Usefulness of Cash Flow in Business Decision Making

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ABSTRACT

This research examines the relationship between free cash flows with earnings, dividend per share, depreciation, and capital expenditures. Using a sample of 100 companies listed on Bursa Malaysia between 2005 until 2010, this study applies ordinary least squares and fixed-effects method to estimate the regression model. Findings reveal that Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA), Capital Expenditure and Depreciation significantly influence the Free Cash Flows. EBITDA and Capital Expenditure has shown positive relationship with free cash flow, but Depreciation reflects a negative relationship with free cash flow. These findings may provide useful information to investors and businessmen on how to plan and manage the cash flow.

Keywords: Cash flow, usefulness, decision-making, business.

I   INTRODUCTION

A company has an opportunity to pay its investors a dividend only after it has become profitable and able to generate free cash flow. Free cash flow is the amount of cash a company generates from minus its capital expenditures. Basically, free cash flow is the amount of cash a company has left after it is made necessary investments back into its business. Free cash flow gives a company a lot of options. Companies have the option of using the excess cash either to invest back into their business or pay out as dividends. Sometimes companies will try to grow a new area of their business and they will want to work their cash back into the business because they think they could get a strong return on investments. Or sometimes companies would not have new areas to invest in and they feel that by paying a dividend, their shareholders can earn a better return on cash than they can earn for them. This is why low-growth companies paying high dividends (Farshadfar, Ng and Brimble, 2008).

Some analysts believe that free cash flow is more important than other measures of financial health because it measures how much cash a company has and can generate. This differs from other measures, which are sometimes accused of using both legitimate and illegitimate forms of accounting to make a company look healthier than it really is. On the other hand, Return on Equity (ROE) is an accounting method similar to Return on Investment (ROI) that is used as a measure of a company's profitability that reveals how much profit a company generates with the money raised from the shareholders. It is also a measure of how well the free cash flows of the company used the reinvested earnings to generate additional earnings, equal to a fiscal year's after-tax income (after preferred share dividends but before common share dividends. Providing new evidence on the relative in formativeness and analytical ability of earnings and cash flow measures appears to be of particular significance and renewed importance given the corporate collapses (e.g. Enron, World.Com, HIH Insurance, One.Tel) in the US and Australia (Farshadfar, Ng and Brimble, 2008).

The objective of this study is to provide some Malaysian evidence on the cash flow from operations as reported in the cash flow statement in forecasting free cash flow. This study has focused on free cash flows as the predictive measure, as they are of significant relevance to the users of accounting information in their various decision-making contexts, such as investing and lending (Bowen et al., 1986). This study expects a positive relationship between EBITDA, Dividend Per Share, Depreciation, Capital Expenditures and Free Cash Flow. The remainder of the paper is organized as follows: the next section presents the literature reviews. The third section explains on the research methodology. The fourth section discusses on the results and discussions. The final section concludes and highlights the limitation of the study.

II   LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

A previous studies used by past research to assess the efficiency of increasing depends on the relationship between growth, free cash flows, and future earnings. Researchers such as Greenberg, Johnson, and Ramesh (1986), Dechow, Kothari, and Watts (1998), Barth, Cram, and Nelson (2001), and Kim and Kross (2005) find an association between current period growth and next period cash flows by regressing cash flows in period t+1 on cash flows and accruals in period t.

This study uses operating income after depreciation which is consistent with the work of Sloan (1996) and Richardson et al. (2005). The attractiveness of item operating income after depreciation is that it excludes non-recurrent items such as extraordinary items, discontinued operations, special items and non operating income, taxes and interest expenses. Free cash flow is the amount of funds available to all investors in a firm after paying for all expenses and meeting investment needs. The definition of free cash flow is the adjusts earnings by adding back depreciation and amortisation and subtracting changes in working capital and capital expenditures (Richardson et al. 2005). A slight variation to this definition of free cash flow includes net operating profits after tax (NOPAT) instead of net earnings (Brigham and Ehrhardt, 2005; Greenwood and Scharfstein, 2005). Such adjustment excludes interests (and other extraordinary items), thus providing with a theoretically sound free cash flow for valuation purposes since it avoids double counting of cost of debt both in the free cash flows and in the cost of capital.

A.   Difference between Earnings and Cash

Moreland (1995) claims that "at least as important as a company's profitability is its liquidity - whether or not it's taking in enough money to meet its obligations. Companies, after all, go bankrupt because they cannot pay their bills, not because they are unprofitable. Many investors also care less about the cash flows, as their main concern is profits. For example, investors may be more concerned on looking at a firm's income statement and not the cash flow statement.

A company's cash flow can be defined as the number that appears in the cash flow statement as net cash provided by operating activities, or "net operating cash flow", or some version of this caption. However, there is no universally accepted definition. For instance, many financial professionals consider a company's cash flow to be the sum of its net income and depreciation (a non-cash charge in the income statement). While often coming close to net operating cash flow, this professional short-cut can be way off the mark and investors should stick with the net operating cash flow number.

Finger (1994) explains the reasons why there is a conflict between net income and cash flow is that the income statement is updated with any sales made or revenues earned as soon as the deal is done. However, payments for such sales may be actually received much later. Hence, though the net income shows profits and the entrepreneur in reality has made money, it is not yet available as cash flow and cannot be spent. Yes, cash flow and profit are different. Cash flow is the money that flows in and out of the firm from operations, financing activities, and investing activities. Profit, also is called net income, is what remains from sales revenue after all the firm's expenses are subtracted.

B.   Which to choose: EBITDA or Cash Flow?

Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA) is essentially net income with interest, taxes, depreciation, and amortization added back to it, and can be used to analyze and compare profitability between companies and industries because it eliminates the effects of financing and accounting decisions[1]. EBITDA is a good metric to evaluate profitability, but not cash flow. EBITDA also leaves out the cash required to fund working capital and the replacement of old equipment, which can be significant. Consequently, EBITDA is often used as an accounting gimmick to dress up a company's earnings. When using this metric, it's key that investors also focus on other performance measures to make sure the company is not trying to hide something with EBITDA.

Based on this property, Koller, Goedhart, and Wessels (2005) refer to EBITDA as a "good measure of extremely low short-term ability to meet interest payments. Most companies cannot survive very long without replacing worn assets".

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[1] http://www.investopedia.com/terms/e/ebitda.asp#ixzz1o1VJpjy0

Why has EBITDA received much attention in corporate finance? Why not simply use cash flows? Possible reasons include, 1) EBITDA involves less components than cash flows making it easier to forecast, 2) EBITDA in general looks better since it tends to be larger than the cash flows of operations, and 3) the statement of cash flow has been common, but many managers are not as familiar with the statement of cash flows. One consideration is that a company's capital expenditures typically vary from year to year. Income measures try to account for this by unnaturally distributing the expense of capital investments over the years in which they will be producing value for the company.

The definitions and modeling of accruals versus cash flows by Healy (1985) and Sloan (1996) have been considered as the standard in the accounting and economics literature. The most important contribution of work by Sloan (1996) and Richardson et al. (2005) are the recognition that even though accruals provide valuable information about current and future earnings, such as EBITDA. EBITDA is a good measure of operating profit. By including depreciation and amortization, EBIT counts the cost of making long-term investments (Richardson, 2006). However, EBITDA is only used if depreciation expense (also called accounting or book depreciation) approximates the company's actual cost to maintain and replace its long-term assets. In other words, it will affect merely on free cash flows because a company substitutes debt for equity or vice versa. However, EBITDA does not reflect the earnings that accrue to shareholders since it must first fund the lenders and the government. Thus, based on the above arguments, this study posits that:

Hypothesis 1: There is a relationship between EBITDA and Free Cash Flow.

C. Dividend Per Share (DPS) and Free Cash Flow

Sloan (1996) and Richardson et al. (2005) found that even though accruals provide valuable information about current and future earnings, such as EBITDA, and DPS. Therefore the real definition of DPS is that the sum of declared dividends for every ordinary share issued. DPS is the total dividends paid out over an entire year (including interim dividends but not including special dividends) divided by the number of outstanding ordinary shares issued. It was obvious that some company did not pay share according to their financial performance.

DPS is used to calculate the dividend yield. Dividends over the entire year (not including any special dividends) must be added together for a proper calculation of DPS, including interim dividends. Special dividends are dividends which are only expected to be issued once so are not included. The total number of ordinary shares outstanding is sometimes calculated using the weighted average over the reporting period. Thus, this study expects that DPS has a relationship with free cash flows. Following the arguments above, this study hypothesize that:

Hypothesis 2: There is a relationship between DPS and Free Cash Flow.

D. Capital Expenditures and Free Cash Flow

In this section, this study focuses on the market reaction to capital expenditure announcements in the backdrop of Jensen's (1986) free cash flow hypothesis. According to the free cash flow hypothesis, the market response to an investment increase will depend on a firm's marginal investment opportunities and the level of its free cash flow. The empirical research of Sloan (1996) found that firms' capital expenditure (CAPEX) has a significant impact on working capital management. The study also found that the firms' free cash flows, which were recognized as a dependent variable, have a significant relationship with working capital management. The study also establishes that the firms' free cash flows which was known as a control variable, has a significant relationship with working capital management. In addition to the growth, leverage, firm size, type and size of expenditures such as finance, operating and capital expenditures have dissimilar impacts on working capital. Therefore, this study predicts that CAPEX may influence free cash flows. The following hypothesis is developed:

Hypothesis 3: There is a relationship between CAPEX and Free Cash Flow.

E. Depreciation and Free Cash Flow

Researchers (Barth et al., 2001; Al-Attar and Hussain, 2004), in their findings support the view that reported cash flow from operations has greater ability in predicting future cash flows than accrual–based earnings using Malaysian data. Depreciation is a noncash expense that reduces the value of an asset as a result of wear and tear, age, or obsolescence. Most assets

depreciate, and must be replaced once the end of their useful life is reached. There are several accounting methods that are used in order to write off an asset's depreciation cost over the period of its useful life. Because it is a non-cash expense, depreciation lowers the company's reported earnings while increasing free cash flow. Based on the arguments above, this study posits that:

> *Hypothesis 4: There is a relationship between Depreciation and Free Cash Flow.*

III   RESEARCH METHODOLOGY

This is a cross-sectional study using regression models of company (i) and time (t). This study examines the free cash flow with Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA), Dividend Per Share (DPS), Capital Expenditure (CAPEX) and Depreciation. The following regression model is established.

- **Research Model and Measurement of Variables**

The following is the model use in this study;

$$FCF_{it}=\beta_0+\beta_1 EBITDA_{it-1}+\beta_2 DPS_{it-1}+\beta_3 CAPEX_{it-1}+\beta_4 Depreciation_{it-1}+\varepsilon_{it}$$
(1)

Free Cash flow is a dependent variable. Cash flow represents the flow of cash earned and spent in a company. Cash flow reveals how much money is available in a company at a given time and reflects the company's true health. If a company is paying out expenses faster than it is generating revenue, it can result in poor cash flow. Independent variables are Earnings Before Interest, Taxes, Dividend Per Share, Depreciation and Amortisation, Capital Expenditure and Depreciation. The OLS regression model and FEM are applied to examine the predictive ability of earnings and cash flow measures in forecasting the cash flows.

IV   RESULTS AND DISCUSSION

4.1   Descriptive Statistics
Table 1 shows the mean value of FCF is 94282.5 ranging from minimum value of -2234617 to maximum value of 8695279. Mean value of DPS is 0.07212 ranging from min 0 to maximum 3.43. EBITDA shows mean of 80704.14 with min of -

571665 and maximum of 4747647. For CAPEX, the mean is 31144.14 with minimum of -10502 and maximum of 2623001. Lastly for DEP has mean of 14834.04 with minimum value of 2 and maximum value 447644.

Table 1. Descriptive statistics

Variable	Sample	Mean	Std. Dev.	Min	Max
FCF	500	94282.5	661891	-2234617	8695279
DPS	500	.07212	.2987776	0	3.43
EBITDA	500	80704.14	353115	-571665	4747647
CAPEX	500	31144.14	150531.6	-10502	2623001
DEP	500	14834.04	38509.32	2	447644

FCF = Free Cash Flows, EBITDA = Earnings Before Interest, Taxes, Depreciation and Amortisation, DPS = Dividend Per Share, DEP = Depreciation, CAPEX = Capital Expenditures.

4.2   Multivariate Regression Analysis
This study uses multiple regressions to test the model. First, by using Ordinary Least Square (OLS) and followed by Fixed Effect Model (FEM).

Table 2. Regression Models

Panel A: OLS

Variable	Hypothesis	Coef.	Std. Err.	t	P>|t|
EBITDA	H_1	1.741759	296563.6	13.65	0.000
DPS	H_2	226207	296563.6	0.76	0.446
CAPEX	H_3	1.903387	.4066906	4.68	0.000
DEP	H_4	-10.16132	2.003351	-5.07	0.000
R^2		0.4095			

Panel B: FEM

EBITDA	H_1	1.73948	.1285212	13.53	0.000
DPS	H_2	251428	298134.8	0.84	0.399
CAPEX	H_3	1.88426	.4102425	4.59	0.000
DEP	H_4	-10.0424	2.017984	-4.98	0.000

EBITDA = Earnings Before Interest, Taxes, Depreciation and Amortisation, DPS = Dividend Per Share, CAPEX = Capital Expenditures, DEP = Depreciation.

Based on Table 2, hypotheses H_1, H_3 and H_4 supported the study based on OLS and FEM regressions. With reference to Panel A, findings

show that EBIT and CAPEX were positively related with Free Cash Flow, but DEP has shown a negative relationship with Free Cash Flow. Result explains that when EBIT is higher, more cash flows are available in the hands for the company to operate. In terms of DEP, the low value of DEP enhances the Free Cash Flow. As depreciation is a non-cash, so depreciation lowers the earnings while increasing the Free Cash Flow. Thus, this finding is consistent with Barth et al., 2001; Al-Attar and Hussain, 2004).

Next, FEM was utilised in this study to analyze the impact of variables that vary over time. The fixed effects model is a useful specification for accommodating individual heterogeneity in panel data. When it comes to interpret the fixed effects model, the most important point is that, is this model good for this study? Is p-value of this study is significant? The p-value is significant at 0.000 for EBITDA, CAPEX and DEP. From Table 4.3, the t-value for EBITDA was 13.53 and coefficient value of 1.73948, CAPEX with t-value 4.59 and coefficient 1.88426, and DEP with t-value -4.98 and coefficient of -10.0424. The t-values test the hypothesis that each coefficient is different from 0.To reject, the t-value has to be higher than 1.96 (for a 95% confidence). In sum, EBITDA, CAPEX and DEP have shown a significant value and significant at 1% level.

V CONCLUSION

In sum, this study examines the relationship between free cash flow with Earnings Before Interest, Taxes, Depreciation and Amortisation, Dividend Per Share, Depreciation and Capital Expenditures. Results indicate that there is a positive relationship between Free Cash Flow with Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA) and Capital Expenditure (CAPEX), whilst a negative relationship Depreciation (DEP). In terms of contribution, these findings contribute to the local and overseas studies on the use of free cash flow by companies in managing their businesses. The outcome of this study will be useful to policy makers, investors and businessmen in planning and predicting the cash flows of the companies. In terms of limitation, this study includes limited variables related to free cash flows. Future research may consider more variables and test the relationship with corporate performance.

REFERENCES

Ali Al-Attar and Simon Hussain 2004. Corporate Data and Future Cash Flow. *Journal of Business Finance and Accounting* 31(7) & (8): 861-903.

Barth, M.E., D.P. Cram and K.K. Nelson, 2001. Accruals and the Prediction of Cash Flows. *The Accounting Review, 76*(1), 27-58.

Bowen, R. D., Burgstahler, D. & Daley, L. (1986). Evidence on the relationships between earnings and various measures of cash flow. *Accounting Review, 61*, 713-725.

Brigham, E. & Ehrhardt, M. (2005). Financial management theory and practice. 11th ed: Thomson South Western.

Dechow, P. M., Kothari, S. P. and Watts, R. L. (1998). The Relation Between Earnings and Cash Flows. *Journal of Accounting and Economics, 25,* 133-168.

Farshadfar, S., Ng, C. & Brimble, M. (2008). The relative ability of earnings and cash flow data in forecasting future cash flows: Some Australian evidence. *Pacific Accounting Review, 20*(3), 254 - 268

Finger, C.A. (1994). The Ability of Earnings to Predict Future Earnings and Cash Flow. *Journal of Accounting Research, 32,* 210-223.

Greenburg, R., Johnson, G., & Ramesh, K. (1986). Earnings versus cash flow as a predictor of future cash flow measures. *Journal of Accounting Auditing and Finance, 1,* 266-277.

Greenwood, R. & Sharchfstein, D. (2005). Calculating future cash flows. Harvard Business School, No. 90206-028.

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

Kim, M. & Kross. W. (2005). The ability of earnings to predict future operating cash flows has been increasing-not decreasing. *Journal of Accounting Research, 43*, 751-780.

Koller, T., Goedhart, M. & Wessels, D. (2005). Measuring and managing the value of companies. 4th ed, Hoboken, New Jersey: John Wiley & Sons, Inc.

Moreland, K. (1995). Criticism of auditing and the association between earnings and returns of client firms*, Auditing*, Spring.

Richardson, S. A., Sloan, R. G., Soliman, M. T. & Tuna, I. (2005). Accrual reliability, earnings persistence, and stock prices. *Journal of Accounting and Economics, 39*(3), 437-485.

Richardson, S., Sloan, R. G., Soliman, M. & Tuna, I. (2006). The implications of firm growth and accounting distortions for accruals and profitability. *The Accounting Review*, *81*(3), 713-743.

Sloan, R. G. (1996). Do stock prices fully reflect information in accruals and cash flows about future earnings? *The Accounting Review, 71*(3), 289-315.