.0038	0.54	0.0041	0.45	0.0041	0.52	0.0004	0.05	0.0011	0.16
Dah Sing Finance Ltd.	-0.0001	-0.02	-0.0009	-0.11	0.0012	0.16	-0.0030	-0.4	-0.0009	-0.13
JCG HLD	0.0065	0.74	0.0018	0.16	0.0014	0.15	0.0026	0.27	0.0022	0.25
Fubon Bank	0.0164	1.57	0.0212	1.57	0.0232	1.99*	0.0154	1.31	0.0181	1.73
Liu Chong Hing Bank	-0.0006	-0.13	-0.0020	-0.27	-0.0030	-0.48	-0.0010	-0.23	-0.0020	-0.43
Panel C: Event date: May 31, 2004										
Shanghai Pudong Dev. Bank	-0.0040	-0.59	-0.0120	-0.95	-0.0070	-0.8	-0.0120	-0.95	-0.0070	-0.8
China Minsheng Banking Co.	-0.0080	-1.05	-0.0140	-1.03	-0.0090	-0.91	-0.0140	-1.03	-0.0090	-0.91
China Merchants Bank	-0.0006	-0.09	-0.0030	-0.23	0.0008	0.08	-0.0030	-0.23	0.0008	0.08
Citic Secs. Co.	-0.0070	-0.77	-0.0090	-0.55	-0.0090	-0.77	-0.0090	-0.55	-0.0090	-0.77
Hongyuan Securities	-0.0080	-0.74	-0.0190	-0.97	-0.0080	-0.56	-0.0190	-0.97	-0.0080	-0.56
Shannxi Intl. Trust	-0.0070	-0.68	-0.0110	-0.6	-0.0120	-0.96	-0.0110	-0.6	-0.0120	-0.96
Anxin Trust	-0.0080	-0.85	-0.0120	-0.68	-0.0090	-0.72	-0.0120	-0.68	-0.0090	-0.72
HSBC Hdg.	0.0057	2.33*	0.0096	3.03***	0.0053	1.93*	0.0073	2.66***	0.0044	1.77
Hang Seng Bank	0.0028	0.82	0.0030	0.67	0.0035	0.91	0.0022	0.56	0.0028	0.8
Bank of East Asia	-0.0020	-0.3	-0.0040	-0.52	-0.0040	-0.5	-0.0040	-0.57	-0.0040	-0.55
Wing Lung Bank	0.0061	0.75	0.0145	1.39	0.0070	0.78	0.0101	1.12	0.0050	0.62
CITIC Intl. Fin. Hdg.	-0.0100	-1.02	-0.0080	-0.59	-0.0090	-0.85	-0.0070	-0.59	-0.0080	-0.82
Wing Hang Bank	-0.0050	-0.57	-0.0070	-0.62	-0.0050	-0.47	-0.0050	-0.55	-0.0040	-0.43

Table 4 (cont.). Daily returns of individual financial institutions around important acquisition events

	(-2,2)		(-2,0)		(-2,1)		(-3,0)		(-3,1)	
	Coefficient	<i>t</i>	Coefficient	<i>T</i>	Coefficient	<i>t</i>	Coefficient	<i>t</i>	Coefficient	<i>t</i>
ICBC (Asia)	0.0021	<i>0.25</i>	0.0035	<i>0.32</i>	0.0036	<i>0.39</i>	0.0022	<i>0.23</i>	0.0026	<i>0.3</i>
Dah Sing Finance Ltd.	-0.0090	<i>-0.83</i>	-0.0110	<i>-0.79</i>	-0.0130	<i>-1.09</i>	-0.0100	<i>-0.85</i>	-0.0120	<i>-1.13</i>
JCG HLD	-0.0010	<i>-0.14</i>	0.0090	<i>0.67</i>	0.0073	<i>0.62</i>	0.0043	<i>0.37</i>	0.0039	<i>0.37</i>
Fubon Bank	0.0008	<i>0.09</i>	0.0073	<i>0.67</i>	0.0020	<i>0.21</i>	0.0054	<i>0.57</i>	0.0016	<i>0.19</i>
Liu Chong Hing Bank	0.0049	<i>0.63</i>	0.0030	<i>0.29</i>	0.0035	<i>0.4</i>	0.0003	<i>0.04</i>	0.0012	<i>0.16</i>

Note: t-statistics are given in italics. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

Table 5. CAR of SDB and rival financial institutions, calculated using the market model

	SDB	Portfolio of Chinese financial institutions	Difference
CAR(1,12)	0.0003	0.0164	-0.0161
	0.06	17.99***	-3.46***
CAR(1,19)	0.0871	0.0370	0.0501
	12.87***	24.36***	9.29***

Note: \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.