# Tender Offer Strategies in Investment Banking

-A Case of China Development Industrial Bank (CDIB) Tender Offering for Grand Cathay Securities Corporation (GCSC)

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**Abstract**

In this article, we focused on the case that China Development Industrial Bank (CDIB) bid for Grand Cathay Securities Corporation (GCSC) by means of the tender offer in 2001. We examined the effect of important events on stock returns of both CDIB and GCSC and found. First, because of variance effect, arbitrage chance, and uncertainty problems of CDIB, tender offer announcement had a positive effect on GCSC's stock returns but a negative one on CDIB's stock returns. Second, because of signaling effect, expectation of control right concentration, and increasing difficulty of taking control for CDIB, management resistance announcement had a positive effect on GCSC's stock returns but a negative one on CDIB's stock returns. Third, because of arbitrage chance, expectations of management resistance, and uncertainty problems of CDIB, tender offer approval by SFC had a positive effect on GCSC's stock returns but a negative one on CDIB's stock returns. Fourth, because of disappointment to the result, tender offer failure had a negative effect on GCSC's stock returns and a negative one on CDIB's stock returns. Finally, because of positive expectations of acquisition, less uncertainty, and less anti-resistance cost to be spent, subsequent success of CDIB's taking control of GCSC one year later had a positive effect on GCSC's stock returns and a positive one on CDIB's stock returns, too.

***JEL classification:*** **G01; G14; G21**

**Keywords: Tender Offer; Strategies; Event Study; Abnormal Returns; Cumulative Abnormal Returns**

## 1. Introduction

In the last two decades, the tender offer was very popular in U.S. There were also many literatures about it (e.g. Louis, et al., 2010; Rustige and Grote, 2011). From the traditional issues including rationales of mergers and acquisitions (M&A) and their effect on corporation securities value to the studies which specifically focused on characteristics of the hostile takeover target, bid premium determinants in a tender offer and the effect of the tender offer on stock returns of both target and acquirer. However, there were much little studies on the tender offer in Taiwan. There may be some reasons for it. First, because of incomplete regulations of tender offer, insufficient incentives and shortage of human resources of M&A in the past, little companies adopted the tender offer as a way to take control of the target companies. Second, because of little companies, which adopted the tender offer, there were few samples that researchers could study. Therefore, in Taiwan, we lack complete and sufficient studies on the tender offer, especially in the field of finance.

However, with the development of M&A in Taiwan, the requirements of studies on the tender offer become more and more important. Especially in the financial industry, with the need of competition after entering WTO, the development of laws concerned (such as ”Law Governing Merger in Financial Institutions” and ”Financial Holding Company Laws”) and the encouraging attitude towards financial reform of the R.O.C. Government, to establish a complete legal system of the tender offer is essential. Additionally, it is also essential to study why companies should adopt the tender offer (how to give them incentives), how they can implement the process (how to decrease the difficulties to implement) and what effects a tender offer will cause.

Therefore, we choose the case that China Development Industrial Bank (CDIB) bid for Grand Cathay Securities Corporation (GCSC) by means of a tender offer in 2001(the first case of tender offer in Taiwan’s financial industry and the amount of

this bidding reached about NT$2.8 billion), and we determine our purposes in this article as follows. First, analyze why CDIB desired to bid for a securities corporation. Second, analyze why GCSC became a hostile takeover target. Third, analyze why CDIB adopted the tender offer as a way to bid for GCSC. Fourth, describe the process of tender offer CDIB implemented and the result of this case. Fifth, examine the effect of a tender offer on stockholders' wealth of both CDIB and GCSC.

The rest of this paper is organized as follows. In Section 2, we introduce the data and explain the techniques used to measure the effect of a tender offer on stock returns of CDIB and GCSC. In Section 3, there are three topics we analyze. First, we describe the process and result of this case and the after development of relationship between CDIB and GCSC in 2002. Second, we analyze the strategic decision of CDIB on why it desired to acquire a securities corporation, why the target was GCSC and why CDIB chose tender offer as a tool to take control of GCSC. Third, we examine the effects of important events in the process of this case on the stock returns of both CDIB and GCSC. In Section 4, we summarize our findings and suggest some directions for future research.

## 2. Data and Methodology

### 2.1 Data

Our event days are defined by means of identifying the first announcement day of every event reported in the *Economic Daily News* from March 28, 2001 through April 8, 2002. The two firms in the case of tender offer we study are acquirer, China Development Industrial Bank (CDIB) and target firm, Grand Cathay Securities Corporation (GCSC). We acquire the daily stock closing quotes, dividends, and daily adjusted prices of CDIB listed on Taiwan Stock Exchange (TSE) market and those of GCSC listed on Over-The-Counter (OTC) Securities Exchange market from Taiwan

Economic Journal (TEJ) Data Bank during the period from February 1, 2000 to April 10, 2002. The daily returns on the market portfolio are defined as the returns on TSE Weighted Index and OTC Securities Exchange Index at the ending of each day. We also acquire daily closing quotes of TSE Weighted Index and those of OTC Securities Exchange Index from TEJ Data Bank during the period starting on February 1, 2000 and ending on April 10, 2002.

2.2 Methodology

1. Defining Event Days and Periods

We define five events including tender offer announcement, management resistance, tender offer approval by SFC, tender offer failure and subsequent success of taking control to test the effects of these events on both stock returns of China Development Industrial Bank (CDIB) and those of Grand Cathay Securities Corporation (GCSC). And we define the event periods based on not calendar days but transaction days, for example, a day –2 relative to event day does not mean that two calendar days before the event day but two transaction days before it.

(1) The Event of Tender Offer Announcement

Because CDIB generated information to stock market that it would purchase shares of GCSC through a tender offer on March 28, 2001, we define that March 28, 2001 is the event day to test the tender offer announcement effect on both stock returns of acquirer and that of target firm. And then we define the event day as”0” and the period starting on day –2 and ending at day +2 relative to event day as event period of tender offer announcement effect.

(2) The Event of Management Resistance

a. Management Resistance Announcement Day

Because the board of GCSC made an announcement that it would resist the offer by CDIB on April 2, 2001, we define that April 2, 2001 is the event day to test management resistance announcement effect on both stock returns of acquirer and that of target firm. And then we define the event day as”0”and the period starting on day -1 and ending on day +1 relative to event day as event period of management resistance announcement effect.

b. Announcement Day When The Seats of Board of Directors are Reduced

Because the board of GCSC approved of reducing the seats of board of directors from 11 to 9 on April 30, 2001, we define that April 30, 2001 is the event day to test anti-takeover measures effect on both stock returns of acquirer and that of target firm. And then we define the event day as”0”and the period starting on day -1 and ending on day +1 relative to event day as event period of anti-takeover measures effect.

(3)The Event of Tender Offer Approval

This case of tender offer is approved by SFC on April 19, 2001, we define April 19, 2001 is the event day to test tender offer approval effect on both stock returns of acquirer and that of target firm. And then we define the event day as”0”and the period starting at day -1 and ending at day +1 relative to event day as event period of tender offer approval effect.

(4)The Event of Tender Offer Failure

On May 25, 2001, in the stockholder’s meeting of GCSC, incumbents acquired 5 directors in the board, which contained 11 directors, but CDIB only acquired 2 directors. Therefore, we define May 25, 2001 is the event day to test tender offer

failure effect on both stock returns of acquirer and that of target firm. And then we define the event day as”0”and the period starting at day -1 and ending at day +1 relative to event day as event period of tender offer failure effect.

(5)The Event of Subsequent Success of Taking Control

Although CDIB lost in the contest of GCSC’s control in the case of the tender offer, its dream for acquiring GCSC’s control came true on April 8, 2002. On this day, CDIB announced that it had entered into an agreement with GCSC’s major stockholders (Kuomintang (KMT)-related investment corporations) to purchase about 0.53 billion shares of GCSC from them. We define that April 8, 2002 is the event day to test the success of taking control effect on both stock returns of acquirer and that of target firm. And then we define the event day as”0” and the period starting on day –2 and ending at day +2 relative to event day as event period of success of taking control effect.

2. Defining Estimation Periods

(1)The Event of Tender Offer Announcement

We define the event day March 28, 2001 as”0” and the period starting on day –302 and ending on day -3 relative to event day as the estimation period to test tender offer announcement effect.

(2)The Event of Management Resistance

a. Management Resistance Announcement Day

We define the event day April 2, 2001 as”0”and the period starting on day -301 and ending on day -2 relative to event day as the estimation period to test management resistance announcement effect.

b. Announcement Day When The Seats of Board of Directors are Reduced

We define the event day April 30, 2001 as”0”and the period starting on day -301 and ending on day -2 relative to event day as the estimation period to test anti-takeover measures effect.

(3)The Event of Tender Offer Approval

We define the event day April 19, 2001 as”0”and the period starting on day -301 and ending on day -2 relative to event day as estimation period to test tender offer approval effect.

(4)The Event of Tender Offer Failure

We define the event day May 25, 2001 as”0”and the period starting on day -301 and ending on day -2 relative to event day as the estimation period to test tender offer failure effect.

(5) The Event of Subsequent Success of Taking Control

We define the event day April 8, 2002 as”0”and the period starting on day -302 and ending on day -3 relative to event day as estimation period to test success of taking control effect.

We summarize the event days, event periods, and estimation periods mentioned as Table 1.

Abnormal Returns (AR) Measurements

(1) Defining Returns Measurements

We define stock i daily returns at t：

$$R_{it} = Ln\{ [ (P_{it}) * (1 + SD_{it} + NIR_{it}) + (CD_{it}) ] / [ (P_{it-1}) + (NIP_{it} * NIR_{it}) ] \} \quad (1)$$

Where $P_{it}(P_{it-1})$：The closing quote of stock i at t (t-1)

$SD_{it}$：The stock dividend rate per share of stock i at ex-right t

$NIR_{it}$：The offered rate per share in the capital increase by cash of stock i at ex-right t

$NIP_{it}$：The offered price per share in the capital increase by cash of stock i at ex-right t

$CD_{it}$：The cash dividend per share of stock i at ex-dividend t

We define market daily returns at t：

$$R_{mt} = Ln ( P_{mt} / P_{mt-1} ) \quad (2)$$

where $P_{mt}(P_{mt-1})$：The closing market index at t (t-1)

Additionally, because CDIB's stocks and GCSC's stocks are trading in the different securities exchange markets, we match CDIB's stock daily returns with daily returns of TSE Weighted Index and match GCSC's stock daily returns with daily returns of OTC Securities Exchange Index.

(2) Establishing Returns Model

We have tried the ARCH (1)-MA (1) model, GARCH (1,1)-MA (1) model and GARCH (1,2)-MA (1) model for returns model establishment. Eventually, we find that the ARCH (1)-MA (1) model is the best one, which can fit the data of daily stock returns of both CDIB and GCSC well. Therefore, we use ARCH(1)-MA(1) model as the returns model：

$$R_{it} = \alpha + MA\,\varepsilon_{it-1} + \beta * R_{mt} + \varepsilon_{it}$$

$$\varepsilon_{it} \sim N(0, h_{it})$$

$$h_{it} = A + B * \varepsilon_{it-1}^{2} \quad (3)$$

where $R_{it}$ is stock i daily returns at t. $R_{mt}$ is market daily returns at t

(3)Testing the Significance of Returns Model

a. Testing the Significance of Individual Coefficients

This test is for whether the individual coefficient differs from zero. The test statistic we use to examine the significance of individual coefficients in ARCH model is t-statistic. We obtain the t-value of individual coefficients from

***t* = (estimator – parameter) / (estimated standard error of estimator)** (4)

b. Testing the Overall Significance of Returns Model

The testing method of overall model significance we use is the Likelihood Ratio Test (LRT). Let $\theta$ be a vector of parameters to be estimated, and let $H_0$ specify some sort of restriction on these parameters. Let $\theta_U$ be the maximum likelihood estimate of $\theta$ obtained without regard to the constraints, and let $\theta_R$ be the constrained maximum likelihood estimator. If $L_U$ and $L_R$ are the likelihood functions evaluated at these two estimators, then the likelihood ratio test statistic is

$$\lambda = -2 \, Ln \, (L_R / L_U) \quad (5)$$

Under regularity, the large sample distribution of $\lambda$ is chi-squared, with degree of freedom equal to the number of restrictions imposed. In this study, the number of parameters is five.

(4) Abnormal Returns Measurements

a. Abnormal Returns (AR)

We define daily abnormal returns of stock i at E：

$$\mathbf{AR_{iE} = R_{iE} - E(R_{iE})} \quad (6)$$

Where $R_{iE}$：The actual daily returns of stock i at E during event period

$E(R_{iE})$：The expected daily returns of stock i at E during event period

And

$$E(R_{iE}) = \alpha + \beta * R_{mE} \quad (7)$$

Where $\alpha$, $\beta$ are parameters estimated from (3)

b. Cumulative Abnormal Returns (CAR)

We define cumulative abnormal returns of stock i during event period from $t_1$ to $t_2$：

$$\mathbf{CAR_i(t_1, t_2) = \sum_{E=t_1}^{t_2} AR_{iE}} \quad (8)$$

where $AR_{iE}$ is daily abnormal returns of stock i at E.

**3. Empirical Results**

In this section, we use the event study approach and ARCH(1)-MA(1) model as a returns model to examine the effect of important events during the period of tender offer. First, take a look of stock price and trading volume of CDIB and GCSC during the period of tender offer (Figure 1 and Figure 2). We can find that CDIB's stock price was falling until March 28, 2001 and the trading volume was declining after March 28, 2001. In contrast, GCSC's trading volumes during the period of tender offer was obviously large than previous periods, and its stock price was more volatile during this period. After May 10, 2001, when the opened period in tender offer was over, the stock price of GCSC soon fell from NT$19.4 on May 10 to NT$14.8 on May 16. These data about the stock prices and trading volumes of CDIB and GCSC can be a foundation for our interpretation of empirical results.

3.1 The Announcement Effect on the Stock Prices of both Acquirer and Target

Our estimates of returns model during estimation period of event of tender offer announcement are shown as Table 1.

CDIB made the information about its intention to acquire GCSC by a tender offer to flow to the stock market on March 28, 2001. We can find that GCSC's stockholders had significantly high positive cumulative abnormal returns, which reached about 26 percent. However, during the event period, CDIB's stockholders had slight negative cumulative abnormal returns, which reached –6 percent (Table 2). We interpret this result as follows.

First, from the point of view of synergy, CDIB's decision to acquire GCSC, as mentioned before, will make revenue-enhancing, cost-reducing and financial synergy. However, it is difficult and uncertain for investors to evaluate the revenue-enhancing effect in the future and theoretically, revenue-enhancing effect itself is much hard to be specified due to much uncertainty and problems of cross selling. Additionally, because of little overlapped businesses between CDIB and GCSC (CDIB just desired to acquire GCSC for filling the shortage of its securities businesses), the cost-reducing effect is also little in this case. Therefore, the financial synergy comes from expanded assets and more balanced revenues structure should be clearer than operating synergy at that time. According to Galai and Masulis (1976) and Shastri (1982) arguments, the variance effect of the merger will exist and affect the individual companies' bonds value. In their model, there are two companies in the merger, and they argued that the company whose variance of cash flows is larger than the other one will have a positive variance effect on its bonds value in the merger; in contrast, the company whose variance of cash flows is smaller than the other one will have a negative variance effect on its bonds value in the merger. In the case which we study, CDIB's revenues structure is more riskful than GCSC because most of its revenues don't

come from fixed fees but capital gains. Therefore, we can reasonably assume that the variance of cash flows of CDIB should be larger than that of GCSC. According to the argument of variance effect, there should be a negative effect on GCSC's bonds value but a positive effect on CDIB's bonds value. Under the assumption that the value of a company is fixed, there should be a positive effect on GCSC's stocks value but a negative effect on CDIB's stocks value, which corresponds to the empirical result we show.

Second, from the point of view of expectations in the market, investors will expect that there may be a chance for arbitrage because of tender offer premium, as a result, to buy in GCSC's stock (we can find that the trading volumes of GCSC's stock significantly bursted in rising during the event period, even a little before the event period), which also causes GCSC's stock price to rise. For CDIB, however, it is still doubtful whether CDIB can acquire GCSC successfully and the content of an offer had not been approved yet at that time. Furthermore, CDIB was also involved in the problem of inside trading at that time (CDIB let information leak out before application). All of these have a negative effect on CDIB's stock price.

3.2 The Resistance Effect on the Stock Prices of both Acquirer and Target

There were two events about GCSC's management resistance happening in April, 2001. The first event was that on April 2, GCSC's board announced their intentions to resist the offer CDIB provided and the second one was the plan proposed by GCSC's board on April 30, 2001 to reduce the seats of GCSC's directors.

We find that in both of events GCSC's stockholders had positive cumulative abnormal returns but CDIB's had negative ones. In the first event, GCSC's stockholders had about 15.2% cumulative abnormal returns and CDIB's had -2.2% ones (Table 3). In the second event, GCSC's stock cumulative abnormal returns was 10.9% lower than those in the first event and CDIB's stock cumulative abnormal

returns was -5.5% also lower than those in the first one (Table 4).

There are two reasons for GCSC's positive cumulative abnormal returns in events of resistance. The first reason is that management resistance may be a positive signal about the target firm value (Baron, 1983; Bagnoli and Lipman, 1989). Because target firm management has private information about the true value of the firm, their decision to resistance shows that retaining the firm is more valuable than just tendering their stocks. The second one is that management resistance announcement or defensive measures may show that board of target will try to concentrate the control right or repurchase the stocks outstanding. It provides positive expectation about target firm's stock price. And as mentioned proceeding, GCSC had abnormal brokerage and trading volume on its stocks in the open market so may strengthen the positive expectation of its stock price.

For the acquirer-CDIB, GCSC's resistance will increase the difficulty to take control of the target. It implies that CDIB may need to offer much higher premium to target's stockholders, spend more resources or time to seek for other block holder's supports and so on. Therefore, GCSC's resistance causes the negative effect on CDIB's stock returns.

Additionally, the reason why GCSC's positive cumulative abnormal returns in the first event was higher than those in the second one may be that the first announcement of resistance had more dominant effect or brought more shocks to the investors and it provided more expectations and imaginations about stock price due to no specific resistance form described. For CDIB, the reason why its negative cumulative abnormal returns in the second event is lower than those in the first one may be that the shares CDIB acquired in the tender offer were certain not to be helpful for taking control in 2001, so the proposal made by GCSC's board to reduce seats of directors caused CDIB's intention to take control of GCSC more difficult to realize and the

probability of tender offer success much lower. Hence, the second event had more negative effect on CDIB's stock returns.

3.3 The Approval Effect on the Stock Prices of both Acquirer and Target

CDIB's application for a tender offer was approved by SFC on April 19, 2001. We can find that GCSC's stock had positive cumulative abnormal returns, which reached 0.9 percent, but CDIB's stock had negative ones, which reached –1.4 percent (Table 5). The reasons of this result are similar to that of the first event-tender offer announcement. There is a motivation for investors to buy in GCSC's stock for arbitrage. For example, we find that the GCSC's stock price was only NT$16.7 on April 19 (the offer price of CDIB was NT$20), but quickly rose at the price of NT$19.03 on April 23 after approval. The trading volumes of GCSC stocks also increased obviously on following days, especially on April 20 and April 23. Additionally, after the approval of tender offer, investors also expected the management of GCSC would repurchase stocks from the market further, which also motivated investors to buy in GCSC's stock.

For CDIB, there was still high uncertainty whether the case of tender offer would succeed. Additionally, because the stocks which CDIB acquired by the tender offer didn't have voting rights of stockholders' meeting in 2001, it was doubtful whether the premium CDIB offered was worthy. Therefore, CDIB's stock price didn't perform well during the event period.

3.4 The Takeover Failure Effect on the Stock Prices of both Acquirer and Target

In the GCSC's stockholders' meeting on May 25, 2001, Jen-Hwa Investment Holding Co. acquired 5 directors and one auditor, however, CDIB only acquired two directors. Therefore, in 2001 CDIB could not obtained the control right and the intention of tender offer failed. During the event period, we can find that GCSC's stock had slightly negative cumulative abnormal returns, which reached 0.2 percent, and

CDIB's stock also had negative ones, which reached –1.9 percent (Table 6). As mentioned before, there is a positive effect on GCSC's stock returns but a negative effect on CDIB's stock returns during the event period of tender offer announcement. When a tender offer failed, there should be a reverse effect on the stock returns of both GCSC and CDIB. We can find that the result of GCSC's stock returns corresponded to the inference above, however, that of CDIB's stock returns didn't correspond to the inference above. The reason why this result happened may be that the investors were disappointed in the result of a tender offer, especially after CDIB's previous large amount of investments in premiums offered. CDIB spent about NT$2.8 billion to purchase stocks tendered, but still lost the contest of control taking. It means that CDIB not only couldn't enjoy any benefits of the merger coming from synergy but also lost a large amount of money in premiums offered. Therefore, there might be a negative effect on CDIB's stock returns during the event period of tender offer failure.

3.5 Subsequent Stock Acquisitions Announcement Effect on the Stock Prices of both Acquirer and Target

After one year, the intention of CDIB to take control of GCSC came true. On April 8, 2002, CDIB announced that it would acquire GCSC's stocks from Jen-Hwa Investment Holding Co. which agreed to this deal, and CDIB would hold about 0.74 billion shares, which was about 62 percentage of GCSC's stocks. Principally, the acquiring price which CDIB planned wouldn't exceed NT$21 per share. After this deal, CDIB would establish a foundation for GCSC's being affiliated with the group of China Development Financial Holding Company (CDFHC). During the event period, we can find that GCSC's stock had positive cumulative abnormal returns, which reached 3.29 percent, and CDIB's stock also had positive ones, which reached 4.06 percent (Table 5.5.12.). This result seems to show that investors had a positive

attitude towards the success of this stock acquisition, and thought of that CDIB could take control of GCSC as good news. According to previous interpretation in the event of tender offer announcement, the result of success stock acquisition should be a positive effect on GCSC's stock price and negative effect on CDIB's stock price. However, we think there are some reasons about this contradiction. First, with many financial holding companies setting-up, the speed of financial service expanding and internal integration become a very important factor for whether a financial holding company can achieve competitive advantage, even survives in the future. Therefore, investors not only observe whether a financial institution becomes a financial holding company but also observe whether a financial holding company has a plan to strengthen its competence in the future. At that time, the group of CDFHC only included CDIB and First Taiwan Securities Corporation (FTSC) which was just a small-size securities corporation. Therefore, CDIB could acquire GCSC's major block of stocks really made the market become more confident of CDIB's future performance. Second, because of less uncertainty CDIB faced in this case compared with previous case of tender offer, there was not as many negative effects on CDIB's stock price as that in the tender offer process one year before. Third, because this case was not a hostile takeover any more, there would not be anti-resistance costs expected to be spent. In sum, these may be the reasons why there was a positive effect on CDIB's stock prices during event period, which was different with the result in the event of tender offer announcement one year before.

## 4. Conclusions

In this article, we focused on the case that China Development Industrial Bank (CDIB) bid for Grand Cathay Securities Corporation (GCSC) by means of the tender offer in 2001. First, we analyzed the reasons why CDIB desired to bid for a securities

corporation. We found that this decision was based on responding to requirements of future competition, the encouraging attitude of the government towards M&A of financial institutions, strengthening CDIB's securities businesses, low cost-of-entry of securities industry at that time and generating synergy. However, in the analysis of sources of synergy, we thought that there was little cost-reducing synergy but much possibly coming from revenue-enhancing and financial synergy. Additionally, we also analyzed why CDIB wanted to choose stock acquisition as a way to enter securities industry. The reasons included legal limitations on internal development, too risky and too slow to set up a subsidiary company, sufficient free cash flow CDIB owned and laying a foundation for changing into a financial holding company in the future.

Second, we thought the reasons why GCSC became a target of hostile takeover included its advantage on the businesses of securities underwriting and bonds trading, complete securities businesses, declining financial performance, huge capital base and stable financial structure, not being controlled by a certain family and convenience.

Third, we thought the reasons why CDIB adopted the tender offer as a tool for taking control of GCSC included opposed attitude of GCSC's block holders, the failure of previous plan of open market sweep and the characteristics of ownership structure of GCSC.

Finally, we examined the effect of important events on stock returns of both CDIB and GCSC. We found that tender offer announcement had a positive effect on GCSC's stock returns but a negative one on CDIB's stock returns; management resistance announcement had a positive effect on GCSC's stock returns but a negative one on CDIB's stock returns; the decision GCSC's board made to propose to reduce the seats of board had a positive effect on GCSC's stock returns but a negative one on CDIB's stock returns; tender offer approval by SFC had a positive effect on GCSC's stock returns but a negative one on CDIB's stock returns; tender offer failure had a negative

effect on GCSC's stock returns and a negative one on CDIB's stock returns. Additionally, subsequent success of CDIB's taking control of GCSC one year later had a positive effect on GCSC's stock returns and a positive one on CDIB's stock returns, too.

Eventually, we have some suggestions about the future directions for further studies. First, the regulations of tender offer and other laws concerned should be further studied for improvement, especially in reducing the difficulties of implementing a tender offer, rules of information disclosure and preventing inside trading problems. Second, as the samples in Taiwan increase in the future, the effect of important events of a tender offer, such as announcement or management resistance, on stock returns of both acquirer and target can be further and completely examined. Third, the characteristics of target in the cases of tender offers in Taiwan can be further studied and examined in the future.

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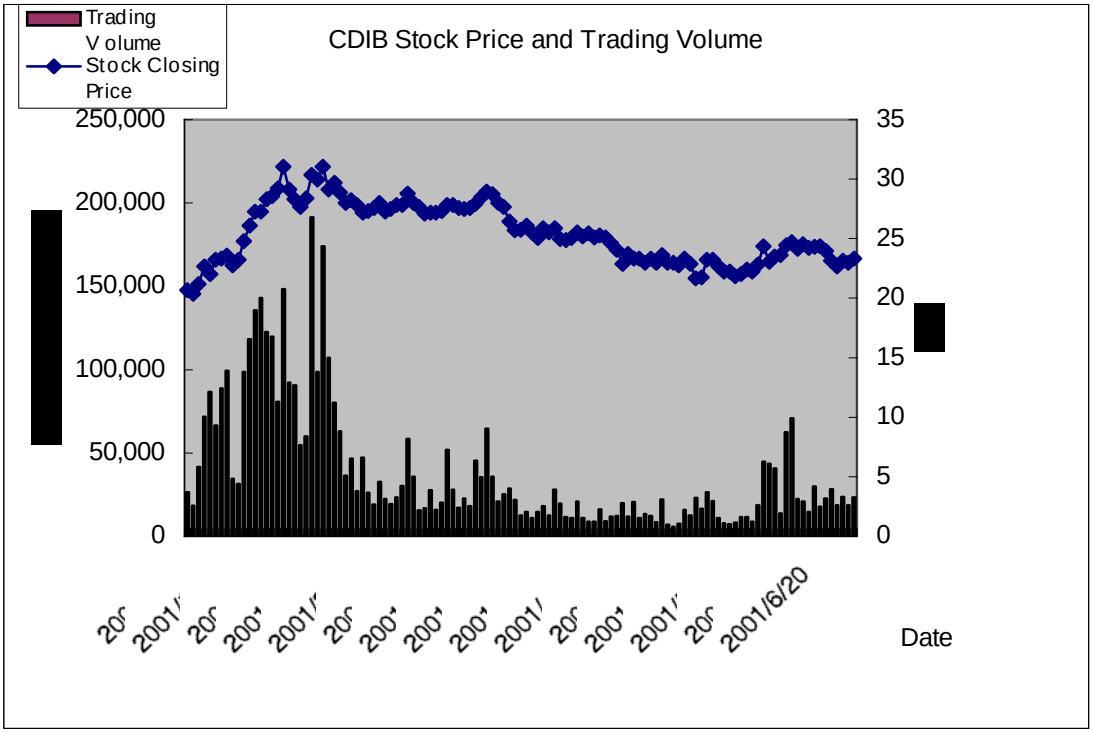
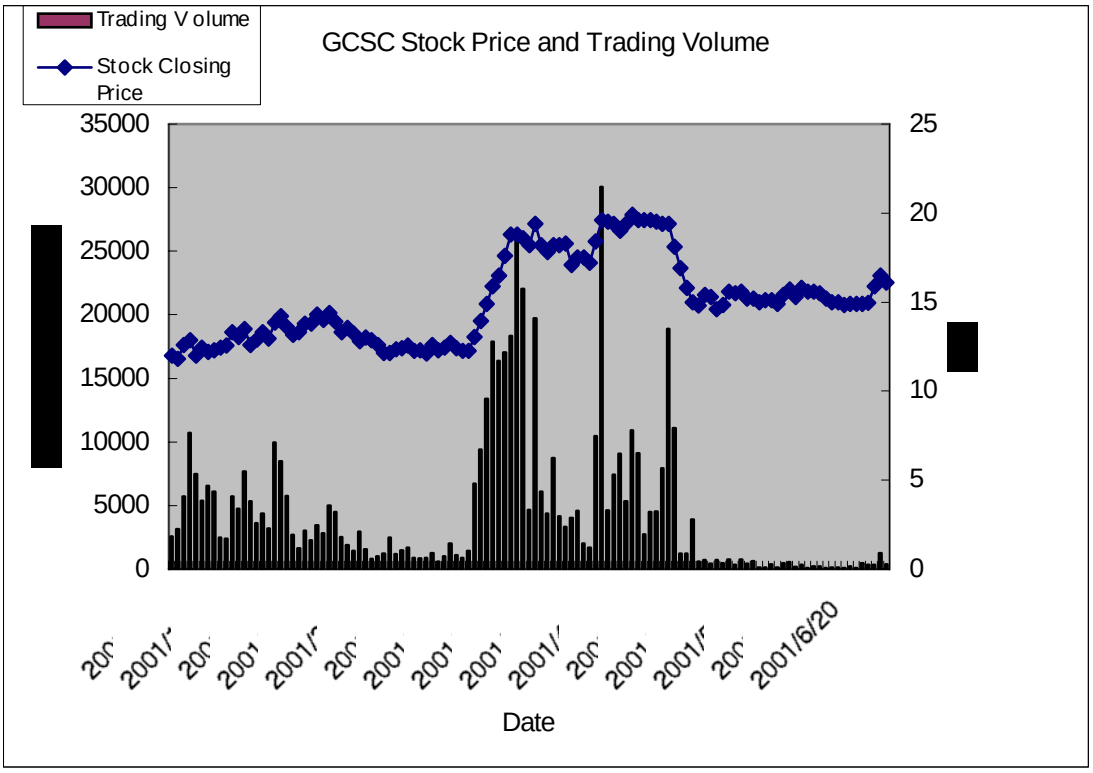
**Figure 1 CDIB Stock Price and Trading Volumes During the Period of Tender Offer**




Source: Taiwan Economic Journal Data Bank

**Figure 2 GCSC Stock Price and Trading Volumes During the Period of Tender Offer**




Source: Taiwan Economic Journal Data Bank

**Table 1 Summary of Event Days, Event Periods, and Estimation Periods Defined**

| Events | Event Days | Event Periods* | Estimation Periods** |
|---|---|---|---|
| Tender Offer Announcement | March 28, 2001 | -2 ~ +2 | -302 ~ -3 |
| Management Resistance Announcement | April 2, 2001 | -1 ~ +1 | -301 ~ -2 |
| The Seats of Board of Directors are Reduced | April 30, 2001 | -1 ~ +1 | -301 ~ -2 |
| Tender Offer Approval | April 19, 2001 | -1 ~ +1 | -301 ~ -2 |
| Tender Offer Failure | May 25, 2001 | -1 ~ +1 | -301 ~ -2 |
| Subsequent Success of Taking Control | April 8, 2002 | -2~+2 | -302~-3 |

* relative to event day as"0", ** relative to event day as"0"

**Table 2 Tender Offer Announcement-Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR)**

| Firm | Abnormal Returns (AR) During Event Period | | | | | Cumulative Abnormal Returns (CAR) |
|---|---|---|---|---|---|---|
| | -1 | -2 | 0 | +1 | +2 | |
| GCSC | 0.029 | 0.071 | 0.045 | 0.050 | 0.071 | 0.266 |
| CDIB | 0.006 | 0.020 | 0.002 | -0.028 | -0.060 | -0.060 |

**Table 3 Resistance Announcement -Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR)**

| Firm | Abnormal Returns (AR) During Event Period | | | Cumulative Abnormal Returns (CAR) |
|---|---|---|---|---|
| | -1 | 0 | +1 | |
| GCSC | 0.071 | 0.044 | 0.037 | 0.152 |
| CDIB | -0.006 | -0.015 | -0.001 | -0.022 |

**Table 4 Announcement of Director Seats Reduced-Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR)**

| Firm | Abnormal Returns During Event Period | | | Cumulative Abnormal Returns (CAR) |
|---|---|---|---|---|
| | -1 | 0 | +1 | |
| GCSC | 0.040 | 0.051 | 0.018 | 0.109 |
| CDIB | -0.003 | -0.017 | -0.035 | -0.055 |

**Table 5 Tender Offer Approval-Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR)**

| Firm | Abnormal Returns During Event Period | | | Cumulative Abnormal Returns (CAR) |
|---|---|---|---|---|
| | -1 | 0 | +1 | |
| GCSC | -0.017 | -0.038 | 0.064 | 0.009 |
| CDIB | -0.006 | 0.003 | -0.011 | -0.014 |

**Table 6 Tender Offer Failure-Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR)**

| Firm | Abnormal Returns During Event Period | | | Cumulative Abnormal Returns (CAR) |
|---|---|---|---|---|
| | -1 | 0 | +1 | |
| GCSC | -0.019 | 0.012 | 0.005 | -0.002 |
| CDIB | -0.003 | -0.015 | -0.001 | -0.019 |

**Table 7 Subsequent Stock Acquisition Announcement -Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR)**

| Firm | Abnormal Returns (AR) During Event Period | | | | | Cumulative Abnormal Returns (CAR) |
|---|---|---|---|---|---|---|
| | -1 | -2 | 0 | +1 | +2 | |
| GCSC | 0.0074 | 0.0061 | 0.0452 | -0.0334 | 0.0075 | 0.0329 |
| CDIB | 0.0129 | 0.0021 | 0.0197 | -0.0217 | 0.0276 | 0.0406 |