Long-Term M&A Effects and Strategies of Asia-Pacific Banks

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Abstract

This paper, representing research that began in 2000, empirically examines the effects of the Asian bank's M&A focusing on management strategies for banks' acquisitioned actuations, from long-term aspects.

Investors value sound banks with low loans and ample liquidity that promotes the purchase of new loan business through mutually complementary. And in the initial stage after acquisition, acquire banks become large in size, growing more total loans and amassing huge total costs. However as the years go by, acquirer banks have more, richer liquidity and finally they will become more sound banks, and, ultimately, this will culminate in the growth of non- performing loans. Even more, these banks become less profitable banks and in the process lead to decrease in their ROA.

Additionally, considering the country characteristics, the English legal system, regulation scope and Regulation entry are some of the important issues key to creating sound Asian banks. The legal and regulatory systems are able to enforce Asian banks become sound by M&A However; banks in Asia have lost their profitability due to the acquisitions.

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1. INTRODUCTION

Since the 1990s, most large Asian and European financial institutions have aggressively promoted alliances and M&A within Asian financial markets. Asian financial institutions just followed their own global client firms where client firms expand their business place. However recently, the business strategies of such financial institutions have changed and they promote strategic business for themselves not for clients, in response not only to M&A but also financial alliances.

This paper, representing research that began in 2000, empirically examines the effects of the Asian stock market's performance and management strategies for banks' acquisition, from long-term aspects. We examine the strategic management factor as performed in Altunbas and Marques (2008). And we explain country characteristics are related to bank financial outcomes.

Investors value sound banks with low loans and high liquidity that promote the purchase of new loan business through mutually complementary. And in the initial stage after acquisition, acquire banks become being larger in size, growing more gross total loans and spending incurring more total costs. However as the years go by, acquirer banks have become higher liquidity entities and are becoming more sound. What's more, these acquisitions have accrued to these financial institutions more non- performing loans. Even more is the fact that these banks also end up incurring more costs and losing their profitability in the long run.

Additionally considering the country characteristics, English legal system, regulation scope and Regulation entry are the one of the important issues regarding creating sound Asian banks. The legal and regulatory system are able to enforce Asian banks sound by M&A, however Asian banks lost their profitability.

The structure of this paper is as follows. Section 1 discusses the research motivation and section 2 the relevant literature. Section 3 outlines three key discussion issues. Section 4 describes the study's data and empirical methods. Section 5 presents Asian banks' data description. Section 6 provides the study's empirical results, and section 7 concludes the paper.

2. LITERATURE

We present below a survey of studies on market evaluation in M&A.

Many studies have been conducted on financial conglomerates. Laeven and Levine (2007) find the diversification discount in financial conglomerate. And more detailed analysis, Baele et al. (2007) find that the relationship between diversification and bank returns is different in Europe relative to other developed markets, notably the U.S. They find a positive relationship between franchise value and the degree of functional diversification. Artikis et al. (2008) offer an intuitive explanation for the market dynamics of, and incentives for bank-insurance collaboration, they argue, gives banking firms the opportunity to utilize their network of branches. Recently, the focus of research is not only diversifications but also cross-border bank M&A activities. As comprehensive empirical literature research of cross-border bank M&A is shown in Caiazza et al.(2012) ,empirically find support for the "acquire to restructure" hypothesis which posits that targets are typically less efficient banks that are acquired to be restructured and made more profitable.

A wide variety of empirical studies have examined the firm value of financial conglomerates. These can be classified into three main groups: first, studies on creating firm value Field et al. (2007) and Staikouras (2009)); second, studies on destroying firm value (Laeven and Levine (2007), Schmid and Walter (2009), Lelyveld and Knot (2009)); third, studies on neutral firm value (Allen and Jagtiani (2000)).

Now, we consider Asia's bad loan problems. Studies on Japanese financial institutions have examined their changing business strategies by targeting only the banking sector, which has suffered because of nonperforming loans for a long time (Yamori et al. (2003), Sakai et al. (2009)). Most studies are nothing more than defensive M&A analyses of defensive nonperforming loans problems, business restructuring, and efficiency. In this study, we comprehensively consider the aggressive business strategies of financial institutions, especially those of large insurance companies, and analyze not only M&A but also aggressive strategic alliances.

Rossi and Volpin (2004), Moeller and Schllingmann (2005), and Fauver et al. (2003) empirically show that differences in nationality, legal and market systems, regulatory systems, and bidder/target maturity vary according to firm value. Steigner and Sutton (2011) show greater cultural distance has a positive influence on the long term performance. By contrast, we comprehensively examine financial institutions' aggressive business strategies, analyzing not only M&A but also aggressive strategic alliances in Asia. My study thus expands the scope of the previous research. Stingner and Sutton (2011) show that greater culture distance has a positive influence on long term performance. Barth et al. (2001, 2004, 2008) empirically show the difference between broad array of bank regulations and supervisory practice and bank development, performance and stability. And some literature shows the evidence that regulatory and cultural barriers limit the international expansion of banks (De Haas and Van leyeveldt 2010), more profitable and larger banks find it easier to overcome such barriers (Calzolari and Liranth 2011), proposed policy measures to increase supervision of banks' international activities (Ongena et al.2013).

Finally many studies on changing business strategies focus on M&A. Recent studies on changing business strategies and the difference between M&A and alliances have been conducted by Makimoto (2007) and Chiou and White (2005). Makimoto (2007) defines the difference between M&A and alliances. While the purpose of M&A is improved financial statements, the purpose of alliances is improved research and development (R&D). Chiou and White (2005) examine the wealth effects of Japanese financial institutions' strategic alliances and find that, first, strategic alliances increase the value of partner firms, second, the smaller partner experiences a larger percentage of gain, and, third, inter-group alliances result in increased market value.

3. DISCUSSION ISSUES

This paper presents three main discussion issues pertaining to the management strategic change of acquired banks and Asian stock market's response from long term aspects. We define "alliance" as

cases involving less than 50% cumulative share/asset holdings and “M&A” as cases involving more than 50% cumulative share holdings.

[Discussion]

Discussion 1: What the strategic management factors have impacts acquisitions? Do the similarities or differences of strategic management factors between acquirer and target affect the market evaluation? We examine the five strategic management factors: earning diversification strategy, risk strategy, cost controlling strategy, capital adequacy level strategy and liquidity risk strategy. And we check the relationship market response and the similarity or difference of strategic management factors between acquirer and target.

To assure the economic benefits, we test the effects of not only loan business growth, cost efficiency and holding rich liquidity but also ROA and Q ratio.

In short, we test Asian stock market response to which type of strategic management factors of acquire and target banks when M&A deals are effective, and whether the markets evaluate either the similarity of strategic management factors or difference of management factors.

Discussion 2: After acquisition, one year after and three year after, which management strategic factor’s changes affect the acquired banks? We examine the five strategic management factors: earning diversification strategy, risk strategy, cost controlling strategy, capital adequacy level strategy and liquidity risk strategy.

Discussion 3: The available evidence on the differences according to target’s country characteristics could help us understand some of factors in acquire banks. The difference of legal system (English law origin, French law origin and the other law origin), the degree of

economic freedom, and financial regulation system (scope regulation, entry regulation and self-monitoring regulation) are considering.

As Asian countries have survived some financial crisis since late 1990s', our research, mainly, focuses on credit risk strategy and capital adequacy strategy.

4. DATA AND METHODOLOGY

4.1 Data

Data on alliance and M&A announcements were drawn from Thomson ONE Investment Banking and cover the period between 2000 and 2011. We collect all the transactions of Asian listed banks that have at least acquired or targeted either the equity or assets of domestic or foreign firms. We require at least one of the firms to be a bank, while the target could be a company in another industry. The investigation uses Asian data from all the Asia-Pacific countries (see Appendix 1). All sample transactions have a dollar value and announcement data. Although the number of all announced data is 1907, the effective data are 1137

All equity return data are from the Thomson One Stock Priced Daily Data. Accounting data are from Thomson One Investment Banking. The data necessary to calculate the geographical and industrial diversification measures come from the Standard Industrial Classifications (SIC) codes and its geographic segment.

The sample comprises 1137 bank transactions. Either the acquirer or target have a regular common stock listing on Asian-Pacific stock markets (see Appendix 1) and have accounting data based on dollar values. In this long analysis, we employ completed -transactions of bank acquisitions.

We use countries' credit ratings obtained from S&P long term foreign currency sovereign rating and legal systems obtained from La Porta et al. (1997), Fauver et al. (2003) and Beck et al. (2003). Additionally, we employ country's EFW index[2], obtained from Moeller et al. (2005)[3]. Barth et al.

[2] The Economic Freedom of the World (EFW) index, maintained by the World Bank, measures the overall level of a country's restrictiveness in terms of its economic, institutional, and developmental environments.

(2008) deriver the available dataset of bank regulatory environment by the World Bank Website[4], we use it.

4.2 ABHR: adjusted buy- and –hold returns

In discussion 1 for long term analysis, our econometric study's methods are based on adjusted buy- and –hold (ABHR) returns. While the stock market reacts to new information and does so fairly quickly, there is some evidence of poor in stock prices. Capital market players may need the time to revise their judgments based on new information about the acquisition integration and response of rivals. This implies that the wealth effects from acquisitions may need to be assessed over long-run event windows. The windows we used 12 month and 36month after effectiveness and used methodologies implied are ABHR.

We adopt buy- and –hold (BHR) returns for one year and three years after the actual acquisitions. To accurately measure the long term stock performance, we compute the ABHR, which subtracts the matched bank's BHR from event firm's BHR. We pick up a matched bank for each of event firms from the same country that do not occur M&A during the same year of bank M&A event as below,

$$ABHR_{it} = BHR_i - BHR_m = \prod_{t=1}^{\tau}[1+R_{it}] - \prod_{t=1}^{\tau}[1+R_{mt}] \quad (1)$$

where R_{it} is event bank's t month return, R_{mt} is matched bank's month return, τ is the window terms, 12 month or 36month.

To control the Fama and French's (1992) three factors, we required matching bank to have the book to market ratio, book value of equity over the market value of equity, in the year before the announcement, ranging between 50 percent and 200 percent of the event bank's book to market ratio. And then, we choose as matching bank the non- acquisition bank that is closest to the event firm in the market value the year before the announcement. In the following analyses, we delete observation with ABHR greater / lower than 99^{th}/ 1^{st} percentile to eliminate abnormal values.

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[3] Moeller et al. (2005) has obtained EFW index from the World Bank.

[4]http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20345037%7EpagePK:64214825%7EpiPK:64214943%7EtheSitePK:469382,00.html

For discussion 1 for long term analysis, we carried out a regression analysis using The ABHR regression, the 12 month or 36 month cross-section of acquirers with considered heteroscedasticity. We set the dependent variables the ABHR, presented in previous paragraph the independent variables are five strategic factors as shown in Altunbas and Marques (2008), control variables (Q ratio and size, ln (asset) and some dummy variables (cross border dummy, effective year dummy, acquire country dummy and target country dummy). As Asian countries use accounting systems different from those in the U.S. and Europe, we cannot use the same strategic accounting variables used in Altunbas and Marques (2008). We present five strategic variables along with their proxy variables in the bank industry case, as seen in Appendix 2. We employ the difference between acquirers and targets about every strategic variable as independent variable. These are both acquirer and target being just banks cases. If the sign is positive, it means that the acquirer's ratio is bigger than target's. And inversely, if the sign is negative, the acquirer's ratio is smaller than target's.

4.3 Difference in Difference Methods

For discussion 2 and 3 for long term analysis, we regression analyze using difference estimation (DID) methods, dependent variables in strategic variables. In DID methods, it is better to employ group data similar to treatment group's outcome distributions[5]. We set all M&A transactions as treatment group, and all non-M&A Asian listed bank's data as control group. We adapt strategic variables to this research. The econometric model is below.

$$StrategicVariable[SV]_{it} = \alpha_0 + \alpha_1 \left(Time\right)_{it} + \alpha_2 \left(Trend\right)_{it} + \alpha_3 \left(Trend \times Time\right)_{it} + \varepsilon_{it} \qquad (2)$$

where, Strategic Variable$_{it}$ is the strategic variables used in Altunbas and Marques (2008)., Time$_{it}$ is year dummy, if pre-acquisition are zero and post one year or three year acquisitions are one, Trend$_{it}$ is dummy variable if acquisitions data are one, non-acquisitions data are zero and (Trend $\times$ Time)$_{it}$ is cross term. The dependent variables are strategic variables and independent variables are intercept

[5] See Meyer(1995)

term, trend dummy variables and cross term variables. It is general to assess the significance of coefficient of cross term variables. In general, we hope to assess whether good effects of acquisitions or not, then we test the sign and significant of coefficients of cross terms.

In this paper, in practice, as following to Inui et al. (2013) econometric methods, we set another model of DID methods, as below.

$$SV_{it+1} - SV_{it-1} = \beta_0 + \beta_1 \left(Trend \right)_{it} + \beta_2 \mathbb{Z}_{it} + \varepsilon_{it} \quad (3)$$

$$SV_{it+3} - SV_{it-1} = \beta_0 + \beta_1 \left(Trend \right)_{it} + \beta_2 \mathbb{Z}_{it} + \varepsilon_{it} \quad (4)$$

where, $\mathbb{Z}_{it}$ is the vector of control variables. We employ control variables, ln (asset), Q ratio, cross border dummy, effective year dummy, acquire country dummy and target country dummy. Equation (6) estimate the change M&A effects of the SV from t-1 to 1+1, Equation (7) estimate the change M&A effects from t-1 to 1+3. Trend is dummy variable if acquisitions data are one, non-acquisitions data are zero. We assess the significance of coefficient of Trend variables.

Now, we explain the country characteristics. In order to investigate the acquisitions affects strategic variables across affects target's country characteristics differently, the affected acquirer's countries are divided into (1) the difference of legal law system, English law origin, French law origin and the other law origin, (2) the difference of EFW, (3) the difference of the strength of financial regulation, (3-1) bank activities scope regulation, (3-2) foreign bank entry regulation, (3-3) bank self-monitoring regulation (so called disclosure regulation) .

To investigate the difference of country characteristics, between acquirers and targets country, following Nguyen and Wilson's (2015) methods, we set another econometric model of DID methods, as below, for example legal system case.

$$\begin{aligned} SV_{it+1} - SV_{it-1} &= \beta_0 + \beta_1 \left(SameLawTrend \right)_i \\ &+ \beta_2 \left(Different[English]LawTrend \right)_i + \beta_3 \left(Different[French]LawTrend \right)_i \\ &+ \beta_4 \left(Different[Other]LawTrend \right)_i + \beta_4 \mathbb{Z}_{it} + \varepsilon_{it} \end{aligned} \quad (5)$$

$$SV_{it+3} - SV_{it-1} = \beta_0 + \beta_1 \left(SameLawTrend \right)_i + \beta_2 \left(Different[English]LawTrend \right)_i + \beta_3 \left(Different[French]LawTrend \right)_i + \beta_4 \left(Different[Other]LawTrend \right)_i + \beta_4 \mathbb{Z}_{it} + \varepsilon_{it} \quad (6)$$

Where, dependent variable is the change of the strategic variables. And we split "Law Trend" variable into four law trend dummy variables. If acquirers and targets are same legal system, "Same Law Tread" is one, non-acquisitions data including non-acquisitions data are zero. If acquirers are different legal system and target is English legal system, "Different [English] Law Tread" is one, the others data are zero. If acquirers are different legal system and target is French legal system, "Different [French] Law Tread" is one, the others data are zero. If acquirers are different legal system and target is Other legal system, "Different [Other] Law Tread" is one, the others data are zero. We assess the significance of coefficient of some kinds of Trend variables.

For sample of EFW and financial regulation, we split "Trend" variable into three trend dummy variable. For example EFW for one year case are following.

$$SV_{it+1} - SV_{it-1} = \beta_0 + \beta_1 \left(SameTrend \right)_i + \beta_2 \left(Different[UnderMean]Trend \right)_i + \beta_3 \left(Different[UpperMean]Trend \right)_i + \beta_4 \mathbb{Z}_{it} + \varepsilon_{it}$$

$$SV_{it+3} - SV_{it-1} = \beta_0 + \beta_1 \left(SameTrend \right)_i + \beta_2 \left(Different[UnderMean]Trend \right)_i + \beta_3 \left(Different[UpperMean]Trend \right)_i + \beta_4 \mathbb{Z}_{it} + \varepsilon_{it}$$

If acquirers and targets are same system, "Same Tread" is one, the others data including non-acquisitions data are zero. If acquirers are different system and target score is under than the mean, "Under median" is one, the others data are zero. If acquirers are different system and target score is upper than the mean, "Upper median" is one, the others data are zero.

4.4 Average Treatment Effect from Propensity Score Matching

For discussion 2 and 3 for long term analysis, we compute the averaged treatment affects (ATE) using Propensity Score Matching (PSM) method. In our knowledge, propensity score matching in relatively new to the econometric papers, and one paper has been used in M&A studies (Behr and Heid,2011).

In this paper, we focus on the acquirer bank's outcomes (Y) as some strategic variables. Let Z denote the indication variable, that it is 1 if it is acquisitions data, and 0 if otherwise. We observe $Y_1|z=1$ but not $Y_0|z=0$, which is a counterfactual outcome. The *prima facie* acquisition effects to observable variables by comparing the outcomes of factually acquired data and factually non-acquisition data are

$$\Delta_i(ATE_i) = E\left(Y_{1i} \mid z=1, x\right) - E\left(Y_{0i} \mid z=0, x\right). \qquad (10)$$

However, Δ_i is generally a biased estimator of Δ unless the assignment to the actuation group (z=1) or the non- actuation group (z=0) is independent of the outcome variable. A possible solution is to derive an unbiased estimator through conditioning on covariates. Rosenbaum and Rubin (1983) have shown that it is a sufficient to condition on the Propensity Score. The propensity score is given by the probability to acquire by logit regression with set of covariates x. The basic matching approach is that, for each factual treatment acquirer data, a pair of non-acquisitions control data are selected from the pool of factually non-acquisitions data. For all Asian banks in the sample, we estimate the propensity with year dummy variables, acquirer country dummy and target country dummy. Our employed matching algorithm method is Greedy Matching.

After PSM, we checked the balanced box charts between treatment group and control group, and tested balance test comparing with raw data and matched data using standardized difference and variance ratio.

5. SAMPLE DESCRIPTION

Graph 1 shows the number of acquisitions for Asian banks. Although the number of all announce data from 2000 to end of 2011 is 1907, and the effective level data are 1137. The reason for not including downloads in years 2012 and 2013 is because of the announcement that was made towards the end of 2011, which is explained in the previous sections. This graph shows the historical acquisition numbers. In 2001, the number reached around 100 and the level of every year is same. After 2009 the number is decreased; there have been fewer than ten recent acquisitions.

(Insert Graph 1 about here.)

Graph 2 shows the share of acquirer and target countries. Panel A shows the acquirer share. The four largest countries are Japan (17%), Thailand (16%), Australia (15%), and India (14%). The top five counterparty industries are banks (35.35%), consumer credit business (9.33%), securities (7.28%), investment advisory services (6.93%) and life insurance (6.04%). Asian banks are almost tied with trade banks, at about 45%. Panel B shows the target share. The five largest countries are Japan (17%), Indonesia (13%), India (12%), Taiwan (9%), and Korea (8%). The top five counterparty industries are banks (54.29%), other investments (21.36%), investment advisory services (4.29%), securities (3.45%), and life insurance (2.89%). Asian banks are tied with trade banks, at over 50%.

(Insert Graph 2 about here.)

Table 1 presents the basic statistics using our regression about ABHR, DID and PSM. Panel A of Tables1 shows the one year financial and economic change after effectiveness, for both acquisition data called “treatment” data and non-acquisition data, called “control” data. Although the number of all effective level data are 1137, because there are many unlisted banks data and other industrial data, we can use only 500-600 deal data for our empirical analysis. All Asian banks data without acquisition

are control data. Panel B of Tables1 shows the three year change after effectiveness. The number of treatment data is a little smaller than panel A.

(Insert Table 1 about here.)

Table 2 presents the number of max deals using analysis. Is means that the number of data having total asset data. Panel A of Tables2 shows about the treatment banks, and Panel B shows the control banks, all Asian banks without acquisitions. From 2001 to 2009, the number of acquisition is high level. And in our available sample, many acquisition deals occurred in Japan (118/563), Australia (95/563) and Thailand (94/563). And we can see the target country in Panal B, singed “target” part. The highest share target country is Japan, 108/563 banks. Second highest target country is Thailand (95/563) and third highest is Australia (73/563). Panel C of Tables2 shows about the control banks, all Asian banks without acquisitions. The number of control banks grow about twice with each passing year, 207 banks in 2000 to 395 banks in 2013. The largest country is Japan, second largest is India. In contract, the smallest country is New Zealand and second smallest is Vietnam. And we don’t have Vietnam data before 2005.

(Insert Table 2 about here.)

6. EMPIRICAL RESULTS

6.1 Discussion 1: Long term Stock performances

We empirically extract the difference of strategic management factors between acquirer and target from the ABHR. The matched-adjusted return for the ABHR from 12month and 36month surrounding the effective day is the dependent variable in each cross-sectional regression model. As presented in the previous section 4.2, when we compute the ABHR, we pick up a matched bank for each of event

firms from the same country and same year of bank M&A event. And we check the relationship between ABHR and the similarity or the difference between the strategic factors of acquirer and target.

Consistent with Altunbas and Marques (2008), the independent variables are the difference of strategic management factors between acquirer and target that include strategies such as earning diversification, risk, cost control, capital adequacy-level strategies and liquidity, including some control variables, Q ratio size, and adding the cross border dummy, year dummy the country dummy of acquirer and the country dummy of target.

Table 3 shows the results of the difference between acquirer and targets on every strategic variable after 12 month and 36 month form effectiveness. These results are both acquire and target being just banks cases then the number of observation is small. If the sign is positive, it means that the acquirer's ratio is higher than the target's. And inversely, if the sign is negative, the acquirer's ratio is smaller than target's.

(Insert Table 3 about here.)

Panel A of Table 3 shows the results after 12 month cases. The Graph 3 present the distribution of ABHR for acquirer and target. For both of them, there is a right side distortion in the shape of the ABHR distribution.

(Insert Graph 3 about here.)

From the empirical results of Panel A of Table 3, the two significant variables are negative non-performing loan ratio and deposit-loan ratio, and positive liquidity ratio. The results of Panel B of Table 3, the results after 36 month cases, and the two significant variables are negative non-performing loan ratio and deposit-loan ratio, and three positive total capital ratio, Tier1 capital ratio and liquidity ratio.

Market value; when acquire- banks with small-sized loan business, the target- banks with big-sized loan and unsound loan business. And acquire- banks with rich liquidity acquire the target- banks with poor liquidity. At the time one A year after effectiveness, market evaluate acquire- banks with rich liquidity and target- banks with big-sized loan and high volumes of non-performing loans, and passing three years, market evaluate becoming more sound acquire- banks.

6.2 Discussion 2: Change of strategies

We empirically extract the change of strategies of acquirer after acquisitions. We check the relationship between acquirer's change of outcomes (treatment data) and the change of strategic factors compared to non-acquisitions deals (control data). Consistent with Altunbas and Marques (2008), the outcome variables are the change of strategic management factors, such as earning diversification, risk, cost control, capital adequacy-level strategies and liquidity, and economic profitability measures of acquirers after one year and three years. For instance, a change of ROA, Q ratio, including some control variables, the DGP growth of acquirer country, the DGP growth of target country, year dummy, the country dummy of acquirer and the country dummy of target, and adding the cross border dummy, the alliance dummy. For the space, we report just treatment effect coefficients, omitting the coefficients of the DGP growth, year dummy, the country dummy, the cross border dummy and the alliance dummy.

(Insert Table 4 about here.)

The equation from (1) to (11) in Panel A of Table 4 shows the results of the DID regression on the change of strategies for one year of acquirers by each variable regressed. There are a few significant results on strategy change. It suggests that one year duration significantly makes notable impact on the bank acquisition deals, becoming large size, growing more total loans and spending more total costs, in spite of no significant results of ROA Q ratio. And the equation from (1) to (11) in Panel B of Table

4 shows the results of the change of strategies for three years. It suggests that a three year duration makes clear impacts on deals, growing more total loans (the coefficients are bigger than the results for one year), becoming large total capital, keeping richer liquidity and having huger of non-performing loan, in spite of no significant results of ROA Q ratio. The results of three year duration are similar results of BHAR regression of market evaluations, previously reported.

In short summary for the change of acquirer's strategy change analysis, there are no economic profitable results. In the initial stage after acquisition, acquire banks become larger sized, grow more loans and finally spend higher costs. However after three years, may have been renewing many loan agreements and acquiring many deposits, acquire banks become being higher loan ratio, richer liquidity and finally qualifying as sound banks with high capital ratio, whereas the growth of non-performing loans. We suggest the volume of the growth of non- performing loans are so much, because the non- performing loans "ratio" is significant, too.

We can get significant strategic results about loan risk strategy, liquidity strategy and capital adequacy-level strategies.

6.3 Discussion 3: Characteristics of Asian countries

The goal of this section is to examine the acquirer's effects, adding the difference of country characteristics between acquirers and targets country. We empirically examine the country characteristics effects using DID econometric methods and ATE from PSM.

Discussion3-1: DID

First, we check the relationship between acquirer bank's outcomes, and the difference of acquirer' and targets' legal systems. The English origin legal system, with its common law origin and providing investors with strongest legal protection, adversely, French origin legal system, civilian law origin and providing the least protection. Rossi and Volpin (2004), Moeller et al. (2005) and Fauver et al. (2003) empirically show that M&A returns differ according to differences in nationality and legal

systems. Although Fauver et al. (2003) empirically show that French origin legal system (civilian law system) has the greater magnitude than England origin legal system (common law system), Suzuki (2012) proposes that M&A premiums in common law countries such as Australia, India, Malaysia, and Singapore are higher than in countries that do not use the common law. Second, we check the difference between countries' degree of economic freedom based on the EFW index[6] of targets. Third, we check the impacts of regulatory barriers on targets. Barth et al. (2001, 2004, and 2008) empirically show the difference between broad array of bank regulations and supervisory practice (see Appendix2) and bank development, performance and stability. We focus on three regulation systems; restrictions on bank scope restrictions on bank regulation, entry into banking requirements regulations for foreign banks and private monitoring regulation, generally called information disclosure.

The outcome variables are the change of strategic management factors, diversification, risk, cost control, capital adequacy-level strategies and liquidity, and economic profitability measures of acquirers after one year and three years, such as change of ROA, Q ratio, including some control variables, the DGP growth of acquirer country, the DGP growth of target country, year dummy, the country dummy of acquirer and the country dummy of target, and adding the cross border dummy, the alliance dummy as same as 6.2.

In this paper, Trend is the dummy variable if acquisitions data are one, non-acquisitions data are zero, and we focus on the difference of systems between acquirer and target for treatment deals not the target system itself. As mentioned before, for example, we sprite "Trend" variable into four law trend dummy variables, "Same Law Tread", "Different [English] Law Tread", "Different [French] Law Tread" and "Different [Other] Law Tread" and set them to be one, the others data including control data are zero. For example EFW and regulations, we sprite "Trend" variable into three trend dummy variables, "Same Tread", "Under median" and "Upper median". We assess the significance of coefficient of some kinds of Trend variables,

The equation from (12) to (41) in Panel A of Table 4 shows the results of the DID regression on the

[6] At first, we plane to investigate the effects of country's credit rating, and the correlation between EFW and rating is so high (0.93), and then omitting the rating from results parts. The empirical results are similar the EFWs'.

change of strategies with country characteristics one year of acquirers by each variable regressed.

First, we consider that after one year of changing outcomes results of the difference of some systems from equations from (12) to (16) in Panel A Table 4. Surprisingly, all Q ratio, categorized in "same" are positively significant. The same system between acquisition deals and target deals promote banks quality higher before acquisitions. And all the total costs, categorized in "different" are positively significant. In the different social system between acquisition deals and target deals, acquire banks incur much more costs related to acquisitions comparing with pre-acquisitions.

Second, in the contrast, we consider that after three years of changing outcome's results (Panel B Table 4). Regrettably Q ratios are insignificant, and all non-performing loans categorized in "same" are positively significant.

Comparing with the results of legal systems, in the English legal system, the strong investor protection, acquirer-banks are positively highest coefficient of total capital. The strong investor protections (English Common Law) promote banks to be sound before acquisitions.

Next, we compare the results between restrictions on bank scope activities regulation (Regulation scope), and entry into banking requirements regulations (Regulation entry), and private monitoring regulation (Regulation monitoring). The strong scope activities banking requirements regulations are useful to be costless and to become sound banks, whereas weak regulations are to be high cost and unsound banks. And more surprisingly, the strong entry into banking requirements regulations are useful, too to eliminate of non-performing loans and to become sound banks, whereas weak regulation is to be high cost and unsound banks. Adversely, the strong power of private monitoring regulations are not significant results. We suggest self-disclosure regulations are inadequate in Asian financial market. In short, English legal system, regulation scope and Regulation entry are the one of the important issues regarding creating sound Asian banks.

Discussion3-2: ATE from PSM

In this paper, we compute the ATE using PSM method focusing on the acquirer bank's outcomes as

some strategic variables. The outcome variables are the change of strategic management factors and economic profitable measure of acquirers after one year and three year, such as change of ROA. And treatment propensity score is given by the probability to acquire by logit regression with set of covariates; bank size of acquire, credit risk of acquire, loan-deposit ratio of acquire, cost ratio of acquirer, the DGP growth, legal index, EFW index, regulatory index of acquirer / target country, and year dummy (see detailed covariates in Tables6).

The Table 5 shows the results of the ATE from PSM about change of strategies with country characteristics one / three year of acquirers by each variable computed. The some ATE for one year change from acquisition, are increasing about total loans, total capital and total cost significantly, adversely decreasing about liquidity significantly. After time passing, the ATE for three change are increasing about total loans, total capital, total cost and additionally non-performing loans, liquidity an, significantly. And surprisingly, the ATE for three change is significant decreasing about ROA adversely. The increasing of change of acquirer's strategic factors for the total loans, total capital, total liquidity and non-performing loans are consistent with previous DID results. Whereas, in the DID regression, we cannot acquire the significant results about economic profitability; ROA and Q ratio, in the ATE from PSM, we can revile the non-profitability of acquirer banks in Asian bank M&A.

After PSM, we checked the balanced box charts between treatment group and control group. We can see the overlap conditions after matching (Graph 4). And tested balance test comparing with raw data and matched data using standardized difference and variance ratio (Table 6). If the variance ratios are near to one, it are good matchings.

We now summarize the empirical results. Investors value sound banks with low loans and much liquidities that promote the purchase of new loan business through mutually complementary. And in the initial stage after acquisition, acquire banks become being large size, growing more total loans and spending mush total costs. However as the years go by, acquire banks have more, richer liquidity and finally being sound banks, whereas the growth of non- performing loans. And finally acquire banks spend much cost and finally lost the profitability, become being lower ROA. Additionally considering

the country characteristics, English legal system, regulation scope and Regulation entry are the one of the important issues regarding creating sound Asian banks. The legal and regulatory system are able to enforce Asian banks sound by M&A, however Asian banks lost their profitability by the bank acquisitions.

7. CONCLUSION

This paper, representing research that began in 2000, empirically examines the effects of the Asian bank's M&A focusing on management strategies for banks' acquisitioned actuations, from long-term aspects.

Investors value sound banks with low loans and high liquidity that promote the purchase of new loan business through mutually complementary. And in the initial stage after acquisition, acquire banks become being larger in size, growing more gross total loans and spending incurring more total costs. However as the years go by, acquirer banks have become higher liquidity entities and are becoming more sound. What's more, these acquisitions have accrued to these financial institutions more non- performing loans. Even more is the fact that these banks also end up incurring more costs and losing their profitability in the long run.

Additionally considering the country characteristics, English legal system, regulation scope and Regulation entry are the one of the important issues regarding creating sound Asian banks. The legal and regulatory system are able to enforce Asian banks sound by M&A, however Asian banks lost their profitability by the bank acquisitions.

This study has considered some issues that have remained unexamined. We compute the ATE from regression adjustment methods not only PSM. Although, the propensity score is given by the probability to acquire by logit regression and compute the ATE with the *prima facie* acquisition effects by factually acquired data and factually non-acquisition data, there are no considerations about the change of effecting terms to the outcome, directly. We plane to compute ATE from regression

adjustment methods. And we have to consider the effects of Asian stock market's liquidity and global financial crisis. We comprehensively investigate the differences among Asia's financial, regulatory systems. Furthermore we will use latest a Barth's et al. (2004) database for more detailed analysis.,

From long term aspects, the promotion or demotion of every strategy widely differs among legal systems and regulation system and each combination. To say it another way, if we know the legal and regulation system for acquisition banks countries, we would understand which strategies are advantageous and which strategies are disadvantageous.

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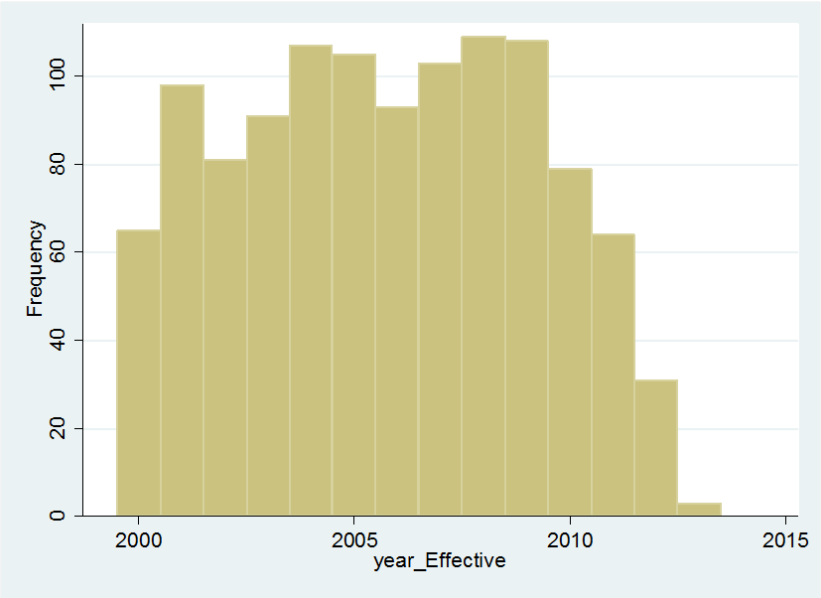
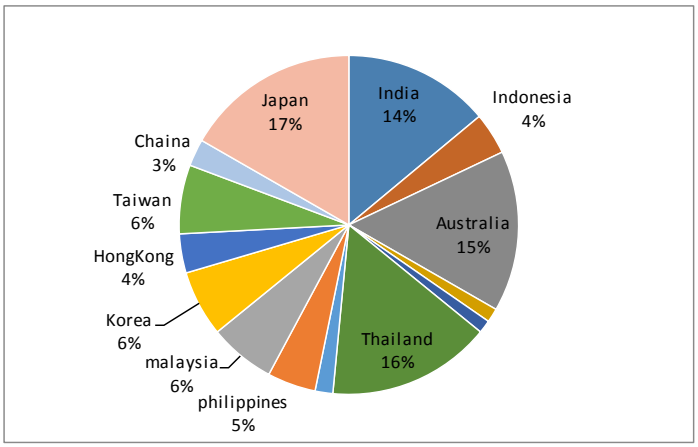
(Graph 1) The number of acquisitions for Asian banks by effective years

(Announcement from 2000 to 2011)



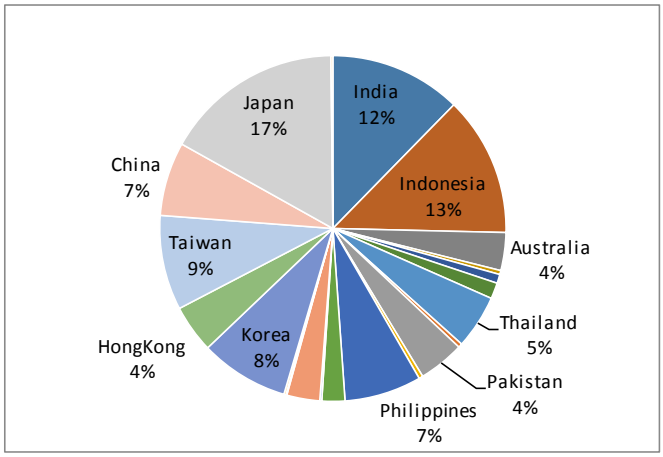
(Graph 2) The share of acquirer and target countries

Panel A) Acquirers



Top five industries of counterpart	%
Bank	35.35
Consumer credit	9.33
Securities	7.28
Investment advisory services	6.93
Life insurance	6.04

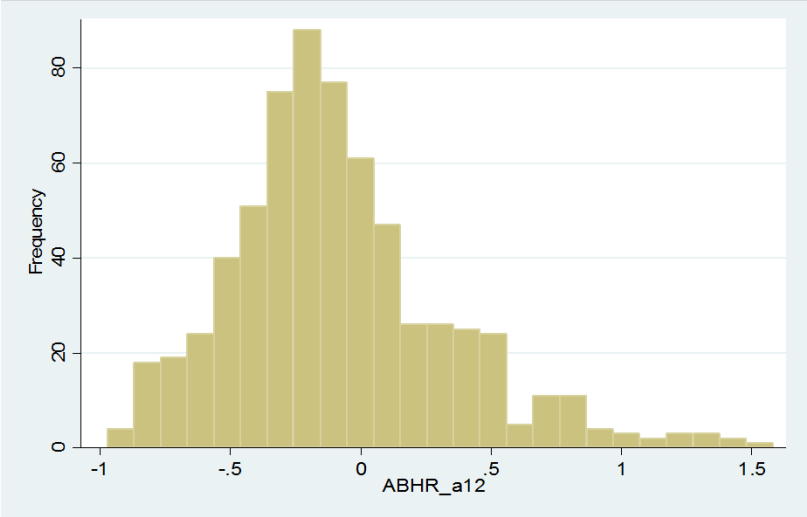
Panel B) Targets



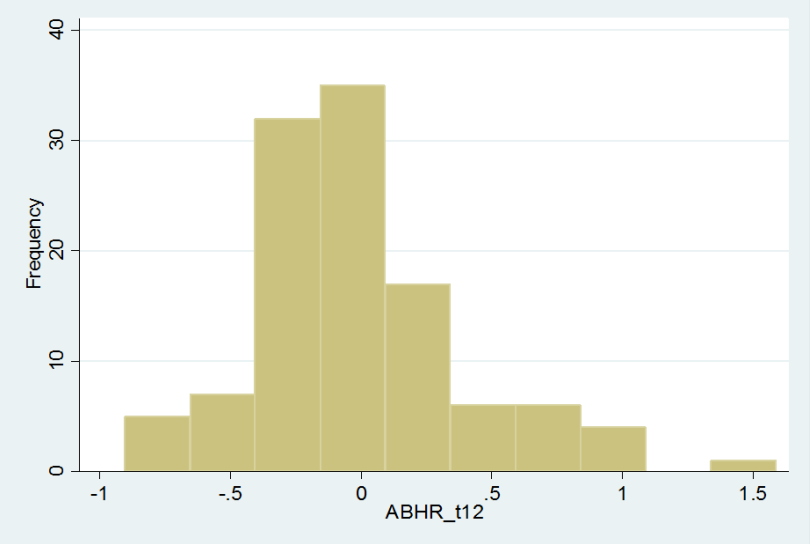
Top five industries of counterparty	%
Bank	54.29%
Other investment	21.36%
Investment advisory services	4.29%
Securities	3.45%
Life insurance	2.89%

(Graph 3) The distribution of ABHR for 12month

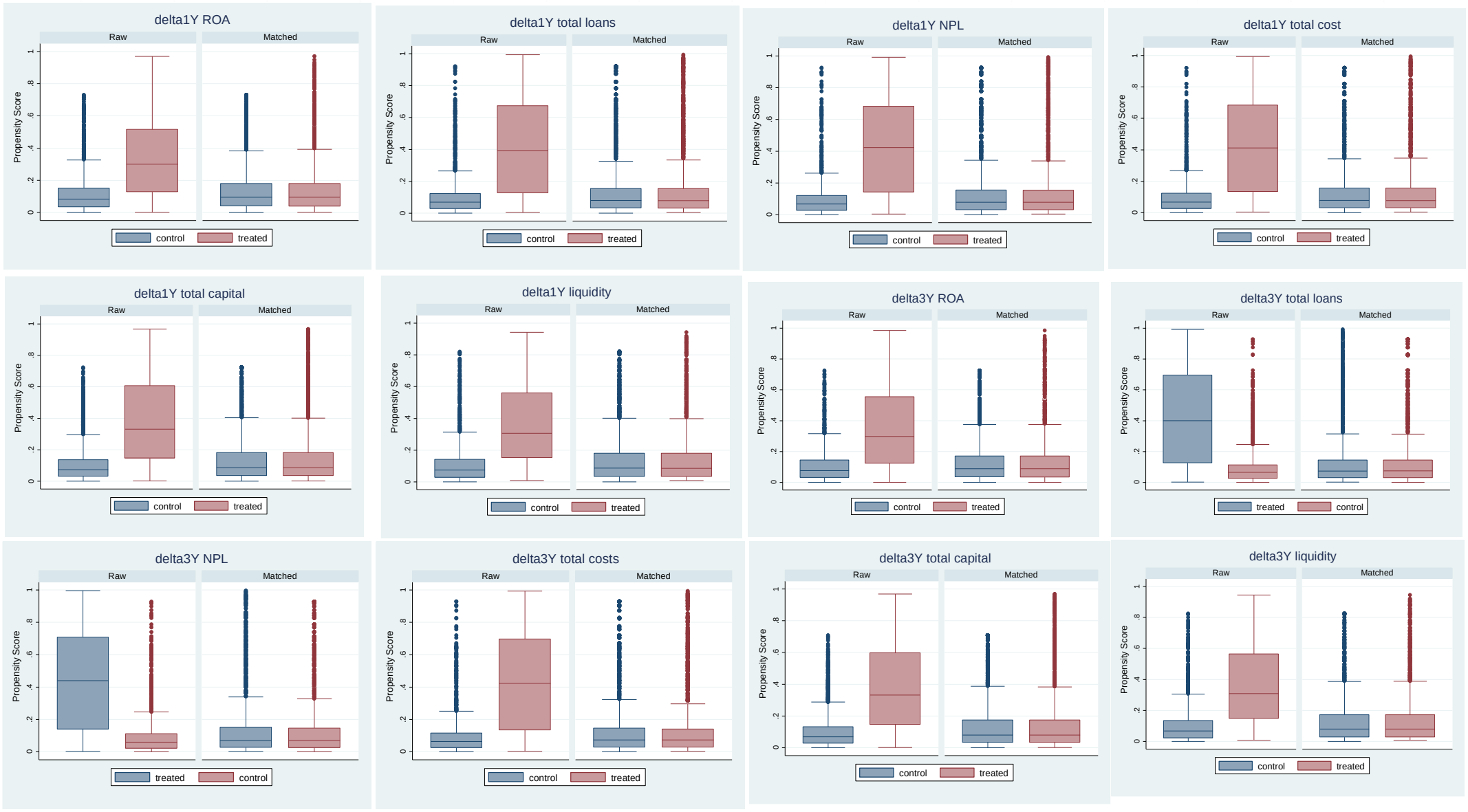
Acquire



Target



(Graph4) The balanced box chart comparing with raw data and matched data



(Table 1) basic statistics

Panel A) 1 year

Variable	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
	Treatmen Banks			Control Banks		
Δ1Y_loanloss provision ratio	494	−0.038	1.158	2,910	−0.146	6.785
Δ1Y_loans ratio	473	−0.010	0.077	2,846	−0.064	2.704
Δ1Y_total capital ratio	529	−0.004	0.049	3,377	−0.001	0.126
Δ1Y_deposit-loans ratio	522	−0.047	0.390	3,351	−0.260	11.724
Δ1Y_total cost ratio	545	0.776	29.375	3264	−0.612	52.741
Δ1Y_Total capital ratio	563	−0.002	0.061	4,255	−0.001	0.074
Δ1Y_Tier 1 capital ratio	402	−0.005	0.082	2,145	−0.001	0.103
Δ1Y_Liquidity ratio	548	0.004	0.055	3,973	0.002	0.069
Δ1Y_Total loans	527	0.140	0.244	3374	0.090	0.199
Δ1Y_Non-performing loan	472	0.075	0.543	2,839	0.012	0.625
Δ1Y_Loan loss provisions	494	0.086	0.428	2,875	0.028	0.432
Δ1Y_Total cost	543	0.133	0.315	3,264	0.066	0.291
Δ1Y_Total capital	560	0.158	0.336	4,217	0.109	0.322
Δ1Y_ROA	563	0.000	0.030	4,258	0.000	0.189
Δ1Y_Size	563	0.146	0.234	4,262	0.103	0.228
Δ1Y_Qratio	548	−0.017	0.260	3,781	−0.020	0.534
Δ1Y_GDP grwoth(a)	806	3.781	4.171	6,632	3.790	4.239
Δ1Y_GDP grwoth(t)	793	3.989	4.315	6632	3.790	4.239
ABHR12month	650	−0.086	0.417	−	−	−
ABHR36month	594	−0.031	0.927	−	−	−

Panel B) 3 year

Variable	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
	Treatmen Banks			Control Banks		
Δ3Y_loanloss provision ratio	455	−0.249	1.188	2,740	−0.237	5.701635
Δ3Y_loans ratio	430	−0.015	0.082	2,592	−0.161	3.732269
Δ3Y_total capital ratio	481	−0.006	0.068	3,100	−0.002	0.219027
Δ3Y_deposit-loans ratio	475	−0.083	0.490	3,077	−0.514	14.61434
Δ3Y_total cost ratio	503	0.2832	34.455	2,998	−1.841	50.02508
Δ3Y_Total capital ratio	521	−0.002	0.078	4,046	−7E-04	0.106191
Δ3Y_Tier 1 capital ratio	361	0.0027	0.089	1,803	−0.071	2.792076
Δ3Y_Liquidity ratio	506	0.0135	0.081	3,777	0.0049	0.100088
Δ3Y_Total loans	479	0.387	0.355	3,099	0.2889	0.4285
Δ3Y_Non-performing loan	430	0.2996	0.928	2,592	0.0223	0.983636
Δ3Y_Loan loss provisions	455	0.2404	0.636	2,717	0.102	0.713012
Δ3Y_Total cost	501	0.3387	0.606	2,998	0.2114	0.50672
Δ3Y_Total capital	520	0.4293	0.458	4,005	0.3458	0.509835
Δ3Y_ROA	521	−0.002	0.027	4,050	0.0012	0.205907
Δ3Y_Size	521	0.3906	0.338	4,054	0.3123	0.43795
Δ3Y_Qratio	509	−0.022	0.282	3,605	−0.02	0.946645
Δ3Y_GDP grwoth(a)	806	3.7806	4.171	6,632	3.79	4.239192
Δ3Y_GDP grwoth(t)	793	3.9891	4.315	6,632	3.79	4.239192
ABHR12month	113	−0.014	0.411	−	−	−
ABHR36month	103	0.2294	1.135	−	−	−

(Table 2) The number of max deals using analysis (the data having financial data, total assets)

Panel A) Treatment Banks (Entities)

Acquire banks

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Japan	4	14	8	14	7	5	15	12	15	10	7	4	3		118
India	2	5	2	4	16	11	6	6	5	5	6	3			71
Indonesia					1	3		1	4	3	1	2			15
Singapore		2			2		2	1	2						9
Sri Lanka		2								2					4
Thailand	3	9	12	8	11	13	7	5	6	8	7	3	2		94
Pakistan			1	1					2		1				5
Philippines	1		3	2	2	1	3	6	2	1		2	1		24
Malaysia	3	3	3	1	3	2	2	1	8	3			1		30
Korea; Republic (S. Korea)	1	7	1	4	6	3	2	3	4		3	2	3		39
Hong Kong		1	1		1	2	4	2	1	3					15
Taiwan	1	2	1	3	1	1	2	1		3					15
China	2				1			1	7	2	3	3	3	1	23
Vietnam									1		3		2		6
Australia	9	6	7	8	4	9	5	12	12	12	6	5			95
Total	26	51	39	45	55	50	48	51	69	52	37	24	15	1	563

Target Entities

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Japan	4	13	8	14	7	4	15	10	14	10	5	2	2		108
India	2	5	2	4	16	10	4	5	5	5	6	3			67
Indonesia	1	1			3	4	1	4	7	4	1	1			27
Singapore		2			1		2		1						6
Sri Lanka		2		1						2					5
Thailand	3	9	12	8	11	12	7	5	7	9	8	3	1		95
Pakistan			1						2		1				4
Philippines	3		3	2	2	1	3	6	2	1		2	1		26
Malaysia	2	3	3	1	3	2	2	3	1						20
Korea; Republic (S. Korea)	1	7	1	3	5	2	2	2	3		2	2	3		33
Hong Kong	2		1		1	1	2	1	5	3	1	1			18
Taiwan		2	1	3	1	2	2	1		4					16
China				1	2	3	3	1	4	2	1	2	3	1	23
Vietnam								1	4	1	4	1	3		14
Australia	7	3	6	8	3	8	3	8	9	8	4	5	1		73
New Zealand	1		1							2	1				5
U.S.		1						4	2		1	1	1		10
The others	0	3	0	0	0	1	2	0	3	1	2	1	0	0	13
Total	26	51	39	45	55	50	48	51	69	52	37	24	15	1	563

Panel B) Control Banks

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Japan	86	83	87	88	92	96	95	91	94	82	93	95	101	102	1285
India	11	26	27	31	31	33	38	37	39	38	40	42	41	43	477
Indonesia	11	24	23	24	17	19	27	24	26	24	26	33	42	43	363
Singapore	2	3	4	4	3	4	3	3	3	3	3	4	4	4	47
Sri Lanka	4	4	7	7	8	9	11	12	12	11	11	15	15	16	142
Thailand	9	10	7	9	8	6	6	6	7	4	9	9	10	12	112
Pakistan	8	9	7	10	13	15	17	20	19	23	19	20	21	21	222
Philippines	10	17	16	18	18	15	15	15	19	16	21	17	19	19	235
Malaysia	14	16	15	16	12	14	11	9	8	9	11	11	11	11	168
Korea; Republic (S. Korea)	19	18	23	25	24	25	27	28	27	28	25	21	19	20	329
Hong Kong	8	9	11	11	7	10	8	7	7	6	8	9	9	9	119
Taiwan	18	15	19	21	23	20	20	16	20	18	20	19	19	21	269
China	4	7	8	8	10	14	12	12	15	19	15	20	21	25	190
Bangladesh							5	7	9	11	25	27	27	27	138
Vietnam					1	1	3	5	5	5	5	7	5	8	45
Australia	3	8	8	10	9	8	7	7	7	7	9	8	12	14	117
New Zealand		1	1	1	1										4
Total	207	250	263	283	277	289	305	299	317	304	340	357	376	395	4262

Source:Thomson Reuter Data Base

(Table 3) Regressions of the difference between acquires and targets

Panel A) 1 year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
the other operational income ratio	−0.6699	−0.0481								
	(0.423)	(0.971)								
loanloss provision ratio			−0.0479	−0.1339						
			(0.283)	(0.163)						
non performing loan ratio					−1.0739	−5.6527 ***				
					(0.231)	(0.004)				
loans ratio							−0.1654	−0.2882		
							(0.319)	(0.132)		
deposit-loans ratio									−0.0049 ***	−0.0187 ***
									(0.000)	(0.010)
total cost ratio										
total capital ratio										
Tier1capital ratio										
liquidity ratio										
D cross border	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
D Year		Yes		Yes		Yes		Yes		Yes
D acquie country		Yes		Yes		Yes		Yes		Yes
D target country		Yes		Yes		Yes		Yes		Yes
Control variables(Q ratio, lnAsset)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
n	106	101	64	61	48	45	97	93	68	64
r2	0.1547	0.5133	0.0424	0.5549	0.0332	0.7921	0.1858	0.6005	0.0652	0.7115

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
the other operational income ratio								
loanloss provision ratio								
non performing loan ratio								
loans ratio								
deposit-loans ratio								
total cost ratio	0.0017 **	0.0015 *						
	(0.015)	(0.099)						
total capital ratio			−0.0342	0.0209				
			(0.602)	(0.750)				
Tier1capital ratio					0.4704	0.4866		
					(0.348)	(0.574)		
liquidity ratio							0.4352 ***	0.3075 ***
							(0.000)	(0.008)
D cross border	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
D Year		Yes		Yes		Yes		Yes
D acquie country		Yes		Yes		Yes		Yes
D target country		Yes		Yes		Yes		Yes
Control variables(Q ratio, lnAsset)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
n	199	193	200	194	43	41	200	194
r2	0.2039	0.5598	0.1912	0.5477	0.0554	0.476	0.2515	0.5674

The results of the 12month ABHR of acquires in each GDP weighted cross-sectional regression model. Heteroskedasticity-corrected P value are in parenthesis. The symbols ***, **, and * denote statistical significant at the 1%, 5% and 10% level, respectively. The independent variables are the difference between acquires and targets of strategic factors after one year of acquisitions. .

Panel B) 3 year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
the other operational income ratio	−0.1338	1.4107								
	(0.876)	(0.228)								
loanloss provision ratio			0.055	−0.1457						
			(0.519)	(0.412)						
non performing loan ratio					−0.4012	−6.768 **				
					(0.694)	(0.036)				
loans ratio							0.1484	−0.1054		
							(0.579)	(0.732)		
deposit-loans ratio									−0.0162 ***	−0.141
									(0.000)	(0.851)
total cost ratio										
total capital ratio										
Tier1capital ratio										
liquidity ratio										
D cross border	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
D Year		Yes		Yes		Yes		Yes		Yes
D acquie country		Yes		Yes		Yes		Yes		Yes
D target country		Yes		Yes		Yes		Yes		Yes
Control variables(Q ratio, lnAsset)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
n	96	91	59	56	45	42	89	85	63	59
r2	0.3178	0.6804	0.1151	0.7334	0.1693	0.9202	0.3011	0.7029	0.2444	0.7395

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
the other operational income ratio								
loanloss provision ratio								
non performing loan ratio								
loans ratio								
deposit-loans ratio								
total cost ratio	0.0002	0.0007						
	(0.895)	(0.700)						
total capital ratio			0.1586	0.2558 **				
			(0.292)	(0.034)				
Tier1capital ratio					1.6809 ***	3.0862 **		
					(0.003)	(0.026)		
liquidity ratio							0.9762 ***	0.6055 **
							(0.001)	(0.023)
D cross border	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
D Year		Yes		Yes		Yes		Yes
D acquie country		Yes		Yes		Yes		Yes
D target country		Yes		Yes		Yes		Yes
Control variables(Q ratio, lnAsset)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
n	183	178	183	178	38	36	183	178
r2	0.1733	0.5917	0.1769	0.5987	0.2118	0.7946	0.2368	0.6064

The results of the 12month ABHR of acquires in each GDP weighted cross-sectional regression model. Heteroskedasticity-corrected P value are in parenthesis. The symbols ***, **, and * denote statistical significant at the 1%, 5% and 10% level, respectively. The independent variables are the difference between acquires and targets of strategic factors after three year of acquisitions.

(Table 4) The DID results for acquirers

Panel A) after 1 year

	Dependent variable (Delta for 1 years)	Δ ROA	Δ Qratio	Δ the other operational income ratio	Δ non performing loan ratio	Δ tier 1 capital ratio	Δ liquidity ratio	Δ size	Δ total loans	Δ nonperforming loans	Δ total costs	Δ total capital
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	regression	0.0006	0.0219	−0.0004	0.0395	0.0008	0.0056	0.0297 *	0.0346 *	0.0706	0.0357 *	0.0303
		(0.897)	(0.117)	(0.581)	(0.407)	(0.833)	(0.244)	(0.058)	(0.065)	(0.251)	(0.100)	(0.147)
Simple regression	n	4815	4323	4025	3315	2545	4516	4820	3897	3307	3802	4771
	r2	0.0036	0.0166	0.01	0.0079	0.0079	0.0281	0.1425	0.2086	0.0437	0.1807	0.1047
		(12)	(13)							(14)	(15)	(16)
Legal law	same	0.003	0.0392 **							0.0601	0.0084	0.0089
		(0.539)	(0.024)							(0.330)	(0.638)	(0.607)
	English law origin	0.0081	0.1419 **							0.8162	−0.0692	0.0677
		(0.721)	(0.038)							(0.196)	(0.505)	(0.423)
	French law origin	0.0056	−0.0619							−0.445	0.0672	0.2339 ***
		(0.793)	(0.614)							(0.434)	(0.651)	(0.008)
	Others law origin	−0.0216	0.0997							−0.4793	0.3341 ***	−0.0713
		(0.223)	(0.507)							(0.444)	(0.001)	(0.378)
		(17)	(18)						(19)	(20)	(21)	(22)
EFW	same	0.003	0.0403 **						0.0025	0.068	0.0091	0.01
		(0.542)	(0.021)						(0.751)	(0.268)	(0.610)	(0.560)
	Under Mean	−0.0083	−0.1161						−0.0094	−0.1517	0.4377 **	0.2066 *
		(0.771)	(0.390)						(0.811)	(0.699)	(0.014)	(0.058)
	Upper Mean	0.015	0.1898						−0.0053	−0.1742	−0.2158	−0.1796
		(0.616)	(0.165)						(0.857)	(0.587)	(0.177)	(0.158)
		(23)	(24)	(25)					(26)	(27)	(28)	(29)
Scope regulation	same	0.0029	0.0394 **	0.0002					0.0029	0.0697	0.009	0.0111
		(0.545)	(0.023)	(0.836)					(0.710)	(0.257)	(0.613)	(0.519)
	Under Mean	0.0192	0.2407 *	−0.0038					−0.0247	−0.4388	−0.1527	−0.2154 *
		(0.628)	(0.085)	(0.262)					(0.403)	(0.257)	(0.371)	(0.066)
	Upper Mean	−0.0023	−0.0367	0.0061					−0.03	−0.3	0.4396 ***	0.1487
		(0.904)	(0.780)	(0.104)					(0.389)	(0.451)	(0.004)	(0.247)
		(30)	(31)						(32)	(33)	(34)	(35)
Entry regulation	same	0.003	0.0403 **						0.0024	0.0665	0.011	0.0106
		(0.539)	(0.021)						(0.755)	(0.276)	(0.535)	(0.534)
	Under Mean	0.0184	0.1914						−0.0197	−0.4047	−0.2052	−0.2243 *
		(0.603)	(0.116)						(0.525)	(0.306)	(0.240)	(0.059)
	Upper Mean	−0.0026	−0.1106						−0.0251	−0.2549	0.3744 **	0.1254
		(0.914)	(0.506)						(0.476)	(0.466)	(0.024)	(0.349)
		(36)	(37)						(38)	(39)	(40)	(41)
Self-monitoring regulation	same	0.0031	0.0398 **						0.0025	0.061	0.0109	0.0103
		(0.525)	(0.022)						(0.747)	(0.319)	(0.540)	(0.546)
	Under Mean	0.0087	−0.1762						0.0472	−0.0682	0.1583	0.2449 **
		(0.727)	(0.260)						(0.182)	(0.867)	(0.376)	(0.038)
	Upper Mean	0.0183	0.1779						0.0094	−0.1993	−0.2835 *	−0.1726
		(0.551)	(0.173)						(0.711)	(0.450)	(0.080)	(0.155)

The results of the 1year DID of acquires with some control variables. Heteroskedasticity-corrected P value are in parenthesis. The symbols ***, **, and * denote statistical significant at the 1%, 5% and 10% level, respectively. The independent variables are the difference between after one year (t=1) acquire's values and pre-effective year (t=0) values of strategic factors. The treatment banks are determined as acquired banks and the contronl banks are all asian banks without acquitions. In independent varibales, there are tratment dummy variables, treatment banks are 1, the others are 0.

Panel B) after 3 year

	Dependent variable (Delta for 3 years)	Δ ROA	Δ Qratio	Δ the other operational income ratio	Δ non performing loan ratio	Δ tier 1 capital ratio	Δ liquidity ratio	Δ size	Δ total loans	Δ nonperforming loans	Δ total costs	Δ total capital
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Simple regression	regression	−0.0054	−0.007	0.0006	0.1783 **	0.0926	0.0156 *	0.039	0.0755 **	0.2861 ***	0.0512	0.0809 *
		(0.443)	(0.760)	(0.645)	(0.015)	(0.313)	(0.083)	(0.239)	(0.032)	(0.003)	(0.342)	(0.074)
	n	4566	4109	3703	3019	2162	4278	4570	3575	3019	3494	4520
	r2	0.0045	0.0101	0.013	0.014	0.0104	0.0834	0.1721	0.2548	0.1097	0.2862	0.1581
		(12)	(13)							(14)	(15)	(16)
Legal law	same	−0.0046	0.0227							0.2509 ***	0.0166	0.0542 *
		(0.439)	(0.423)							(0.008)	(0.657)	(0.099)
	English law origin	0.0016	0.0925							−0.5754	−0.2277	0.2943 ***
		(0.919)	(0.442)							(0.455)	(0.388)	(0.001)
	French law origin	0.0137	−0.2815							0.2398	0.2631	0.1371
		(0.480)	(0.119)							(0.792)	(0.311)	(0.310)
	Others law origin	−0.0184	−0.0343							0.6813	0.4213	−0.1918
		(0.461)	(0.895)							(0.452)	(0.167)	(0.165)
		(17)	(18)						(19)	(20)	(21)	(22)
EFW	same	−0.0046	0.021						−0.0049	0.2602 ***	0.0005	0.055 *
		(0.446)	(0.457)						(0.688)	(0.006)	(0.990)	(0.091)
	Under Mean	0.0068	0.04						0.0974 *	−1.0187 *	−0.3909	0.2636 *
		(0.532)	(0.820)						(0.087)	(0.081)	(0.348)	(0.074)
	Upper Mean	−0.0087	−0.2166 **						−0.0781 *	0.5241	0.3009	−0.001
		(0.685)	(0.013)						(0.095)	(0.365)	(0.238)	(0.994)
		(23)	(24)	(25)					(26)	(27)	(28)	(29)
Scope regulation	same	−0.0046	0.0201	0.0012					−0.0046	0.256 ***	0.0007	0.0561 *
		(0.448)	(0.474)	(0.384)					(0.704)	(0.006)	(0.985)	(0.085)
	Under Mean	−0.0066	−0.0833	−0.0092					0.028	1.4834 *	1.0477 *	−0.3235 **
		(0.644)	(0.707)	(0.251)					(0.721)	(0.073)	(0.055)	(0.047)
	Upper Mean	0.0128	0.1691	0.0198 **					−0.0486	−1.2744	−1.2293 *	0.4334 **
		(0.347)	(0.400)	(0.041)					(0.602)	(0.143)	(0.094)	(0.020)
		(30)	(31)						(32)	(33)	(34)	(35)
Entry regulation	same	−0.0046	0.0204						−0.0046	0.2557 ***	0.0013	0.0556 *
		(0.450)	(0.469)						(0.702)	(0.007)	(0.973)	(0.088)
	Under Mean	−0.0098	−0.1701						0.0292	0.9677	0.9977 *	−0.2782 *
		(0.516)	(0.421)						(0.719)	(0.239)	(0.066)	(0.089)
	Upper Mean	0.0087	0.06						−0.045	−2.1032 ***	−1.2781 *	0.4848 ***
		(0.548)	(0.777)						(0.616)	(0.010)	(0.082)	(0.010)
		(36)	(37)						(38)	(39)	(40)	(41)
Self-monitoring regulation	same	−0.0045	0.0201						−0.0047	0.2542 ***	−0.0005	0.0561 *
		(0.454)	(0.474)						(0.696)	(0.007)	(0.989)	(0.085)
	Under Mean	0.0002	0.2184						0.0167	0.7852	−0.0417	0.2541 *
		(0.995)	(0.277)						(0.764)	(0.192)	(0.810)	(0.071)
	Upper Mean	−0.0097	−0.1314						0.012	0.2226	0.2509	−0.1062
		(0.692)	(0.418)						(0.829)	(0.725)	(0.389)	(0.396)

The results of the 3year DID of acquires with some control variables. Heteroskedasticity-corrected P value are in parenthesis. The symbols ***, **, and * denote statistical significant at the 1%, 5% and 10% level, respectively. The independent variables are the difference between three one year (t=3) acquire's values and pre-effective year (t=0) values of strategic factors. The treatment banks are determined as acquired banks and the contronl banks are all asian banks without acquitions. In independent varibales, there are tratment dummy variables, treatment banks are 1, the others are 0.

(Table 5) The ATE calculating from PSM for acquirers

Outcome variable	Δ ROA	Δ total loans	Δ nonperforming loans	Δ total costs	Δ total capital	Δ liquidity
	(1)	(2)	(3)	(4)	(5)	(6)
ATE from PSM: 1 year	−0.0085	0.0568 ***	0.0673	0.0533 **	0.0910 *	−0.0140 **
	(0.102)	(0.010)	(0.263)	(0.033)	(0.093)	(0.013)
n	2963	2888	2519	2564	2960	2564
	(7)	(8)	(9)	(10)	(11)	(12)
ATE from PSM: 3 year	−0.0132 *	0.0891 ***	0.2015 **	0.1680 ***	0.1497 **	0.0133 *
	(0.073)	(0.009)	(0.043)	(0.000)	(0.025)	(0.088)
n	2855	2758	2399	2468	2817	2474

The results of the 1year and 3 year ATE from PSM for acquires with some control variables. P value are in parenthesis. The symbols ***, **, and * denote statistical significant at the 1%, 5% and 10% level, respectively. The outcome variables are the difference between after one/three year (t=1 or t=3) acquire's values and pre-effective year (t=0) values of strategic factors. The treatment banks are determined as acquired banks and the contronl banks are all asian banks without acquitions.

(Table 6) The balanced check by variance ratio

Δ1Y ROA	Raw	Matched
size	1.328	1.308
creditrisk	0.001	0.005
loandeporatio	0.008	0.055
gdpgwoth_a	0.862	0.770
gdpgwoth_t	0.872	0.804
bkact_inx_t	0.916	0.979
privatemoni_i~t	0.957	0.975
EFW_t	0.865	0.648
legal_e_t	0.469	0.977
Year Dummies		

Δ1Y total loans	Raw	Matched
size	1.4381	1.2441
creditrisk	0.0006	0.0005
loandeporatio	1.0378	0.5912
gdpgwoth_a	0.8538	0.7670
gdpgwoth_t	0.8531	0.6385
bkact_inx_t	0.9050	0.8058
compfor_inx_t	0.4736	0.3964
privatemoni_i~t	0.9856	0.9174
EFW_a	0.7754	0.6944
EFW_t	0.7096	0.7096
legal_e_a	1.0988	0.9049
legal_e_t	1.0770	0.9094
Year Dummies		

Δ1Y NPL	Raw	Matched
size	1.4768	1.1004
costratio	0.5022	0.5370
capitalratio	1.1900	0.7116
loandeporatio	0.0074	0.0150
gdpgwoth_a	0.8585	0.8578
gdpgwoth_t	0.8544	0.7051
bkact_inx_t	0.9069	0.7083
compfor_inx_t	0.4666	0.2977
privatemoni_i~t	0.9915	0.9220
EFW_a	0.7813	0.6551
EFW_t	0.8418	0.6728
legal_e_t	1.0836	0.8882
Year Dummies		

Δ1Y total costs	Raw	Matched
size	1.4381	1.2441
creditrisk	0.0006	0.0005
capitalratio	1.0378	0.5912
gdpgwoth_a	0.8538	0.7670
gdpgwoth_t	0.8531	0.6385
bkact_inx_t	0.9050	0.8058
compfor_inx_t	0.4736	0.3964
privatemoni_i~t	0.9856	0.9174
EFW_a	0.7754	0.6944
EFW_t	0.8376	0.7096
legal_e_a	1.0988	0.9049
legal_e_t	1.0770	0.9094
Year Dummies		

Δ1Y total capital	Raw	Matched
size	1.0737	1.0870
creditrisk	0.0353	0.0564
loandeporatio	0.0008	0.0068
gdpgwoth_a	0.9195	0.6908
gdpgwoth_t	0.9348	0.7311
privatemoni_i~t	1.0195	0.9681
EFW_t	0.8749	0.5791
legal_e_a	1.1929	1.0411
legal_e_t	1.1812	1.0308
Year Dummies		

Δ1Y liquidity	Raw	Matched
size	1.4350	1.3951
costratio	0.4730	0.9440
creditrisk	0.0006	0.0009
capitalratio	1.0637	0.7960
loandeporatio	0.0075	0.0162
gdpgwoth_a	0.8528	0.7758
gdpgwoth_t	0.8522	0.8009
compfor_inx_t	0.4716	1.0396
privatemoni_i~t	0.9852	0.8938
EFW_t	0.8344	0.6150
legal_e_t	1.0755	0.8917
Year Dummies		

Δ3Y ROA	Raw	Matched
size	1.3275	1.3083
creditrisk	0.0008	0.0046
loandeporatio	0.0080	0.0546
gdpgwoth_a	0.8625	0.7703
gdpgwoth_t	0.8718	0.8043
bkact_inx_t	0.9156	0.9786
privatemoni_i~t	0.9567	0.9747
EFW_t	0.8653	0.6478
legal_e_t	1.0313	0.9770
Year Dummies		

Δ3Y total loans	Raw	Matched
size	1.2882	1.0596
costratio	0.5050	1.4042
capitalratio	1.4311	0.8694
gdpgwoth_a	0.8744	0.8461
gdpgwoth_t	0.8752	0.8551
bkact_inx_t	0.9292	0.8157
compfor_inx_t	0.4636	0.5854
privatemoni_i~t	0.9985	0.8840
EFW_a	0.8123	0.7228
EFW_t	0.8846	0.7643
legal_e_a	1.0695	0.8928
legal_e_t	0.9085	0.9144
Year Dummies		

Δ3Y NPL	Raw	Matched
size	1.4760	1.2755
costratio	0.5339	0.7041
capitalratio	1.2141	0.8211
loandeporatio	0.0074	0.0159
gdpgwoth_a	0.8609	0.8647
gdpgwoth_t	0.8644	0.6436
bkact_inx_t	0.9077	0.7189
compfor_inx_t	0.4888	0.3744
privatemoni_i~t	0.9918	0.8439
EFW_a	0.7600	0.5904
EFW_t	0.8293	0.6718
legal_e_t	1.0724	0.8531
legal_o_t	0.9095	0.8423
Year Dummies		

Δ3Y total costs	Raw	Matched
size	1.4347	1.3054
creditrisk	0.0006	0.0006
capitalratio	1.0863	0.8149
gdpgwoth_a	0.8536	0.9215
gdpgwoth_t	0.8490	0.6676
bkact_inx_t	0.9493	0.7558
compfor_inx_t	0.4830	0.2731
privatemoni_i~t	0.9886	0.9368
EFW_a	0.7921	0.6004
EFW_t	0.8507	0.6876
legal_e_a	1.0904	0.9241
legal_e_t	1.0648	0.9452
Year Dummies		

Δ3Y total capital	Raw	Matched
size	1.0778	1.1971
creditrisk	0.0355	0.0547
loandeporatio	0.0008	0.0053
gdpgwoth_a	0.9260	0.7853
gdpgwoth_t	0.9401	0.8002
privatemoni_i~t	1.0287	0.9957
EFW_t	0.8945	0.6520
legal_e_a	1.1977	1.0289
legal_e_t	1.1838	1.0260
Year Dummies		

Δ3Y liquidity	Raw	Matched
size	1.4273	1.2182
costratio	0.5189	1.4738
creditrisk	0.0006	0.0006
capitalratio	1.1014	0.6605
loandeporatio	0.0076	0.0108
gdpgwoth_a	0.8570	0.9065
gdpgwoth_t	0.8523	0.8061
compfor_inx_t	0.4811	0.5907
privatemoni_i~t	0.9887	0.9627
EFW_t	0.8505	0.5871
legal_e_t	1.0662	0.9242
Year Dummies		

The valance ratio is standardized different covariate's variance of treatments over controls.

<Appendix 1>

Asia-Pacific Data

Asia-Pacific countries	Australia, Bangladesh, Bhutan, Brunei, Cambodia, China, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Hong Kong, India, Indonesia, Kiribati, Laos, Macau, Malaysia, Maldives, Marshall Islands, Mongolia, Myanmar, N. Mariana Islands, Japan, Nauru, Nepal, New Caledonia, New Zealand, Norfolk Islands, North Korea, Pakistan, Palau, Papua New Guinea, Philippines, Singapore, Solomon Islands, Samoa (US), South Korea, Sri Lanka, Taiwan, Timor-Leste, Thailand, Tokelau, Tonga, Tuvalu, Vanuatu, Vietnam, Wallis/Futuna Island, Western Samoa

<Appendix 2> The strategy variables for Asian banks

Strategy	Variables in Altunbas and Marques (2008)	Proxy variables used in this paper
1. Earning diversification strategy	(1) Diversity of earnings Other operational revenue／total assets (2) Off-balance sheet activity off-balance sheet items／total assets	The other operational income ratio = other operational revenue／total assets
2. Risk strategy	(1) Credit risk Loan loss provisions／net interest revenue (2) Loan ratio Loans／total assets (3) Deposit activity Customer loans／customer deposits	Provisions ratio (credit risk1) = loan loss provisions／net interest revenue Non-performing loan ratio (credit risk2) = non-performing loans／total loans Loan ratio = total loans／total assets Deposit-loans ratio = total loans／total deposits
3. Cost controlling strategy	Total costs／income	Total cost ratio = total costs／operating income
4. Capital adequacy level strategy	Total capital／total assets	Total capital ratio (Capital ratio 1) = total capital／total asset Capital ratio 2 = tier 1 capital／risk asset
5. Liquidity risk strategy	Liquidity asset／total assets	Liquidity ratio = Liquidity asset／total assets
Controls	ROA	ROA= net income/total asset
	Size	size= ln(asset)
	Q ratio	Q ratio=market value of capital/book value of capital

*1. According to Minton and Scharand (1999), companies with highly volatile cash flows tend to invest less and engage in fewer R&D and advertising activities. We employ the standard error of total cash flows (insurance cash flow + investment cash flow + financial cash flow) as a proxy for R&D.

<Appendix 3> Definitions of Barth(2004) Regulatory Variables

1. Bank activity regulatory variables

Variable	Definition	Source and quantification	World Bank guide questions
(a) Securities activities	The extent to which banks may engage in underwriting, brokering and dealing in securities, and all aspects of the mutual fund industry.	OCC and WBG 4.1 (higher values, more restrictive) Unrestricted =1: full range of activities can be conducted directly in the bank; Permitted =2: full range of activities can be conducted, but some or all must be conducted in subsidiaries; Restricted =3: less than full range of activities can be conducted in the bank or subsidiaries; and Prohibited =4: the activity cannot be conducted in either the bank or subsidiaries.	4.1 What is the level of regulatory restrictiveness for bank participation in securities activities (the ability of banks to engage in the business of securities underwriting, brokering, dealing, and all aspects of the mutual fund industry)?
(b) Insurance activities	The extent to which banks may engage in insurance underwriting and selling.	OCC and WBG 4.2 (higher values, more restrictive) Unrestricted =1: full range of activities can be conducted directly in the bank; Permitted =2: full range of activities can be conducted, but some or all must be conducted in subsidiaries; Restricted =3: less than full range of activities can be conducted in the bank or subsidiaries; and Prohibited =4: the activity cannot be conducted in either the bank or subsidiaries.	4.2 What is the level of regulatory restrictiveness for bank participation in insurance activities (the ability of banks to engage in insurance underwriting and selling)?
(c) Real estate activities	The extent to which banks may engage in real estate investment, development and management.	OCC and WBG 4.3 (higher values, more restrictive) Unrestricted =1: full range of activities can be conducted directly in the bank; Permitted =2: full range of activities can be conducted, but some or all must be conducted in subsidiaries; Restricted =3: less than full range of activities can be conducted in the bank or subsidiaries; and Prohibited =4: the activity cannot be conducted in either the bank or subsidiaries.	4.3 What is the level of regulatory restrictiveness for bank participation in real estate activities (the ability of banks to engage in real estate investment, development, and management)?

3. Competition regulatory variables

Variable	Definition	Source and quantification	World Bank guide questions
(a) Limitations on foreign bank entry/ownership	Whether foreign banks may own domestic banks and whether foreign banks may enter a country's banking industry.	OCC Yes =1; No =0	
(b) Entry into banking requirements	Whether various types of legal submissions are required to obtain a banking license.	WBG 1.8.1−1.8.8 Yes =1; No =0 Higher values indicate greater stringency.	1.8 Which of the following are legally required to be submitted before issuance of the banking license? 1.8.1 Draft by-laws? Yes/No 1.8.2 Intended organization chart? Yes/No 1.8.3 Financial projections for first three years? Yes/No 1.8.4 Financial information on main potential shareholders? Yes/No 1.8.5 Background/experience of future directors? Yes/No 1.8.6 Background/experience of future managers? Yes/No 1.8.7 Sources of funds to be disbursed in the capitalization of new banks? Yes/No 1.8.8 Market differentiation intended for the new bank? Yes/No
(c) Fraction of entry applications denied	The degree to which applications to enter banking are denied.	WBG (1.9.1 +1.10.1)/(1.9 +1.10) (pure number)	1.9 In the past five years, how many applications for commercial banking licenses have been received from domestic entities? 1.9.1 How many of those applications have been denied? 1.10 In the past five years, how many applications for commercial banking licenses have been received from foreign entities? 1.10.1 How many of those applications have been denied?

(1) Domestic denials	The degree to which foreign applications to enter banking are denied.	WBG 1.9.1/1.9 (pure number)	1.9 In the past five years, how many applications for commercial banking licenses have been received from domestic entities? 1.9.1 How many of those applications have been denied?
(2) Foreign denials	The degree to which domestic applications to enter banking are denied.	WBG 1.10.1/1.10 (pure number)	1.10 In the past five years, how many applications for commercial banking licenses have been received from foreign entities? 1.10.1 How many of those applications have been denied?

7. Private monitoring variables

Variable	Definition	Source and quantification	World Bank guide questions
(a) Certified audit required	Whether there is a compulsory external audit by a licensed or certified auditor.	WBG 5.1 *5.3(Yes =1; No =0)	5.1 Is an external audit a compulsory obligation for banks? Yes/No 5.3 Are auditors licensed or certified? Yes/No
(b) Percent of 10 biggest banks rated internationally	The percentage of the top ten banks that are rated by international credit rating agencies.	WBG 10.7.1 (percent)	10.7.1 What percent of the top ten banks are rated by international credit rating agencies (e.g., Moody's, Standard and Poor)?
(c) No explicit deposit insurance scheme	Whether there is an explicit deposit insurance scheme and, if not, whether depositors were fully compensated the last time a bank failed.	WBG 1 if 8.1 = 0 and 8.4 = 0; 0 otherwise Yes =1; No =0 Higher values indicate more private supervision	8.1 Is there an explicit deposit insurance protection system? Yes/No 8.4 Were depositors wholly compensated (to the extent of legal protection) the last time a bank failed? Yes/No
(d) Bank accounting	Whether the income statement includes accrued or unpaid interest or principal on nonperforming loans and whether banks are required to produce consolidated financial statements.	WBG (10.1.1 −1)*(−1)+10.3 +10.6 Yes =1; No =0 Sum of assigned values, with higher values indicating more informative bank accounts.	10.1.1 Does accrued, though unpaid interest/principal enter the income statement while the loan is still non-performing? 10.3 Are financial institutions required to produce consolidated accounts covering all bank and any non-bank financial subsidiaries? 10.6 Are bank directors legally liable if information disclosed is erroneous or misleading?
(e) Private monitoring index	Whether (a) occurs, (b) equals 100%, (c) occurs, (d) occurs, off-balance sheet items are disclosed to the public, banks must disclose risk management procedures to the public, and subordinated debt is allowable (required) as a part of regulatory capital.	WBG: (a) +[1 if (b) equals 100%; 0 otherwise] +(c) +(d) +10.4.1 +10.5 +3.5 Yes =1; No =0 Higher values indicating more private supervision.	10.4.1 Are off-balance sheet items disclosed to the public? Yes/No 10.5 Must banks disclose their risk management procedures to the public? Yes/No 3.5 Is subordinated debt allowable (required) as part of capital? Yes/No