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上市公司與一般公開發行公司之盈餘屬性異同以及對融資成本影響之研究
研究成果報告(精簡版)

計 畫 主 持 人 ：戚務君

計畫參與人員 ：博士班研究生-兼任助理：陳宜伶、黃惠琦、廖益均

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共同主持人： 無

計畫參與人員： 廖益均、黃惠琦、陳宜伶

The Difference in Accruals Quality between Listed and Unlisted Firms and the Responsiveness of Financials Statement Users: Evidence from Taiwan

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I. Introduction

The two aims of this paper are to compare the earnings quality, proxied by accrual quality (Francis et al. 2004, 2005) between *listed* and *unlisted* firms, and investigate whether the users of financial statements take the difference into their decisions. We conduct this study using unique Taiwanese data and choosing banks as the users where interest rates are their main decision factor in this study.

Prior researchers, in general, analyze the quality of financial statements from listed companies, whereas so far only few have attempted to investigate the earnings quality of unlisted firms although unlisted companies are predominant in the economy. These findings, however, only provide limited and mixed evidence. For instance, Beatty and Harris (1998) and Beatty, Ke, and Petroni (2002) report that public bank financial statement has lower earrings quality, and they reason their findings as public bank managers face more pressure from capital market beyond private bank managers. On the contrary, by examining timely loss recognition of UK private and public firms, Ball and Shivakumar (2005) demonstrate that private company has lower financial reporting quality. They rationale their findings as the market demands lower quality financial reporting for private companies than for public companies.

Although these studies have already compared earnings attributes between the two different markets, we still know little about whether users of financial statements take different earnings quality into their considerations while making their decisions (while allocating their resources). In this study we try to fill in the gap. Because there is no stock price for the unlisted firms, we investigate another important user of financial statements – *creditors* (more specifically, banks), based on (1) the quality of earnings should be generated by a real demand on financial reporting, and (2) financial reports are more important communication mechanisms for listed companies compared to those of unlisted companies. Thus, we first compare the accruals quality between the two markets, one with capital market whereas the other one without, and predict firms in listed market have higher accruals quality. Then we analyze whether the relation between creditor's decision and accruals quality is weaker for unlisted firms than that for listed firms.

We believe that this paper contributes to the line of research on investigating how capital market demand affects financial reporting properties. The followings are our principal results. First, accruals quality is substantially lower in unlisted companies than in listed companies, despite two types of firms facing equivalent accounting, auditing,

and taxation rules in Taiwan. Second, rational users of financial statements, i.e., creditors in this study, rely less on the accounting information of unlisted firms whose accruals quality is lower. Third, innate factors of accruals quality, rather than discretionary ones, play a main role on creditors' decisions.

The paper is organized as follows. Section II provides several institutional backgrounds of Taiwan related to this study, section III develops the hypotheses to be tested, section IV discusses the research methodology, section V reports the sample selection process and empirical results and section VI summaries the conclusions and inferences.

II. Background of Listed and Unlisted Firms in Taiwan

There are four types of Taiwanese companies under the regulation of Taiwanese *Securities and Exchange Act* (hereafter Taiwanese SEC Act): (1) firms listed in Taiwan Stock Exchange corporation (TSEC), (2) firms listed in GreTai Securities Market (GT), (3) firms listed in Emerging Stocks (ES), and (4) unlisted but financial statements should be publicly distributed. In the Taiwanese SEC Act, they are *all* public companies although the last one is unlisted. With the exception of government bonds or other securities exempted by the Ministry of Finance, the public offering or issuing of securities without the approval from or an effective registration with the competent authority shall be prohibited. In the issuance of new shares to increase the capital by an issuer under this Act, the competent authority may prescribe the shareholding dispersal standards (the guidelines on governing the processing of securities matters by an issuer shall be prescribed by the competent authority).

A prospectus shall be delivered to the subscriber of securities prior to its public offer. Any person violating the rules from the SEC Act shall be held liable for the compensation of damages sustained by any bona fide counterpart. In particular, the attested certified public accountant is included. Within four (two) months after the close of each fiscal (semi-annual fiscal) year, an issuer under the Taiwanese SEC Act shall announce to the public and register with the competent authority financial reports which have been duly audited and certified by a certified public accountant, approved by the board of directors, and recognized by the supervisors. In particular, all the public firms, listed or unlisted, use the same accounting rules, auditing rules, and tax laws in Taiwan.

Starting from 1980, in Taiwan, when companies whose capital is above a certain level (the amount was set NT$ 2 hundred million and was raised to NT$5 hundred

million in 2000), the Taiwanese SEC Act enforces the company has to be a "public" firm. That is, at this time, the original owners have to sell their certain portion shares outside, a prospectus shall be delivered to the subscriber of securities prior to its public offer, and regularly provide their financial statements to the public. However, in year 2001, amended SEC Act cancels the enforced public requirement, and let the firm decides to be public or not. So, several original ES-companies de-public after 2001, therefore, these companies need not to public their financier statement after their making the de-public decisions.

The major differences between TSEC, GT, and ES are the trading of ES on over-the-counter markets shall be a cash-and-spot basis, and margin transitions are not allowed, whereas stocks trading in TSEC and GT are allowed. The threshold of listing on TSEC (capital more than NT$ 6 hundred million for normal firms, and NT$ 3 hundred million for high-tech companies) in greater that that on GT (capital more than NT1 hundred million for all companies). So, on average, the firm size and stock liquidly are biggest (smallest) and highest (lowest), respectively, in TSEC (ES) market. Of course, the stocks in these listed firms have better liquidity than the "public-but-not-listed" companies.

III. Literatures (most in pending) and Hypotheses

Beatty and Harris (1998) find that public banks consistently engage in more earnings management than private banks. In addition, using the earnings threshold approach, Beatty, Ke, and Petroni (2002) report that public bank financial statement has lower earrings quality. They reason their findings as public bank managers face more pressure from capital market beyond private bank managers. On the contrary, examining timely loss recognition of UK private and public firms, Ball and Shivakumar (2005) demonstrate that private company has lower financial reporting quality. They rationale their findings as the market demands lower quality financial reporting for private companies than for public companies. To further clarify these mixed results, we compare another earnings attributes, accrual quality.

Private (or unlisted in this study) companies have different ownership, governance, financing, management and compensation structures from public (or listed in this study) companies (Ball and Shivakumar 2005) do. Similar to listed companies, the financial statements of Taiwanese unlisted firms are also distributed to the public; however, the qualities of financial reporting between the two types of companies are not necessarily

the same. The reason is that unlisted companies are more likely to be influenced by dividend and retention policies, as well as income tax policies. In addition, compared to unlisted companies, the function for financial reporting of listed companies on mitigating agency problems is more important than that of non-listed companies. Specifically, the demand on quality of financial statements is higher for the users in listed companies than the users in unlisted companies.

Since private companies typically are more closely held, their shareholder turnover is lower, shareholders take a more active role in management, and the usefulness of financial statements is weaker for the users of un-listed companies. So the private communication would be comparatively efficient for non-listed companies than for listed companies. Therefore, similar to Ball and Shivakumar (2005), our first hypothesis is that capital market force will generate a higher quality for financial reporting of listed companies.

Beyond Ball and Shivakumar (2005), this study further examine whether the users of different markets (i.e., listed vs. unlisted) have dissimilar reaction on earnings information while facing different quality of financial reporting. Based on (1) information economic theory, the lower accruals quality of unlisted companies will cause users tend to ignore the less quality information, and (2) unlisted firms have other channels to communicate among their stakeholders, our second hypothesis predicts that creditor's decision will rely less on accounting information of unlisted companies compared to that of listed companies.

Finally, based on the empirical evidence from Francis et al. (2005), we conjecture that, among listed and unlisted companies, the association between accruals quality and creditors' decisions is mainly attributed to innate accruals quality.

IV. Research Methodology

<u>Creditor decisions</u>

Since there is no stock price for unlisted companies, we use creditors as the users of financial statements. The Taiwanese Guidelines Governing the Preparation of Financial Reports by Securities Issuers (hereafter the Guide), based on the requirement of Taiwanese SEC Act, is an official guideline to govern financial reporting of all public companies, including the "unlisted-but-public" companies. Article 8 of the Guide requires that companies must disclose:

(1) Short-term loans, including short-term borrowings from <u>banks</u>, overdrafts, and other short-term loans. For short-term loans, the nature of loan, guarantee, and the range of interest rates shall be noted based on the type of loans. If collateral is provided, the name of collateral and its book value shall be recorded.

(2) Borrowings from financial institutions, shareholders, employees, related parties, and other individuals or institutions, which shall be <u>separately noted</u>.

Using this information, we calculate cost of borrowing from banks for each firm in each year.

<u>Accruals quality</u>

Following Francis et al. (2004, 2005), we use accruals quality as a measure of earnings quality Similar to Dechow and Dichev (2002) and Francis et al. (2004), we regress total current accruals (TCA) to lagged, current, and future cash flows from operations (CFO), deflated by total assets, as

$$\frac{TCA_{it}}{Assets_{it}} = \alpha_{0i} + \alpha_{1i}\frac{CFO_{it-1}}{Assets_{it}} + \alpha_{2,i}\frac{CFO_{it}}{Assets_{it}} + \alpha_{3,i}\frac{CFO_{it+1}}{Assets_{it}} + \varepsilon_{it} \quad , \tag{1}$$

where denominator $Assets_{it}$ is the average of beginning- and end of-year assets. For each firm-year, we estimate Equation (1) using rolling ten-year windows, yielding ten residuals, and calculate their standard deviations, $\sigma(\hat{\varepsilon}_{it})$, to proxy for accruals quality (AQ_{it}). Notice that large (small) values of AQ represent poor (good) accruals quality. Our first hypothesis is to test $AQ^{listed} \leq AQ^{unlisted}$.

To test hypothesis 2, we run the following equation:

$$CostDebt_{it} = \beta_0 + \beta_1 PR_{it} + \beta_2 Rank(AQ)_{it} + \beta_3 PR_{it} \times Rank(AQ)_{it} + \beta_4 LEV_{it} + \beta_5 Size_{it}$$
$$+ \beta_6 ROA_{it} + \beta_7 IntCov_{it} + \beta_8 \sigma(NIBE)_{it} + \varepsilon_{it}$$

$$\tag{2}$$

where:

      $CostDebt_{it}$ = weighted average interest rate on firm i's bank loans initiated in year t;

      PR_{it} = dummy variable equal to one if firm i is unlisted in year t and zero otherwise;

      $Rank(AQ)_{it}$ = standardized annual decile ranking of accruals quality (AQ_{it});

$PR_{it} \times Rank(AQ)_{it}$ = $Rank(AQ)_{it}$ multiplied by PR_{it};

LEV_{it} = leverage measured as the ratio of interest-bearing debt to average total assets;

$Size_{it}$ = log of firm i's average total assets;

ROA_{it} = firm i's return on assets;

$IntCov_{it}$ = firm i's ratio of net income before extraordinary items to interest expense;

$\sigma(NIBE)_{it}$ = standard deviation of firm i's net income before extraordinary items (NIBE), scaled by average total assets, over the rolling prior 10-year period with at least five observations;

Since the coefficient on $Rank(AQ)_{it}$, β_2, measure the association between accruals quality and the cost of debt of unlisted companies, the sum of coefficient β_2 and β_3 measures the association between accruals quality and cost of debt of listed companies, our second hypothesis predict a negative β_3.

Dechow and Dichev (2002) identify five innate factors that affect accruals quality. Following Francis et al. (2005, p. 316), we use the following model to separate accruals quality (AQ) into innate (InnaAQ) and discretionary (DiscAQ) accruals quality:

$$AQ_{it} = \gamma_0 + \gamma_1 Size_{it} + \gamma_2 \sigma(CFO)_{it} + \gamma_3 \sigma(Sales)_{it} + \gamma_4 \log(OpCycle)_{it} + \gamma_5 NegEarn_{it} + \varepsilon_{it} \quad (3)$$

where:

AQ_{it} = firm i's accruals quality in year t;

$Size_{it}$ = log of firm i's average total assets;

$\sigma(CFO)_{it}$ = standard deviation of firm i's cash flows from operations (CFO), scaled by average total assets, over the rolling prior 10-year period with at least five observations;

$\sigma(Sales)_{it}$ = standard deviation of firm i's net sales, scaled by average total assets, over the rolling prior 10-year period with at least five observations;

log(OpCycle)$_{it}$ = log of the length of operating cycle, measured as the sum of days accounts receivables and days inventory;

NegEarn$_{it}$ = percent of negative earnings over the rolling prior 10-year period.

The predicted values from equation (3) are defined as the innate portion of firm i's accruals quality in year t (InnaAQ$_{it}$), specifically,

$$InnaAQ_{it} = \hat{\gamma}_0 + \hat{\gamma}_1 Size_{it} + \hat{\gamma}_2 \sigma(CFO)_{it} + \hat{\gamma}_3 \sigma(Sales)_{it} + \hat{\gamma}_4 \log(OpCycle)_{it} + \hat{\gamma}_5 NegEarn_{it} + \varepsilon_{it}$$

(4)

The residuals from equation (3) are defined as the discretionary component of firm i's accruals quality (DiscAQ$_{it}$), DiscAQ$_{it}$ = ε_{it}.

V Results

<u>Table 1</u>

Table 1 reports descriptive statistics for all variables, where the left (right) part reports summary statistics of listed (unlisted) companies for the pooled sample. For listed companies, mean and median values of interest rate are 5.139 and 5.525, respectively; as for the unlisted companies, their corresponding mean and median values are 6.263 and 6.768, respectively. The differences in mean and median of interest rate between the two groups are both significantly different at 1% (the t-statistics equals -15.63 and the z-statistics equals -15.50, see the last two columns of Table 1). As expected, on average, the interest rate is higher for the listed firms. Consistent with the results from mean and median, the interest rate at 10-, 25-, 75-, and 90- percentiles all reveal that unlisted firms have higher interest rates than listed firms have.

The results on AQ are consistent with our hypothesis 1. No matter any values on mean, median and the reported percentiles, AQ of listed firms are smaller than those of un-listed firms. The differences in mean and median are both significant at 1%. Since higher AQ indicates poorer accruals quality, the univariate comparison result supports our first hypothesis that listed companies have better accruals quality.

[insert a AQ vs percentile plot by listed/unlisted]

Regarding other variables beyond AQ, in terms of mean value, listed firms have significantly bigger sizes, higher sales revenues, and better ROA; unlisted firms have

significantly higher assets turnover (i.e., sales divided by total assets), standard deviations of operating cash flows and sales, and higher portion of negative earnings over the past 10 years.

The bottom of Table 1 reports innate and discretionary part of AQ. Similar to original AQ, no matter what values of mean, median and the reported percentiles, InnaAQ of listed firms is smaller than that of unlisted firms; again, the differences in mean and median are both significant at 1%. However, this clear pattern disappears when we loot at DiscAQ. Specifically, the listed firms have lower mean DiscAQ (-0.002 vs. 0.001) and the mean differences in DiscAQ is significant (t-stat. = -2.76 and p-value<1%); but the listed firms have larger median DiscAQ (-0.004 vs. -0.007), however, the median differences in DiscAQ is insignificant (z-stat. = 1.02). So roughly speaking, the AQ between listed and unlisted companies are different, and the difference mainly comes from innate accruals quality.

Table 2

Table 2 summaries the correlation matrix of listed firms and unlisted firms, respectively. Broadly specking, in both samples, interest rate is positively correlated with AQ. The Pearson correlation and Spearman correlation between interest rate and AQ are 0.114 and 0.131, respectively, for listed firms (both p-value <1%). The Pearson correlation and Spearman correlation between interest rate and AQ are 0.057 and 0.062, respectively, for unlisted firms (both p-value <1%). That means, without considering control variables, AQ affects interest rate both in the two samples. Besides, the correlation between interest rate and AQ is higher in listed firms than that in unlisted firms. It is consistent with our second hypotheses that, compared to listed companies, the users of unlisted companies rely less on accounting information to make their decisions (proxied by setting interest rate). In addition, since there is a significantly high correlation between ROA and IntCov (see Pearson correlation, 0.665 in listed firms and 0.679 in unlisted firms), which may cause a serious collinearity problem, we will remedy it when fitting and explaining our regression models.

The correlations between interest rate and all other variables are clear except for leverage. To summarize, firms that are big, with superior performance, and with better interest coverage ratio can lower their interest rates. Operation risk of firms, proxied by σ(NIBE), has a negative effect on interest rate. However, the correlation between interest rate and leverage is insignificantly negative in listed firms but significantly positive in unlisted firms. Dhaliwal et al. (1991) mentioned that leverage could be a proxy for the briskness

of debt or default risk, while, on the other hand, Smith and Watts (1992) suggest that leverage can proxy for a firm's investment opportunity set (i.e, mature firms with low growth opportunities generally have high leverage). Thus the association between leverage and interest rate is unclear.

<u>Table 3</u>

More evidence on our hypothesis 2 is reported in Table 3. Panel A (B) of Table 3 reports the mean and median interest rate for each quintile of the ranked AQ distribution in listed (unlisted) firms. In Panel A, the worst accruals quality firms (Q5) have mean interest rate 5.458% and median interest rate 5.661 while the best accruals quality firms (Q1) have mean interest rate 4.670% and median interest rate 4.649%. The difference between the mean and median interest rate for the worst and best AQ quintile (Q5 versus Q1) are both significant at the 1% level. However, this finding disappears in Panel B of Table 3. Therefore, combining Panel A and B, we get evidence consistent with our second hypothesis: financial statements users rely less on lower accruals quality information. However, the simple analysis omitting necessary control factors might conclude improperly. Specifically, based on Table 1, we find that firm characteristics between listed and unlisted companies are very different. Thus, we should use regression approach to control for the potential factors. However, due to a very high correlation between ROA and IntCov, we run our Equation 2 with three models: without IntCov (Model 1 in Panel C), without ROA (Model 2 in Panel C), and put them altogether (Model 3 in Panel C). As expected, the coefficients on PR are all significant (1.170, 1.011 and 1.021 in model 1, 2 and 3; respectively, and all p-value < 1%). That means, on average, the interest rate of unlisted companies is higher than 1% in the interest rate of listed companies. Because PR is a dummy variable to indicate whether the firm is listed or not, the coefficient on PR measures how AQ affect interest rates of listed firms. Those coefficients on AQR in all three models are all significantly positive. Using Model 3 as an example, the mean decile rank coefficient on AQ of 0.536 (t-statistic = 2.97) suggests a difference in interest rate of 4.824% (0.536 × 9) for firms in the best and worst AQ deciles.

The coefficient on AQRPR represents the differential effect of AQ on interest rate. In Model (1) ~ (3), the coefficients on AQRPR are all significantly negatively. Thus, supporting our hypothesis 2, users facing less accruals quality will rely less on accounting information. In fact, the sum of coefficients on AQR and AQRPR measure the association between AQ and interest rate in the unlisted firms. Beyond our expectation, the sums of the two coefficients are insignificant in all models. That means (1) AQ of un-listed firms are too worse to take it into considerations in decision making, and/or (2) users of

unlisted firms have another channel (better than accounting information) to communicate with the firms, so they do not need to rely on earnings message.

Consistent with the findings in Francis et al. (2005), the coefficient on leverage is significantly negative; in contract, we do not find the negative role σ(NIBE) on interest rate in the regression model although a negative effect appears in the previous univariate analysis. The effects of SIZE and IntCov on interest rate are both significantly positive. Finally, due to the collinearity problem, the coefficient on ROA is insignificantly negative in model (3); however, if the variable IntCov is excluded then we find ROA has positive effect on interest rate in model (1).

Table 4

Table 4, Panel A reports the mean coefficient estimates from the Equation (3). Panel B further provides four models to investigate our hypotheses.

For ease of comparison, we reproduce model (3) in Panel C of Table 2 into AQ column of Table 4. Then, we rerun interest rates on all interested variables again, except for changing original AQ with InnaAQ and/or DisAQ. Results are reported in the corresponding columns.

First, avoiding for directly using AQ will cause an endogenous variable problem, we use two-stage least squares method (hereafter 2SLS) to rerun our Equation (2). The main results are unchanged. Unlisted firms have higher interest rate (the coefficient on PR, 1.247, is significantly negative), the effect of AQ on interest rate is significantly positive (the coefficient on IAQR, 1.019, is significantly positive) in listed firms, the differential effect of AQ on interest rates between listed and unlisted firm is significant (the coefficient on IAQRPR, -0.977, is significantly negative), the effect of AQ on interest rates is insignificant (the sum of the coefficient on IAQR and IAQRPR, 0.042, is insignificant) in unlisted firms, and size and IntCov both have significantly positive effect on decreasing interest rates.

Second, to compare the incremental effect of InnateAQ and DisAQ, we decompose AQ into InnateAQ and DisAQ, and then, put them two into regression concurrently. The main findings are: (1) Unlisted firms face higher interest rates (the coefficient on PR, 1.269, is significantly negative), (2) the effect of InnaAQ on interest rates is significant (the coefficient on IAQR, 1.045, is significantly positive) in listed firms, (3) the differential effect of InnaAQ on interest rates between listed and unlisted firm is significant (the coefficient on IAQRPR, -0.996, is significantly negative), (4) the effect of InnaAQ on interest rates is insignificant (the sum of the coefficient on IAQR and IAQRPR, 0.050, is

insignificant) in the unlisted firms, (5) the effect of DisAQ on interest rates is insignificant (the coefficient on DAQR, 0.137, is insignificant positive) in listed firms, (6) the differential effect of DiscAQ on interest rates between listed and unlisted firm is insignificant (the coefficient on DAQRPR, -0.034, is insignificantly negative), (7) the effect of DiscAQ on interest rates is insignificant (the sum of the coefficient on DAQR and DAQRPR, 0.103, is insignificant) in unlisted firms, and (8) size and IntCov both have significantly positive effect on decreasing interest rates.

Finally, to further examine whether there exists any effect of DisAQ on interest rates in Taiwan, we only use DisAQ in fitting Equation (2). Similar to the results when putting InnaAQ and DisAQ before, we find that: (1) the effect of DisAQ on interest rate is insignificant (the coefficient on DAQR, -0005, is insignificant) in listed firms, (2) the differential effect of DiscAQ on interest rate between listed and unlisted firm is insignificant (the coefficient on DAQRPR, 0.098, is insignificant), (3) the effect of DiscAQ on interest rate is insignificant (the sum of the coefficient on DAQR and DAQRPR, 0.094, is insignificant) in unlisted firms, and (4) size and IntCov both have significantly positive effect on decreasing interest rates. Thus, consistent with the arguments in Francis et al. (2005), to certain extent discretionary accruals quality reflects a mixture of information-risk increasing and information-risk-decreasing effects, while Francis et al (2005) find that the overall cost of capital effect is greater than the effect of innate accruals quality (where still has certain effects); in contrast, using Taiwanese data, we find no role of DiscAQ in explaining interest rate.

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Table 1 (Compare with Francis et al. 2005, p. 307)
Descriptive Statistics

	Listed Firms						Unlisted Firms						Diff. in Means	Diff. in Median
	Number of Observation = 1,767						Number of Observation = 2,296							
	Mean	P10%	P25%	Median	P75%	P90%	Mean	P10%	P25%	Median	P75%	P90%	t-stat.	z-stat.
Variables														
CostDebt	5.139	1.896	2.988	5.525	7.021	8.065	6.263	2.675	4.783	6.768	8.050	8.692	-15.63***	-15.50***
AQ	0.057	0.024	0.035	0.054	0.075	0.094	0.075	0.025	0.039	0.064	0.096	0.143	-13.33***	-10.06***
TAssets	17726.743	2142.436	4213.058	8194.188	18498.831	39550.609	8099.824	598.599	951.047	1726.635	3549.639	7724.212	5.66***	37.24***
Sales	9442.178	852.855	1851.463	3845.763	9896.741	19728.112	3598.544	270.866	514.619	1088.708	2267.973	5212.353	9.16***	30.29***
Sales/TAssets	0.601	0.187	0.311	0.511	0.764	1.141	0.757	0.184	0.409	0.640	0.928	1.419	-9.84***	-9.81***
COGS/TAssets	0.514	0.155	0.254	0.428	0.653	0.981	0.643	0.164	0.335	0.535	0.791	1.210	-8.97***	-8.99***
ROA	0.006	-0.094	-0.024	0.016	0.049	0.091	-0.001	-0.103	-0.028	0.011	0.042	0.083	2.49**	2.71***
LEV	0.139	0.000	0.039	0.124	0.211	0.300	0.153	0.000	0.020	0.097	0.203	0.334	-0.90	0.54
σ(NIBE)	0.052	0.019	0.028	0.042	0.068	0.098	0.053	0.016	0.026	0.043	0.070	0.107	-1.57	4.22***
SGRate	0.129	-0.234	-0.072	0.048	0.189	0.386	0.191	-0.286	-0.108	0.041	0.196	0.485	-1.35	1.23
Growth	1.056	0.815	0.951	1.018	1.091	1.240	1.122	0.806	0.949	1.026	1.117	1.317	-1.43	-2.34**
Innate Factors for AQ														
Size	9.088	7.670	8.346	9.011	9.825	10.585	7.601	6.395	6.858	7.454	8.175	8.952	41.95***	37.24***
σ(CFO)	0.065	0.029	0.039	0.054	0.079	0.117	0.104	0.037	0.055	0.085	0.132	0.191	-21.10***	-20.56***
σ(Sales)	0.162	0.057	0.085	0.134	0.204	0.297	0.230	0.066	0.105	0.176	0.287	0.457	-13.51***	-11.99***
OpCycle	219.327	66.260	95.640	141.480	215.120	421.270	225.544	33.780	95.635	154.140	251.040	453.370	-0.82	-1.85*
log(OpCycle)	5.049	4.194	4.561	4.952	5.371	6.043	4.977	3.520	4.561	5.038	5.526	6.117	2.58***	-1.85*
NegEarn	0.223	0.000	0.000	0.200	0.400	0.556	0.297	0.000	0.000	0.222	0.500	0.714	-8.90***	-7.16***
Innate and Discretionary AQ														
InnaAQ	0.059	0.044	0.051	0.058	0.067	0.077	0.074	0.052	0.059	0.071	0.086	0.102	-26.14***	-24.15***
DiscAQ	-0.002	-0.036	-0.022	-0.004	0.014	0.033	0.001	-0.046	-0.027	-0.007	0.021	0.058	-2.76***	1.02

Table 2

Correlations

Panel A: Listed Firms							
	CostDebt	AQ	LEV	Size	ROA	IntCov	σ(NIBE)
CostDebt		0.131***	-0.032	-0.084***	-0.244***	-0.296***	0.171***
AQ	0.114***		-0.022	-0.107***	-0.109***	-0.135***	0.283***
LEV	-0.033	-0.017		0.423***	-0.067***	-0.127***	-0.064***
Size	-0.088***	-0.117***	0.425***		0.222***	0.166***	-0.242***
ROA	-0.230***	-0.131***	-0.080***	0.231***		0.940***	-0.330***
IntCov	-0.298***	-0.120***	-0.225***	0.083***	0.665***		-0.336***
σ(NIBE)	0.200***	0.285***	-0.030	-0.248***	-0.431***	-0.225***	

Panel B: Unlisted Firms							
	CostDebt	AQ	LEV	Size	ROA	IntCov	σ(NIBE)
CostDebt		0.062***	0.076***	-0.032	-0.254***	-0.297***	-0.018
AQ	0.057***		0.123***	-0.095***	-0.080***	-0.093***	0.274***
LEV	0.046**	0.143***		0.246***	-0.111***	-0.164***	0.008
Size	-0.094***	-0.101***	-0.037*		0.113***	0.115***	-0.255***
ROA	-0.217***	-0.106***	-0.144***	0.165***		0.943***	-0.215***
IntCov	-0.311***	-0.068***	-0.056***	0.117***	0.679***		-0.229***
σ(NIBE)	0.005***	0.283***	0.086***	-0.244***	-0.347***	-0.117***	

Pearson correlations are below the diagonal and Spearman correlations above the diagonal.

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Table 3 (Compare with Francis et al. 2005, p. 309)

Tests of association between accruals quality and the cost of debt across listed and unlisted firms

Panel A: Mean and median values of cost of debt for list firms by AQ quintiles							
	AQ Quintile					Q5 – Q1	
CostDebt	Q1	Q2	Q3	Q4	Q5	t-statistic	z-statistic
Mean	4.670	5.148	5.183	5.386	5.458	3.81***	
Median	4.649	5.589	5.612	5.911	5.661		3.60***

Panel B: Mean and median values of cost of debt for unlisted firms by AQ quintiles							
	AQ Quintile					Q5 – Q1	
CostDebt	Q1	Q2	Q3	Q4	Q5	t-statistic	z-statistic
Mean	6.261	6.011	6.200	6.392	6.393	0.91	
Median	6.769	6.515	6.760	6.583	6.979		1.23

Panel C: Regression of cost of debt on accruals quality and control variables				
Variable	Pred. Sign	Model 1	Model 2	Model 3
Intercept	?	5.829***	6.167***	6.139***
		(18.01)	(19.48)	(19.34)
PR	+	1.170***	1.011***	1.021***
		(8.36)	(7.38)	(7.44)
AQR	+	0.735***	0.525***	0.536***
		(3.99)	(2.91)	(2.97)
AQRPR	–	-0.552**	-0.419*	-0.424*
		(-2.40)	(-1.87)	(-1.89)
LEV	+	0.029	0.056	0.047
		(0.39)	(0.77)	(0.65)
Size	–	-0.100***	-0.113***	-0.109***
		(-3.11)	(-3.61)	(-3.47)
ROA	–	-5.538***	Not included	-0.675
		(-12.89)		(-1.22)
IntCov	–	Not included	-0.071***	-0.067***
			(-18.9)	(-13.6)
σ(NIBE)	+	-1.602	0.739	0.296
		(-1.47)	(0.73)	(0.28)
H_0: AQR+AQRPR = 0		Coeff. = 0.182	Coeff. = 0.106	Coeff. = 0.112
		F-stat. = 1.59	F-stat. = 0.56	F-stat. = 0.62
		p-value = 0.21	p-value = 0.45	p-value = 0.43
Adj. R^2		0.1077	0.1463	0.1464

Table 4 (Compare with Francis et al. 2005, p. 317)

Tests of association between accruals quality and the cost of debt across listed and unlisted firms: The two-stage least squares (2SLS) regression and the cost of debt effects of innate vs. discretionary accruals quality

Panel A: Regression of AQ on innate factors			
Variable	Predicted Sign	Coefficient Estimate	t-statistic
Intercept	?	0.048	2.58***
Size	−	-0.001	-0.53
$\sigma(CFO)$	+	0.177	6.60***
$\sigma(Sales)$	+	0.013	4.81***
Log(OpCycle)	+	-0.001	-0.23
NegEarn	+	0.025	7.97***
Adj. R^2			

Panel B: The two-stage least squares regression and the cost of debt effects of InnaAQ vs. DiscAQ				
Variable	Predicted Sign	AQ	InnaAQ	InnaAQ and DiscAQ	DiscAQ
Intercept	?	6.139***	5.759***	5.697***	6.408***
		(19.34)	(17.42)	(16.64)	(20.48)
PR	+	1.021***	1.247***	1.269***	0.782***
		(7.44)	(8.86)	(6.87)	(5.69)
AQR	+	0.536***			
		(2.97)			
AQRPR	−	-0.424*			
		(-1.89)			
IAQR	+		1.019***	1.045***	
			(5.04)	(5.11)	
IAQRPR	−		-0.977***	-0.996***	
			(-4.12)	-4.17	
DAQR	+			0.137	-0.005
				(0.76)	(-0.03)
DAQRPR	−			-0.034	0.098
				(-0.15)	(0.44)
LEV	+	0.047	0.065	0.061	0.045
		(0.65)	(0.90)	(0.85)	(0.62)
Size	−	-0.109***	-0.081**	-0.082**	-0.115***
		(-3.47)	(-2.50)	(-2.53)	(-3.64)
ROA	−	-0.675	-0.640	-0.668	-0.596
		(-1.22)	(-1.16)	(-1.21)	(-1.08)
IntCov	−	-0.067***	-0.067***	-0.066***	-0.069***
		(-13.6)	(-13.45)	(-13.36)	(-13.87)
$\sigma(NIBE)$	+	0.296	-0.282	-0.430	0.857
		(0.28)	(-0.25)	(-0.38)	(0.820)
H_0: AQR+AQRPR = 0		Coeff. = 0.112			
		F-stat. = 0.62			
		p-value = 0.43			
H_0: IAQR + IAQRPR = 0			Coeff. = 0.042	Coeff. = 0.050	
			F-stat. = 0.07	F-stat. = 0.10	
			p-value = 0.79	p-value = 0.75	
H_0: DAQR + DAQRPR = 0				Coeff. =0.103	Coeff. =0.094
				F-stat. = 0.59	F-stat. = 0.49
				p-value = 0.44	p-value = 0.48
Adj. R^2		0.1464	0.1499	0.1497	0.1446

Shaded column reports the results from two-stage least squares regression where AQR in equation (2) is replaced by predicted AQ (i.e., InnaAQ) using equation (3). IAQR = standardized annual ranking of InnaAQ. DAQR = standardized annual ranking of DiscAQ.

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出席國際學術會議心得報告

計畫編號	NSC 95-2416-H-004-052
計畫名稱	上市公司與一般公開發行公司之盈餘屬性異同以及對融資成本影響之研究
出國人員姓名 服務機關及職稱	戚 務 君
會議時間地點	2007 年 4 月 3~5 日；英國倫敦
會議名稱	British Accounting Association Conference 2007
發表論文題目	Board Effectiveness: Investigating Payment Asymmetry between Board Members and Shareholders

一、參加會議經過

　　研討會於倫敦的 Royal Holloway, University of London 舉行。二位 Keynote speakers 為 Richard Laughlin (介紹會計管制) 以及 Stephen Zeff (討論跨國財務報表的比較)。

　　文章報告完，與會學者提供許多保貴的建議。

二、與會心得

　　我們的研究在與會學者的建議與修改後，論文品質有明顯地提昇。由於參與研討會有許多實質的收獲，非常希望國科會能持續補助學者參與國際性研討會。