Journal of Business Studies Quarterly   jbsq.org

Acquisition, Earnings Management and Firm's Performance: Evidence from Malaysia

Aref Mahdavi Ardekani, Multimedia University, Malaysia
Nejat Younesi, Multimedia University, Malaysia
Mohammad Hashemijoo, Multimedia University, Malaysia

Abstract

This paper examined the relationship between earnings management and performance of acquiring firms in Malaysia during period of 2004-2010. Earnings management measured by discretionary accruals derived from modified Jones model and firm's performance estimated by monthly Cumulative Abnormal Return. Firms are selected from both listed cash and share acquirers firms on Bursa Malaysia in the period of 2004-2010. The results indicated that share acquirer firms unlike cash acquirers manipulated their earnings preceding acquisition announcement date. Furthermore, the presented a negative relationship between earnings management preceding and performance of firms following the acquisition date for share acquirer firms.

Keywords: Earnings Management, Mergers and Acquisitions, Jones Model, Total Accruals, Discretionary Accruals, Cumulative Abnormal Return, Firm's Performance

1. Introduction

One of the hot issues that have always been discussed in relation with the inefficient capital market is relevant to the transparency of financial reports in accounting information. Rapid development of the internet and employment of this technology to the stock markets in the recent decade has increased the need for transparency of financial situation for firms whose stocks are traded in the stock markets. Investors according to financial statements of firms listed in stock exchange markets decide to buy or sell firm's share in the specific time horizon. Occurrences of big scandals like Xerox 2000, Enron 2001, and WorldCom 2002, and many others, led to the reduction of investor's trust to the accuracy of financial information published by firms. Furthermore by disclosure of the mentioned scandals and reflection of them in the media has led to the attention of securities regulators, parliaments, and even presidents to this phenomenon and caused to make serious decisions to solve it and prevent more scandals thereafter (Ronen & Yaari, 2008). Hence, the demand for research in the area of financial information transparency, the reasons for manipulating accounting information, their effects on stock markets and the ways to prevent future scandals are raised. The lack of transparency in

financial reports has several reasons but the most important is earnings management practice which is implemented by managers. Indeed, managers by using EM (Earnings Management) tools manipulate accounting information in order to achieve some goals. Earnings management is one of the tools used for manipulating accounting information due to gaining profit through trade in capital markets. CFOs of firms sometimes manipulate earnings prior to specific date leading to IPO, Management Buyout, Mergers and acquisitions, and other important deals to reduce costs of them.

Duo to (Ronen & Yaari, 2008) studies three different definitions of earnings management will be mentioned in order to find the best description for its concept:

1. First of all, earnings management is a tool used for flexibility of accounting information which managers apply as signals of their own exclusive information from their respective organization to shareholders.
2. Second definition relies on the managers' utilization of accounting tools in ways that they could apply them in both aspects of opportunistic and optimistic managerial goals.
3. And finally, earnings management is a manipulation of accounting data in order to decrease transparency of financial reports and cause to mislead shareholders and other stakeholders in their decision making process that lead to enhance managements' personal profit.

Managers use several tools to manipulate income. But the main means are classified into four categories based on (Ayres, 1994; Bruns Jr & Merchant, 2005; Francis, 2001) studies:

1. Discretionary accruals and liabilities estimation
2. Recognition of revenues
3. Generous reserve accounting and excessive provisions
4. Intentional minor breaches of financial reporting requirements that aggregate to a material breach

In this research, the focus is on Discretionary Accruals as the main measure of earning management.

Jones in 1991 introduced his model for total discretionary accruals. It was the first model that was applied widely by researchers and analysts to discover the amount of manipulation of accounting data in financial reports and was also a milestone in the accruals approach. Researchers have applied total accruals measures to find earnings management preceding Jones model.

Prior to Jones model, (DeAngelo, 1986, 1988; Dechow & Sloan, 1991; Healy, 1985; Ronen & Sadan, 1981) tried to model accruals.

(Ronen & Sadan, 1981) examined ordinary incomes' smoothing. For this purpose, they introduced modeling of expenses based on classification of income statement and the use of the two step regression model to analyze the trends.

(Healy, 1985) investigated managers' incentives to manipulate earnings in downward direction when bonus for managers is not money. Healy defined accruals as the deflated long-term accruals.

(DeAngelo, 1986, 1988) analyzed the managements' decision on accounting based on 64 publicly traded firms that applied management buyout during the period of study. Model of DeAngelo considered accrual as the prior accruals deflated by lagged assets.

(Dechow & Sloan, 1991) examined the expenditure of research and development with previous CEO spending in last years of their management. They introduced 3 hypotheses in the area of expenditures' reduction on research and development (R&D) activities.

(Bergstresser & Philippon, 2006; Chunguang, 2006; Erickson & Wang, 1999; Gong, Louis, & Sun, 2008; Hamza & Lakhal, 2010; Hope, Kang, & Kim, 2011; Leuz, Nanda, &

Wysocki, 2003; Louis, 2004; Sun & Rath, 2008) studied the effects of earnings management on firm's performance.

According to the earlier definitions and descriptions about earnings management this study aims to find out whether acquirer firms manipulate their earnings preceding the acquisition date. It is logical for a tendency of managers of firms who intend to acquire other firms by means of stock to stock acquisition tools to swap less of their own stock and more of the target firms' stock. For this reason, they are incentives to inflate their earnings in order to boost their own stock price. According to the study by (Louis, 2004), managers of acquiring firms one quarter preceding mergers announcement manipulate accounting reports to inflate their earnings.

Nowadays, target firms employ expert accountants, lawyers, and also the best financial analysts to find earnings management of acquiring firm if they exist. Yet many of the acquiring firms use this tactic to manipulate their earnings reports. Therefore, based on these monitoring leverages of target firms and many other control tools in this area, this research intends to examine whether there is any earnings management of accounting data by means of discretionary accruals used by managers of firms in the period before the announcement and termination of mergers and acquisitions in Malaysia from 2004 till 2010.

Furthermore, the relation between earnings management and performance in acquirer firms following acquisition date is also examined. According to (Erickson & Wang, 1999) and (Louis, 2004) studies, the firms that manipulated their earnings to acquire target firms by stock swap have experienced stock underperformance following the acquisition date. This research examines the acquirer firms in Malaysia in the period of 2004-2010 to find out how performance of acquirer firms is affected by earnings management.

The current study decided to study within the boundary of Malaysia. Malaysia is one of the developing countries and its market is counted as an emerging market. Thus, the need for transparency of information in order to reach more stable and smooth trends and also to decrease fraud potential is vital to them.

(Rahman & Abu Bakar, 2003) examined earnings management in firms preceding acquisition in Malaysia over the period of 1991 to 2000 and concluded that managements in a year preceding acquisition manage earnings upwards.

This study intends to survey whether cash and share acquirer firms in bursa Malaysia manipulate their earnings preceding acquisition date over the period of 2004 to 2010. And finally what is the impact of earnings management on share performance of acquirer firms.

2. Literature Review

(Jones, 1991) in the purpose of investigation for earnings reported that manipulation of managers was used in the discretionary accrual in the time of import relief investigation and getting results that managers by means of discretionary accrual technique decreased income during import relief investigation.

In a management buyout problem, managers usually try to exhibit income reduction in order to decrease the purchase price of firm. According to this issue, (DeAngelo, 1990) studied the changes in discretionary accrual and obtained some evidence of earnings management by buyout firms. Also, (Perry & Williams, 1994) obtained evidence on manipulating of accounting report by accrual means in a year before buyout announcement and found that unexpected accruals are negative before the management buyout.

According to related studies in recent years, the issue of overstated earnings report by managers in the years prior to mergers announcement have been surveyed. In these surveys,

(Shivakumar, 2000) and (Teoh, Welch, & Wong, 1998) found that there were positive accounting reports by means of income increasing unexpected discretionary accruals prior to seasoned equity offering (SEO). Also, (Erickson & Wang, 1999) confirmed this result for stock financed mergers and Wong, (Teoh, Wong, & Rao, 1998) confirmed it for initial public offering (IPO).

In a study, (Erickson & Wang, 1999) examined earnings management for acquiring firms in the US Market which have stock for stock mergers. They found the result that acquiring firms manipulate discretionary accruals in order to inflate their earnings reports in the period prior to the merger's announcement. In addition, based on their study on statistical samples of acquiring firms which has mergers with cash, they didn't find any evidence on earnings management before mergers announcement.

(Heron & Lie, 2002) reached the results which were inconsistent with Erickson and Wong's results. They found that if acquiring firms have a high performance prior to mergers and acquisitions announcement, it does not mean that they actually use earnings management by means of discretionary accruals. They explained that the reason for the difference in their study with Erickson and Wong could have risen from using different sampling methods or using distinct sampling size or various processes for estimating discretionary accruals.

(Jensen & Ruback, 1983) explained that the future result of high negative return leads to a wrong away because it has inconsistency with market efficiency theory, and also expressed those changes in stock price during merger leads to overestimation of gains of merger's future performance. In this area, (Raghavendra Rau & Vermaelen, 1998) by means of performance extrapolation hypothesis, represented reasons for underperformance of the firms after merger announcements.

Accrual accounting gives managers significant rights to determine profits in various periods. In fact, based on this accounting system, managers have meaningful control on the recognition period of some cost items such as advertisement and R&D costs. On the other side, managers are faced with different options in recognition of revenues in accrual accounting system such as earlier recognition of revenue through credit sales, (Teoh, Wong, et al., 1998).

(Degeorge, Patel, & Zeckhauser, 1999) defined earnings management as artificial earnings manipulation by managers to reach the expected level of profit for some special decisions like effects on analysts' forecasts or estimation of previous earning trends. They believed that the main goal of earnings management is investors' imagination management.

(Yoon & Miller, 2002) believed that operational cash flow is a part in business which could be less manipulated by managers; therefore, it offers more real scale of business economic performance. Hence, it could be concluded that those business units that were likely to face weak performance have more incentive to enhance their reported earnings by earnings management or reverse. The probability for practices in artificially increasing earnings by managers is less for business units which have good performance.

(Burgstahler & Dichev, 1997) believed that most of the firms reported less earning changes rather than expected earning changes and these evidences are illustrated as opportunistic earnings management. The evidence indicated that firms have more incentive to escape from loss and reduction in profits.

(Michelson, Jordan-Wagner, & Wootton, 1995) in their research concluded that the firms doing earning smoothing are the large firms with less risk and return.

(Chaney & Lewis, 1995) in their study examined the effect of firm's size, debt, profit, return, discretionary accruals and growth on earning smoothing. Their study results illustrated that the smoothing maker firms are bigger than others in size, debt, returns, and discretionary

accruals. In addition, these results showed that the weak performance firms do less earning smoothing. Finally, they found a negative relation between earning smoothing and growth.

So far, many researchers have provided information about determinants of share price by various models and methods. In each model, they examined the relationship between share price and collection of variables. In addition, many studies have examined the informative content of accounting items in order to forecast future share price or share price volatility.

(Dimitropoulos & Asteriou, 2009) in their study examined the relationship between financial ratios and share price by analyzing 101 publicly traded firms in the Athens Stock Exchange in the period of 10 years. They surveyed the effect of discretionary, non-discretionary accruals, earnings per share and six special financial ratios as indicators of earnings manipulation on share price. Their study results illustrated that 4 ratios from the 6 selected ratios and both non-discretionary and discretionary accruals have more important roles in describing the changes in the share price. In addition, their result illustrated that the earnings per share variable is a more relative variable than others.

(Francis, LaFond, Olsson, & Schipper, 2005) in a research from 1970 to 2001 found that security' investors determined share price according to information they had from the quality of accruals. Their research results also indicated that the firms with lower quality of accruals have a lower debt ratio and indicated that discretionary accruals and non discretionary accruals items are important in describing share price changes.

(Spathis, Doumpos, & Zopounidis, 2002) in their research by using published data examined 76 Greece companies. According to 10 financial ratios as independent variables, they illustrated that there is high probability of manipulation in financial statements for companies with high inventory to sale and debt to asset ratios and low working capital to asset, net profit to asset, net profit to sale and sale to total asset ratios. Hence, widespread analysis on these key ratios could reveal the credit of companies to investors and analysts.

(Chan, Chan, Jegadeesh, & Lakonishok, 2001) in their study based on the US capital market data during 25 years indicated an inverse relation of accruals and future stock return. It means that increase in earnings along with a high degree of accruals which are indicators of low earning quality will lead to weak stock return.

(Subramanyam, 1996) showed in his study that the market has a high consideration to discretionary accruals because discretionary items increase earnings' ability to reflect the base price. Besides, he verified the increase of informative content in cash flow and accruals to each other provided evidence for confirmation of hypothesis which in US capital markets, all discretionary accruals items have increasing informative content rather than operational cash flow.

(Dechow, Sloan, & Sweeney, 1995) illustrated that discretionary accruals are fixed and could not be used as income smoothing tools. The probability of earnings manipulation increases as much as the amounts of discretionary accruals and is more in total accruals.

GhaemMaghami, Livali & Bozorgi, 2009) examined the role of accruals items in describing the earning quality of publicly traded firms in Tehran Stock Exchange and studied the relation of earning quality through accruals and its components with normal and abnormal stock return. Their samples consisted of 136 firms during 1998 to 2005 and accruals item were divided into discretionary and non-discretionary accruals. Their research result indicated that firm's stock return was affected by accruals and its components.

(Kordlori, Hassani-A & Hassani-E, 2006) determined discretionary accruals as indicators for evaluation of earnings management and surveyed EM during IPO. Their survey results showed that managers manipulated earnings in a year prior to IPO and in the year of IPO. In

addition, they examined the effect of EM on long run performance of stock price and illustrated that discretionary accruals and long run performance of stock price have a positive correlation.

(ArabMazar, Mashayekhi & Rafiee, 2006) surveyed informative contents of earnings, operational cash flow and accruals and examined the relation of stock return with earnings and its components. According to their sample that consisted of 400 firms during 2000 to 2003, the results illustrated increasing informative contents of accruals rather than operational cash flow. By dividing accruals to its discretionary and non-discretionary components, they found more accurate results.

(Kordestani & RoudNeshin, 2006) studied the degree of correlation between cash and accrual components of accounting earnings and firm's market value. Their study results showed unlike accruals components cash components of earnings have a significant correlation with firm's market value.

3. Methodology
3.1 Hypothesis of Study

In this study in accordance with other literatures in the earnings management area of M&A firms, the main objective is to find whether acquirer firms manage their earnings preceding the acquisition date. Due to that reason, first of all, the existence of earnings manipulation will be examined with this first hypothesis:

- **H1**: share acquirer Firms' managers Manipulate earnings 1 year preceding Acquisition date (announcement).
- **H2**: cash acquirer Firms' managers Manipulate earnings 1 year preceding Acquisition date (announcement).

In the second step immediately after the acceptance of H1, the effect of earnings manipulation on firms' performance will be measured. In this study, the firm's return is used as measurement of the firm's performance. In addition, in accordance with other scholars, discretionary accruals applied as measurement of manipulating earnings. Hence, the second hypothesis will test the effect of discretionary accruals on firm's performance.

- **H3**: share acquirer firms' discretionary accruals have reverse relation with returns of firms
- **H4**: cash acquirer firms' discretionary accruals have reverse relation with returns of firms

3.2 Data Sources

In this study, secondary data is used as the data analyzing source. All of the data used in the current research was collected from Capital IQ and Bursa Malaysia Bloomberg database. The list of all the firms which have had acquisition deals in the years of 2004 to 2010 along with target firms' names, announcement dates and completed dates were collected from the Bursa Malaysia Bloomberg database. Monthly share price of acquirer firms from 2004 to 2010, total assets, property, plant and equipment, sales revenue, operating cash flows, net income and account receivable from 2002 to 2010 were collected from the Capital IQ database.

3.3 Data Collection

Data which will be used in this study was collected based on the Acquisition announcement years from 2004 to 2010. In that period, 50 share acquirer firms and 68 cash acquirer firms were selected based on availability of financial, accounting, Acquisitions, and other related data on both databases (Capital IQ and Bursa Malaysia Bloomberg) and used in this

study. Table 3-1 and table 3-2 illustrate the dispersal of firms based on the acquisition announcement year.

Table 3.1 Descriptive Statistics for Acquirer firms based on acquisition year

Y	SAF	CAF
2004	5	-
2005	3	-
2006	8	12
2007	15	35
2008	9	9
2009	3	6
2010	7	1
Total	**50**	**68**

Note: Y= Year; SAF= share acquirer firms; CAF= cash acquirer firms. Sample firms include 50 share acquirer firms and 68 cash acquirer firms which have acquisition deals in years 2004-2010. For each firm data collected during period 2004-2010.

Table 3.2 Descriptive Statistics for Acquirer firms based on their own Industry

Industry	SAF	CAF
Consumer Discretionary	10	12
Consumer Staples	5	3
Energy	2	-
Healthcare	1	1
Industrials	14	46
Information technology	8	2
Materials	10	3
Telecommunication Services	-	1
Total	**50**	**68**

Note: I= industry; SAF= share acquirer firms; CAF= cash acquirer firms. Sample firms include 50 share acquirer firms and 68 cash acquirer firms which have acquisition deals in years 2004-2010. For each firm data collected during period 2004-2010.

3.4 Model and Formulas
3.4.1 Total Accruals

In the first step, Total accruals for all samples were calculated in the Excel worksheet as following:

Total accrual calculated by subtracting operating cash flows from net income according to (Erickson & Wang, 1999) study. (Murphy & Zimmerman, 1993) pointed out in their study that

managers could implement as much discretion from which the profits' portion come from by subtracting cash flows from operations from the accounting income:

$$TotAccr = NI - OpCF \qquad (3\text{-}1)$$

Where:
TotAccr = Total Accruals
NI = Net Income
OpCF = Operating Cash Flows

3.4.2 Modified Jones Model

Due to estimate discretionary accruals as the main estimator of earnings management, Modified Jones model applied according to (Dechow et al., 1995).

$$TotAccr = \alpha \left(\frac{1}{TAs}\right) + b_1 \left(\frac{\Delta RVN - \Delta ARV}{TAs}\right) + b_2 \left(\frac{GrPPE}{TAs}\right) + \varepsilon \qquad (3\text{-}2)$$

Which
TotAccr = Total acquirer firm (k) accruals at period t
TAs = acquirer firm (k) Total Assets at period t-1
ΔRVN = Total Revenue at period t minus Total Revenue at period t-1 for firm (k)
ΔARV = firm (k) Total Account Receivable in year t minus Total Account Receivable at period t-1
GrPPE = firm (k) Gross property plant and equipment at period t
α, β_1 and β_2 = Specific parameters of industries-years
ε = Error

In the second step, by using the SPSS (statistical analysis software) and applying multiple regression, α, b_1 and b_2, the specific parameters of industries years were estimated.

Then, the coefficients which were estimated in equation 3-2 to equation 3-3 and calculated the non-discretionary accrual as following in the Excel worksheet:

$$NDA = \alpha \left(\frac{1}{TAs}\right) + b_1 \left(\frac{\Delta RVN - \Delta ARV}{TAs}\right) + b_2 \left(\frac{GrPPE}{TAs}\right) \qquad (3\text{-}3)$$

Where:
NDA = Non-Discretionary Accruals
TAs = Total Assets of acquirer firm (k) in period t-1
ΔRVN = Revenues at period t minus Revenues in period t-1 for firm (k)
ΔARV = firm (k) Total Account Receivable at period t minus Total Account Receivable at period t-1
GrPPE = firm (k) Gross property plant and equipment at period t
α, β_1 and β_2 = Specific parameters of industries-years estimated in equation 3-2

(Teoh, Welch, et al., 1998) in their study argued that total accruals formed as sum of discretionary accruals and non-discretionary accruals. They pointed out that discretionary accruals are the intervention of management on financial statements, also non-discretionary accruals are dependent to firm's implicit performance and it is independent to intervention of management. Finally, the discretionary accruals are calculated as:

$$DAC = TotAccr - NDA \qquad (3\text{-}4)$$

Where:
DAC = Discretionary Accruals
TotAccr = Total Accruals
NDA = Non-Discretionary Accruals

3.4.3 Stock Return

To measure the effect of earnings manipulation on firm's performance, this study applied a simple regression by SPSS to determine the extent of the mentioned effects. In this part, discretionary accruals which were estimated in equation 3-4 were used as earnings management measurement and firm's stock Cumulative Abnormal Return (CAR) illustrated in equation 3.5 was used as firm's performance measurement.

According to (Louis, 2004; Teoh, Wong, et al., 1998), Cumulative Abnormal Return (CAR) is estimated as a measurement of stock return. Calculation of CAR is based on the sum of the firm's abnormal return in a specific period. Firm's abnormal return is calculated as the difference between expected return and real return. There are some methods for the calculation of expected return such as CAPM, market model and some others. Similar to (Louis, 2004), the market model was used for calculation of the expected return.

$$CAR = \sum_i^k AbRe \qquad (3\text{-}5)$$

Where:

CAR: Cumulative Abnormal Return

AbRe: Abnormal Return

$AbRe = ReR - ExR$

ReR: Real Return

ExR: Expected Return

$ExR = \alpha + \beta(R_m)$ (Market Model)

R_m: Market Return (in this study Bursa Malaysia Index Return)

$$ReR: \frac{P_1 - P_0}{P_0} \qquad (3\text{-}6)$$

Where:

P_1 = Firm's Stock Price in Year 1

P_0 = Firm's Stock Price in Year 0

$$Rm = \frac{M_1 - M_0}{M_0} \qquad (3\text{-}7)$$

Where:

M_1 = Market Index Price in Year 1

M_0 = Firm's Stock Price in Year 0

Firm's return for each year in the period of study (2004-2010) was calculated as cumulative abnormal return of monthly 50 share acquirer firms and 68 cash acquirer firms' return.

3.5 Quantitative Measurement

For the purpose of analyzing the data, this study used STATA, SPSS and Excel as the statistics analysis software.

STATA software was used to analyze the data type, Total Accruals, $\left(\frac{1}{TAs}\right)$, $\left(\frac{\Delta RVN - \Delta ARV}{TAs}\right)$ and $\left(\frac{GrPPE}{TAs}\right)$ were separately calculated in the Excel worksheet. Then, in the SPSS software, total accruals were defined as the dependent variable and others were defined as the independent

variables. By using the regression option on SPSS, it was able to test multi regression of equation 3-2 and estimate coefficients α, b_1, and b_2. By putting the coefficients estimated in the previous step in equation 3-3 in the Excel worksheet, non-discretionary accruals were estimated. Discretionary accruals were calculated as Non-discretionary accruals minus Total Accruals in the Excel worksheet. According to (Erickson & Wang, 1999; Healy, 1985; Jones, 1991), the means of discretionary accruals for M&A companies in at least one period prior to M&A announcement must be positive if the managers had manipulated earnings.

In the next step, one sample test and one sample K-S test was applied by SPSS in order to find whether firms did earnings management.

In the current study, cumulative abnormal return (CAR) was calculated on the Excel worksheet as the sum of monthly abnormal return for each year. Finally, by the regression test of SPSS, the correlation between stock return and discretionary accruals is measured.

4. Analysis and Discussion

Section 4 contains the analysis part of this study. All the analyses in the current section are conducted by means of STATA and SPSS software. At the beginning, the total accruals for each firm's groups (cash deals and share deals) will be calculated due to the formula presented in section 3. Then, with the total assets, revenues, account receivables and GrPPE alongside the Modified Jones Model, discretionary accruals will be estimated in the period of study's duration (2004-2010). To continue, the yearly return of cash and share acquirer firms will be calculated from 2004 to 2010 by cumulative abnormal return method which estimated by sum of monthly abnormal returns in every year. Finally, hypothesis 1 to 4 as discussed in section 3 will be tested and the results will be presented in this section.

4.1 Discretionary Accruals

Discretionary accruals are estimated for both cash and stock deals according to Equation 3-2 (Modified (reformed) Jones Model) as described in section 3. Modified (reformed) Jones Model is ran for every event period which consist of Year -1, Year 0 (Deal Announcement Year) and Year +1.

Figure 4.1: Modified Jones Model ran for every event period
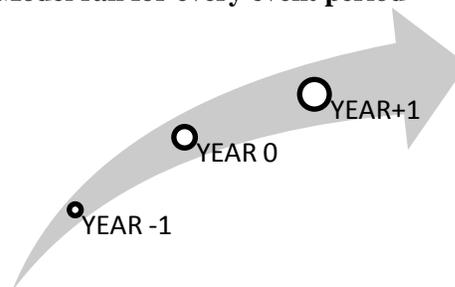
Overall, 150 Company/Event year portfolios for stock deals and 204 Company/Event year portfolios for cash deals were formed and Jones model was estimated for them.

Step I is the determination of the panel type. At the beginning LM test has given by STATA to determined panel type. The results have shown than P-value is below 0.05, thus the share deals' data is not pooled and it should be fixed or random. In continue the Hausman Test (Correlated Random Effects) conducted to determine whether data is fixed or random. Share deals' data P-value is 0.0001 which is less than 0.05, so the results indicated that data type for

this panel is fixed. The result of LM test for cash deals data indicated that the panel is pooled (P-value is $0.08 > 0.05$).

Step II is the estimation of specific firms' parameters α, β_1 and β_2 for both cash and stock deals samples by means of equation 3-2 as presented in Table 4.1.

Table 4.1: Firm's Specific Parameters

FSP	CDs	SDs
A	0.0162	-0.0720
Sig	(0.130)	(0.000)
B_1	0.0539	0.0860
Sig	(0.021)	(0.032)
B_2	-0.0526	-0.0490
Sig	(0.003)	(0.000)
R^2	**0.258**	**0.266**

Note: FSP= firm's specific parameters; CDs= cash deals; SDs= stock deals; A, B_1 and B_2 are coefficients of equation: $\text{TotAccr} = \alpha\left(\frac{1}{\text{TAs}}\right) + \beta_1\left(\frac{\Delta\text{RVN} - \Delta\text{ARV}}{\text{TAs}}\right) + \beta_2\left(\frac{\text{GrPPE}}{\text{TAs}}\right) + \varepsilon$

According to (Dechow et al., 1995), the variable changes in revenues minus changes in account receivables and GrPPE are used for control in some expected ingredient of total accruals. Total accruals consist of working capital components and an expected depreciation expense component. Based on prior studies (Dechow et al., 1995; Erickson & Wang, 1999; Jones, 1991), changes in revenues have an influence on working capital components and gross property; plant and equipment have an influence on depreciation expense components of total accruals. Similar to (Jaaffar, Abdul Rahman, & Abu Bakar, 2002), it is expected that revenues coefficient ($\beta1$) is positive because increase in revenues leads to increase in working capital accruals. In addition, it is expected that gross property, plant and equipment coefficient ($\beta2$) is negative due to the fact that increase in property, plant and equipment leads to increase in depreciation accruals.

Table 4.2: Descriptive Statistics of Jones Modified Model component

PART A SDs	ME	MED	Std D.
Total Assets	378.37	114.40	829.352
Revenues	400.72	129.75	756.203
Property, Plant and Equipment	829.39	351.80	1311.215
PART B CDs	**ME**	**MED**	**Std D.**
Total Assets	3509.43	362.70	20916.959
Revenues	563.90	192.50	1232.632
Property, Plant and Equipment	422.21	148.75	893.337

Note: SDs= share deals; CDs= cash deals; ME= mean; MED= median; Std D= standard deviation.

As seen in Table 4.1, the coefficient of β_1 for both cash and stock deals are statistically significant at the 0.05 level (0.021 for cash and 0.032 for stock deals). The coefficient sign of β_1 for both samples are positive.

Furthermore, the coefficient β_2 for both cash and stock deals are statistically significant at the 0.05 level (0.003 for cash and 0.000 for stock deals). The coefficient sign of β_2 for both samples are negative. Hence, β_1 and β_2 coefficients signs are consistent with prior studies.

The results of the descriptive statistics test for share acquiring and cash acquiring firms over the period of 2004-2010 that was conducted by SPSS are presented in Table 4.2.

Based on Table 4.2, Total assets' median and mean for cash deal firms is truly more than stock deal firms. These results show that firms with high total assets prefer to acquire target firms with cash rather than share offer or in other words, the acquirers that are involved in cash acquisition deals have more total assets than the acquirers that are involved in share by share acquisition deals. In addition, the mean and median of revenues for cash deals' firms are more than stock deals' firms.

Step III is the estimation of discretionary accruals for 50 share acquirer and 68 cash acquirer firms based on equations 3-3 and 3-4.

Table 4.3: Descriptive Statistics for overall Discretionary Accruals over the period of 2004-2010

DAccr	SDs	CDs
No of Firms	50	68
Mean	0.06885797	-0.00000005
Median	0.06427200	0.0037798
Minimum	-0.255041	-0.66076
Maximum	1.124171	1.66490

Note: DAccr= Discretionary Accruals; SDs= share deals; CDs= cash deals.

Based on Table 4.3, the mean of discretionary accruals in share acquirer firms shows that overall earnings management in the period of this study (2004-2010) by means of discretionary accruals is 6.9 % of the firms' total assets. On the other side, the mean of discretionary accruals in cash acquirer firms is approximately 0 % of total assets; thus, it means that overall, cash acquirer firms didn't manipulate earnings during 2004-2010. The minimum amount of discretionary accruals that was illustrated in Table 4.3 indicates maximum deflated earnings and maximum amount of discretionary accruals indicate maximum inflated earnings in each share and cash deals.

Table 4.4: Descriptive Statistics of Discretionary Accruals for each event period year in share acquirer firms:

DAccr(SDs)	Y +1	Y 0	Y -1
Mean	0.05354551	0.05444997	0.09857841
Median	0.05602500	0.06203400	0.08359100
Std. D	0.070092169	0.096875521	0.189534253
Minimum	-0.131050	-0.255041	-0.235692
Maximum	0.224224	0.214473	1.124171

Note: DAccr= Discretionary Accruals; SDs= share deals; Y +1= year following acquisition deals; Y 0= year of acquisition deals; Y -1= year preceding acquisition deals.

Table 4.5: Descriptive Statistics of Discretionary Accruals for each event period year in cash acquirer firms

DAccr(CDs)	Y +1	Y 0	Y -1
Mean	-0.03216253	0.00955721	-0.01263301
Median	-0.00323181	-0.00826077	-0.03277827
Std. D	0.389704530	0.382143170	0.442600241
Minimum	-0.882807	-0.868795	-1.382423
Maximum	1.857653	1.664897	2.153325

Note: DAccr= Discretionary Accruals; CDs= cash deals; Y +1= year following acquisition deals; Y 0= year of acquisition deals; Y -1= year preceding acquisition deals.

According to the means of discretionary accruals belong to share acquirer firms which is estimated for three years (Table 4-4), the mean in a year prior to acquisition announcement (Year -1) is approximately 1.5 times more than year of announcement (Year 0) and the year immediately following announcement (Y+1). Furthermore, the means from year -1 to year +1 have a descending trend. Also, the maximum amount of discretionary accruals is presented in Table 4.6 indicate that the maximum amount of discretionary accruals in Year -1 is approximately 5 times more than year 0 and year +1. These evidences are consistent with prior studies like (Botsari & Meeks, 2008; Dechow et al., 1995; Erickson & Wang, 1999; Healy, 1985; Heron & Lie, 2002; Jones, 1991; Louis, 2004; Rahman & Abu Bakar, 2003; Shivakumar, 2000) that indicated Share acquirer firms manipulated earnings at least one period before acquisition announcement date.

As seen in Table 4.5, there is no specific descending or ascending trend in means of discretionary accruals for cash acquirer firms. The mean in year of acquisition announcement (0.00955721) is more than two other years and is illustrated in the year of announcement; discretionary accruals are about 0.96 % of total assets.

By comparison descriptive statistics of discretionary accruals between share acquirer and cash acquirer firms based on Table 4.4 and Table 4.5, it was found that there is a logical descending trend for share acquirer firms from the year prior to the announcement date of acquisition to following year of the announcement date of acquisition which couldn't be found for cash acquirer firms. Furthermore, in the year prior to acquisition announcement for the share deals' firms, mean of discretionary accruals is 9.8 percent which is 10.21 times more than the mean for cash acquirer firms that is 0.96 percent.

4.2 Hypotheses Testing: One Sample Test – Acquirer Firms

In order to test whether share acquirer firms manipulated their earnings, the One Sample Test for share acquirer discretionary accruals was conducted in the event period years. The results are presented in Table 4.6. Normality test indicates that there isn't any evidence for rejection of normality assumption at $\alpha = 0.05$ in all three event period years.

Table 4.6: One Sample Test for Stock Acquirer

		OST			
		TV 0		**95% Confidence Interval**	
Period	T	sig (2-tailed)	Mean Df	Lower	Upper
Y +1	5.081	.000	.05329568	.0320206	.0745708
Y 0	4.395	.000	.06040503	.0325327	.0882774
Y -1	6.714	.000	.07989403	.0557620	.1040261

Note: OST= one sample test; TV= T Value; Y +1= year following acquisition deals; Y 0= year of acquisition deals; Y -1= year preceding acquisition deals.

As presented in Table 4.6, P-value for all three years are 0.000 that is less than 0.05 at α = 0.05. These results indicate that mean of discretionary accruals is distinct from (0) zero at α = 0.05. In addition, upper and lower amounts in confidence interval of 95% from difference of mean didn't contain (zero) 0; therefore, the results should be valid. Hence, the test of one sample's results indicate discretionary accruals' mean is distinct from zero (0); hence, H1 should not rejected and confirmed that share acquirer firms in all of the three years and especially a year prior to acquisition announcement (Y -1) manipulated earnings by means of discretionary accruals.

Just like the share acquirer firms, One Sample Test was used for cash acquirer firms in order to test whether cash acquirer firms managed their earnings preceding the acquisition date. The results of Normality test indicates that the assumption of normality is not fulfilled, so the normality by nonparametric was tested (one sample Kolmogorov-Smirnov test). The results illustrated any reason to reject normality of data.

Table 4.7 shows the results for one sample test for cash acquirer firms. As seen in the table, P-value for all three years are more than α = 0.05. In addition, lower and upper amount of 95% confidence interval include zero. Both of these results indicate that there is no statistical evidence for the existence of difference in mean of cash acquirer firms in all of the three events and especially in (Y -1) period years. Hence, hypothesis one (H2) is fulfilled.

Table 4.7: One sample Test for Cash Acquirer

		OST			
		TV 0		**95% Confidence Interval**	
Period	T	sig (2-tailed)	Mean Df	Lower	Upper
Y +1	5.081	.502	-.03216253	-.1272189	.0628939
Y 0	4.395	.838	.00955721	-.0836548	.1027692
Y -1	6.714	.816	-.01263301	-.1205917	.0953257

Note: OST= one sample test; TV= T Value; Y +1= year following acquisition deals; Y 0= year of acquisition deals; Y -1= year preceding acquisition deals.

4.3 Firms' Return

Returns of firms for each year in the period of study (2004-2010) was calculated as cumulative abnormal return of monthly 50 share acquirer firms and 68 cash acquirer firms' return which was described in detail in section 3.

4.4 Descriptive Statistics: Cumulative Abnormal Return

As presented in Table 4.8, for share acquirer firms, the mean of cumulative abnormal return in the year preceding announcement is positive and its amount is 12.65 %. In the year of announcement, the CAR's mean is -8.46 % and in the following year of acquisition announcement, the CAR's mean is -2.8 %. This contrary change in return direction that begins in year 0 and continues in year +1 indicates the underperformance of acquirer firms following manipulation of earnings in year -1. In addition, the minimum in year 0 is less than the minimum in other years. All evidences indicate that in the year preceding the acquisition announcement, managers manipulated earnings.

As presented in Table 4.9, for share acquirer firms, the mean of cumulative abnormal return in the year preceding announcement is positive and its amount is 12.65 %. In the year of announcement, the CAR's mean is -8.46 % and in the following year of acquisition announcement, the CAR's mean is -2.8 %. This contrary change in return direction that begins in year 0 and continues in year +1 indicates the underperformance of acquirer firms following manipulation of earnings in year -1. In addition, the minimum in year 0 is less than the minimum in other years. All evidences indicate that in the year preceding the acquisition announcement, managers manipulated earnings.

Table 4.8: Descriptive Statistics for each event period Cumulative Abnormal Return (CAR) – Share Deals

CAR (SDs)	Y +1	Y 0	Y -1
Mean	-0.0279954	-0.0845795	0.1264877
Median	0.0559700	-0.1982400	0.0045500
Std. D	0.46247512	0.61220059	0.58959351
Minimum	-0.76064	-1.07184	-0.67530
Maximum	0.95153	2.14303	2.17079

Note: CAR= Cumulative Abnormal Return; SDs= share deals; Y +1= year following acquisition deals; Y 0= year of acquisition deals; Y -1= year preceding acquisition deals.

Table 4.9: Descriptive Statistics for each event period Cumulative Abnormal Return (CAR)- Cash Deals

CAR (CDs)	Y +1	Y 0	Y -1
Mean	-0.1353073	0.1240361	0.0379735
Median	-0.1334270	0.0686680	-0.0622090
Std. D	0.54776818	0.52061630	0.55634013
Minimum	-1.37854	-0.86880	-1.38242
Maximum	1.85765	1.64208	2.15333

Note: CAR= Cumulative Abnormal Return; CDs= cash deals; Y +1= year following acquisition deals; Y 0= year of acquisition deals; Y -1= year preceding acquisition deals.

As illustrated in Table 4.9, cumulative abnormal return in the year preceding acquisition announcement is 3.8 % which is positive. In the year of announcement, the CAR is 12.4 % which is more that year -1. This change in return is in the same direction. Finally, in the year following the announcement, the CAR direction is reversed and its sign becomes negative. There are weak evidences which indicate earnings management. Hence, the results are consistent with (Louis, 2004).

4.5 Return & Earnings Management

Step I is the determination of the panel type. At the beginning LM test has given by STATA to determined panel type. The results have shown than P-value is below 0.05, thus the share deals' data is not pooled and it should be fixed or random. In continue the Hausman Test (Correlated Random Effects) conducted to determine whether data is fixed or random. Share and cash deals' data P-value are 0.4716 and 0.6450 respectively that are less than 0.05, so the results indicated that data type for this panel is Random.

Step II is the comparison between return and discretionary accruals for both cash and share acquirer firms in order to find any relationship between them. Table 4.10 and 4-11 present the mean of discretionary accruals and returns for the event period years.

Table 4.10: Return and discretionary accruals for share acquirer firms

SDs	DAcrr	CAR
Y +1	0.05354551	-0.0279954
Y 0	0.05444997	-0.0845795
Y -1	0.09857841	0.1264877

Note: SDs= share deals; DAcrr= Discretionary Accruals; CAR= Cumulative Abnormal Return; Y +1= year following acquisition deals; Y 0= year of acquisition deals; Y -1= year preceding acquisition deals.

Table 4.11: Return and discretionary accruals for share acquirer firms

CDs	DAcrr	CAR
Y +1	-0.03216253	-0.1353073
Y 0	0.00955721	0.1240361
Y -1	**-0.01263301**	**0.0379735**

Note: CDs= cash deals; DAcrr= Discretionary Accruals; CAR= Cumulative Abnormal Return; Y +1= year following acquisition deals; Y 0= year of acquisition deals; Y -1= year preceding acquisition deals.

As illustrated in Table 4.10, in the year preceding announcement, discretionary accruals for share acquirer firms are maximum. In addition, returns in the year of announcement and the year following announcement are reversed and changed its sign from positive to negative. Table 4.11 presented the negative discretionary accruals for cash acquirer firms in the year preceding announcement with positive return, the minimum discretionary accruals estimated in announcement year. In the year preceding announcement and in the year of announcement, returns are positive. Maximum returns belong to the year of announcement which is equal to 12.4 %.

4.6 Hypotheses Testing: Simple Regression Analysis – Share and Cash

Step III Regression (CAR & DA)

The simple regression analysis was conducted in order to find a linear relationship between manipulation of earnings and return of the firms in the period of the study. As shown in Table 4.12, the constant in firms with cash deals is -0.005647 with α coefficient of 0.234315. They aren't statistically significant at level 0.05. Thus, this table's contents show that there isn't any positive or negative relationship between return and discretionary accruals in firms with cash deals. The results are not consistent with H4, therefore H4 is rejected.

Table 4.12: Coefficient estimation of return and discretionary accruals regression

COE	CDs	SDs
Constant	**-0.005647**	**0.031086**
(P-value)	(0.803)	(0.375)
A	**0.234315**	**-0.48021**
(P-value)	(0.155)	(0.048)
R^2	**0.0128**	**0.015**

Note: CDs= cash deals; SDs= stock deals; COE= Coefficient.

Constant and α coefficient for firms with share deals are 0.031086 and -0.48021. As reported in Table 4.12, discretionary accrual coefficient for share acquirer firms is statistically significant at level 0.05. The value for α is -0.48021 which indicates a reverse relationship between return and discretionary accruals. The results are consistent with the hypothesis, and support H3. Small R^2 in this regression indicates that the discretionary accrual isn't the only determinant of firm's return. There are many factors that affect the firm's returns which were waivered in the current study. The following equation for share acquirer's cumulative abnormal return obtained from above regression:

$CAR_{Share} = 0.031086 + -0.48021 (DA_{Share}) + \varepsilon$

5. Conclusion

The results of analyses presented in section 4 for the first hypothesis indicated that share acquirer firms manipulated upward earnings one year prior to acquisition announcement date. These results are consistent with prior studies like (Ben-Amar & Missonier-Piera, 2008; Botsari & Meeks, 2008; Dechow et al., 1995; Erickson & Wang, 1999; Fairfield, Kitching, & Tang, 2008; Higgins, 2011; Koumanakos, Siriopoulos, & Georgopoulos, 2005; Louis, 2004; Rahman & Abu Bakar, 2003). These results rejected hypothesis two that argued the manipulation of earnings prior to mergers and acquisition announcement by cash acquirer firms. The results are consistent with (Erickson & Wang, 1999; Fairfield et al., 2008; Louis, 2004; Rahman & Abu Bakar, 2003). The strongest reason behind these findings is that the acquirer firms involved in stock swap acquisitions manipulate earnings upward preceding acquisition announcement date to boost their firms' share value in order to reduce costs of acquisition deals. In other words, by means of upward earnings manipulation, share acquirer firms acquired target shares with less than their own shares. For the acquirers involved in cash acquisition deals, there is no incentive for earnings management, because they pay the costs of acquisitions by cash, hence acquirer firms don't need to increase their own firms' share value as means of the deals intermediate.

For hypothesis three, the results of analysis in section 4 indicated that earnings management in one year prior to acquisition announcement date has a negative correlation with return of share acquirer firms. Therefore, increase in earnings management prior to acquisition announcement date led to the decrease in returns of acquirer firms. In that situation, the acquirer firms experienced underperforming years immediately after acquisition date.

The results for testing hypothesis four show that there isn't any relationship between return of cash acquirer firms and earnings management. The results of hypothesis four verified the results of hypothesis two.

According to (Teoh, Welch, et al., 1998), the effects of discretionary accruals on underperforming firm's return after acquisitions must be considered by both market efficiency theory and earnings management theory. In the fully efficient markets, earnings manipulation does not affect market performance of the firms. In semi-efficient markets and weak efficient markets, earnings management has a negative correlation with firm's performance. The results of this study show that the Malaysian stock market isn't a strong efficient market.

References

ArabMazar, M., Mashayekhi, B., Rafiee, A., (2006). Information content of cash flows and accruals in Iran capital market. The Iranian Accounting and Auditing Review 43(1), 99-118

Ayres, F. L. (1994). Perceptions of earnings quality: What managers need to know. ManagementAccounting- New York, *75*, 27-27.

Ben-Amar, W., & Missonier-Piera, F. (2008). Earnings management by friendly takeover targets. *International Journal of Managerial Finance, 4*(3), 232-243.

Bergstresser, D., & Philippon, T. (2006). CEO incentives and earnings management. *Journal of financial economics, 80*(3), 511-529.

Botsari, A., & Meeks, G. (2008). Do acquirers manage earnings prior to a share for share bid? *Journal of Business Finance & Accounting, 35*(5-6), 633-670.

Bruns Jr, W. J., & Merchant, K. A. (2005). The dangerous morality of managing earnings. *Accounting ethics: critical perspectives on business and management, 2*(2), 90.

Burgstahler, D., & Dichev, I. (1997). Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics, 24*(1), 99-126.

Chan, K., Chan, L. K. C., Jegadeesh, N., & Lakonishok, J. (2001). Earnings quality and stock returns: National Bureau of Economic Research.

Chaney, P. K., & Lewis, C. M. (1995). Earnings management and firm valuation under asymmetric information. *Journal of Corporate Finance, 1*(3), 319-345.

Chunguang, Z. (2006). Asset Impairments and Earnings Management [J]. *Accounting Research, 3*.

DeAngelo, L. E. (1986). Accounting numbers as market valuation substitutes: A study of management buyouts of public stockholders. *Accounting Review*, 400-420.

DeAngelo, L. E. (1988). Managerial competition, information costs, and corporate governance* 1:: The use of accounting performance measures in proxy contests. *Journal of Accounting and Economics, 10*(1), 3-36.

DeAngelo, L. E. (1990). Equity valuation and corporate control. *Accounting Review*, 93-112.

Dechow, P. M., & Sloan, R. G. (1991). Executive incentives and the horizon problem:: An empirical investigation. *Journal of Accounting and Economics, 14*(1), 51-89.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting Review*, 193-225.

Degeorge, F., Patel, J., & Zeckhauser, R. (1999). Earnings Management to Exceed Thresholds*. *The Journal of Business, 72*(1), 1-33.

Dimitropoulos, P. E., & Asteriou, D. (2009). The Relationship between Earnings and Stock Returns: Empirical Evidence from the Greek Capital Market. *International Journal of Economics and Finance, 1*(1), P40.

Erickson, M., & Wang, S. (1999). Earnings management by acquiring firms in stock for stock mergers. *Journal of Accounting and Economics, 27*(2), 149-176.

Fairfield, P. M., Kitching, K. A., & Tang, V. W. (2008). Core Profitability and the Persistence of Negative Special Items.

Francis, J. (2001). Discussion of empirical research on accounting choice. *Journal of Accounting and Economics, 31*(1), 309-319.

Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005). The market pricing of accruals quality. *Journal of Accounting and Economics, 39*(2), 295-327.

GhaemMaghami, M. H, Livali, A., Bozorgi, S. D. (2009). Earning quality and firm's stock return. The Iranian Accounting and Auditing Review 13(52), 71-88.

Gong, G., Louis, H., & Sun, A. X. (2008). Earnings management, lawsuits, and stock-for-stock acquirers' market performance. *Journal of Accounting and Economics, 46*(1), 62-77.

Hamza, T., & Lakhal, F. (2010). The determinants of earnings management by the acquirer: The case of french corporate takeovers. *Working Papers*.

Healy, P. M. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics, 7*(1-3), 85-107.

Heron, R., & Lie, E. (2002). Operating performance and the method of payment in takeovers. *Journal of Financial and Quantitative Analysis, 37*(1), 137-156.

Higgins, H. N. (2011). Forecasting stock price with the residual income model. *Review of Quantitative Finance and Accounting, 36*(4), 583-604.

Hope, O. K., Kang, T., & Kim, J. (2011). Voluntary disclosure practices by foreign firms cross-listed in the United States.

Jaaffar, C. A., Abdul Rahman, R., & Abu Bakar, A. (2002). Evidence of earnings management by acquiring firms preceding acquisitions in Malaysia.

Jensen, M. C., & Ruback, R. S. (1983). The market for corporate control* 1:: The scientific evidence. *Journal of financial economics, 11*(1-4), 5-50.

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of accounting research, 29*(2), 193-228.

Kordestani, GH. R., RoudNeshin, H., (2006). Investigating the value relevance of cash and accruals components of accounting earnings. Iranian Acc.

Kordlor, E., Hasani-A., Hasani-E., (2006). Examine earnings management during IPO in Tehran Stock Exchange. The Iranian Accounting and Auditing Review 13(45), 3-23.

Koumanakos, E., Siriopoulos, C., & Georgopoulos, A. (2005). Firm acquisitions and earnings management: evidence from Greece. *Managerial Auditing Journal, 20*(7), 663-678.

Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. *Journal of financial economics, 69*(3), 505-527.

Louis, H. (2004). Earnings management and the market performance of acquiring firms. *Journal of financial economics, 74*(1), 121-148.

Michelson, S. E., Jordan-Wagner, J., & Wootton, C. W. (1995). A market based analysis of income smoothing. *Journal of Business Finance & Accounting, 22*(8), 1179-1193.

Murphy, K. J., & Zimmerman, J. L. (1993). Financial performance surrounding CEO turnover. *Journal of Accounting and Economics, 16*(1-3), 273-315.

Perry, S. E., & Williams, T. H. (1994). Earnings management preceding management buyout offers. *Journal of Accounting and Economics, 18*(2), 157-179.

Raghavendra Rau, P., & Vermaelen, T. (1998). Glamour, value and the post-acquisition performance of acquiring firms. *Journal of financial economics, 49*(2), 223-253.

Rahman, R., & Abu Bakar, A. (2003). Earnings management and acquiring firms preceding acquisitions in Malaysia.

Ronen, J., & Sadan, S. (1981). *Smoothing income numbers: Objectives, means, and implications* (Vol. 198): Addison-Wesley Reading, MA.

Ronen, J., & Yaari, V. (2008). Earnings Management: Emerging Insights in Theory. *Practice*.

Shivakumar, L. (2000). Do firms mislead investors by overstating earnings before seasoned equity offerings? *Journal of Accounting and Economics, 29*(3), 339-371.

Spathis, C., Doumpos, M., & Zopounidis, C. (2002). Detecting falsified financial statements: a comparative study using multicriteria analysis and multivariate statistical techniques. *European Accounting Review, 11*(3), 509-535.

Subramanyam, K. (1996). The pricing of discretionary accruals. *Journal of Accounting and Economics, 22*(1), 249-281.

Sun, L., & Rath, S. (2008). An empirical analysis of earnings management in Australia.

Teoh, S. H., Welch, I., & Wong, T. J. (1998). Earnings management and the long-run market performance of initial public offerings. *The Journal of Finance, 53*(6), 1935-1974.

Teoh, S. H., Wong, T. J., & Rao, G. R. (1998). Are accruals during initial public offerings opportunistic? *Review of Accounting Studies, 3*(1), 175-208.

Yoon, S. S., & Miller, G. (2002). Earnings management of seasoned equity offering firms in Korea. *The International Journal of Accounting, 37*(1), 57-78.