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## The Effects of Reintroduce Securities Transaction Tax on Taiwan's Stock Market

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### Chapter 1: Abstract

#### Section I: Research Purpose

For a long time, the capital gains in stock exchanges belong to waive State, which cause erosion of the tax base and the phenomenon of unfair taxes. Many documents have been discussed a lot, but reintroduce the stock exchange was difficult.

Capital gains tax become policy taboos of all previous chairman, also, scholars and private investors too; capital gains tax is one of the hidden cancer in Taiwan. However, due to the duty free of capital gains tax, many rich people having thousands of billions of income but did not afford national construction developments, it is unfair to those people who worked vary hard support country operation with tens of thousands of income per month. Even forcing the Taiwanese at the limit with this kind of unfair society which is a gap between rich and poor people is getting wider.

The main purpose of this article is to review that how investors act in the process of reintroduce securities transaction tax, however, this decided behavior reflected on stock price of company. Therefore this article will observe whether normal reactions happened on stock price of company. Moreover, because different types of companies have different reaction with this event; this study will examine how those companies' stock act during the process of reintroduce securities transaction tax. Although there are documents which explore the market reaction of reintroduce securities transaction tax in the past, but that reintroduce case did not success. This article discuss investors consider that in the success process of reintroduce securities transaction tax are important timing, and the study result can be compared with the relevant literature in the past.

#### Section II: Research Purpose

Viewing stock price reaction of listed companies in the process of domestic reintroduce securities transaction tax, the main purpose of this research is to discuss the reaction of overall listed company to reintroduce securities transaction tax in mainly events.

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## CHAPTER 2: LITERATURE REVIEW

### Section I: Reintroduce Process of Securities Transaction Tax

From the viewpoint of tax justice, people who get income needs to be tax, and securities transaction tax is no exception. However, our country start collecting capital gains tax to enterprises and individuals in 1974 and 1989 but all of this only last a year. Since 1990, individual and corporate taxes were waived by the certificate of tax-exempt status so far. Since then, when government mention about the issue of reintroduce securities transaction tax, always caused turbulence on stock market.

Based on tax fair and the people who support reintroduce securities transaction tax consider that stop the Securities and futures transaction tax are violate the principle of income should be taxed; moreover, stopping capital gains tax caused the rich and poor gap expanded because people who get securities futures trading belongs to a big part of enterprise and personal which have higher asset and income. For those who against reintroduce securities transaction tax consider that taxation not only

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enhance the trading cost, but also increase the resources that government spent to collecting tax data. Once reintroduce securities transaction tax, then securities trading tax followed drop may influence total tax drop too.

## **Section II: Event Related Documents**

Many empirical accounting researches have shown that when the financial accounting standards or other mandatory rules change, companies which affected will have normal reward. As market model and two-factor model for event study by Kwok Lun Lee (2001) to discuss that the reaction of financial business tax rate dropped to zero by the expanding financial conference of Executive Yuan on October 14, 2000 whether this decision reached the positive effect to improve financial management environment and increase stock of financial institutions or not. The result shows that bank stocks indeed have positive abnormal returns and positive abnormal trading volume. There are positive relationships between the cumulative abnormal returns whether the volume of it is high or low, overdue loan ratio, and the market predictions for company's growing. Cumulative abnormal trading volumes related positively to the potential of lowering business tax rates. Moreover, the greater earning per share is, the longer abnormal trading volume continued.

Wei Heng Qiu (2001) explore when the enterprise at different stages of the life cycle, capital market will have a different evaluation to each period of research development costs. Choosing factors including dividend, sales growth, research and development costs, moreover, capital cost and company age as judgment factors of life circle. With income statement approach and balance sheet approach, using those factors including earning per share, market value, capital expenditures, research and development expenses as regression testing hypothesis. Results found that research and development spending is cost-effective, so presents a significant positive relationship between reward and stock. Further taking into account the different stages of the life cycle, found that influence of stock or reward in growth stage is significantly higher than maturity and decline.

Mengfen Wu (2004) adopt the affective recognized factors of assets loss on 35th bulletin to declare effects on Taiwan stock market; and the research sample include all Taiwan listed and over-the-counter companies but finance and insurance. The result shows that early used company of assets derogation amount recognize column of size is effected by enterprise operating factors (market price ratio and assets paid rate changes) and reported motivation factors (surplus smoothing variable) of effect; moreover, delayed used company of assets derogation recognize column amount size is effected by enterprise operating factors (market price ratio, assets and industry paid rate changes) and reported motivation factors (political cost, surplus smoothing and the management class changes). In addition, divide the recognized distinction of assets loss into expected and unexpected part to discuss the reaction of assets loss declaration on Taiwan stock. According to research result of early use of 35th bulletin, declaration of assets loss for investors is unexpected therefore has significant negative reaction on stock. While delaying the use of company shows that expected loss on impairment of assets for the company's stock price will not have a negative impact, rather than the expected loss on impairment of assets for the company's share price has a significant negative reaction.

Youqun Cai (2006) analyze the executive of Taiwan OTC listing about the effective result on stock after employee warrants. Based on asymmetric information assumptions, executive has highly scale information within the company. Is kind of a positive or negative signal emission when executive performing employee warrants? Is this can express the perception of the future performance of the company? The result shows that most of managers performance about 2.5 years once passing freeze period after Taiwan OTC listing release warrants. Factors affecting the early performance including degree in the money, manager level positions, liquidity and growth. Manager will perform early employee warrants when degree in the money is lower and manger position, liquidity and growth is higher. On the other hand, accumulating abnormal returns are significant positive increases as the period increases. Besides, the cumulative abnormal returns is highest after manager of small company performing employee warrants

Jingjia Chen (2007) studies about the market reaction of restated earnings which using ADR as empirical analysis. Results found that United States markets in the events window-1 day and CAR (-1,+1) has a significant negative reaction which is -0.96% and-1.44%. Also, the results found that all of the events have significant negative reaction and the market there is a positive relationship between the two places after testing the domestic market reaction.

Yongyan Chen (2009) exploring the influence of market reaction about the information transparency for company after declared decision which repurchase company stock. As cumulative abnormal returns of event research as a measurement of market reaction after declaration of repurchase stock. The result shows that there is positive relative between information transparency and declaration of repurchase stock, and there is negative relative between information transparency and market reaction of declaration of repurchase stock. According to this show that because information asymmetry cause serious diverge situation of stock price, the cumulative abnormal returns of repurchase declaration are larger for low information transparency of company. Therefore, declaration of repurchase stock can reduce problems of information asymmetry even earn recognition by investors and make price rise. Information transparency for performance of long-term stock price is not significantly different.

Yuzheng Lin (2010) discussed the Financial Supervisory Commission of the Executive Yuan announced that Taiwan will be fully aligned market reaction of international accounting standards on May 14, 2009. Using two perspectives that the net benefit which apply IFRS on enterprise; and the information environment of financial statement to survey reaction of capital market. The result shows that market consider it is good news for domestic aligned international accounting standard, and also the benefit of financial is higher than general industry. Further regression analysis shows that enterprise which having chance to attract foreign investment, growth opportunities and the increased assets record have more powerful positive reaction of this event on stock market. Besides, in the financial statement user's information environment, the result found that enterprise which having higher abnormal accruals, lower accruals quality and information asymmetry with traders have weaker positive reaction of this event on stock market. Support and expectations for the import of international accounting standards by the competent authorities promoting international capitals flows and lower the cost of capital.

Boyuan Zhang (2011) study the connection between asset revaluation, company future operating performance and market reaction, discuss whether debt contract costs affect the relationship between the three or not. The result shows that asset revaluation does have its information content and have significant positive relationship between future companies operating performance and stock price; but asset revaluation did not have significant explanatory power on current stock returns due to their lack of instantaneity. Also, the study found that debt contract cost does not affect the relationship between company's asset revaluation and future performance; but market will revised down its evaluation for those enterprise which having high debt contract.

Based on event study methods and regression model, Jingjie Lin (2012) testing publish annual financial statements of the company whether have the information content of earnings, and review whether the public timing of annual financial report associated with firm size, profitability and leverage; moreover, whether the implied abnormal return affected by firm size, profitability and leverage. Research result shows the annual financial statements that announced by company has surplus information connotation, and companies which publish annual financial statements earlier having different surplus information connotation. Also, the timing that annual financial statements published have negative relative with firm size and profitability but have positive relative with leverage. Specially, larger firm size and higher benefit companies tend to publish earlier; and companies having higher leverage tend to publish lately, and its implied abnormal return affected by firm size, profitability and leverage.

### **Section III: Study on Market Response to Tax Changes**

According to APB Opinion No.16 (Accounting for Business Combination) and APB Opinion No.17 (Accounting for Intangible Assets) released. Leftwich (1981) inspect the influence of the change of compulsory accounting principles for the company's stock price, the result shows that the change of compulsory accounting principles did not affect the cash flow of the company; however, the rising cost of debt contracts will reduce shareholder value for those company which having bigger debt. Biddle and Lindahl (1982) explore when change the inventory cost procedures of company to LIFO (Last in, first out) will receive significant correlation between tax benefits and the stock price reaction. The results show that after control the influence of unexpected surplus, companies that adopt LIFO as significant positive relative between tax benefits and abnormal returns of the stock.

On the study of "Safe Harbor Lease Law" in the discussion of economic rent of recovery of tax by Shaw (1988), this bill allow rental companies sell Tax Depreciation Deduction and Investment Tax Credits to leasing company by way of leasing. The result shows although buyer and seller both can

benefit in this kind of transactions, but only seller company can produce positive abnormal return when the deal was announced.

In 1986, United States tax reform (Tax Reform Act of 1986) and reduced tax rates of United States enterprise, Downs and Hendershott (1987), Givoly and Hayn (1991) found that lower tax rates will enhance the company's share price

According to the deferred tax item of financial statements revealed by domestic listed companies, Zhiqi Huang (2010) explore the influence of slash business income tax rate from 25% to 20% by Legislative Yuan on May 1, 2009. The result shows that there is a reverse relationship between deferred income tax assets items net and cumulative abnormal returns, consistent with the efficient market hypothesis assumptions about the investor but the results are not statistically significant. If resolve the deferred tax items according to character found that the relevance between the net-flow of deferred income tax assets and the net-flow of deferred income tax debts is significant; moreover, both of the implied information content is opposite. In the primer result shows that the reaction of investors on deferred income tax assets is more confirm with efficient market hypothesis, and the deferred income tax debts is tend to functional hypothesis.

### **CHAPTER 3: RESEARCH DESIGN**

#### **Section I: Event Selection**

According to the process of reintroduce securities transaction tax, electing a decisive or representative date in 2012 to 2013, including 10 events are as follows:

No.	Date	The Main Event
1	March 28, 2012	Financial Integrity Group held first committee meeting
2	April 12, 2012	Finance Minister released the latest scheme of capital gains tax
3	April 25, 2012	Presidential Summit and a green light for reinstate reintroduce
4	May 11, 2012	Approval relative draft law of the Executive Yuan, KMT and PFP, deliver to committee review
5	May 29, 2012	Finance Minister resignation
6	June 4, 2012	The Finance Committee approve modify scheme of capital gains tax in first trial
7	July 25, 2012	The Legislative Yuan passed capital gains tax, and will start using on January 1, 2013
8	August 8, 2012	President announced part of revise articles in “Income Tax Act” and "Income Tax Regulations"
9	November 30, 2012	The additional tax that DPP and TSU proposed be rejected in the Legislative Yuan
10	January 3, 2013	First trading date for start capital gains tax

#### **Section II: Data Sources and Sample Selection**

##### **1. Sample Selection**

Using listed company of Taiwan Stock Exchange as a research object, study period including each event during 2012 to 2013. About 732-735 company number of samples and need to confirm with following conditions:

1. The accounting period of selected companies shall be the calendar year.
2. Will not be included in if required variable data missing.
3. Exclude full-cash delivery stock, stock management and depository receipt of company.

##### **2. Resource**

Associated data source as follows:

1. The basic data of listed company are taken from publicly available information observatory.
2. The data of abnormal return and cumulative abnormal returns are taken from TEJ Equity of Taiwan economic newspaper database.

#### **Section III: Research Model**

This section is based on Event Study Methodology as a model, testing whether the process of reintroduce capital gains tax having information content. Event study originated from the Ball and Brown (1968), proposed that whether abnormal change of stock will caused by some information or

event happens and then produce abnormal return rate (Zhonghua Shen, and Jianran Li, 2000) which is the purposes of this section focuses on. In addition, infer whether there is a correlation between stock price and specific event by statistical methods to survey whether the abnormal rate of return is zero.

### 1. Univariate Analysis

Event date, event and estimated periods are defined as follows:

1. Event Date: Using 10 events that mentioned in section I as event day.
2. Event Period: Using before event date and after event date as an event period, a total of 3 days.
3. Estimated Period: using before event date during 3rd to 152 days as an estimated period, a total of 150 trading days, as shown in Figure 3-1.

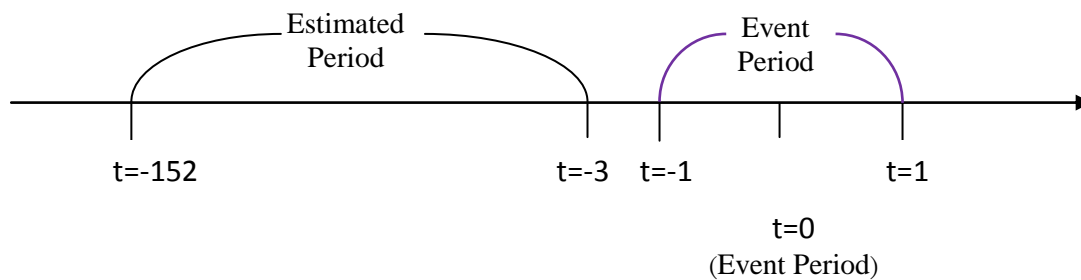


Figure3.1. Event Date, Event Period and Estimated Period

According to stock model by Sharpe (1964) to estimate expected return of daily stock, the regression model are as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

Among this,

$R_{it}$  : i company's stock return rate at t-day.

$R_{mt}$  : Market invest combination calculate the rate of return with Taiwan weighted index options at t-day.

$\alpha_i$  : Intercept of i company's stock returns.

$\beta_i$  : Risk estimation of parameters of i company's stock returns.

$\varepsilon_{it}$  : Errors

According to the market efficiency research by Fama, Fisher, Jensen and Roll (1969), will substitute  $R_{it}$  and  $R_{mt}$  of estimated period into (1) to estimate the parameter  $\hat{\alpha}_i$  and  $\hat{\beta}_i$  of stock market. Also estimate the expected paid rate with  $\hat{\alpha}_i$  and  $\hat{\beta}_i$  to infer abnormal paid rate is equal to the rate which actual paid rate subtract normal paid rate, as model following:

$$AR_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt}) \quad (2)$$

Among this,

$AR_{it}$  : i company's abnormal return rate at t-day.

$R_{it}$  : i company's actual return rate at t-day.

$R_{mt}$  : Market invest combination calculate the normal rate of return with Taiwan weighted index options at t-day.

$\hat{\alpha}_i$  &  $\hat{\beta}_i$  : Risk estimation of parameters of i company's stock returns at estimated period.

To reduce interference with other has nothing to do with this research event on the formula (2) abnormal returns, so to calculate cumulative abnormal returns is help to test hypotheses for future research, are listed below:

$$CAR_{it} = \left( \sum_{t=d_1}^{d_2} AR_{it} \right) \quad (3)$$



Among this,

$CAR_{it}$  : i company's abnormal return rate in event period.

t : Event Period ( $d_1, d_2$ )

## **CHAPTER 4: RESULTS**

### **Section I: Univariate Analysis**

Table 4-1 present abnormal returns and cumulative abnormal return for all of the samples at each event date and table 4-2 present percentage change and cumulate of weighted stock index options. On March 28, 2012, Financial Integrity Group held its first meeting to determine the capital gains tax issue when abnormal return was -0.3517% on the day and reached 1% significant standard. And the stock cumulative abnormal return of three days at the event date was -3.304% which reached 1% significant standard. Moreover, the market stock index cumulative rate of return was -1.17% which presents a declining trend. Financial Integrity Group announced latest tax program on April 12, 2012, and the Executive Yuan finished the review of modify relative law on April 25, 2012. The value of stock abnormal return is positive, reached 1% significant standard. And the cumulative abnormal return rate was 0.5954% and 0.3386% which both reached 1% significant standard; the cumulative return rate of stock index was 1.93% and 0.54% which may shows the influence of capital gains tax is less than investors were expected. Some of limits reducing the possible impact such as tax 20% if personal capital gains benefits more than 3 million; and qualify to get welfare if holds stock more than a certain number of years.

However, both stock abnormal return or cumulative abnormal return sluggish same as stock index after capital gains tax approved by the version of the Executive Yuan, KMT, PFP on May 11, 2012. This may show that capital gains tax will be proved in delaying or temporary meeting of the Legislative Yuan, and investors will sell holdings as the program determined. But financial minister handing resignation to be responsible for the policy of capital gains tax on t May 29, 2012, stock price rose immediately and the abnormal return that day was 0.5865%, and the abnormal return next day was 0.2841% are reached 1% significantly standard. Moreover, the cumulative abnormal return was 0.6697%, stock index rising 2.89% and the cumulative return was 2.70% that shows investors are optimistic about capital gains tax after a person in charge resigned.

On June 4, 2012, the Legislative Yuan Finance Committee through tax-modify program in first trial but there is no significant reaction of stock price because this program has not been confirmed yet, and the stock index down 4.12% with international stock. It's worth mentioning that stock abnormal return and cumulative abnormal returns are significantly positive on July 25, 2012 and July 26, 2012. This shows that although investors did not optimistic about capital gains tax, but the impact did not influence as investors expected after the final version determined; therefore the stock price rising due to bad out.

No matters the income tax and basis income modify article that president announced on August, 8, 2012, or the deferred income tax that proposed by DPP and TSU did not change the actual impact of the tax so cumulative abnormal returns are not reached 10% significantly. The cumulative return rate of market stock index in this two event period is positive.

The abnormal return of stock price did not significantly at the first trading day of start income tax on January 3, 2013, and then the rising shares up next day should be due to other factors. Moreover, market share index accumulated rate of return rose to 1.38%.

To sum up, focused on cumulative abnormal return of selected 10 days in reintroduce capital gains tax found that the two event date is negative which is Financial Integrity Group hold first committee meeting and Legislative Yuan hand over for committee reviewed. Especially stock price declined most in the first event date which Financial Integrity Group hold first committee meeting. Those events which including Finance Ministry released the latest income tax program, president confirmed to reintroduce securities transaction tax, and then the Finance Minister resigned, and the Legislative Yuan approved income tax are all positive reaction; reflect that the negative impact of reintroduce capital gains tax after first event was not obvious. For the income tax that through first trial by the Finance Committee of the Legislative Yuan, president announced the article modify, added tax and so on; for all of those events are not react significantly.

**Table4.1.** Univariate Analysis of All Samples

No.			AR			CAR
			t=-1	t=0	t=1	t=-1~+1
1	Financial Integrity Group held first committee meeting	Average	-1.0778	-0.3571	-1.8691	-3.3040
2012.3.28		p-value	0.0000	0.0000	0.0000	0.0000
2	Finance Ministry released the latest income tax program	Average	0.0654	0.2812	0.2489	0.5954
2012.4.12		p-value	0.3891	0.0002	0.001	0.0000
3	Presidential Summit and a green light for reintroduce securities transaction tax	Average	-0.1876	0.4898	0.0364	0.3386
2012.4.25		p-value	0.0130	0.0000	0.6299	0.0097
4	Approval relative draft law of the Executive Yuan, KMT and PFP, deliver to committee review	Average	-0.4578	-0.1644	-0.4470	-1.0691
2012.5.11		p-value	0.0000	0.0268	0.0000	0.0000
5	Finance Minister resignation	Average	-0.2009	0.5865	0.2841	0.6697
2012.5.29		p-value	0.0062	0.0000	0.0001	0.0000
6	The Finance Committee approve modify scheme of capital gains tax in first trial	Average	0.8209	-0.9722	0.0702	-0.0812
2012.6.4		p-value	0.0000	0.0000	0.3385	0.5227
7	The Legislative Yuan passed capital gains tax, and will start using on January 1, 2013	Average	-0.3162	0.3542	0.3361	0.3741
2012.7.25		p-value	0.0000	0.0000	0.0000	0.0020
8	President announced part of revise articles in "Income Tax Act" and "Income Tax Regulations"	Average	-0.3834	0.2963	-0.0514	-0.1385
2012.8.8		p-value	0.0000	0.0000	0.4593	0.2495
9	The additional tax that DPP and TSU proposed be rejected in the Legislative Yuan	Average	-0.0463	-0.3114	0.4690	0.1112
2012.11.30		p-value	0.4674	0.0000	0.0000	0.3140
10	First trading date for start capital gains tax	Average	-0.0208	0.0415	0.2364	0.2571
2013.1.3		p-value	0.7427	0.5125	0.0002	0.0191

**Table4.2.** Price Index Change

No.		Index Paid Rate			Cumulative Return Rate
		t=-1	t=0	t=1	t=-1~+1
1.2012.3.28	Financial Integrity Group held first committee meeting	0.78%	0.11%	-2.06%	-1.17%
2.2012.4.12	Finance Minister released the latest scheme of capital gains tax	0.21%	0.08%	1.64%	1.93%
3.2012.4.25	Presidential Summit and a green light for reintroduce securities transaction tax	0.24%	0.86%	-0.55%	0.54%
4.2012.5.11	The Legislative Yuan deliver to committee for review	0.11%	1.10%	-0.33%	-1.32%
5.2012.5.29	Finance Minister resignation	0.91%	2.89%	-1.10%	2.70%
6. 2012.6.4	The Finance Committee approve modify scheme of capital gains tax in first trial	-2.68%	-2.98%	1.53%	-4.12%
7.2012.7.25	The Legislative Yuan passed capital gains tax in the third reading	-0.29%	-0.42%	-0.12%	-0.83%
8.2012.8.8	President announced part of revise articles in "Income Tax Act"	0.13%	0.33%	1.56%	2.02%
9.2012.11.30	The additional tax that DPP, the TSU proposed be rejected	0.92%	1.02%	0.26%	2.20%
10.2013.1.3	First trading date for start capital gains tax	1.04%	0.74%	-0.39%	1.38%

## CHAPTER 5: CONCLUSION AND SUGGESTION

For those people who support reintroduce securities transaction tax based on tax fair consider that stop the securities and futures transaction tax are violate the principle of income should be taxed; moreover, stopping capital gains tax caused the rich and poor gap expanded because people who get securities futures trading belongs to a big part of enterprise and personal which have higher asset and income. For those who against reintroduce securities transaction tax consider that taxation not only enhances the trading cost, but also increases the resources which government spent to collecting tax data. Once reintroduce securities transaction tax, then securities trading tax followed drop may influence total tax drop too.

The result shows the cumulative abnormal return of two events that Financial Integrity Group hold first committee meeting on March, 28, 2012 and the Legislative Yuan hand over for committee reviewed on May, 11, 2012 in selected 10 event date are negative. Particularly, the stock price of first event date declined most. Those events which including Finance Ministry released the latest income

tax program, president confirmed to reintroduce securities transaction tax, and then the Finance Minister resigned, and Legislative Yuan approved income tax are all have positive reaction; moreover, reflect the negative impact of reintroduce capital gains tax after first event was not obvious.

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