科技部補助專題研究計畫成果報告
期末報告

財務困境對台灣股市資產定價異常現象之影響

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處 理 方 式 ：
1.公開資訊：本計畫可公開查詢
2.「本研究」是否已有嚴重損及公共利益之發現：否
3.「本報告」是否建議提供政府單位施政參考：否

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中 文 摘 要 ： 本計畫案研究財務困境對台灣股市資產定價異常現象之影響。我們利用投資組合分組以及橫斷面迴歸兩種方式來檢驗：依據資產定價異常現象所制訂交易策略之獲利性如何受到財務困境（以信用評等來衡量）之影響。另外，我們採用台灣經濟新報所建立的企業信用風險指標 (Taiwan Corporate Credit Risk Index, TCRI) 來衡量財務困境，以便觀察到台灣企業信用風險狀況的全貌。實證結果發現，依據盈餘動能、規模、流動性以及特徵風險等異常定價效果所建構的投資策略的獲利性，主要是來自於信用評等最差的公司股票；而據價格動能、益本比等異常定價效果所建構的投資策略的獲利性，則主要是來自於信用評等最好的公司股票。另外，信用評等調降影響所有的異常定價投資策略之獲利性，但影響程度各異。總結本計畫案之研究結果顯示：信用風險在解釋異常定價效果投資策略獲利性之來源的確扮演一個種要的角色，但並非所有的台灣股市資產定價異常現象都與財務困境有關。

中文關鍵詞： 財務困境、資產定價異常、信用評等

英 文 摘 要 ： This project studies the implications of financial distress for asset pricing anomalies existing in Taiwan ‘s security market. Specifically, the relations between financial distress and profitability of various asset pricing anomalies-based trading strategies are carefully scrutinized using both portfolio sorts and cross-sectional regressions. To measured financial distress, I use the Taiwan Corporate Credit Risk Index (TCRI) issued by the Taiwan Economic Journal (TEJ), which offers a much better overview of corporate credit risks in Taiwan. My empirical investigation shows that profits of anomaly-based trading strategies, such as earning momentum, size, turnover, and idiosyncratic volatility are mostly driven by firms with the worst credit rating. In contrast, profits of anomaly-based trading strategies, such as price momentum, and earnings-price ratio are mostly driven by firms with the best credit rating. In addition, credit rating downgrade affects all anomalies, but with different degrees. Overall, results of this research show that credit risk plays an important role in explaining the source of anomaly profits, yet not all asset pricing

anomalies are related to financial distress in Taiwan ‘s security market.

英文關鍵詞： Financial Distress； Asset Pricing Anomaly； Credit Rating

Implications of Financial Distress on Asset Pricing Anomalies in Taiwan's Security Market

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Abstract

This project studies the implications of financial distress for asset pricing anomalies existing in Taiwan's security market. Specifically, the relations between financial distress and profitability of various asset pricing anomalies-based trading strategies are carefully scrutinized using both portfolio sorts and cross-sectional regressions. To measured financial distress, I use the Taiwan Corporate Credit Risk Index (TCRI) issued by the Taiwan Economic Journal (TEJ), which offers a much better overview of corporate credit risks in Taiwan. My empirical investigation shows that profits of anomaly-based trading strategies, such as earning momentum, size, turnover, and idiosyncratic volatility are mostly driven by firms with the worst credit rating. In contrast, profits of anomaly-based trading strategies, such as price momentum, and earnings-price ratio are mostly driven by firms with the best credit rating. In addition, credit rating downgrade affects all anomalies but with different degrees. Overall, results of this research show that credit risk plays an important role in explaining the source of anomaly profits, yet not all asset pricing anomalies are related to financial distress in Taiwan's security market.

JEL Classification: G11; G12; G14.
Keywords: Financial Distress; Asset Pricing Anomaly; Credit Rating.

1 Introduction

According to rational asset-pricing theory, higher risk should be accompanied by higher expected return. However, there exist many asset pricing anomalies in the empirical studies of cross-sectional stock returns. In addition to systematic risk factors, cross-sectional stock returns are reported to be positively related to past returns (price momentum effect, Jegadeesh and Titman, 1993), past earning (earnings momentum effect, Ball and Brown, 1968), book-to-market ratio (value effect, Fama and French, 1992); and negatively related to firm size (Fama and French, 1992), accruals (Sloan, 1996), credit risk (Dichev, 1998; Campbell, Hilscher, and Szilagyi, 2008; Avramov, Chordia, Jostova, and Philipov, 2009), analysts' earning forecast (Diether, Malloy, and Scherbina, 2002), capital investment (Titman, Wei, and Xie, 2004), asset growth (Cooper, Gulen, and Schill, 2008), and idiosyncratic volatility (Ang, Hodrick, Xing, and Zhang, 2006).

Fama and French (1993) argue that the size factor (small-minus-big, SMB) and the value factor (high-minus-low, HML) are proxies for priced distress factor. On the other hand, Daniel and Titman (1997) suggest that it is the size and value characteristics, instead of factor loadings on the SMB and the HML factors, that affect stock returns, which echoes the existence of asset pricing anomalies. According to these two articles, there seems to exist some connection between financial distress and asset pricing anomalies. Following the same line of reasoning, Avramov et al. (2013) examine all US firms listed on NYSE, Amex, and Nasdaq, and find that strategies based on price momentum, earnings momentum, credit risk, dispersion, idiosyncratic volatility, and capital investment derive their profitability from taking short positions in high credit risk firms that experience deteriorating credit conditions. In contrast, the value-based strategy derives most of its profit from taking long positions in high credit risk firms that survive financial distress and subsequently realize high returns.

This project proposes to study the implications of financial distress for asset pricing anomalies existing in Taiwan's security market. Specifically, I would like to examine how the profitability of anomaly-based trading strategies are affected by financial distress (measured by corresponding credit ratings). Not only because this topic has not yet been comprehensively studied (other than Avramov et al., 2013), but also because there exist different kinds of significant asset pricing anomalies, and different credit risk rating system in Taiwan's security market.

In Taiwan's security market, future stock returns are positively related to price momentum (Li, Luo and Su, 2006; Hung, Lin and Liu, 2007; Wang, Zu and Wang , 2010), earnings momentum (Ku, 2011; Ko, Lin, Peng and Chang, 2012), and earnings-price ratio (Hung and Lei, 2002). Further, stock returns are negatively related to firm size(Lu and Lee, 2008), turnover (Chou, Chang and Lin, 2007; Chang and Wang, 2013), and idiosyncratic volatility (Huang, Lu, Huang and Chang, 2010). In contrast, asset growth (Ko, Jiang, Lin, and Chang,2012), and value (Mukherji, Dhatt, and Kim, 1997; Chen and Zhang,1998; Chui and Wei, 1998; Ding, Chua, and Fetherston,2005) are insignificantly in Taiwan security market. This project focuses only on examining those significant asset pricing anomalies.

Unlike Avramov et al. (2013), who adopt the long-term issuer credit ratings issued by the Standard and Poor's (S&P) to measure financial distress and credit risk faced by firms, this project proposes to use the Taiwan Corporate Credit Risk Index (TCRI) issued by the Taiwan Economic Journal (TEJ), instead. The main reason for doing so is because rating services offered by the three internationally renowned credit rating agencies, S&P, Moody's and Fitch are solicited from participating members only. As a consequence, not all listed/public Taiwanese firms are rated by these credit rating agencies. In contrast, the TCRI issued by the TEJ offers unsolicited rating services, which implies that all Taiwanese listed/public firms are ranked by this credit rating agency. Therefore, ratings based on the TCRI offer a much better overview of corporate credit risks in Taiwan. With this rating data, Chu et al. (2012) document a significantly positive premium between best- and worst-rated stocks in both portfolios and individual stocks, and demonstrate that such premium cannot be explained by well-known asset-pricing models, which include the CAPM, Fama and French's (1993) three-factor model, and Liu's (2006) liquidity-augmented CAPM. This project further examines how credit ratings and the associated rating downgrades affect profits of anomaly-based trading strategies in Taiwan's security market.

Another feature that differentiates this project from Avramov et al. (2013) is the adoption of the errors-in-variables (EIV)-free approach proposed by Brennan, Chordia and Subrahmanyam (1998) to adjust individual stock returns for systematic risk. Avramov et al. (2013), as in Fama and French(2008), subtract the monthly return of the matching size and BM portfolio from each individual monthly stock return to obtain the stock's size- and BM-adjusted return. Instead, the EIV approach avoids relying on the portfolio grouping procedure, retains information embedded in individual securities, and hence more accurately describes profits of corresponding anomaly-based trading strategies. In

addition, we consider both Fama and French (1993) three factors model, and Carhart (1997) four factors model in adjusting for systematic risk.

My empirical investigation, based on both portfolio sorts and cross-sectional regressions, shows that the profitability of strategies based on earnings momentum, size, turnover, and idiosyncratic volatility is concentrated in the worst-rated stocks. Their profitability disappears when firms rated 4 or above (5-10) are excluded from the investment universe. In contrast, profitability of strategies based on price momentum, and earnings-price ratio is concentrated in stocks with better credit ratings. After excluding observations from six months before to six months after a downgrade, profitability of strategies based on price momentum, earnings momentum, earnings-price ratio, turnover, idiosyncratic volatility are all affected, but with different degrees. Overall, results of this research show that credit risk plays an important role in explaining the source of anomaly profits, yet not all asset pricing anomalies are related to financial distress in Taiwan's security market.

This report proceeds as follows. The next section discusses the methodology and the data. Section 3 presents the empirical results, and Section 4 concludes.

2 Methodology

2.1 Analysis with Portfolio Sorts

The TCRI assigns to each individual stock an integer rank between 1 and 10, with 1 representing the best-rated stocks, and 10 representing worst-rated stocks. Furthermore, each season, all stocks rated by the TCRI issued by the TEJ are divided into terciles based on their credit ratings. The best-rated group, C_1, includes stocks with ratings from 1 to 3; the medium-rated group, C_2, includes stocks with ratings from 4 to 7; and the worst-rated group, C_3, includes stocks with ratings from 8 to 10. Within each tercile and in each month t, stocks are sorted into quintile portfolios according to the anomaly-specific conditioning variable (for example, firm size). P_1 (P_5) denotes the portfolio containing stocks with the lowest (highest) value of the conditioning variable.

Each anomaly-based trading strategy involves buying one of the extreme portfolios (P_1 or P_5), selling the opposite extreme portfolio (P_5 or P_1), and holding both portfolios for the following K months. Since equally weighted portfolio returns can be dominated by

tiny (microcap) stocks that account for a very low fraction of the market capitalization but a vast majority of the stocks in the extreme anomaly-sorted portfolios. In contrast, value-weighted returns can be dominated by a few big stocks. Separately, either case could result in an unrepresentative picture of the importance of an anomaly. Thus, equally- and value-weighted average portfolio returns will both be calculated and studied in this project. While this methodology applies to all strategies, strategies differ with respect to their conditioning variables and their holding periods that are consistent with the literature for each anomaly. For example, the price momentum strategy is constructed as in Jegadeesh and Titman (1993). Stocks are sorted on their cumulative return over the formation period (months $t-6$ to $t-1$). The momentum strategy involves buying the winner portfolio (P_5), selling the loser portfolio (P_1), and holding both positions for six months ($t+1$ to $t+6$). We skip a month between the formation and holding periods to avoid the potential impact of short-run reversal.

Once individual stocks are sorted according to the corresponding risk group and anomaly-specific conditioning variable, the profitability of each anomaly-based trading strategy can be computed as the return differentials, $P_5 - P_1$ or $P_1 - P_5$ for each risk group. Several interesting issues can then be examined. First of all, we can examine whether the profitability of each anomaly-based trading strategy are significantly different among different risk groups (C_1, C_2, and C_3.) Second, to further ascertain whether the worst-rated stocks are driving anomalies profits (Avramov et al., 2013), we will repeat the above portfolio sorts analysis by sequentially excluding the worst-rated stocks from our investment universe. Furthermore, we can examine whether credit rating downgrades have any impact on the profitability of each anomaly-based trading strategy by excluding returns around rating downgrades (six months before and after a downgrade was recorded).

2.2 Regression Analysis

Next, we examine how the profitability of each anomaly-based trading strategy are affected by financial distress (measured by credit risk group to which each stock belongs) using individual stocks rather than portfolios. By examining individual stocks, we can avoid data-snooping biases that are usually inherent in portfolio-based approaches, as noted by Lo and MacKinlay (1990). Furthermore, without relying on the portfolio grouping procedure, statistical tests retain information embedded in individual securities.

To do this, we apply an errors-in-variables (EIV)-free approach proposed by Brennan, Chordia and Subrahmanyam (hereafter BCS, 1998). The methodology is briefly described as follows. First, for each year, the factor loadings, $\beta_{j,k}$, of some asset pricing model (for example, Fama and French's, 1993, three factor model) are estimated for all securities that have at least 24 return observations over the previous 60 months. The estimated risk-adjusted return of each security, $\tilde{R}^*_{jt}$, for each month of the following year is then calculated as:

$$\tilde{R}^*_{jt} \equiv \tilde{R}_{jt} - R_{ft} - \sum_{k=1}^{L} \hat{\beta}_{jk} \tilde{F}_{kt}, \tag{1}$$

for all j. The risk-adjusted returns from Equation (1) are then used to test whether different credit risk groups and anomaly-specific conditioning variables can describe the cross-sectional variation in expected returns. As in Avramov et al. (2013), we first run the Fama-MacBeth cross-sectional regressions for the entire sample (all rated) and the three tercile sub-samples as follows:

$$\tilde{R}^*_{jt} = c_{0t} + \sum_{m=1}^{M} c_{mt} Z_{mjt-lag} + \tilde{e}_{jt}, \tag{2}$$

where $Z_{mjt-lag}$ $(m = 1, \ldots, M)$ is the value of anomaly-specific conditioning variable for stock j in month t-lag, and c_{mt} is the premium per unit of anomaly-specific conditioning variable m in month t.[1]

To access how rating downgrade and credit risk group, C_i, affect the profitability of the pricing anomalies, we extend the estimation model as follow:

$$\tilde{R}^*_{jt} = c_{0t} + d_t DG + \sum_{m=1}^{M} c_{mt} Z_{mjt-lag} + \sum_{i=2}^{3} (\sum_{m=1}^{M} \delta_{imt} \mathrm{C}_{ijq-1} Z_{mjt-lag}) + \tilde{e}_{jt}, \tag{3}$$

where DG is a dummy variable which equals to 1 over a period that extends from six months prior to six months after a rating downgrade; C_{ijq-1} is a dummy variable which equals to 1, if, at the end of previous quarter (q-1), stock j is categorized into credit risk group C_i; δ_{imt} measures extra credit-risk premiums in month t for stocks which have anomaly-specific conditioning variable equals to $Z_{mjt-lag}$ and are categorized into credit risk group C_i. After running those models in Equation (2) and (3) for all t, we can compute the time-series average of cross-sectional regression coefficients with their associated

[1]The choice of $Z_{mjt-lag}$ is anomaly-specific. For example, for the price momentum effect, the accumulative return of the previous six month (month t-6 to t-1) is used as one of the explanatory variable on the right hand side of Equation (2).

sample t-statistics. Consequently, a significant average d_t and δ_{imt} would indicate that rating downgrade and credit rating have significant impact on the profitability of pricing anomalies.

2.3 Data

Our sample consists of credit ratings, monthly returns and firm characteristics of common stocks listed on the Taiwan Stock Exchange for the period from January 1996 to December 2012. All required data can be retrieved from the TEJ.

Table 1: Stock characteristics by credit rating tercile

Each season, all stocks rated by the TCRI issued by the TEJ are divided into terciles based on their credit rating. The best-rated group, C_1, includes stocks with ratings from 1 to 3; the medium-rated group, C_2, includes stocks with ratings from 4 to 7; and the worst-rated group, C_3, includes stocks with ratings from 8 to 10. For each tercile, we compute the cross-sectional median characteristic for each month. The sample period is January 1996 to December 2012. This table reports the time series average of these monthly medians.

	Ratings (C_1=best-rated, C_3=worst-rated)		
Characteristics	C_1	C_2	C_3
Average Rating	2.503	5.662	8.571
Market capitalization (billions of dollars)	35.022	3.281	1.491
Book-to-market ratio	0.428	0.676	1.032
Price (dollars)	24.664	14.384	13.519
Dollar volume (billions of dollars)	5.524	0.566	0.246
Turnover rate (%)	12.692	14.073	9.562
Average number of Firms	75	614	162

Summary statistics are reported in Table 1. Worse-rated firms tend to be smaller. The average market capitalization of the best-rated (C_1) stocks is \$35 billion, and that of the worst-rated (C_3) is \$1.49 billion. The book-to-market ratio increases monotonically from 0.428 in C_1 to 1.032 in C_3. The average stock price decreases monotonically from \$24.7 in C_1 to \$13.5 in C_3. The worst-rated firms are considerably less liquid than the best-rated firms. The average monthly dollar trading volume decreases from \$5524 million for the best-rated (C_1) to \$246 million for the worst-rated (C_3) stocks. These statistics

are consistent with those in Avramov et al. (2013). In other words, firms with better credit ratings tend to be bigger in market capitalizations, higher price, and more liquid.

And, as reported in Table 2, worse-rated stocks have more systematic risk and earn lower risk-adjusted returns than better-rated stocks. More specifically, market betas (β_{RMRF}) increase monotonically from the best-rated (C_1) to the worst-rated (C_3) stocks, in all three asset pricing models. β_{SMB} and β_{HML} in both the Fama and French (1993) three-factor model, and the Carhart (1997) four-factor model also increase monotonically from C_1 stocks to C_3 stocks. However, αs in all three asset pricing models decrease monotonically from C_1 stocks to C_3 stocks. This can also be seen from the significant αs of the arbitrage portfolios ($C_1 - C_3$) for all three asset pricing models. Such evidence is consistent with Chu et al. (2012), who document a significantly positive premium between best- and worst-rated stocks, and demonstrate that such premium cannot be explained by well-known asset-pricing models.

3 Empirical Results

3.1 Portfolio Sorts

Table 3 presents for each anomaly monthly returns for the extreme portfolios, P_1 and P_5, as well as return differentials, $P_5 - P_1$ or $P_1 - P_5$. We first examine anomaly-based profitability for all rated firms based on equally-weighted returns in Panel A. For all-rated portfolios, profitability of strategies based on earning momentum, turnover, and idiosyncratic volatility are significant. We next partition the sample into best-rated (C_1), medium-rated (C_2), and worst-rated (C_3) stocks. For the C_1 tercile, profitability of strategies based on price momentum, and earning-price ratio are significant; for the C_2 tercile, profitability of strategies based on earning momentum, size, and turnover are significant; For the C_3 tercile, profitability of strategies based on earning momentum, size, turnover, and idiosyncratic volatility are significant; Results based on value-weighted returns (as reported in Panel B) are largely similar to those based on equally-weighted returns. In short, based on these results, strategies based on price momentum, and earning-price ratio seem to derive their profitability from the best-rated stocks; while strategies based on earning momentum, size, turnover, and idiosyncratic volatility seem to derive their profitability from the worst-rated stocks. The evidence suggests that credit risk plays an important role in explaining the source of anomaly profits.

Table 2: Stock alphas and betas by credit rating tercile.

Each season, all stocks rated by the TCRI issued by the TEJ are divided into terciles based on their credit rating. The best-rated group, C_1, includes stocks with ratings from 1 to 3; the medium-rated group, C_2, includes stocks with ratings from 4 to 7; and the worst-rated group, C_3, includes stocks with ratings from 8 to 10. For each tercile, we compute the cross-sectional median characteristic for each month. The sample period is January 1996 to December 2012. This table reports capital asset pricing model(CAPM), Fama and French (1993), and Carhart (1997) alphas and betas from time series regressions of the credit risk tercile portfolio excess returns on the factor returns. t-statistics are in parentheses. * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level.

	C_1	C_2	C_3	$C_1 - C_3$
Panel A : Average Returns				
Raw returns	0.865	0.204	-0.879	1.744**
	(1.50)	(0.27)	(-0.92)	(2.36)
Panel B : CAPM Model				
α	0.373***	-0.369	-1.452***	1.825***
	(2.75)	(-1.60)	(-2.62)	(2.80)
β_{RMRF}	0.953***	1.111***	1.108***	-0.156*
	(55.56)	(37.94)	(15.80)	(-1.89)
Panel C : Fama and French (1993)Three Factors Model				
α	0.376***	-0.369**	-1.491***	1.867***
	(4.22)	(-2.21)	(-5.21)	(6.03)
β_{RMRF}	0.932***	1.149***	1.172***	-0.240***
	(8 1.60)	(53.58)	(31.99)	(-6.04)
β_{SMB}	-0.270***	0.4 89***	0.917***	-1.187***
	(-12.47)	(1 2.00)	(1 3.18)	(-15.75)
β_{HML}	-0.118***	0.115***	0.792***	-0.910***
	(-8.10)	(4.20)	(16.91)	(-17.93)
Panel D: Carhart (1997) Four Factors Model				
α	0.387***	-0.294*	-1.423***	1.810***
	(4.35)	(-1.91)	(-5.06)	(5.89)
β_{RMRF}	0.928***	1. 122***	1.148***	-0.220***
	(79.66)	(55.70)	(31.25)	(-5.47)
β_{SMB}	-0.280***	0.423***	0.858***	-1.137***
	(-12.46)	(10.90)	(1 2.11)	(-14.68)
β_{HML}	-0.125***	0.068***	0.750***	-0.875***
	(-8.22)	(2.61)	(15.66)	(-16.70)
β_{MOM}	-0.024	-0.169***	-0.152***	0.128**
	(-1.54)	(-6.20)	(-3.06)	(2.35)

Table 3: Profits from asset pricing anomalies in rated firms.

Stocks are sorted into best- (C_1), medium- (C_2), and worst-rated (C_3) terciles, based on their TCRI credit rating. Within each subsample, stocks aresorted into quintile portfolios based on the conditioning variable of each specific anomaly, as noted in the column heading."PMOM" refers to price mementum; "EMOM" to earnings momentum"EP" to earnings-price ratio; "Size" to market capitalization; "TO" to turnover; and "IV" to the idiosyncratic volatility. The line"Strategy" presents the net profit from the long and short positions, i.e. $P_5 - P_1$ or $P_1 - P_5$, depending on the anomaly. Panel A (B) provides the average monthly equally- (value-) weighted anomaly returns. The sample period is January 1996 to December 2012. Numbers in the parentheses are the t-statistics calculated using the Newey-West (1987) robust standard errors. * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level.

Panel A: Equally weighted returns

Subsample	Portfo1io	PMOM	EMOM	EP	Size	TO	IV
All Rated	P_1	0.457	-0.043	0.694	1.141	0.903	0.579
	P_5	0.604	1.066	1.345	0.416	-0.209	-0.150
	Strategy	0.147	1.109***	0.651	0.725	1.111**	0.729*
		(0.32)	(5.12)	(1.27)	(1.46)	(2.27)	(1.74)
C_1	P_1	0.506	0.743	0.161	1.114	0.794	0.518
	P_5	1.289	1.339	1.811	0.980	0.986	1.022
	Strategy	0.783*	0.597	1.649***	0.133	-0.192	-0.505
		(1.72)	(1.49)	(4.18)	(0.32)	(-0.34)	(-1.15)
C_2	P_1	0.484	0.147	0.765	1.294	0.906	0.628
	P_5	0.621	1.273	1.041	0.223	-0.218	-0.040
	Strategy	0.138	1.125***	0.277	1.071***	1.124**	0.668
		(0.39)	(4.97)	(0.88)	(2.69)	(2.49)	(1.62)
C_3	P_1	0.175	-1.195	1.173	1.667	0.445	0.262
	P_5	-0.106	0.604	0.238	-0.786	-1.302	-0.735
	Strategy	-0.281	1.799***	-0.935	2.453***	1.748**	0.996*
		(-0.46)	(3.58)	(-1.63)	(4.14)	(2.58)	(1.71)

Panel B: Value-weighted returns

Subsample	Portfo1io	PMOM	EMOM	EP	Size	TO	IV
All Rated	P_1	0.222	0.180	-0.042	0.990	0.294	0.186
	P_5	0.489	0.672	1.301	0.571	0.114	-0.143
	Strategy	0.266	0.492	1.343**	0.419	0.180	0.329
		(0.48)	(1.36)	(2.44)	(0.78)	(0.29)	(0.52)
C_1	P_1	0.646	0.847	0.110	1.047	0.565	-0.059
	P_5	0.918	0.847	1.904	0.971	0.943	0.849
	Strategy	0.272	0.000	1.794***	0.075	-0.379	-0.908*
		(0.57)	(-0.00)	(3.28)	(0.17)	(-0.57)	(-1.66)
C_2	P_1	0.004	-0.164	0.139	1.240	0.337	0.062
	P_5	0.329	1.066	0.784	0.046	-0.224	0.057
	Strategy	0.325	1.231***	0.646*	1.194***	0.560	0.005
		(0.72)	(3.59)	(1.69)	(2.69)	(1.08)	(0.01)
C_3	P_1	-1.401	-1.58	-0.213	1.374	-0.288	-0.162
	P_5	-0.649	-0.177	-0.510	-1.268	-1.619	-3.148
	Strategy	0.752	1.404***	-0.297	2.642***	1.331	2.986***
		(0.92)	(2.01)	(-0.39)	(4.33)	(1.44)	(4.04)

To further pinpoint the segment of firms driving the anomalies' profits, we show in Table 4 various credit rating sub-samples as we sequentially exclude the worst-rated stocks from our investment universe. It can be seen that positive profits of turnover- and idiosyncratic-based strategies turn negative as worse-rated stocks are excluded from the sub-samples. Strategy based on price momentum does not seem to yield significant positive profit in all sub-sample. In contrast, strategy based on earning-price ratio still generate significant positive profit as worse-rated stocks are excluded from the sub-samples. For strategies based on other anomalies (earning momentum and size), profitability gradually disappear as worse-rated stocks are excluded from the sub-samples. These patterns are quite similar for equally-weighted (Panel A) and value-weighted (Panel B) returns. Therefore, unlike Avramov et al. (2013), sequentially excluding the worst-rated stocks does not seem to explain the profitability of anomaly-based strategies in a systematic way. However, the profitability of strategies based on earnings momentum, size, turnover, and idiosyncratic volatility is concentrated in the worst-rated stocks, and their profitability disappears when firms rated 4 or above (5-10) are excluded from the investment universe.

3.2 Credit rating downgrades

Table 5 presents the number and size of rating downgrades, as well as returns around downgrades, for the credit risk-sorted terciles. Downgrades are more frequent and larger in magnitude among lower-rated stocks. The price impact around downgrades is considerably larger for worst- versus best-rated stocks. Table 5 also shows that, following downgrades, de-listings are much more likely among lower-rated stocks.

Table 4: Profits from asset pricing anomalies in decreasing subsamples of rated firms.

This table reports profits from anomaly-based trading strategies as in Table 3, as we sequentially eliminate the worst-rated stocks. Stocks are eliminated before anomaly-based portfolios are formed each month. Once included in a portfolio, a stock stays in that portfolio throughout the holding period even if it is subsequently downgraded. The first column specifies the range of ratings included in the corresponding subsample. The last two columns report the percentage of rated firms, Firm(%), and of ratio market capitalization to the entire market, Cap(%), represented by each subsample. The column headings identifying each anomaly are defined in Table 3. The reported anomaly profits are based on equally- (Panel A) and value-weighted (Panel B) returns. The sample period is January 1996 to December 2012. Numbers in the parentheses are the t-statistics calculated using the Newey-West (1987) robust standard errors. * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level.

Panel A: Equally-weighted returns

Rating	PMOM	EMOM	EP	Size	TO	IV	Firm(%)	Cap(%)
1-10	0.147	1.109***	0.651	0.725	1.111**	0.729*	100.00	100.00
	(0.32)	(5.12)	(1.27)	(1.46)	(2.27)	(1.74)		
1-9	0.127	0.946***	0.559	0.796*	1.042**	0.563	94.92	99.75
	(0.32)	(4.65)	(1.38)	(1.81)	(2.23)	(1.38)		
1-8	0.197	0.999***	0.593	0.791*	1.102**	0.592	89.64	99.25
	(0.50)	(4.70)	(1.50)	(1.89)	(2.14)	(1.47)		
1-7	0.239	1.034***	0.730*	0.702*	0.971**	0.540	80.98	98.65
	(0.62)	(4.71)	(1.92)	(1.69)	(2.01)	(1.31)		
1-6	0.324	0.923***	0.845**	0.530	0.822*	0.544	66.67	97.88
	(0.86)	(4.00)	(2.41)	(1.37)	(1.70)	(1.30)		
1-5	0.521	1.039***	1.004***	0.358	0.691	0.357	42.94	97.11
	(1.37)	(4.38)	(3.07)	(0.97)	(1.45)	(0.86)		
1-4	0.781*	0.898***	1.340***	0.421	0.162	0.012	21.83	95.82
	(1.96)	(3.55)	(3.95)	(1.15)	(0.34)	(0.03)		
1-3	0.783*	0.597	1.649***	0.133	-0.192	-0.505	8.80	93.11
	(1.72)	(1.49)	(4.18)	(0.32)	(-0.34)	(-1.15)		
1-2	0.903*	0.469	1.807***	0.407	-0.539	-0.788	4.25	85.03
	(1.75)	(1.00)	(4.44)	(0.96)	(-0.76)	(-1.53)		
1	0.052	0.122	1.336*	0.094	-0.439	-0.269	1.55	61.67
	(0.10)	(0.19)	(1.67)	(0.16)	(-0.62)	(-0.47)		

Panel B: Value-weighted returns

Rating	PMOM	EMOM	EP	Size	TO	IV	Firm(%)	Cap(%)
1-10	0.266	0.492	1.343**	0.419	0.180	0.329	100.00	100.00
	(0.48)	(1.36)	(2.44)	(0.78)	(0.29)	(0.52)		
1-9	0.169	0.443	1.245***	0.564	0.191	0.100	94.92	99.75
	(0.33)	(1.22)	(2.48)	(1.13)	(0.31)	(0 .17)		
1-8	0.228	0.462	1.390***	0.588	0.260	0.043	89.64	99.25
	(0.45)	(1.26)	(2.76)	(1.22)	(0.42)	(0.07)		
1-7	0.240	0.425	1.557***	0.490	0.267	-0.060	80.98	98.65
	(0.49)	(1.12)	(3.39)	(1.04)	(0.43)	(-0.10)		
1-6	0.281	0.379	1.702***	0.357	0.138	-0.120	66.67	97.88
	(0.60)	(0.98)	(4.06)	(0.82)	(0.22)	(-0.20)		
1-5	0.363	0.358	1.617***	0.216	0.086	-0.308	42.94	97.11
	(0.78)	(0.89)	(3.54)	(0.52)	(0.14)	(-0.57)		
1-4	0.424	0.300	1.685***	0.223	-0.127	-0.478	21.83	95.82
	(0.91)	(0.65)	(3.49)	(0.58)	(-0.20)	(-0.85)		
1-3	0.272	0.000	1.794***	0.075	-0.379	-0.908*	8.80	93.11
	(0.57)	(-0.00)	(3.28)	(0.17)	(-0.57)	(-1.66)		
1-2	0.721	0.176	1.770***	0.425	-0.362	-1.395**	4.25	85.03
	(1.36)	(0.28)	(3.12)	(0.99)	(-0.48)	(-2.18)		
1	0.064	-0.103	1.533**	0.057	-0.507	-0.519	1.55	61.67
	(0.13)	(-0.15)	(2.02)	(0.09)	(-0.61)	(-0.85)		

Table 5: Downgrades, returns, and delistings by credit rating groups.

The table focuses on stocks with at least one downgrade at the beginning of the month. We analyze downgrades by credit rating tercile, sorted on firm rating. We report number of firms dowgraded per season, average scale of downgrades, average returns, and number of firms delisted. The sample period is January 1996 to December 2012.

	Ratings (C_1=best-rated, C_3=worst-rated)		
Characteristics	C_1	C_2	C_3
Number of downgrades	96	1750	1111
Downgrades per season	1.63	29.66	18.83
Size of downgrade	1.11	1.15	1.36
r_{t-1}	-1.33	-3.44	-3.84
r_t	-1.46	-3.28	-3.82
r_{t+1}	-0.69	-2.87	-2.48
$r_{t-6,t-1}$	-4.97	-15.85	-2 1.23
$r_{t+1,t+6}$	4.46	-6.35	-13 .70
$r_{t-12,t-1}$	-3.65	-22.64	-27.34
$r_{t+1,t+12}$	4.67	-2.78	-1 1.08
Delisted over $(t+1:t+6)$	0	9	291
Delisted over $(t+1:t+12)$	0	25	319
Delisted over $(t+1:t+24)$	1	42	338

Table 6 repeats the analysis from Table 3, but focuses on periods of stable or improving credit conditions. Specifically, for each downgraded stock, we exclude observations from six months before to six months after a downgrade. By comparing results presented in those two tables, we find that profitability of strategies based on price momentum, earnings momentum, earnings-price ratio, turnover, idiosyncratic volatility are all affected, but with different degrees. Again, such results are different from those presented in Avramov et al. (2013), but is consistent with Chu et al. (2013), which reports that credit rating downgrade only have limited impact on stock returns.

3.3 Cross-sectional Regression analysis

In this subsection, we scrutinize the asset pricing anomalies using cross-sectional regression analysis. First, for each month, we estimate the cross-sectional regression model in

Table 6: Impact of Downgrades on Profits from Asset-Pricing Anomalies.

We repeat the analysis in Table 3 after removing return observations from six months prior to six months after a downgrade. The column headings are defined in Table 3. The reported anomaly profits are based on equally- (Panel A) and value-weighted (Panel B) returns. The sample period is January 1996 to December 2012. Numbers in the parentheses are the t-statistics calculated using the Newey-West (1987) robust standard errors. * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level.

Panel A: Equally-weighted returns

Subsample	Portfo1io	PMOM	EMOM	EP	Size	TO	IV
All Rated	P_1	1.016	0.332	0.985	1.430	1.184	0.879
	P_5	0.913	1.296	1.668	0.855	0.431	0.392
	Strategy	-0.103	0.964***	0.684	0.575	0.754	0.488
		(-0.23)	(4.11)	(l.l7)	(1.10)	(1.48)	(1.12)
C_1	P_1	0.806	0.964	0.422	1.516	0.972	0.720
	P_5	1.461	1.391	2.040	1.077	1.442	1.357
	Strategy	0.655	0.428	1.619***	0.439	-0.469	-0.636
		(1.35)	(1.00)	(3.89)	(l.l2)	(-0.79)	(-1.39)
C_2	P_1	1.003	0.637	1.207	1.682	1.322	0.923
	P_5	0.843	1.448	1.272	0.560	0.164	0.488
	Strategy	-0.160	0.811***	0.065	1.123***	l.l58**	0.435
		(-0.48)	(3.47)	(0.20)	(2.75)	(2.56)	(1.04)
C_3	P_1	0.936	-0.192	1.430	1.899	0.612	0.930
	P_5	0.437	1.005	1.055	0.187	-0.184	0.056
	Strategy	-0.498	l.l97**	-0.375	1.713***	0.796	0.874
		(-0.85)	(2.18)	(-0.59)	(2.71)	(1.16)	(1.33)

Panel B: Value-weighted returns

Subsample	Portfo1io	PMOM	EMOM	EP	Size	TO	IV
All Rated	P_1	0.734	0.589	0.647	1.318	0.563	0.464
	P_5	0.727	0.820	1.555	0.870	0.701	0.380
	Strategy	-0.006	0.231	0.908	0.448	-0.138	0.084
		(-0.01)	(0.56)	(1.58)	(0.83)	(-0.22)	(0.13)
C_1	P_1	0.836	1.081	0.187	1.413	0.788	0.084
	P_5	1.083	0.971	1.986	1.074	1.228	1.138
	Strategy	0.247	-0.109	1.799***	0.340	-0.440	-1.054*
		(0.51)	(-0.19)	(3.10)	(0.81)	(-0.64)	(-1.85)
C_2	P_1	0.515	0.328	0.668	1.637	0.965	0.467
	P_5	0.521	1.220	1.103	0.463	0.214	0.523
	Strategy	0.006	0.992***	0.435	1.174***	0.751	-0.056
		(0.01)	(2.70)	(1.16)	(2.62)	(1.44)	(-0.09)
C_3	P_1	-0.230	-0.243	0.686	1.588	0.012	0.724
	P_5	-0.104	0.269	0.438	-0.075	0.108	-1.817
	Strategy	0.126	0.512	-0.249	1.662**	-0.096	2.541***
		(0.16)	(0.68)	(-0.32)	(2.50)	(-0.09)	(3.20)

Equation 2, and report the regression results in Table 7. In addition to raw returns, we also apply Fama and French (1993), and Carhart (1997) to adjusted for systematic risk. Consistent with portfolio sorts results (Table 3), we find from cross-sectional regressions that strategies based on size, turnover and idiosyncratic volatility derive their profitability mostly from stocks with the worst credit rating, while strategy based on earning-price ratio derives its profitability mostly from stocks with the best credit rating. In contrast, earning-momentum based strategy shows significant profitability in all three terciles of credit rating.

We further consider the credit rating downgrade dummy and credit rating dummies in the cross-sectional regression analysis, as specified in Equation 3, and report the results in Table 8. First of all, we find that the rating downgrade dummy variables (cross-sectional regression analysis) are all significantly negative, which indicate that the rating downgrade does decrease stock returns. Second, consistent with the literature, price momentum, earnings momentum and earnings-price ratio have positive impact on stock returns, while firm size, turnover and idiosyncratic volatility have negative impact on stock returns. Third, the C_2 tercile dummy has significantly negative impact on price momentum and earning-price ratio anomalies, while the C_3 tercile dummy only adversely affects the earning-price ratio anomalies.

Table 7: Cross-sectional regressions of returns on anomaly variables.

We apply BCS (1998) EIV-free approach to examine how the profitability of each anomaly-based trading strategy are affected by credit ratings. Each month t, we run univariate Fama-MacBeth cross-sectional regressions of monthly stock returns on a lagged firm characteristic based on each of the anomalies:

$$\tilde{R}^*_{jt} = c_{0t} + \sum_{m=1}^{M} c_{mt} Z_{mjt-lag} + \tilde{e}_{jt},$$

where $\tilde{R}^*_{jt}$ is raw return, the Fama and French (1993), or Carhart (1997), risk-adjusted return estimated with data of the previous 60 months; $Z_{mjt-lag}$ $(m = 1, \ldots, M)$ is the value of anomaly-specific conditioning variable for stock j in month t-lag, and c_{mt} is the premium per unit of anomaly-specific conditioning variable m in month t. Each row reports the results from a separate univariate regression and shows the time-series average of these cross-sectional regression coefficients with their associated sample t-statistics in parentheses calculated using the Newey-West (1987) robust standard errors. * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level.

Panel A: Raw average monthly returns

Subsample	Intercept	PMOM	EMOM	EP	Size	TO	IV
All Rated	3.184***	0.089	0.222***	0.896*	-0.190*	-0.309***	-0.108***
	(2.64)	(0.17)	(6.10)	(1.92)	(-1.71)	(-2.96)	(-4.47)
C_1	0.515	0.997	0.238***	5.193***	0.047	-0.113	0.004
	(0.33)	(1.32)	(2.88)	(3.56)	(-0.34)	(-0.64)	(0.08)
C_2	3.524***	-0.012	0.214***	1.836**	-0.266***	-0.249***	-0.101***
	(3.19)	(-0.02)	(5.18)	(2.48)	(-2.36)	(-2.51)	(-3.88)
C_3	10.401***	-0.216	0.387***	-0.210	-1.105***	-0.507 ***	-0.171***
	(4.78)	(-0.34)	(4.09)	(-0.28)	(-4.66)	(-3.69)	(-3.82)

Panel B: Fama-French three-factor risk-adjusted monthly returns

Subsample	Intercept	PMOM	EMOM	EP	Size	TO	IV
All Rated	4.075***	-0.096	0.253***	0.681*	-0.261***	-0.357***	-0.134***
	(5.57)	(-0.21)	(6.10)	(1.88)	(-3.51)	(-3.92)	(-5.68)
C_1	2.174	0.865	0.332***	5.209***	-0.151	-0.157	-0.069
	(1.63)	(1.25)	(3.53)	(3.11)	(-1.41)	(-0.96)	(-1.18)
C_2	4.378***	-0.375	0.233***	1.809**	-0.343***	-0.260***	-0.133***
	(5.06)	(-0.73)	(4.94)	(2.35)	(-3.51)	(-3.22)	(-5.00)
C_3	9.986***	-0.141	0.431***	-0.062	-1.040***	-0.623***	-0.141***
	(3.90)	(-0.21)	(3.38)	(-0.08)	(-3.37)	(-3.28)	(-2.66)

Panel C: Carhart four-factor risk-adjusted monthly returns

Subsample	Intercept	PMOM	EMOM	EP	Size	TO	IV
All Rated	4.162***	0.074	0.257***	0.915**	-0.262***	-0.371***	-0.127***
	(5.92)	(0.15)	(5.95)	(2.24)	(-3.61)	(-3.98)	(-5.04)
C_1	2.476*	1.305	0.378***	4.807***	-0.174	-0.065	-0.079
	(1.86)	(1.38)	(3.30)	(2.75)	(-1.64)	(-0.34)	(-1.31)
C_2	4.283***	-0.262	0.226***	1.271	-0.318***	-0.266***	-0.124***
	(4.81)	(-0.48)	(4.95)	(1.54)	(-3.15)	(-2.97)	(-4.42)
C_3	9.146***	0.055	0.403***	0.158	-0.925***	-0.628***	-0.141***
	(3.74)	(0.08)	(2.99)	(0.23)	(-3.16)	(-3.24)	(-2.70)

4 Conclusion

This project studies the implications of financial distress for asset pricing anomalies existing in Taiwan's security market for the period from January 1996 to December 2012. The main objective is to ascertain how the profitability of anomaly-based trading strategies in Taiwan's security market is affected by credit ratings, and credit rating downgrade using both portfolio sorts and cross-sectional regressions.

My empirical investigation shows that profits of anomaly-based trading strategies, such as earning momentum, size, turnover, and idiosyncratic volatility are mostly driven by firms with the worst credit rating. In contrast, profits of strategies based price momentum, and earnings-price ratio are driven by firms with the best credit rating. I also find that credit rating downgrade affects all anomalies but with different degrees. This observation is different from that in Avramov et al. (2013), which find all anomalies disappear after downgraded data are excluded from the study samples.

Overall, results of this research show that credit risk does play an important role in explaining the source of anomaly profits. However, not all asset pricing anomalies are related to financial distress in Taiwan's security market.

Table 8: Cross-sectional regressions with rating downgrade and credit rating dummies

Each column reports the results from a separate univariate regression and shows the time-series average of these cross-sectional regression coefficients with their associated sample t-statistics in parentheses calculated using the Newey-West (1987) robust standard errors. D_RDG refers to a dummy variable for stocks during the period which is 6 months before or 6 months after a rating downgrade; D_C_2 refers to a dummy variable for stocks in the C_2 tercile; D_C_3 refers to a dummy variable for stocks in the C_3 tercile; * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level.

	Average returns	Fama-French risk-adjusted returns	Carhart risk-adjusted returns
Intercept	4.359***	5.087***	5.106***
	(3.83)	(6.35)	(6.62)
D_RDG	-2.259***	-2.139***	-2.066***
	(-14.47)	(-13.33)	(-12.54)
PMOM	0.608	0.403	0.565
	(0.20)	(0.56)	(0.75)
EMOM	0.210***	0.317***	0.317***
	(2.62)	(3.52)	(3.38)
EP	3.509***	4.452***	4.516***
	(2.69)	(3.08)	(2.87)
Size	-0.319***	-0.389***	-0.377***
	(-3.03)	(-4.92)	(-4.92)
TO	-0.193	-0.291**	-0.235
	(-1.20)	(-1.92)	(-1.48)
IV	-0.026	-0.062	-0.074
	(-0.54)	(-1.25)	(-1.48)
PMOM$\times D_C_2$	-1.117**	-1.134**	-1.172**
	(-1.73)	(-1.70)	(-1.67)
EMOM$\times D_C_2$	-0.035	-0.116	-0.116
	(-0.39)	(-1.25)	(-1.21)
EP$\times D_C_2$	-2.182	-3.348**	-3.694**
	(-1.50)	(-2.21)	(-2.38)
Size $\times D\_C_2$	-0.001	-0.016	-0.020
	(-0.03)	(-0.31)	(-0.37)
TO$\times D_C_2$	-0.051	0.019	-0.039
	(-0.42)	(0.14)	(-0.27)
IV$\times D_C_2$	-0.078	-0.072	-0.054
	(-1.43)	(-1.37)	(-0.98)
PMOM$\times D_C_3$	-0.888	-0.961	-0.874
	(-1.06)	(-1.07)	(-0.92)
EMOM$\times D_C_3$	0.150	0.077	0.085
	(1.24)	(0.61)	(0.66)
EP$\times D_C_3$	-4.118***	-5.207***	-4.862***
	(-2.73)	(-3.16)	(-2.83)
Size$\times D_C_3$	-0.046	-0.094	-0.079
	(-0.60)	(-1.28)	(-1.07)
TO$\times D_C_3$	-0.300**	-0.243	-0.336
	(-1.67)	(-1.22)	(-1.61)
IV$\times D_C_3$	-0.060	-0.036	-0.027
	(-0.89)	(-0.55)	(-0.42)

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國科會補助專題研究計畫項下出席國際學術會議心得報告

日期：2014 年 05 月 21 日

計畫編號	NSC 102-2410-H-004 -032 -		
計畫名稱	財務困境對台灣股市資產定價異常現象之影響		
出國人員姓名	林信助	服務機構及職稱	國立政治大學國際貿易學系副教授
會議時間	2014 年 04 月 13 日至 2014 年 04 月 19 日	會議地點	法國巴黎
會議名稱	(中文)全球商業暨社會科學研究研討會 (英文) World Business and Social Science Research Conference		
發表論文題目	(中文)技術分析對於台灣股市波動度效果及規模效果之影響 (英文) The Impact of Technical Analysis on Volatility and Size Effects on Taiwan's Stock Market		

一、參加會議經過

本次研討會我被安排在4月15日的Accounting and Finance session，該場次共有五位學者發表學術論文。本人發表的論文題目為"The Impact of Technical Analysis on Volatility and Size Effects on Taiwan's Stock Market"。會中評論人

對本篇文章提供了非常多寶貴的建議，讓本篇論文在將來投稿前，有一個良好的修正依據。另外，本篇論文也獲得該研討會經濟及財務類最佳論文（如附上之信件）。這兩者都算是參加本次研討會的珍貴收穫。

除了我自己的報告之外，我也參加了幾場其他學者的專題演講，對於瞭解時下經濟財務主要研究問題的了解與釐清都有相當不錯的幫助。

二、與會心得

這次到法國巴黎參加金融學術研討會，除了從其他學者身上得到投稿前論文修改的許多寶貴建議之外；另外，與其他與會學者之間的研究經驗交流，也讓我獲益匪淺。

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三、考察參觀活動(無是項活動者略)

無。

四、建議

無。

五、攜回資料名稱及內容

無。

六、其他

無。

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日期: Wed, 14 May 2014 14:24:46
標題: Thank you and Best Paper Awards Paris Apr 2014 Conference

Dear Author/Participant

On behalf of World Business Institute, Australia, I would like to take this opportunity to thank you all for attending and participating at the World BSSRC held in Paris, France in April 2014. We apologise for the delay in sending out this announcement.

Although, I could not attend in person to meet and greet you all, I hope that you all had a fantastic conference and took away some valuable feedback for your research work and made some great new contacts.

I will be your contact person for this conference from here on. So if you have any questions about publication or other matters please email me via this email address. We remind you that authors of all presented papers will receive a Paper Evaluation Report within 2 months. If you paid for the conference, but failed to present the paper, then a PER will not be sent to you. For those who have paid for publication of the paper in a journal a Editorial Review Report will be emailed to you within 5 months.

The best papers for this conference were awarded as follows:

Accounting

Paper 102: Dr. Lijen He

Auditor Industry Specialization, Audit Experience, Tenure, and Audit Opinion

Banking

Paper 602: Dr. Wael Hassan

Financial Stability of Islamic Banks versus Conventional Banks of the Middle East Region

Economics & Finance

Paper 313: Dr. Shinn-Juh Lin

The Impact of Technical Analysis on Volatility and Size Effects on Taiwan's Stock Market

Paper 309: Prof. Haran Segram

A Mixed Ordered Probit Analysis of Corporate Credit Ratings

Management

Paper 424: Dr. Ragnar Lund

Private Banking and Art –Relationship Building and Cross Cultural Marketing: A Case Study

Marketing

Paper 508: Prof. Qi Wang

The Impact of Strategic Alliance on the Innovator's Financial Value in Markets with Network Effects and Standard Competition

Further to the above, the following papers were awarded best prize for journal award:

Global Review of Accounting and Finance

Paper 108: Dr. Walid Ben-Amar

The Effect of Board Composition and Structure on Voluntary Disclosure of Climate Change Strategies: Evidence from France

Journal of Islamic Finance and Business Research

Paper 507: Prof. Suleiman Mohammad and Miss. Ayat Mohammad

Effect of Banking Service Quality on Customer Satisfaction of Islamic Banks in Jordan: Structural Equation Modeling

Congratulations to all the winners on this outstanding achievement! Please email me your full postal address so that I can post out the award certificate to you. You will also be awarded fellowship into World Business Institute.

Thank you again and we hope to see you all again in our future conferences.

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To keep up-to-date with our forthcoming conferences and journal publications, follow us on Facebook by clicking https://www.facebook.com/pages/World-Business-Institute/203169793036174

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科技部補助計畫衍生研發成果推廣資料表

日期:2014/09/24

科技部補助計畫	計畫名稱: 財務困境對台灣股市資產定價異常現象之影響
	計畫主持人: 林信助
	計畫編號: 102-2410-H-004-032- 學門領域: 財務

無研發成果推廣資料

102 年度專題研究計畫研究成果彙整表

計畫主持人：林信助	計畫編號：102-2410-H-004-032-
計畫名稱：財務困境對台灣股市資產定價異常現象之影響	

成果項目			量化			單位	備註（質化說明：如數個計畫共同成果、成果列為該期刊之封面故事...等）
			實際已達成數（被接受或已發表）	預期總達成數(含實際已達成數)	本計畫實際貢獻百分比		
國內	論文著作	期刊論文	0	0	100%	篇	
		研究報告/技術報告	1	1	100%		
		研討會論文	0	0	100%		
		專書	0	0	100%		
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力（本國籍）	碩士生	2	2	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	0	0	100%		
國外	論文著作	期刊論文	0	1	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	0	1	100%		
		專書	0	0	100%	章/本	
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力（外國籍）	碩士生	0	0	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	0	0	100%		

其他成果 (無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)	無

	成果項目	量化	名稱或內容性質簡述
科教處計畫加填項目	測驗工具(含質性與量性)	0	
	課程/模組	0	
	電腦及網路系統或工具	0	
	教材	0	
	舉辦之活動/競賽	0	
	研討會/工作坊	0	
	電子報、網站	0	
	計畫成果推廣之參與（閱聽）人數	0	

科技部補助專題研究計畫成果報告自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現或其他有關價值等，作一綜合評估。

1. 請就研究內容與原計畫相符程度、達成預期目標情況作一綜合評估

■達成目標

□未達成目標（請說明，以 100 字為限）

□實驗失敗

□因故實驗中斷

□其他原因

說明：

2. 研究成果在學術期刊發表或申請專利等情形：

論文：□已發表 ■未發表之文稿 □撰寫中 □無

專利：□已獲得 □申請中 ■無

技轉：□已技轉 □洽談中 ■無

其他：(以 100 字為限)

3. 請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）(以 500 字為限)

在這個研究計畫中，我們探討財務困境對台灣股市資產定價異常現象之影響。我們發現：信用評等及其調降影響所有台灣股市異常定價投資策略之獲利性，但影響程度各異。也就是說，信用風險在解釋異常定價投資策略獲利性之來源的確扮演一個種要的角色，但並非所有的台灣股市資產定價異常現象都與財務困境有關。這些結果與國外主要相關研究(Avramov et al. 2013) 將異常定價效果投資策略獲利性均歸因於財務困境的結論並不完全相同。因此，本計畫的研究成果將可以補充相關文獻不足之處，並促使學/業界及投資者對於這個議題有更深一層的認識。另外，研究成果將在國際學術研討會發表，並於近期內投稿於相關領域之學術期刊。