The Relationship between Free Cash Flows and Return on Equity Law

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ABSTRACT

Free cash flows possess special importance for inner and outer organization users. Companies which have high free cash flows, increase their profits by use of commitment items and counteract and balance low profits. This order brings improvement of company market value and return on equity law. The aim of this research is the evaluation of information increasing content in free cash flows for efficiency changes description of equity law and company value. For doing this research, a hypothesis is considered: there is meaningful relation between free cash flows and return on equity law. By use of 120 companies data which are research sample member and for a six year temporal period from beginning of financial year 2007 until the end of financial year 2013, research theories had been tested in 5 percent error level which by use of correlation coefficient, correlation level was determined between independent variable with every one of dependent variables and then through relevant p-value, we would specify that is there relationship between dependent or independent variables or not. The recent research findings show that there is meaningful and direct relationship between free cash flows and return on equity law.

1. Introduction

Cash money is one of the important and vital resources in each profit-making unit which is used in economic exchanges frequently and it is employed for other resources schooling. profit-making units are educated on their needed resources in exchange for cash money payment and their own productions have been sold in lieu of cash money reception. Stock profit is paid in cash money form frequently. Cash money entry and exit flows of a profit-making unit is part of the most basic circumstances which forms the basis of many investors decisions and judgments, trusters and some of the other main groups of users from financial information about that unit. Investors and trusters show much affection to investment and validation in units which have high free cash flow and they abstain from validation and investment in that group which are without free cash flow. On the other hand, managers try to obtain some procedures for profit smoothing (profit management) that commitment item is one of these procedures. Companies which have high free cash flows, by use of commitment items increase their profits and balance and counteract low profits which cause making negative absolute value and this work change division policies of stock-profit and return on equity law.

Problem expression (subject definition):

Free cash flow (FCF) is cash flow quantity in authority of company that can be used for desired investments purchase, stock -profit payment, debt repayment or increasing liquidity. The purpose of this research is evaluation of information increasing content of free cash flows for description of commitment items changes, return on equity law and company value. By use of commitment items, managers would change company profits in the best possible way. And companies that have high free cash flows, by use of different methods increase their profits and balance and counteract low profits which causes making negative absolute value and this work changes return on equity law. Also, control and orientation of free cash flow and commitment items will incur improvement of company market value and return on equity law. If free cash flows will be positive, it is demonstrator of cash money which is available for profit division between company's shareholders and if it will be negative, shareholders should inject cash money to company.

Research hypothesis:

In this research, for show and survey the relationship between free cash flows and return on equity law, a hypothesis is defined as following:

Hypothesis: there is meaningful relationship between free cash flows and return on equity law.

Data collection method:

Data related to research history and background with library studies like studying M.A and P.H.D dissertations, financial researches journals, accounting and auditing surveys and survey foreign journals and publications has been obtained in research setting and other part through search in the web and also acquired data by use of financial lists of accepted companies in the Tehran stock exchange

collected and surveyed and tested theories which is archived in exchange library and other data have been derived through informational software like Tadbir Pardaz, Rahavord Novin and Dena Sahm.

Statistical society and sample:
The present research statistical society is all accepted companies in the Tehran stock exchange during research temporal territory from beginning of financial year 2007 until the end of financial year 2013 for 6 years. This research sampling method was eliminated. Therefore, all companies which were the member of statistical society, had these following conditions and they were part of research sample and some companies which hadn't these conditions, were deleted from research sample.

Foresaid conditions are as following:
1-before year 2007 was accepted in exchange.
2-from beginning of year 2007, their stock had been transacted in exchange. 3-there shouldn't be any stopping more than 3 month in stock exchanges of that company.
4-there should be necessary access to their financial lists.

Hypothesis test method:
 For research hypothesis test, we should determine correlation rate between independent variable with every one of dependent variables by use of correlation coefficient test and then through relevant p-value, we would specify that is there relationship between dependent or independent variables or not. Also, T test is done for surveying being meaningful of regression line slope and F test for surveying being meaningful of whole regression model.

The operational definition of variables:
Independent variable:
Free cash flows:
Free cash flow is a concept which is concentrated on liquidity rate and company possessors can use without any decrease in value. Free cash flow is embarked to company abilities in developing cash flows and for the sake of investment in properties like store-stock, instruments and equipments, other companies stock, etc. when a company is able to make cash flows, which is more than investment expenses for survival in business, company has free cash flow. Such company can use free cash flows by profit payment between possessors and for more growth keeps more free cash flows in company. If we deduct from whole cash receptions resultant from continuum operations, all payments and cash expenses, free cash flows are whatever remain, which is computed as following:

FCF: asset expenses (increase in investment) _ cash flow resultant from operational activities

Asset expenses = fixed properties summation in last year _ fixed properties summation in present year

Dependent variable
Return on equity law:
This ratio signifies profit-making content of commercial unit and shows return on equity law which its computation way is as follows:

$$\frac{\text{return on equity}}{\text{law}} = \frac{\text{Absolute profit}}{\text{Equity law average}}$$

$$\text{equity law average} = \frac{\text{Equity law in first period} + \text{end period}}{2}$$

Hypothesis test:
There is meaningful relationship between free cash flows and return on equity law.

In this hypothesis, relationship between free cash flows and return on equity law through regression model, correlation coefficient and variance analysis have been tested.

Before doing this hypothesis test, data were tested from being normal viewpoint and by use of (Q-Q) diagram, outliers content were recognized and deleted, and we used from logarithm conversion for data normalization. Therefore, data numbers for first hypothesis test decreased from 120 to 95 for all companies. And after doing necessary computations, the relationship between free cash flows (CFC) as an independent variable and return on equity law (ROE) as a dependent variable has been tested. The acquired results from correlation and regression coefficient test for survey the relationship of (FCF) and (ROE) are as following:

Peerson correlation table in hypothesis test

Variables	Free cash flows	Return on equity law
FCF: correlation coefficient	1	0/413
Sig: possibility content		0/000
N: number	113	95
ROE: correlation coefficient	0/413	1
Sig: possibility content	0/000	
N: number	95	99

Regression coefficients table in hypothesis test

Model	Coef	Std.e	T	P
Constant	0/326	0/041	8/032	0/000
FCF	1/724	0/394	4/373	0/000

In this research, we will use from two p-value and classic methods for theories test:

Meaningful level:
For all research hypothesizes, %5 error level (a=%5) or %95 certainty level has been considered.

Regression coefficients meaningful test (T- test):
As for the regression coefficients table, because p-value (0/000) is less than **a** in %5 level, therefore in meaningful level **a=%5**, H0: B=0 hypothesis is failed (without being relationship) and research hypothesis H1: B=0 is accepted (being relationship), And it is concluded that in %5 meaningful level, there is relationship between free cash flows and return on equity law and because Beta (B) coefficient and line slope is positive, then there is direct relationship between free cash flows and return on equity law.

Also, line slope meaningful test (T-test) shows that the contents of T test and T table are 4/373 and 1/89 respectively. considering that table T is less than test T in %5 error level, therefore in meaningful level **a=%5**, H0: B=0 hypothesis is failed (without being relationship) and

research hypothesis H1: B=0 is accepted (being relationship).

Correlation coefficient meaningful test:
As for the appeared meaningful level in correlation table (0/000), it is concluded that there is meaningful correlation between variables. Also, model determination coefficient is almost 0/171 and it is confirmed meaningful relationship between two variables completely.

Hypothesis test results:
In this hypothesis, the relationship between free cash flows (FCF) as an independent variable with return on equity law (ROE) as a dependent variable had been tested. As for the results which is originated from statistical tests, and because p-value (0/000) is less than **a** in %5 level, therefore in meaningful level **a=%5**, H0: B=0 hypothesis is failed (without being relationship) and research hypothesis H1: B=0 is accepted (being relationship), And it is concluded that in %5 meaningful level, there is relationship between free cash flows and return on equity law and because Beta (B) coefficient and line slope is positive, there is direct relationship between free cash flows and return on equity law.

Suggestions in relation with research results:
According to research results, we can present some suggestions as follows:
1- it is suggested to investors which their goal of investment in stock is stock price increasing in long period, they should not find sufficient only to profitability process and company profit content, but other variables should bear in mind like return on equity law, company cash flows reports, company value, etc.
2- it is suggested to investors which their goal of investment in stock is stock acquirement and battle, they should bear in mind in their decisions free cash flows and commitment items.
3-as for the research results according to leave impression on free cash money flows over investor's decisions, banks and trusters, it is suggested to managers to pay attention more to free cash money flows.

Suggestions in relation with next researches:
1-it is suggested that a research is accomplished similar to present research and by use of other statistical methods and research results compared with this research results.
2- in this research, return on equity law has been computed annually, while in some of these researches, efficiency output mainly is computed monthly and then their average was considered as annual efficiency, therefore it is suggested in next researches bear in mind this subject.
3- it is suggested that a research is done with title of survey the relationship between free cash flows with absolute profit, economic value added (EVA), market value added (MVA) and properties output aggregation (ROA).

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