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Abstract

This paper investigates the impact of mandatory IFRS adoption on earning management and accounting conservatism by European countries. Using firm-level data of nine European countries within G20 who mandatorily adopted IFRS in 2005, we found that IFRS either increase or decrease accounting conservatism within the sample countries. With Mishkin test to market efficiency at valuation with disaggregated earning components, the results show that the accrual anomaly is not a generalized phenomenon within Europe, especially the Common Law countries. The market seems to be less able to distinguish abnormal accrual from normal accrual estimated by Jones model, which in term cause the mis-valuation of the future earnings forecast. Cross country characteristics examination, including law enforcement, protection of shareholder and accounting structure, etc. suggests that the change of accounting standard itself cannot solely improve the valuation information environment. Relevant commercial law should change to support IFRS to make accounting information informative and comparable.

Introduction

Recent years saw the important accounting regulatory change with EU and all around the world is the mandatory adoption of International Financial Reporting Standard (IFRS). In 2002, the European Union required all member countries to mandatory adopt IFRS from 2005. The main purpose is to make all the data from financial statement comparable. Despite the costly and huge change, till now there is very few researches as to the related economic impact (Ball, 2006).

One of the most discussed topics in accounting research area is the earning management. It is arguable that managers manipulate earnings through accruals. Sloan (1996) first introduced Mishkin test to test the market efficiency in accounting area. They pointed out that the mis-valuation of the stock return is due to the fact that market overweighed the persistence of total accruals. However, Pincus et al (2007) found that accrual anomaly is not a generalised phenomenon. It happens most in Common Law countries, but not in Code Law countries.

While at the same time, it is argued that accounting conservatism, which is defined as asymmetric timeliness of earnings, could mitigate earning management. In general, the earnings conservatism principle is that future bad news is anticipated, whereas future good news is not. However there is very few researches focus on both earning management and accounting conservatism.

The motivation of this research is two folded: the first one is to investigate the possible combination effect of accounting conservatism and earning management. We examine the accounting conservatism as well as the accrual anomaly in the nine European

countries of G20 who have already mandatorily adopted IPRS from 2005, to see the possible impact of the mandatory adoption of IFRS on the market efficiency of valuation model. Secondly following Byard et al (2011)'s approach, investigation is conducted as to examine whether the change to IFRS solely can change accounting information environment.

Literature Review

One of the important topics in financial reporting is the extent to which managers manipulate reported earnings, which in term affects the correct pricing of the market stock price. Healy (1985) used accrual-based measurement to test earning management hypothesis; and after this significant researches have been done with the adoption of the accrual-based approach. According to this theory, the accruals are the main difference between earning and cashflows in valuation models. Under accrual accounting system, managers manipulated earning only through accruals rather than cash accounts; therefore the cash should be more persistent than accruals. However, when employing this approach, significant obstacle is associated as to correctly separate total accruals into normal and abnormal accruals. The most frequently used techniques to estimate the normal accruals are the cross-sectional versions of the standard-Jones model or the modified-Jones model, and the abnormal accrual works as a proxy for managerial discretion. (Jones, 1991; Dechow et al., 1995, Erickson and Wang, 1999, et al) It is obvious that the precision in estimating the normal accrual is vital to detect earning management. After Dechow et al (1995), Kang and Shivaramakrishnan (1995), Guay et al. (1996) and Sloan (1996), substantial researches have reported the imprecision of the normal accrual estimated by Jones (1991) model(hereafter the Jones model), as the

residuals capture not only managerial discretion, but also unusual nondiscretionary accruals and unintentional misstatements(Xie, 2001). Peasnell et al. (2000) developed 'marginal model' to detect earning management. Using UK non-financial companies, their results suggested that marginal model is relatively superior to both Jones model and modified Jones model when cash slow performance is extreme.

Another stream of research focused on the market pricing with cash flows, earning or accruals. In other words, whether the stock price correctly reflects the implications provided by accounting information. Jones (1991) examined whether the market price rationally reflected one-year ahead earning implications, which incorporated discretionary accrual (hereafter abnormal accrual). She provided empirical evidence that abnormal accruals are positively associated with future profitability. Subramanyam (1996), however, argued that the positive relationship does not necessarily suggest that market rationally prices either earnings or accruals.

After Mishkin(1983) who introduced Mishkin test as a statistical comparison between the market pricing and the forecast pricing, Sloan (1996) employed Mishkin test in investigating the market pricing of total accruals. The empirical evidence from US suggested that the market overprices the persistent of accrual component of earnings. Collins and Hribar (2000) provided evidences to support Sloan's argument that the market overweighed the total accruals of earnings with the same methodology. Xie (2001) pointed out that both Sloan(1996) and Collins and Hribar (2000) did not investigate whether the market mis-pricing is due to normal accrual (non-discretionary accrual) or abnormal accrual (discretionary accrual).

Xie (2001) separated total accrual into normal accrual and abnormal accrual component with Jones model and then examined the market efficiency with Mishkin test. At the same time they controlled major unusual accruals and non-articulation events (i.e. mergers, acquisitions or divestitures). Their results suggest that in the forecast model the abnormal accrual is less persistent than normal accrual, which in term, is less persistent than cash flow. In the return model, results suggested that the market does not correctly anticipate the possible reversal of abnormal accrual component. Kraft et al (2007) argues that when Sloan (1996) first employed Mishkin test, he has clearly mentioned that there would be possible biases because of the ignorance of possible variables with co-relation with cash flow or total accruals. Therefore they replicated Mishkin test with US data with other possible explanatory variables, such as market value, earning to price ratio, etc. The results showed that when these variables are included in the forecast and return model, the mis-pricing disappeared. They, in turn, argued that when sample size is big enough, the OLS regression result is not significantly different from the result produced by Mishkin test.

Pincus(2007) extended the investigation to international wide. They found market overweighs accruals is a generalised phenomenon in common law countries, but not in code law countries. The results also suggested that the occurrence of accrual anomaly is due to differences in accounting system and institutional structures. Basically accrual anomaly is more likely to occur in countries with a common law tradition, with more extensive use of accrual accounting and having a lower concentration of share ownership. However, the possible limitation of their research is that the sample period is between

1994 and 2002, the paper cannot cover the period after the adoption of International Accounting Standard.

Recently Byard et al (2011) examined the effect of the mandatory adoption of International Financial Reporting (IFRS) by the European Union on financial analysts' information environment. They found that the impact occurs in those countries with both strong enforcement regimes and domestic accounting standards that differ significantly from IFRS. Hence, the change of accounting standard cannot solely improve the market pricing environment.

However, the earning management behaviour can be mitigated by employing conservative accounting. According to Basu(1997), the accounting conservatism caused by the asymmetric treatment of possible future gains or losses in the relevant profit and loss accounts. This is because that the recognition of future losses is on a timelier basis than that of future gain. Givoly and Hayn (2000) pointed out that giving long enough time scale, accrual based earning will converge to the true economic performance, as the accounting conservatism is the accounting conservatism is the difference of timing and sequencing of recognised earning and the associated cash flows. Lafond and Watts (2008) showed that accounting conservatism can reduce the manager's ability of earning manipulation. With the adoption of IFRS from 2005, it is argued that earning management should be controlled and information asymmetric should be improved. Therefore considering the beneficiary aspect of conservative accounting, we would expect that the adoption of conservative accounting would reduce accrual anomaly.

The contribution of our research to the existent literature is three-folded. First, we extend Peasnell et al. (2000)'s work to detect earning management with marginal model. With data spanning from 1990 to 2010, we investigate whether the adoption of IFRS in the European Union countries helps to mitigate manager's earning management. Secondly, we would use Mishkin's test to investigate market efficiency of the EU countries. It would be interesting to see whether the change of accounting system solely can change the status of market pricing. Thirdly we would investigate the effect of legal enforcement and accounting system would affect accrual anomaly.

Sample

Our analysis examines 9 European countries in G20, including United Kingdom, France, Germany, Italy, Netherland, Spain, Denmark, Sweden and Switzerland. The sample period span from 1990 to 2010. We start from the point that to include all the population of firms on the *Datastream* 'Live' and 'Dead" stock files with the accounting data needed by Jone's model, Peasnell et al (2000)'s model and Mishkin's test. We hereby exclude all financial firms as their different financial reporting environment and the way accruals are calculated and recorded. We also exclude those companies for which returns and scaled accruals lie outside the five and 95% percentiles.

All the accounting data collected are at the end of fiscal year, except that the stock return is collected and calculated three month after the fiscal year to allow the information to be incorporated into the stock price.

The sampling criteria result in a final total sample of 38,880 firm-year observations, comprising 4,995 individual firms.

Empirical Result

1. Detect Accounting Conservatism

The following models proposed by Basu (1997) will be estimated to investigate accounting conservatism:

$$Net\ Income_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \nu_t \quad (1)$$

$$CFO_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \nu_t \quad (2)$$

$$Accrual_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \nu_t \quad (3)$$

where:

Net income: is the net income

CFO: operating cash flow

Accrual: the different between net income and operating cash flow[1]

R: one year buy and hold stock return[2]

RD: is a dummy variable. RD is 1 when R is negative or is 0 when R is positive

The results are listed in Table 1. The coefficient β_3 in equation (1) captures the increase in the strength of the relationship between Earning and stock return when bad performance in the future is anticipated. This coefficient is the Basu (1997)'s measure of

[1] As Xie (2001) mentioned that Collins and Hribar (2000) suggest that total accruals measured directly from cash flow statement are accurate, while total accruals estimated using a balance sheet approach contain measurement error. Therefore the method used by Xie (2001) will be used in this paper to work out the total accruals.

[2] Following Sloan (1996) and Xie (2000), we collect the return data three month after the fiscal year to allow the accounting information to be reflected in the stock price.

earnings conservatism, since it is entirely due to earnings capturing anticipated bad performance in the future. From the results in Table 1, it is suggested that most of all the β_3s of the countries except Spain are significant at 99% significant level, with an average coefficient of 0.127, which is almost the same as Basu(1997)'s result of an average coefficient of 0.13. Among all the countries, Spain has the major problem of missing data; therefore the result may suffer higher standard deviation and possible surviving bias. United Kingdom has the highest coefficient of earning conservatism of 0.303. This result is in line with other relevant researches that earning conservatism is more prominent in Common Law countries. In our sample, only United Kingdom is Common law country.

If equation (1) correctly captures possible accounting conservatism, the β_3 in equation (2) should be insignificant, as the cash flow component should not be affected by the bad news anticipation in the future. Our results are consistent with Basu(1997)'s results that the coefficient of the possible impact of future bad news on the cash flow is still significant. This is not as expected by Basu(1997), and one the possible explanations is that the β_3 captured by equation (1) does not solely reflect the accrual factor. The possible earning conservatism through accruals should be reflected by the difference between the two β_3s estimated by equation (1)and (2). Our results suggest that most of the dif

ferences among all the sampled countries are positive, with an average of 0.04. The only exceptions are France and Spain.

The result of equation (3) shows that although the average β_3 coefficient of all the sample countries is 0.025, which is much lower than the β_3 coefficient estimated by equation (1),

it is more or less the same as captured by the difference between two β_3s from equation (1) and (2).

In Table 2 and Table 3, we listed the results with sub-sample period from 1990 to 2004 and the sub-sample period from 2005 to 2010. It would be interested to see whether the mandatory adoption of IFRS in EU from 2005 will have impact on the accounting conservatism or not. The results suggest that there is no difference between the period before and after the mandatory adoption of IFRS. The more conservative accounting standard implied by IFRS does not seem to increase the earning conservatism in financial reporting.

As Peasnell et al (2000) suggested, the early recognition of future bad performance may be realised through non-operating as well as operating accruals. Therefore the following model will be estimated to detect possible accounting conservatism:

$$Accruals_t = \beta_0 + \beta_1 \Delta Rev_t + \beta_2 PPE_t + \beta_3 RD_t + \beta_4 RD_t * \Delta Rev_t + \beta_5 RD_t * PPE_t + \nu_t \qquad (4)$$

where:

ΔRev_t is the change in net sales

PPE_t is property, plant, and equipment defined by IFRS

Significant coefficient of β_4 or β_5 suggests accounting conservatism. The results are listed in Table 4, among which Panel A shows the results of the whole sample period and the sub-sample periods before and after the mandatory adoption of IFRS in 2005. The results suggest that not all the sample countries have accounting conservatism. Among all

the sample countries, United Kingdom has the highest coefficient of earning conservatism. The other two countries are Germany and Denmark.

2. Market efficiency

In this section we will look into the market efficiency of the sample countries. Sloan (1996), Xie (2001) and Pincus et al (2007) tested the market efficiency, where Sloan (1996) first adopted Mishkin's test to apply into accounting information efficiency. Xie (2001) in term disaggregate earning components into operating cash flow, normal accrual and abnormal accrual components. Both of them examined the US market. Pincus et al (2007) extended the investigation into international market. Their sample includes countries using Common Law and countries using Code Law. However their sample spanned only to 2002, it cannot show whether the mandatory adoption of IFRS will have impact on the market pricing.

In Table 5, we list the results estimated by Mishkin test with the following model:

$$Net\ Income_{t+1} = \gamma_{0+}\gamma_1 CFO_t + \gamma_2 Accrual_t + \varepsilon_t \quad (5)$$

$$SizeReturn_{t+1} = \beta_0 + \beta_1(Net\ Income_{t+1}\text{-}\gamma_0^* - \gamma_1^* CFO_t - \gamma_2^* Accrual_t) + \nu_t \quad (6)$$

Where:

$Net\ Income$ is the net income scaled by end-of-year total assets

CFO_t is operating cash flow

$Accrual_t$ is the difference between earning and operating cash flow

$SizeReturn$ is size-adjusted abnormal returns define by Xie (2001)

We estimate equation (5) and (6) jointly as mentioned by Mishkin (1983). If the market is efficient, we would expect to see no difference between either γ_1^* and γ_1, or γ_2^* and γ_2. Panel A is the results for the whole sample period, while Panel B and Panel C list the results for both sub-sample periods before and after the mandatory adoption of IFRS in 2005. Generally the results show that the cash flow persistence is higher than accrual persistence, which is in consistence with Sloan (1996) and Xie (2001). However, different from Sloan (1996) and Xie (2001)'s empirical results for US market; there is no significant evidence showing that the market overprice the persistence of accrual. Our results are in line with Pincus et al (2007) of European countries that there is no accrual abnormal in Code Law countries. It is suggested by our evidence that the only one Common Law country United Kingdom does not have accrual abnormal as well. Most of all the countries have lower coefficients for both cash flow and accruals in the valuation model than those in the forecasting model, suggesting that the market under-prices either cash from operations or accruals relative to its ability to forecast one-year-ahead earnings.

We, therefore, in term estimate the following model used by Xie (2001) to disaggregate the total accrual into normal accrual and abnormal accrual components. This has not been done in studies covering countries international wide.

$$NetIncome_{t+1} = \gamma_{0+}\gamma_1 CFO_t + \gamma_2 Normal\ Accrual_t + \gamma_3 Abnormal\ Accrual_t + \varepsilon_t \quad (7)$$

$$SizeReturn_{t+1} = \beta_0 + \beta_1(Net\ Income_{t+1} - \gamma_0^* - \gamma_1^* CFO_t - \gamma_2^* Normal\ Accrual_t - \gamma_3^* Abnormal\ Accrual_t) + \nu_t \quad (8)$$

here:

Normal Accrual is the estimated accrual forecast by Jones model (Jone, 1991), and the abnormal accrual is the residue of the estimated model.

According to Xie (2001), the cash flow should have the highest coefficient, suggesting that the persistence of cash flow is the highest. It should be higher than the coefficient of normal accrual, which, in term, should be higher than the coefficient of abnormal accrual. The results are listed in Table 6, with Panel A showing the results for all sample period and Panel B and Panel C with sub-sample periods before and after the mandatory adoption of IFRS in 2005. The results are very informative, suggesting that investors are less able to distinguish between normal accruals and abnormal accruals. Although there is some change after 2005, which is the switch between the weights put on the valuation of normal accrual and abnormal accrual. But the results suggest that investors are less likely to correctly estimate the normal accrual. This result has practical implication that investors are less able to correctly valuate the future earning with accrual components.

3. Cross-country differences in institutional and Accounting Structures

Pincus et al (2007) investigated the possible impact of country specific characteristics, such as legal tradition, shareholder protections to mitigate earning management, characteristics of equity market or accounting structure on the earning management. Recently Byard et al (2011) examined the impact of similar characteristics on the information environment after mandatory adoption of IFRS in European countries. We therefore apply similar approach to combine both Pincus et al (2007) and Byard et al (2011)’s variables together to examine the possible impact of the mandatory adoption of

IFRS on earning management. For sample period before 2005, we estimate the following models:

$$Net\ Income_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 LawEnforce_j + \beta_5 IFRSdiffer_j + \beta_6 AccIndex_j + \beta_7 OwnConcen_j + \beta_8 AntiDirector_j + \beta_9 EquityMarket_j + \nu_t$$

$$CFO_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 LawEnforce_j + \beta_5 IFRSdiffer_j + \beta_6 AccIndex_j + \beta_7 OwnConcen_j + \beta_8 AntiDirector_j + \beta_9 EquityMarket_j + \nu_t$$

$$Accrual_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 LawEnforce_j + \beta_5 IFRSdiffer_j + \beta_6 AccIndex_j + \beta_7 OwnConcen_j + \beta_8 AntiDirector_j + \beta_9 EquityMarket_j + \nu_t$$

$$Accrual_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 PPE_t + \beta_5 PPE_t * RD_t + \beta_6 LawEnforce_j + \beta_7 IFRSdiffer_j + \beta_8 AccIndex_j + \beta_9 OwnConcen_j + \beta_{10} AntiDirector_j + \beta_{11} EquityMarket_j + \nu_t$$

where:

The data of Law Enforcement and Difference between domestic accounting and IFRS are collected from Byard et al (2011), the accrual index is an equally weighted index of 11 accrual-related accounting standards in each country developed by Hung (2000).

Ownership concentration is the median of the percentage of common shares owned bt the three largest stockholders in the ten largest privately owned nonfinancial firms, developed by La Porta et al. (1998). The importance of equity market is collected from La Porta et al. (1997), and Anti-director rights index is collected by La Porta et al. (1996). And for the sample after 2005, we dropped out independent variables as IFRS difference and Accrual Index.[3]

The results are listed in Table 7. Panel A listed the results for the sample period before 2005. It is interesting to see that although some of the country characteristics are not significant, while when included, the earning management disappeared. The Importance of Equity Market is significant in all the four models. In the sample period after 2005, the results suggest that the earning management cannot be erased because of the mandatory adoption of IFRS. These results are consistent with Byard et al (2011)'s results that information environment is only improved when country is with strong law enforcement and big difference between domestic accounting system and IFRS.

Conclusion

We investigate the accounting conservatism as well as the market efficiency in valuation the one-year-ahead return in the nine European countries of G20, who have already mandatorily adopted IFRS in 2005. Our empirical results with sample spanning 1990-2010 suggest that accounting conservatism existed both before and after the mandatory adoption of IFRS. The change into IFRS does not increase of decrease earning conservatism. The Mishkin test of the market efficiency in valuation with total accrual

[3] The ignorance of the fact that some of the companies that do not provide consolidated statement may still use domestic accounting standard may lead to estimation bias.

shows that the accrual anomaly does not exist in Common law countries in the EU as well as in the UK. The further investigation with disaggregation of total accrual into normal accrual and abnormal accrual shows that the market cannot distinguish abnormal accrual from normal accrual. The mispricing of future earning based on cash flow and accruals could be due to the inability to distinguish the abnormal accrual from normal accrual. Finally the cross country characteristics and accounting structure investigation shows that the change of accounting structure itself cannot significantly improve the quality of information, which in term, will affect the valuation.

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Table 1: Earning conservatism detection sample period 1990-2010

		Net Income Model (1)	CFO Model (2)	Difference btw (1) and (2)	Accruals Model (3)	No of Observations
Denmark	**RD**	0.004	-0.0096		0.006	1828
	t-stat	(0.57)	(-1.12)		(0.89)	
	Return	-0.001	0.015		-0.01	
	t-stat	(-0.06)	(1.04)		(-1.16)	
	Return*RD	0.12***	0.073***	0.047	0.03**	
	t-stat	(7.06)	(3.94)		(2.02)	
	$\mathbf{R^2}$	0.09	0.06		0.003	
France	**RD**	-0.004	-0.005		-0.006	6865
	t-stat	(-0.74)	(-0.19)		(-0.23)	
	Return	-0.01	-0.0005		-0.012	
	t-stat	(-1.42	(-0.01)		(-0.32)	
	Return*RD	0.106***	0.138***	-0.032	-0.039	
	t-stat	(11.40)	(2.87)		(-0.81)	
	$\mathbf{R^2}$	0.06	0.005		0.0006	
Germany	**RD**	-0.0065	-0.01**		-0.003	7685
	t-stat	(-1.37)	(-2.26)		(-0.37)	
	Return	0.006	0.021**		-0.024**	
	t-stat	(0.68)	(2.31)		(-2.29)	
	Return*RD	0.129***	0.064***	0.065	0.039***	
	t-stat	(11.5)	(5.63)		(3.06)	
	$\mathbf{R^2}$	0.09	0.05		0.01	
Italy	**RD**	-0.005	-0.01**		0.006	2524
	t-stat	(-1.21)	(-2.36)		(0.85)	
	Return	0.005	0.014		0.002	
	t-stat	(0.70)	(1.52)		(0.18)	
	Return*RD	0.055***	0.016	0.039	0.014	
	t-stat	(5.94)	(1.33)		(1.01)	
	$\mathbf{R^2}$	0.08	0.03		0.001	
Netherland	**RD**	-0.008	-0.015*		0.000	1878
	t-stat	(-0.96)	(-1.84)		0.000	
	Return	-0.009	0.019		-0.027**	
	t-stat	(-0.75)	(1.58)		(-2.42)	
	Return*RD	0.107***	0.028*	0.079	0.055***	
	t-stat	(6.51)	(1.78)		(3.59)	
	$\mathbf{R^2}$	0.07	0.04		0.007	

Table 1 (continued)

		Net Income Model (1)	CFO Model (2)	Difference btw (1) and (2)	Accruals Model (3)	No of Observations
Spain	**RD**	-0.005	-0.012		0.005	560
	t-stat	(-0.66)	(-1.03)		(0.56)	
	Return	0.022	0.02		-0.015	
	t-stat	(1.63)	(1.03)		(-0.98)	
	Return*RD	-0.005	-0.007	-0.012	0.026	
	t-stat	(-0.30)	(-0.29)		(1.29)	
	R^2	0.03	0.02		0.005	
Sweden	**RD**	-0.001	-0.029**		0.003	3730
	t-stat	(-0.09)	(-2.49)		(0.36)	
	Return	0.009	-0.009		-0.007	
	t-stat	(0.53)	(-0.60)		(-0.53)	
	Return*RD	0.233***	0.169***	0.064	0.055***	
	t-stat	(10.63)	(8.96)		(3.45)	
	R^2	0.14	0.1		0.009	
Switzerland	**RD**	-0.0011	-0.003		-0.001	2544
	t-stat	(-0.22)	(-0.57)		(-0.28)	
	Return	-0.007	0.013*		-0.013**	
	t-stat	(-0.88)	(1.72)		(-2.08)	
	Return*RD	0.093***	0.035***	0.058	0.021**	
	t-stat	(8.41)	(3.21)		(2.43)	
	R^2	0.07	0.04		0.1	
United Kingdom	**RD**	-0.036***	-0.036***		-0.007	11266
	t-stat	(-3.69)	(-3.38)		(-1.14)	
	Return	-0.059***	-0.058***		0.0069	
	t-stat	(-3.75)	(-3.65)		(0.75)	
	Return*RD	0.303***	0.25***	0.053	0.0011	
	t-stat	(15.42)	(12.52)		(0.23)	
	R^2	0.07	0.04		0.001	

Table 2: Earning Conservatism detection sample period 1990-2004

		Net Income Model (1)	CFO Model (2)	Difference btw (1) and (2)	Accruals Model (3)	No of Observations
Denmark	**RD**	0.006	-0.0087		0.01	1263
	t-stat	(0.78)	(-0.93)		(1.23)	
	Return	0.020	0.032**		-0.007	
	t-stat	(1.43)	(1.98)		(-0.49)	
	Return*RD	0.095***	0.048**	0.047	0.022*	
	t-stat	(4.95)	(2.18)		(1.70)	
	R^2	0.10	0.07		0.004	
France	**RD**	0.0008	0.0029		-0.0076	3720
	t-stat	(0.11)	(0.07)		(-0.17)	
	Return	-0.005	-0.0053		-0.0012	
	t-stat	(-0.48)	(-0.06)		(-0.02)	
	Return*RD	0.1144***	0.1939**	-0.0795	-0.090	
	t-stat	(9.01)	(2.33)		(-1.09)	
	R^2	0.07	0.005		0.001	
Germany	**RD**	-0.01	-0.0075037		-0.0073	3975
	t-stat	(-1.24)	(-0.86)		(-0.68)	
	Return	-0.0181	0.0088		-0.0198	
	t-stat	(-1.54)	(0.70)		(-1.27)	
	Return*RD	0.1686***	0.0946***	0.074	0.0284	
	t-stat	(11.92)	(6.23)		(1.51)	
	R^2	0.13	0.06		0.0007	
Italy	**RD**	-0.0041	-0.0175**		0.0143	1341
	t-stat	(-0.71)	(-2.04)		(1.32)	
	Return	0.0111	0.0199		0.0066	
	t-stat	(1.29)	(1.55)		(0.40)	
	Return*RD	0.0635***	0.0112	0.0523	0.0297	
	t-stat	(5.28)	(0.61)		(1.30)	
	R^2	0.12	0.04		0.004	
Netherland	**RD**	-0.0082	-0.0131		0.0042	1303
	t-stat	(-0.86)	(-1.55)		(0.43)	
	Return	-0.0115	0.0138		-0.023	
	t-stat	(-0.83)	(0.97)		(-1.60)	
	Return*RD	0.1021***	0.039**	0.0631	0.056***	
	t-stat	(5.34)	(2.01)		(2.86)	
	R^2	0.06	0.04		0.007	

Table 2 (continued)

		Net Income Model (1)	CFO Model (2)	Difference btw (1) and (2)	Accruals Model (3)	No of Observations
Spain	**RD**	-0.0289	-0.041		-0.004	58
	t-stat	(-1.08)	(-0.87)		(-0.12)	
	Return	0.0477	0.1525*		-0.0863	
	t-stat	(0.98)	(1.78)		(-1.31)	
	Return*RD	-0.0641	-0.2217	0.1576	0.0202	
	t-stat	(-0.83)	(-1.63)		(0.19)	
	$\mathbf{R^2}$	0.08	0.12		0.07	
Sweden	**RD**	-0.011	-0.0178		-0.015	1863
	t-stat	(-0.72)	(-1.24)		(-1.45)	
	Return	-0.025	-0.026		-0.0223*	
	t-stat	(-1.28)	(-1.46)		(-1.75)	
	Return*RD	0.266***	0.2038***	0.0622	0.059***	
	t-stat	(10.91)	(8.95)		(3.65)	
	$\mathbf{R^2}$	0.19	0.13		0.01	
Switzerland	**RD**	0.0050	-0.0004		0.0023	1607
	t-stat	(0.90)	(-0.07)		(0.48)	
	Return	0.0077	0.021**		-0.0068	
	t-stat	(0.89)	(2.35)		(-0.91)	
	Return*RD	0.089***	0.0339***	0.0551	0.023**	
	t-stat	(7.24)	(2.67)		(2.21)	
	$\mathbf{R^2}$	0.10	0.05		0.004	
United Kingdom	**RD**	-0.027**	-0.0213*		-0.0044	5888
	t-stat	(-2.44)	(-1.82)		(-0.71)	
	Return	-0.094***	-0.0467**		-0.0131	
	t-stat	(-5.33)	(-2.52)		(-1.33)	
	Return*RD	0.364***	0.241***	0.123	0.0354***	
	t-stat	(15.87)	(9.97)		(2.76)	
	$\mathbf{R^2}$	0.09	0.04		0.002	

Table 3: Earning management detection sample period 2005-2010

		Net Income Model (1)	CFO Model (2)	Difference btw (1) and (2)	Accruals Model (3)	No of Observations
Denmark	**RD**	0.0036	-0.0101		0.0002	565
	t-stat	(0.20)	(-0.54)		(0.01)	
	Return	-0.029	-0.016		-0.019	
	t-stat	(-1.04)	(-0.56)		(-0.89)	
	Return*RD	0.1505***	0.1169	0.0336	0.0204	
	t-stat	(4.32)	(3.32)		(0.77)	
	$\mathbf{R^2}$	0.08	0.07		0.002	
France	**RD**	-0.0105	-0.0164		-0.0015	3145
	t-stat	(-1.53)	(-1.28)		(-0.12)	
	Return	-0.0177	0.006		-0.0275	
	t-stat	(-1.64)	(0.30)		(-1.40)	
	Return*RD	0.0956***	0.065**	0.0306	0.0298	
	t-stat	(6.95)	(2.55)		(1.19)	
	$\mathbf{R^2}$	0.05	0.02		0.0009	
Germany	**RD**	-0.0093	-0.024**		0.0027	3710
	t-stat	(-0.98)	(-2.56)		(0.30)	
	Return	0.0333**	0.036***		-0.028**	
	t-stat	(2.41)	(2.62)		(-2.15)	
	Return*RD	0.0721***	0.0245	0.0476	0.046***	
	t-stat	(4.02)	(1.38)		(2.72)	
	$\mathbf{R^2}$	0.05	0.04		0.002	
Italy	**RD**	-0.0058	-0.01		-0.0014	1183
	t-stat	(-0.86)	(-1.37)		(-0.19)	
	Return	-0.0061	-0.0002		-0.0006	
	t-stat	(-0.51)	(-0.01)		(-0.05)	
	Return*RD	0.0555	0.029*	0.0265	0.0037	
	t-stat	(3.81)	(1.80)		(0.23)	
	$\mathbf{R^2}$	0.05	0.03		0.0003	
Netherland	**RD**	-0.007	-0.012		-0.009	575
	t-stat	(-0.44)	(-0.84)		(-0.85)	
	Return	-0.002	0.0343		-0.04**	
	t-stat	(-0.09)	(1.60)		(-2.20)	
	Return*RD	0.113***	0.0003	0.1127	0.054***	
	t-stat	(3.56)	(0.01)		(2.35)	
	$\mathbf{R^2}$	0.09	0.04		0.01	

Table 3(continued)

		Net Income Model (1)	CFO Model (2)	Difference btw (1) and (2)	Accruals Model (3)	No of Observations
Spain	**RD**	-0.001	-0.0085		0.005	502
	t-stat	(-0.19)	(-0.72)		(0.56)	
	Return	0.0196	0.0086		-0.009	
	t-stat	(1.43)	(0.45)		(-0.58)	
	Return*RD	0.0007	0.0091	-0.008	0.022	
	t-stat	(0.04)	(0.37)		(1.13)	
	$\mathbf{R^2}$	0.03	0.01		0.003	
Sweden	**RD**	0.014	-0.036**		0.024	1867
	t-stat	(0.61)	(-1.97)		(1.44)	
	Return	0.053*	0.013		0.0136	
	t-stat	(1.72)	(0.51)		(0.60)	
	Return*RD	0.1914	0.129***	0.0624	0.046	
	t-stat	(5.11)	(4.22)		(1.63)	
	$\mathbf{R^2}$	0.11	0.08		0.008	
Switzerland	**RD**	-0.01	-0.0054		-0.0075	937
	t-stat	(-1.02)	(-0.55)		(-1.08)	
	Return	-0.035**	-0.0008		-0.024**	
	t-stat	(-2.26)	(-0.05)		(-2.28)	
	Return*RD	0.107***	0.043**	0.064	0.0183	
	t-stat	(4.98)	(2.07)		(1.25)	
	$\mathbf{R^2}$	0.05	0.02		0.006	
United Kingdom	**RD**	-0.042**	-0.05***		-0.007	5378
	t-stat	(-2.50)	(-2.81)		(-0.68)	
	Return	-0.0114	-0.071**		0.034**	
	t-stat	(-0.41)	(-2.59)		(2.02)	
	Return*RD	0.224***	0.251***	-0.027	-0.036*	
	t-stat	(6.76)	(7.62)		(-1.82)	
	$\mathbf{R^2}$	0.06	0.04		0.002	

Table 4: Earning Management Detection

$$Accruals_t = \beta_0 + \beta_1 \Delta Rev_t + \beta_2 PPE_t + \beta_3 RD_t + \beta_4 RD_t * \Delta Rev_t + \beta_5 RD_t * PPE_t + \nu_t$$

Panel A: Whole sample period (1994-2010)

		β_1	β_2	β_3	β_4	β_5	R^2
Denmark		0.050***	-0.001	0.019**	0.033**	-0.04***	0.05
	t-stat	(4.95)	(-0.09)	(2.36)	(2.33)	(-2.29)	
France		0.02	0.010	0.018	0.033	0.001	0.0008
	t-stat	(0.64)	(0.18)	(0.82)	(0.76)	(0.02)	
Germany		0.02***	-0.068***	-0.025***	0.024***	0.078***	0.019
	t-stat	(3.75)	(-4.74)	(-3.48)	(3.63)	(3.80)	
Italy		0.062***	-0.026***	0.0065	-0.033*	0.027*	0.015
	t-stat	(4.83)	(-3.22)	1.19	(-1.80)	(1.67)	
Netherland		0.08***	-0.044***	0.013	-0.0003	-0.030	0.11
	t-stat	(11.72)	(-3.09)	(1.61)	(-0.03)	(-1.34)	
Spain		0.046**	0.003	0.020*	-0.030	-0.035	0.01
	t-stat	(2.00)	(0.20)	(1.91)	(-0.82)	(-1.5)	
Sweden		0.04***	0.015	-0.023***	-0.0022	0.030	0.01
	t-stat	(4.26)	(0.77)	(-2.63)	(-0.17)	(1.06)	
Switzerland		0.009*	-0.042***	-0.003	0.0077	0.0072	0.02
	t-stat	(1.85)	(-5.99)	(-0.68)	(0.86)	(0.68)	
UK		0.004***	0.017***	-0.004	-0.035***	-0.011	0.007
	t-stat	(4.66)	(2.93)	(-0.87)	(-7.28)	(-1.27)	

***, **, * stands for significant at 99%, 95% and 90% level using a two-tailed binomial test separately

Panel B: sample period before mandatory adoption of IFRS (1994-2004)

		β_1	β_2	β_3	β_4	β_5	R^2
Denmark		0.044***	-0.048***	0.0053	0.047***	-0.0065	0.06
	t-stat	(3.92)	(-2.85)	(0.53)	(2.95)	(-0.37)	
France		0.0182	-0.0055	0.0517	0.0045	-0.091	0.0006
	t-stat	(0.33)	(-0.06)	(1.17)	(0.06)	(-0.62)	
Germany		-0.0011	-0.077***	-0.032**	0.0246**	0.0821**	0.006
	t-stat	(-0.10)	(-3.41)	(-2.77)	(2.36)	(2.52)	
Italy		0.0216	-0.042***	0.0087	-0.009	0.0492**	0.009
	t-stat	(0.97)	(-2.74)	(0.97)	(-0.28)	(1.89)	
Netherland		0.087***	-0.041**	0.0229**	0.0111	-0.052*	0.13
	t-stat	(10.27)	(-2.20)	(2.05)	(0.79)	(-1.76)	
Spain		0.011	-0.0578	0.0167	0.1732	0.03	0.08
	t-stat	(0.10)	(-0.73)	(0.35)	(1.05)	(0.26)	
Sweden		0.030***	0.0236	-0.03***	-0.0145	0.0249	0.02
	t-stat	(2.80)	(1.22)	(-2.68)	(-0.98)	(0.86)	
Switzerland		0.0049	-0.042***	-0.0009	0.0052	-0.0018	0.03
	t-stat	(0.68)	(-4.77)	(-0.14)	(-0.44)	(-0.14)	
UK		-0.02***	0.005	0.0002	0.0182***	-0.039***	0.009
	t-stat	(-4.43)	(0.77)	(0.04)	(2.82)	(-3.57)	

***, **, * stands for significant at 99%, 95% and 90% level using a two-tailed binomial test separately

Panel C: sample period after mandatory adoption of IFRS (2005-2010)

		β_1	β_2	β_3	β_4	β_5	R^2
Denmark		0.076***	0.049**	0.0334**	-0.0117	-0.074**	0.05
	t-stat	(3.42)	(2.55)	(2.49)	(-0.39)	(-2.43)	
France		0.0256	0.0277	0.0018	0.0705***	0.0025	0.01
	t-stat	(1.54)	(1.07)	(0.17)	(3.04)	(0.09)	
Germany		0.030***	-0.042**	-0.012	0.0164**	0.0672***	0.05
	t-stat	(5.48)	(-2.37)	(-1.60)	(2.44)	(2.71)	
Italy		0.102***	-0.016**	0.0025	-0.061***	0.0165	0.06
	t-stat	(7.95)	(-2.10)	(0.44)	(-3.37)	(0.92)	
Netherland		0.058***	-0.06***	0.0001	-0.0197	-0.0009	0.07
	t-stat	(5.06)	(-2.70)	(0.01)	(-1.11)	(-0.03)	
Spain		0.048**	0.0037	0.0189*	-0.05	-0.036	0.02
	t-stat	(2.10)	(0.27)	(1.76)	(-1.39)	(-1.56)	
Sweden		0.048***	-0.009	-0.022	0.007	0.0576	0.02
	t-stat	(3.21)	(-0.25)	(-1.60)	(0.34)	(1.10)	
Switzerland		0.0128*	-0.045***	-0.0083	0.01311	0.0316	0.02
	t-stat	(1.80)	(-3.78)	(-1.20)	(0.94)	(1.63)	
UK		0.043***	0.0291***	-0.0042	-0.064***	-0.0038	0.02
	t-stat	(7.40)	(3.02)	(-0.57)	(-8.93)	(-0.27)	

***, **, * stands for significant at 99%, 95% and 90% level using a two-tailed binomial test separately

Table 5: Mishkin Test of the Market Efficiency-Earning Components-By countries

$$Net\ Income_{t+1} = \gamma_{0+}\gamma_1 CFO_t + \gamma_2 Accrual_t + \varepsilon_t$$

$$SizeReturn_{t+1} = \beta_0 + \beta_1(Net\ Income_{t+1} - \gamma_0^* - \gamma_1^* CFO_t - \gamma_2^* Accrual_t) + \nu_t$$

Panel A: Mishkin Test of the components of earning (1994-2010)-by countries

Country	n	β_1	γ_1	γ_1^*	γ_2	γ_2^*
Demark	1297	0.5209	0.8001	0.4235	0.6489	0.5954
France	4471	0.8722	0.7300	0.5430	0.7066	0.5636
Italy	1629	0.9725	0.7699	0.3702	0.7643	0.5117
Netherland	1258	1.1792	0.7487	0.6372	0.7212	0.7905
Sweden	2243	1.0331	0.7921	0.4903	0.6522	0.4194
Switzerland	1742	1.43336	0.8294	0.7194	0.7101	0.7500
Germany	4989	0.4681	0.6845	0.0893	0.5198	0.1419
United Kingdom	8074	0.3264	0.7755	0.0524	0.6853	0.2292
Spain	325	1.2459	0.8165	0.6278	0.7403	0.4909
European Countries(pooled)	17954	0.6941	0.7181	0.3803	0.6503	0.4070

Panel B: Mishkin Test of the components of earning (1994-2004)-by countries

Country	n	β_1	γ_1	γ_1^*	γ_2	γ_2^*
Demark	854	0.5002	0.6042	0.1992	0.5220	0.1655
France	2144	1.1127	0.7624	0.6175	0.7407	0.6358
Italy	782	1.1420	0.6758	0.3103	0.7215	0.6165
Netherland	820	1.2978	0.7370	0.6582	0.6918	0.8208
Sweden	1033	1.0843	0.7944	0.4484	0.6507	0.1743
Switzerland	1036	1.6494	0.8002	0.6826	0.6818	0.7179
Germany	2275	0.5873	0.6773	-0.0253	0.5293	-0.0358
United Kingdom	4103	0.4234	0.8194	0.3074	0.7104	0.4808
European Countries(pooled)	8961	0.7838	0.7109	0.3407	0.6540	0.3573

Panel C: Mishkin Test of the components of earning (2004-2010)-by countries

Country	n	β_1	γ_1	γ_1^*	γ_2	γ_2^*
Demark	364	0.6599	1.0094	0.6328	0.6865	1.1358
France	1923	0.6974	0.6938	0.4470	0.6754	0.4427
Italy	718	0.9407	0.8762	0.5929	0.7827	0.4250
Netherland	355	0.7739	0.7380	0.3730	0.7680	0.4720
Sweden	1028	1.0504	0.7811	0.4977	0.6459	0.5927
Switzerland	584	1.1969	0.8408	0.7514	0.7424	0.7723
Germany	2269	0.3787	0.6718	0.1105	0.4855	0.2178
United Kingdom	3432	0.3021	0.7620	-0.0074	0.6992	-0.0281
European Countries(pooled)	7544	0.6139	0.7149	0.3823	0.6274	0.4030

Table 6: Mishkin Test of the Market Efficiency-with Accrual Components

$$Earning_{t+1} = \gamma_{0+}\gamma_1 CFO_t + \gamma_2 Normal\ Accrual_t + \gamma_3 Abnormal\ Accrual_t + \varepsilon_t$$

$$SizeReturn_{t+1} = \beta_0 + \beta_1(Earning_{t+1} - \gamma_0^* - \gamma_1^* CFO_t - \gamma_2^* Normal\ Accrual_t - \gamma_3^* Abnormal\ Accrual_t) + \nu_t$$

Panel A: Mishkin Test of the components of accrual (1994-2010)-by countries

Country	n	β_1	γ_1	γ_1^*	γ_2	γ_2^*	γ_3	γ_3^*
Demark	1297	0.5376	0.8283	0.4751	0.1232	-0.1495	0.6987	0.6678
France	4471	0.8647	0.7385	0.5105	0.3180	2.1483	0.7141	0.5317
Italy	1629	0.9462	0.7848	0.3260	0.0421	2.1128	0.7796	0.4706
Netherland	1258	1.1838	0.7550	0.6543	0.6480	0.5950	0.7341	0.8244
Sweden	2243	1.0208	0.8017	0.4630	0.3345	1.1961	0.6685	0.3766
Switzerland	1742	1.4498	0.8188	0.7039	1.0406	1.2739	0.6934	0.7231
Germany	4989	0.4680	0.6845	0.0904	0.4863	1.5090	0.5199	0.1369
United Kingdom	8074	0.3273	0.7763	0.0572	0.4517	-0.5498	0.6908	0.2488
Spain	325	1.2627	0.8402	0.6663	0.1494	-0.4058	0.7616	0.5267
European Countries	17954	0.6911	0.7246	0.3673	0.2535	1.1120	0.6568	0.3945

Panel B: Mishkin Test of the components of accrual (1994-2004)-by countries

Country	n	β_1	γ_1	γ_1^*	γ_2	γ_2^*	γ_3	γ_3^*
Demark	854	0.5099	0.6336	0.2365	0.0926	-0.2585	0.5726	0.2231
France	1923	0.6936	0.6971	0.4028	0.5262	2.3876	0.6784	0.4015
Italy	782	1.1399	0.6732	0.3131	0.3021	1.1879	0.7211	0.6169
Netherland	820	1.3037	0.7450	0.6772	0.6109	0.6338	0.7077	0.8568
Sweden	1033	1.0837	0.8084	0.4463	0.3473	0.2151	0.6655	0.1720
Switzerland	1036	1.6819	0.7989	0.6834	1.1298	1.2528	0.6641	0.6960
Germany	2269	0.3787	0.6765	0.1103	0.1715	0.2299	0.4927	0.2175
United Kingdom	4103	0.4310	0.8221	0.3306	0.5201	-0.5439	0.7223	0.5491
European Countries	8961	0.7812	0.7163	0.3293	0.1106	1.3820	0.6588	0.3473

Panel C: Mishkin Test of the components of accrual (2005-2010)-by countries

Country	n	β_1	γ_1	γ_1^*	γ_2	γ_2^*	γ_3	γ_3^*
Demark	364	0.6534	1.0215	0.6104	0.4265	1.5381	0.7132	1.0994
France	2144	1.1071	0.7708	0.6050	0.2793	1.2797	0.7495	0.6230
Italy	718	0.9285	0.8800	0.5506	0.6392	1.9019	0.7884	0.3613
Netherland	355	0.7735	0.7417	0.3710	0.7021	0.5038	0.7792	0.4664
Sweden	1028	1.0378	0.7871	0.4676	0.4227	1.5768	0.6607	0.5271
Switzerland	584	1.1967	0.8395	0.7583	0.7684	0.6322	0.7409	0.7806
Germany	2275	0.5867	0.6672	-0.0181	0.0989	0.2987	0.5264	-0.0341
United Kingdom	3432	0.3017	0.7621	-0.0087	-0.5335	1.432	0.7042	-0.035
European Countries	7544	0.6102	0.7238	0.3680	0.2410	0.9412	0.6374	0.3876

Table 7: Earning Management Controlled for Country Characteristics

Panel A: sample period (1994-2004)

	Model 1	Model 2	Model 3	Model 4
RD	-0.009**	-0.011	-0.0031	0.0048
	(-2.31)	(-1.25)	(-0.37)	(0.65)
Return	-0.031***	-0.01	-0.012	0.0022
	(-5.11)	(-0.78)	(-0.96)	(0.27)
PPE				-0.0146
				(-1.21)
Return*RD	0.206***	0.152***	0.014	0.0099
	(26.55)	(8.99)	(0.88)	(0.89)
PPE*RD				-0.0224
				(-1.28)
Law Enforcement	0.025***	0.0161	0.001	0.0024
	(3.91)	(1.17)	(0.08)	(0.18)
IFRS difference	0.003***	0.0015	0.0002	0.0001
	(4.46)	(0.96)	(0.14)	(0.04)
Accrual Index	0.2725***	0.199**	0.135	0.134
	(6.72)	(2.26)	(1.62)	(1.61)
Ownership Concentration	0.261***	0.182**	0.112	0.129*
	(7.29)	(2.33)	(1.51)	(1.75)
Anti-Director	-0.013***	-0.013*	-0.0014	0.0001
	(-3.52)	(-1.68)	(-0.19)	(0.02)
Equity Market Importance	0.0028***	0.0018**	0.0023***	0.0025***
	(8.65)	(2.59)	(3.50)	(3.74)
R^2	0.10	0.02	0.002	0.003

Model1:

$Net\ Income_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 LawEnforce_j + \beta_5 IFRSdiffer_j + \beta_6 AccIndex_j + \beta_7 OwnConcen_j + \beta_8 AntiDirector_j + \beta_9 EquityMarket_j + v_t$

Model 2: $CFO_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 LawEnforce_j + \beta_5 IFRSdiffer_j + \beta_6 AccIndex_j + \beta_7 OwnConcen_j + \beta_8 AntiDirector_j + \beta_9 EquityMarket_j + v_t$

Model 3: $Accrual_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 LawEnforce_j + \beta_5 IFRSdiffer_j + \beta_6 AccIndex_j + \beta_7 OwnConcen_j + \beta_8 AntiDirector_j + \beta_9 EquityMarket_j + v_t$

Model 4: $Accrual_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 PPE_t + \beta_5 PPE_t * RD_t + \beta_6 LawEnforce_j + \beta_7 IFRSdiffer_j + \beta_8 AccIndex_j + \beta_9 OwnConcen_j + \beta_{10} AntiDirector_j + \beta_{11} EquityMarket_j + v_t$

***, **, * stands for significant at 99%,95% and 90% level using a two-tailed binomial test separately

Panel B: sample period (2004-2010)

	Model 1	Model 2	Model 3	Model 4
RD	-0.12**	-0.024***	0.0004	-0.0013
	(-1.90)	(-3.87)	(0.10)	(-0.38)
Return	0.007	-0.0054	-0.005	0.0392***
	(0.74)	(-0.56)	(-0.70)	(11.42)
PPE				0.0139**
				(2.34)
Return*RD	0.151***	0.1214***	0.019**	-0.027***
	(12.83)	(10.14)	(2.10)	(-6.31)
PPE*RD				0.0067
				(0.84)
Law Enforcement	-0.008	-0.0103*	-0.0101**	-0.011**
	(-1.26)	(-1.67)	(-2.19)	(-2.30)
Ownership Concentration	0.054*	0.046	0.066**	0.063**
	(1.59)	(1.33)	(2.55)	(2.44)
Anti-Director	-0.02***	-0.019***	0.0114***	0.0097***
	(-5.58)	(-5.12)	(4.22)	(3.57)
Equity Market Importance	0.002***	0.0025	0.004	0.0005
	(4.38)	(5.05)	(1.13)	(1.42)
R^2	0.06	0.04		

Model1: $Net\ Income_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 LawEnforce_j + \beta_5 OwnConcen_j + \beta_6 AntiDirector_j + \beta_7 EquityMarket_j + v_t$

Model 2:

$CFO_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 LawEnforce_j + \beta_5 OwnConcen_j + \beta_6 AntiDirector_j + \beta_7 EquityMarket_j + v_t$

Model 3:

$Accrual_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 LawEnforce_j + \beta_5 OwnConcen_j + \beta_6 AntiDirector_j + \beta_7 EquityMarket_j + v_t$

Model 4: $Accrual_t = \beta_0 + \beta_1 RD_t + \beta_2 R_t + \beta_3 R_t * RD_t + \beta_4 PPE_t + \beta_5 PPE_t * RD_t + \beta_6 LawEnforce_j + \beta_7 OwnConcen_j + \beta_8 AntiDirector_j + \beta_9 EquityMarket_j + v_t$

***, **, * stands for significant at 99%, 95% and 90% level using a two-tailed binomial test separately