Evaluate the Predictive Capability of Future Operating Cash Flow through Historical Operating Profits, and the Historical Accruals

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Abstract

Accurate prediction of cash, are required to notify, and correct analysis of cash flows in the current year and prior years. The subject can be predicted, with less error, which we have accurate knowledge of the past and present, for that matter. The overall goal of this research is to determine the ability of predictive, future operating cash flows, earnings, operating through history, and the historical accruals. This research is, in terms of the purpose is applicative, in terms of data collection methods is inductive - analytical and research in terms of performance and design is after the event. The population of the study is to include all firms listed in Tehran Stock Exchange. Sampling is done by elimination method. According to research data collected, it is official information, which is published by the Tehran Stock Exchange. The results showed that, the historical operating profits, they predict, future operating cash flows. In addition, the findings showed that the historical accruals have the ability to predict the effect of future operating cash flows. In addition, the results showed that the ability to predict future operating cash flows, earnings, operating through history, and the historical accruals are different.

Keywords: future operating cash flows, accruals, historic operating profit

1- Introduction

Today, accounting is defined as an information system. One of the most important information that obtained from an accounting system is about profit. Users of financial statements, focus most of their attention to profit (saghafi and Kordestani, 2004, 52). Because the accounting profit is calculated under the accrual accounting system, and because of the mentality further in, accruals, as it can be, the reliability of accruals included below, the reliance on cash items. Cash component of earnings than the accrual component of earnings, has become more stable, it is also due to higher accruals mentality, and it's less reliability than the cash element. In total, they have accruals, lower reliability, leading to lower earnings persistence. The inability of investors to predict the stability of earnings, accruals, that is associated with lower reliability, leads to a basic lack of performance of market. Today, economic organizations, in order to further their ends engage the identified individual factors that influence the development of the organization. One factor that could have a significant role in achieving the organization's goals is to, cash, and a lack of planning in relation to it, can be created many problems for an organization. Not only aware of the amount of cash per year, can be beneficial to an organization, but it also can predict, will lead to proper planning, in connection with, the use of resources in the coming years . In fact, the firm is successful, the need for their resources, predict the present and take steps to secure it.

2- Review of literature

Some important studies related to the topic of this study in other countries are as follows: Chvtknakhyty results showed that the historical operating income, cash flow, cash flow and accrual components of earnings can be used for prediction of future cash flows. \textsuperscript{.} (Chotkunakitti, 2005) the brackets and colleagues found the average absolute forecast errors of future cash flows when accrual as a predictor of increased operating cash flow Shvndkvchktkr since the cash flow alone Operations be used as a predictor. (Brochet et al., 2007) Cheng Vhaly Rabaastfadh components of cash flow Cash flow forecasting
model were investigated. The main research findings indicate that cash flow and cash flow forecasting Vghyrasly always adopted Darndtvnanavy role model to predict the increase. (Cheng, 2007) et Halystr research has offered in 9 Vinshan CRP accrual components Svdhsabdary information Drtvzyh increase operating cash flow next year gives (Hollister et al., 2008). Results showed Lavark Vvylyngr forecast cash flows of large corporations than smaller firms and firms operating cycle Darnnsbt evil Kthayy shorter operating cycle longer have that exact got Tvrmny Trust (Lorek and Willinger, 2008). Another Vvylyngrthqyq Lavark using quarterly data with outcome data were performed using the Azsryhay Drshrkt of large forecast errors than to G .Small firms are lower. (Lorek and Willinger, 2008)

3- Estimation

Today in capitalist societies, firms are organized in such a way that, at any moment, is looking to increase their resources and interests. In fact, in the developed world, the competition is such that planning for future profits is the primary requirement for a successful business, so that, no matter the circumstances, shall remove the company from the competition. Competition in developed markets, which are moving towards a solution, so that, regardless of the companies do not make even the minimum amounts of capital to shareholders, and are constantly trying to attract cash resources, investment investors and creditors. In fact, in today's business, the company is successful with good cash resources, and also it can be an appropriate way to invest and increase. To further emphasize the usability of financial statement, in predicting future cash flows, of Accounting Standard No. 2, which states in paragraph 3 that, "Although the statement of cash flows, provides information about currents Cash entity during the financial period, the report, however, the data used for evaluation of future cash flows are not sufficient. Some cash flows due to transactions, that occurred in previous financial periods, and at times expected to lead to, any other cash flows in the future periods. Thus, for the assessment of future cash flows, statement of cash flows should always be used, along with financial performance and balance sheet statements.” In fact financial statements are released to determine the company's liquidity.

The population and sampling in the research:

According to the limitations described below, a sample survey, including 142 company. The list of companies is provided in the following table.

| 324 | Accepted companies in Tehran Stock Exchange by the end of the year 2012 |
| 21  | Investment companies |
| 45  | Companies whose financial year is not ending March |
| 39  | Companies that during the studied period, the fiscal year have been |
| 77  | Companies that their information is not available or have been removed from the stock |
| 142 | The remaining firms in the sample survey |

Data needed for these companies is extracted from CDs Tehran Stock Exchange, and the test is done, using, EVIEWS version 7. To achieve more accurate results and a more reliable, all data required to investigate, independently, will be extracted from the original file financial statements of companies, visit the Library of the Tehran Stock Exchange.

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Research hypothesis:

1 - The historical operating profits have the potential predictive of future operating cash flows

2 - The historical accruals can predict future operating cash flows

3 - The ability to predict future operating cash flows through operating earnings history and the historical accruals, are different.

The results of the empirical analysis of this study:

Descriptive statistics research

Descriptive statistics related to variables, are presented in the following table. The results presented in the table, provides an overview of the status of research data.

Table 2: Descriptive statistics research

<table>
<thead>
<tr>
<th>Variables</th>
<th>Standard deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Median</th>
<th>Average</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating cash flow</td>
<td>898.295</td>
<td>-587123</td>
<td>7911315</td>
<td>48743</td>
<td>238,523</td>
<td>Operating cash flow</td>
</tr>
<tr>
<td>Operating profit</td>
<td>1042445</td>
<td>-62574</td>
<td>8313668</td>
<td>62974</td>
<td>299,478</td>
<td>Operating profit</td>
</tr>
<tr>
<td>Accruals</td>
<td>549,586</td>
<td>-1979275</td>
<td>4495168</td>
<td>9390</td>
<td>74541</td>
<td>Accruals</td>
</tr>
</tbody>
</table>

As can be seen from the table above, the average (median), the variable operating cash flow, operating income and accruals, respectively, is: 238,523 (48,743) 299,478 (62,974) and 74,541 (9390).

The standard deviation of operating cash flow variables, respectively, operating income and accruals is: 898295, 1042445 and 549586.

Reliability testing (static) variables:

Table 3 The results of the test, generalized Dickey Fuller unit root of variables

<table>
<thead>
<tr>
<th>Degree of collective</th>
<th>Level of error</th>
<th>Value of the test statistic</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>I(0)</td>
<td>0.011</td>
<td>275.5</td>
<td>Operating profit</td>
</tr>
<tr>
<td>I(0)</td>
<td>0.000</td>
<td>334.38</td>
<td>Accruals</td>
</tr>
<tr>
<td>I(0)</td>
<td>0.000</td>
<td>340.2</td>
<td>Operating cash flow</td>
</tr>
</tbody>
</table>

As can be seen in the table above, Dickey Fuller unit root tests show that all variables in levels are stationary. So continue to be used the conventional econometric estimation of the parameters, using time series, and in the statistical inference, it's possible to use t and F statistics.

The first hypothesis of the study:

The first hypothesis of the study is to investigate this issue, whether historical operating income, cash flows, has the ability to predict the future? For this purpose, model number (1), which is presented below, is used to evaluate this hypothesis.

\[ \text{CFO}_{i,t+1} = \alpha + \alpha_1 \text{Earnings}_{i,t} + \varepsilon_{i,t} \]

\[ \text{CF}_{i,t+1} \]: The Company’s future operating cash flow i, in period t

\[ \alpha \]: Width of origin regression

\[ \alpha_1 \text{Earnings}_{i,t} \]: Regression coefficients operating profit

\[ \varepsilon_{i,t} \]: The only remaining operating profit of firm i in period t

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It is noteworthy that, it is necessary to use the F-test Lamer to choose, from among the regular panel data methods, the panel data with fixed effects before estimating the model, the results presented below.

<table>
<thead>
<tr>
<th>Accepted methods</th>
<th>Significance level</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional combined data approach</td>
<td>0.221</td>
<td>1.467</td>
</tr>
</tbody>
</table>

As can be seen in the table above, according to the achieved significance level, which is equal to 21%, the results of the non-rejection of the hypothesis H0, the resulting pattern combined data base is the preferred method for estimation model.

The second hypothesis:

The second hypothesis of the study is to investigate this issue, whether the historical accruals, future operating cash flows have predictive power?

The following model to examine the association between accruals and operating cash flows are used:

\[ \text{CFO}_{i,t+1} = \beta_i + \beta_{\text{Accrual}_{i,t}} + \varepsilon_{i,t} \]

As can be seen in the table above, according to the achieved significance level, which is equal to 21%, the results of the non-rejection of the hypothesis H0, the resulting pattern combined data base is the preferred method for estimation model.

Therefore, the results of panel data techniques to estimate model (2) research are presented in the following table:

<table>
<thead>
<tr>
<th>Level of error</th>
<th>Student t test</th>
<th>Coefficient</th>
<th>Variable</th>
<th>Coefficient</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>11.285</td>
<td>133.372</td>
<td>The width of origin</td>
<td>0.351</td>
<td>The historical accruals</td>
</tr>
</tbody>
</table>

According to the results in the above table, the estimation of the model, according to the statistic F (427.43) and the error level that is equal to (0.000) and the error level of less than 0.01 will be resulting in a confidence level of 99/0 can be expressed in the whole research model fit well and are highly significant. Also, according to Watson, the camera base equal to 2.2 is, it can be stated that there is no research model self-correlating Residual series between sentences.

According to the results of estimating the model number (2), and the historical accruals coefficient, which is equal to (0.351), and due to the error, which is equal to (0.000), acceptable error level of less than,
5 percent, is this hypothesis is confirmed. Also, according to the coefficient of determination adjusted for the model, which is equivalent to (0.667) is, it can be concluded that changing the historical accruals, more than 66% of future operating cash flow describes.

Third hypothesis:

When we keep in mind, we compare the performance of two models; we used the Z test Wong:

<table>
<thead>
<tr>
<th>Significance level</th>
<th>Statistic z Wong</th>
<th>Coefficient of determination</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>3.94</td>
<td>0.851</td>
<td>No.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.667</td>
<td>No.2</td>
</tr>
</tbody>
</table>

Wong statistical significance (94/3) at the 5% level for comparing models (1) and (2) show that the coefficient of determination between the two models is significant, statistically and this means that there is a difference in predictive power future operating cash flow variables, the two variable operating profit histories, and the historical accruals.

4- Hypothesis test results

Hypothesis 1:

The hypothesis of this study are discussed, whether historical operating income, has the ability to forecast future cash flows? The results showed that changing historical operating income, is capable, high capacity, in predicting future cash flows, companies, and therefore, this hypothesis was confirmed.

Hypothesis 2:

In this hypothesis, the study of this subject has been discussed, whether the historical accruals, has the ability to forecast future cash flows? The results showed that changing the historical accruals, has the ability to predict high future cash flows of companies, and therefore, this hypothesis been confirmed.

Hypothesis 3:

Therefore, to test the third hypothesis, that is, compared to operating profit model based on the independent variable (model theory) and the independent variable accruals-based model (the hypothesized model), Z-test and Wong (1989), the coefficient of determination obtained from the two models will be compared with each other. The results are presented in the following table:

4- Conclusion

It should be noted that one of the most important information available to investors regarding various financial and economic decisions, is extracted from the financial reports of the company's accounting system. In this regard it should be noted that perhaps the most important decision criteria investors in the stock market, the buying, selling or holding shares of companies is their time horizon and on the foreseeable future profitability, and the producers operating cash flows. Therefore, this study was, to investigate the ability to predict future operating cash flow of companies, by operating income and accruals variables, the question to be answered is whether accounting data, have the capability of high the prediction models. Results confirm the hypothesis in general, and that could be historic information, operating income and accruals by firms can be predicted, future operating cash flows.
Table 8 hypothesizes

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. First hypothesis: historical operating profits, have the ability to predict future operating cash flow effect</td>
<td>Confirmed</td>
</tr>
<tr>
<td>2. Second hypothesis: historical accruals, have the ability to predict future operating cash flow effect</td>
<td>Confirmed</td>
</tr>
<tr>
<td>3. Third hypothesis: predictive ability of future operating cash flows from operating profits of history and the historical accruals are different.</td>
<td>Confirmed</td>
</tr>
</tbody>
</table>

References:


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