Factors Affecting Prediction of Revenue Forecast Error Study on IPO Firms at Indonesians Stock Exchange Period 2007-2012

— Review of —
Integrative
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— Research —

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ABSTRACT

This study was conducted to demonstrate the effect of predictability of revenue forecast error with the factors that determine the accuracy, namely firm age, firm size, time interval, the percentage of existing shareholders, macroeconomic conditions, and the share premium. Based on Neil Harnett and Jennifer Romke (2000), contemporaneous evidence of corporate revenue and profit forecasting error are provided in a different institutional context – Australian share market initial public offerings. The study investigates the association between earnings forecast risk and conventional ex-ante uncertainty proxies, which was used to explain IPO underpricing. Ex-ante and ex-post explanatory variables are distinguished and a forecast error prediction model is tested. The results show that revenue forecast errors are smaller and less sensitive than those for profit. Strong associations are reported between forecast error and float motive, audit quality and unanticipated industry activity. The link between earnings forecast error and proxies for initial public offering underpricing is observed. Predictability is poor regarding individual company forecast error, but is improved for portfolio average forecasting error

Revenue forecast accuracy can be obtained from forecasting error measuring rate of habit that occurs in forecasting, which is calculated based on the difference between the projected revenue and realized revenue on the actual year of the IPO. Hypotheses used in this study are the independent variables (firm age, firm size, time interval, the percentage of existing shareholders, macroeconomic conditions, and share premium) that affect the dependent variable (Forecast Error), both partially and simultaneously.

This study concluded that time interval is the variable that significantly affects the predictability of revenue forecast error. It means that the longer the time interval for forecasting the revenue, its greater the unpredictability, and thus the actual revenue will has greater deviation. Macroeconomic variables also have significant an effect, which means that the higher a country's GDP, the smaller the forecasting error. Moreover, the effects of independent variables are jointly significant on the accuracy of revenue forecasts error.

Suggestions for future research are to conduct research on different types of industries in the same sector in order to provide more valid data.

Keywords: Revenue Forecast Error, IPO, Indonesians Stock Exchange

1. INTRODUCTION

Determination of the selling price of the IPO shares formed after the agreement was reached between issuers, investors and underwriters. Issuers will sell the shares at the highest price, on the other hand, the underwriters as party who provide services to sell the shares trying to make all of these shares sold, so they will try to lower the price by asking for a discount to the issuer, as well as investor as the buyer who is trying to buy the shares at the lowest possible price.

Florence (2007) in his research tested risk management and forecast revenue management in the company that conducted an IPO with determinants to see the error of forecasting (prediction). The company which is proxied by IPO motive (Float motive), Subscription price premium, Range of activities and international exposure examines the relationship between the IPO motifs that; The research hypothesis is the subscription price premium; Range of activities and international exposure associated with revenue forecast errors concluded that the test results based on forecasting techniques with RWM, GARCH and ARIMA models shows that RWM (*Random Walk Model)* has a better forecasting performance than the GARCH and ARIMA. Thus, it can be interpreted that the weekly IHSG appropriates with *Random Walk Theory.*

The research of Harnett and Romcke (2000) in Australia shows that the revenue forecast is more accurate than the profit forecast in the management forecast report and finds that float motive, audit quality and industry activity have a significant influence on the forecast error management.

2. LITERATURE REVIEW

Revenue Forecasting

Revenue forecast is a very important piece of information for companies that will be listed on the capital market. Revenue forecasts were made and used by several parties, including investors, securities analysis, institutional lenders, and management with different interests. Therefore, revenue forecast is expected to be a clear information and easily understood by the investor. Thus, investor will be easier to read the revenue forecast information which is reflected in the financial report statement.

There are several reasons why management makes the revenue projections, namely:

1) Management wants to achieve certain goals and revenue projections are used as standard of achievement.
2) Another reason is to arise investor's trust so that they are interested to invest his asset.

A good forecasting will require pretty much resources and labors. So, the

management should consider the costs and benefits. Including the cost to search for information, auditing, supervision, time and cost to distribute information. But in general, the management considers it with expectation that the forecast has impact on the future of the company. Pownall et al (1993) describes that manager assumes that investor gives his decision based on the revenue forecast.

Revenue forecasts are also used by management as a standard to be achieved. Revenue forecast reflects conditions which are expected to occur. This is important because it is a motivation to encourage employee performance. And other terms, managers use the revenue forecast as one of the tools to make a budget.

Factors which affecting the predictability of revenue forecast error:

1. The Age of Company

It is measured based on the experience of the company with the assumption that older companies are considered to have a bit more risky investments in investment decisions. The age of the company counted when the company was first established based on the certificate of incorporation until the company doing an IPO.

In previous research, age generally measured as time spent since the company listed in the IPO and as dichotomous variables. The age, based on how long the business was established will be used in this studies (estimate point based on available continous data), which is the early alternative in giving ambigous action and may not accurately have an underlying influence on the accuracy of the correct age estimates (e.g., business which has longer age (old), the more mature the age of a company, the more it has trading history and pattern of growth which is more stable, and more conducive to use in forecasting).

The age of the company is the age since the company was first established until that company listed in the secondary market. The age of the company can demonstrate the company's ability to overcome the difficulties and obstacles that could threaten the life of the company, and be able to demonstrate the ability of the company to take a chance in the environment to develop the company.

2. Company Size

Size included in this study although the results of previous studies obtained significant results. The size of the company can be used as a proxy for the level of uncertainty in the determination of stock prices. Uncertainty value of company stock in the future will make investors hesitant to invest their money in issuer stocks. When investors read the prospectus, analyze companies scale or total assets and judge that total assets may be used to increase the income of the issuer and able to close its obligations, then the risk of uncertainty in the future can be minimized.

Large-scale companies tend to be more known to the public so that information about the prospect of large-scale companies are more easily obtained by the investors than small companies. The level of uncertainty that will be faced by prospective investors about the company's future issuers can be minimized if many informations were obtained (Ardiansyah, 2004).

The size of the company as seen from the company's total assets considered capable of giving a signal that the company has a great asset to have good prospects. Measured by total assets of the company, which has been divided by the equity value of the company concerned. Total asset or assets are also called economic resources owned by the company and still

provide benefits in the future (Sugiri and Riyono, 2001). The asset itself consists of current assets, fixed assets, investments, and other assets.

Still intuitively appealing to expect that the size of the business reflects the underlying factors that are relevant to forecasting errors. The large size of the company has lower forecasting errors through their ability to absorb/launch estimate unexpected financial events, have more sophisticated techniques or effects of market regulation in researching other bigger companies because it is possible to have a higher profile. Or, a positive relationship between the size and the forecasting error suggests that the management IPO companies with smaller sizes may assume that market is more tolerant to the forecasting error compared to companies with large size or company with discretionary activities/smoothing may be more typically owned by management of small companies [Ferris dan Hayes (1977)]. Measured by total assets of the company, which has been divided by the equity value of the concern company is used as a proxy for firm size (Harnett (2000: 109)).

3. Time Interval

According to Harnett (2000: 109), calculated from the number of days on the date of the prospectus until the end of the forecast period. It is expected that the longer the time is left, the more definite the possibility of future events of the managements.

The positive relationship can be supported with reasons that, by forecasting a shorter period of time may consider factors that influence the amount of revenue with more precise. While forecasting a longer period of time using the consideration with the factors that are more common.

4. Percentage of Old Shareholders

According to Harnett (2000: 109), post-bid proportion of equity held by the pre-offer owners may reflects estimates integrity and such a forecasting risk proxy. As example, lower proportions can reduce their concerns about the forecasting error, and adverse reputation effects, and may affect inflation expectations to maximize fundraising.

If the company did the initial public offering, it is important to consider potential investors is shareholdings. Ownership of shares offered to the public shows how large a part of the paid-up capital to be owned by the public. Dharmadji and Fakhruddin (2001: 54) states that the greater the number of shares offered will increasingly have the potential for liquid shares trade on the exchange.

Leland and Pyle (1977) in Daljono (2000) showed that the amount of ownership measured by the percentage of the old shareholding showed the presence of private information so that the information about the company that distributed to prospective new shareholders. The greater the proportion of shares which still held by the shareholders, the more private information owned by the old shareholders.

5. Macroeconomic Conditions

Previous studies have measured various aspects of the economic conditions potential variables that clearly measure the forecasting error. Year of the float, GDP growth, GDP itself and changes in stock indices are ways which used up until now.

According to Harnett (2000: 109), if GDP is used as a measurement tool, then the constant value is needed and some steps that represent the trend of the data. This study uses nominal rupiahs, adjusted to GDP data to measure changes in economic conditions, because these numbers are considered more representative of events and nominal rupiahs which are estimated and reported. In this study, GDP growth is used as a proxy of macroeconomic conditions.

6. Premium Shares

Lee et al (1993) with the hypothesis that there is a positive association between forecast errors and the premium (P) time offers. Subscription price (initial price) is above the value of the net tangible assets per share (NTA)

How to calculate the Premium are:

$$P = \frac{SP - NTA}{SP}$$

With proxies growth opportunities and uncertainties in the future, the results were not statistically significant associated if the premium CP *) of SP Over total shareholder equity.

How to calculate:

$$P* = \frac{(SP - NA)}{SP}$$

Nevertheless, the premium may be a signal / promoter of confidence against the results of business activities.

HYPOTHESIS

H1   : There is influence between the age of company against the accuracy of revenue forecasting error which is recorded in prospectus reports when the company do the IPO.
H2   : There is influence between the size of the company against the accuracy of revenue forecasting error which is recorded in prospectus reports when the company do the IPO.
H3   : There is influence between the time interval against the accuracy of revenue forecasting error which is recorded in prospectus reports when the company do the IPO.
H4   : There is influence between the percentage of the old shareholders against the accuracy of revenue forecasting error which is recorded in prospectus reports when the company do the IPO.
H5   : There is influence between the macroeconomic conditions against the accuracy of revenue forecasting error which is recorded in prospectus reports when the company do the IPO.
H6   : There is influence between the premium shares against the accuracy of revenue forecasting error which is recorded in prospectus reports when the company do the IPO.
H7   : There is influence of determinant factors such as the age of the company, the size of the company, time interval, the percentage of the old shareholders, macroeconomic conditions, premium shares, which can affect simultanously at the accuracy of revenue forecasting error which is recorded in prospectus reports when the company do the IPO.

3. RESEARCH METHODS
3.1. RESEARCH DESIGN

This study is included in the explanatory type of research. Explanatory research is to test the hypothesized relationships among variables. According to the explanation, it is including associative research that aimed to determine the relationship between two or more variables (Sugiyono, 2002: 10). In this research, there will be built a theory that works to explain, predict and control the symptoms. Meanwhile, there is also using the term of correlational studies (Indriantoro and Supomo, 1999: 27).
3.2.   POPULATION AND SAMPLE

The object of this research is a company that does an initial public offering (IPO) for the first time in Indonesia Stock Exchange. The object of this study were selected on the grounds that the results of this study can illustrate the extent to which the accuracy of revenue projections made by the management company when the company offers shares in the

primary market, so that it can provide accounting information either to the company that will conduct an initial public offering (IPO) or investors before making a decision to invest the initial shares.

The population in this study are all companies that conduct an Initial Public Offering (IPO) on the Indonesia Stock Exchange in the period 2007 to 2012. The data used in this study is the financial data and non-financial companies namely in the Agriculture sector; mining; Basic Industry and Chemicals; Consumer Goods Industry; Property, Real Estate and Building Construction; Infrastructure, Utilities, and Transportation; Finance and Trade, Services, and Investment that during the period are still listed in the Indonesia Stock Exchange. While the sample used is a company that does an initial public offering (IPO) during the study period. Here are the results of sample selection:

Table 3.1
The Results of the Sample Selection

No	Explanation	Total
1	Companies that conduct an initial public offering (IPO) during the years 2007 to In 2012.	122
2	Companies that are not found its prospectus	(28)
3	Data that having outliers	(35)
4	The number of samples obtained during the years 2007 to In 2012.	59

Source: IDX, processed by the author.

3.3.   COLLECTION DATA METHOD

This study uses secondary data in the form of Indonesian Capital Market Directory (ICMD), Prospectus and IDX Fact Book. Data on companies doing an IPO, offering price, shares offered to the public and sourced from the date of listing Fact book. Stock price data in the secondary market at the close of the first day in the secondary market (closing price) and obtained from the website www.duniainvestasi.com. While the data on total assets and total equity, derived from the Indonesian Capital Market Directory (ICMD) 2007-2012. Data such as the company name, type of business, the date of issuance of the prospectus, the date of establishment of the company, revenue prospectus and the actual income derived from the company's prospectus. The Gross Domestic Product data obtained from official news reported by the Central Statistical Bureau.

3.4. ANALYSIS DATA METHOD

Assumptions Classic Test

Before conducting regression testing, data first tested with classical assumptions. Testing classical assumptions concerning four issues of normality, heteroskedatisitas, multicollinearity, and autocorrelation. Testing needs to be done to check the violation of the assumption. For the cross section data, according to Nachrowi and Hardius (2006) include Multicollinearity, Heteroskeditas and error term of Normality Test

The research model :
$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e$$

Y   : Accuracy of Revenue Forecasting Errors

X_1 : Age
X_2 : Company Size
X_3 : Time Interval
X_4 : Percentage of Old Shareholders
X_5 : Macroeconomic Conditions
X_6 : Premium Shares
a   : intercept (cconstant)
b   : regression coefficient
e   : error

RESULT AND DISCUSSION

Table 4.1.
Hypothesis Testing

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	4,135	2,132		1,939	,058
The age of the company	,003	,003	,088	,734	,466
The size of the company	-,022	,117	-,058	-,190	,850
The old shareholders	,022	,337	,022	,064	,949
Time interval	16,348	6,494	,310	2,518	,015
PDB	-75,261	32,777	-,267	-2,296	,026
Premium shares	-,920	,757	-,342	-1,215	,230

a. Dependent Variable: AFE

4.1. The Effect of Age on the Company to Revenue Forecast

Company age variable did not significantly affect the revenue forecast. It can be seen from the 0.466 significance greater than 0.05. These results signify the hypothesis is rejected. Signs of regression coefficients that show a positive relationship explains that the longer a company established, the better the accuracy of revenue forecasting.

Based on research Gounopoulos Dimitrios (2004: 10) Previous studies have postulated that the longer a company has been around, the greater the the accuracy of forecasting, especially due to earnings predictions for the new company actually very difficult compared to companies with solid earnings history. Jelic et al. (1998) and Jog and McConomy (2003) in the Gounopoulos Dimitrios (2004: 10) stipulates that company profit with no history of previous operations tend to be more difficult to predict, given the fact that the historical data is a very important input to the forecasting process. Mak (1994) showed that a new company that relies on operations history of other similar companies or have relevant industry, the information available on the operations history of companies tend to be less reliable predictor of future profits from operations history of a person. Chen et al. (2001) reported that older companies can be seen as less risky because they have more experience to draw on when making their profit forecasts. On the other hand, Jaggi (1997) reported that younger companies may not be able to fully understand and appreciate the environmental

impact of their future performance, and the lack of historical basis can hinder their ability to make accurate forecasts.

This study are consistent with previous research conducted by Hartnett and Romcke (2000) that shows the company age has no effect on the revenue forecast.

4.2. The Effect of Company Size to Revenue Forecast

Variable scale companies did not significantly affect the revenue forecast. It can be seen from the 0.850 significance greater than 0.05. These results signify the hypothesis is rejected. Signs of regression coefficients that show the negative relationship explained that the larger the size of a company, the better the accuracy of revenue forecasting.

Ease of information about this company that will increase investor confidence, thereby reducing uncertainty factor so that the risk of forecasting error in large-scale companies tend to be smaller if compared to the small-scale company. This study are consistent with previous research conducted by Hartnett and Romcke (2000) that shows the company size has no effect on revenue forecast..

Gounopoulos Dimitrios research (2004: 9) Evidence in the literature suggests that it is easier to do revenue forecast in the larger companies than smaller companies. Cox (1985), Firth and Smith (1992), Brown et al. (2000), Chen et al. (2001) and Dutta and Gingler (2002) reported that large companies have more control over their market setting, enjoying the comparative economies of scale, and tend to be more diversified than smaller company. This makes the large company's revenue more stable, more predictable, and more accurate. On the other hand, smaller companies tend to have less stable incomes, then there is little chance for management to make more accurate earnings estimates in the first place (Jelic et al, (1998).

4.3. The Effect of Old Shareholding to Revenue Forecast

Old shareholdings variable was not significantly affect the revenue forecast. It can be seen from the significant value of 0.494 that is greater than 0.05. While the positive sign of the regression coefficient, which means if there is a company made an initial public offering, it is important to consider potential investors is stock ownership.
Dharmadji and Fakhruddin (2001: 54) states that the greater the number of shares offered will increasingly have the potential for illiquid shares trade on the exchange. Similarly with Leland and Pyle (1977) in Daljono (2000) showed that the amount of ownership that measured by the percentage of shareholding longer showed the presence of private information so that information about the company that distributed to prospective new shareholders. The greater the proportion of shares still held by the shareholders will be more and more private information held by the existing shareholders.

This study consistent with research and Romcke Hartnett (2000) that the old ownership had no significant effect on the revenue forecast error. Likewise with Triani Apriliani research and Nikmah (2006) that the percentage of public offering also does not significantly affect the initial return, return 15 days and one year after the performance of the company's IPO.

Gounopoulos Dimitrios research (2004: 12) A lower proportion may signal owners concerns about the accuracy of forecasting, in this case the higher the level of ownership continued shows higher confidence and achieve accuracy. Ruland et al. (1990), Firth and Liau - Tan (1997) and Jelic et al. (1998) showed that a higher percentage of management ownership of shares may signal that the directors-owners are more confident about the future prospects of the company, and tend to do a lot more resources and attach greater importance to the estimated income as a signal of the quality of their company . Jog and McConomy (1997) and Chen et al. (2001) reported that insiders has another way to predict the profits,

while the outsider must rely in the estimates of the prospectus. They argue that the greater the number of outside shareholders, the greater the problems that arise if the estimate is not accurate.

4.4. The Effect of the Time Interval to Revenue Forecast

Time interval variable turns significantly affect the revenue forecast. Based on the results in the Table 4.10 t-test, obtained significance value smaller than 0.05, the value of significance in the this study was 0.015. This shows the longer the time is left, the better the management is certain to the possibility of future events. The positive relationship can be supported with reasons that the forecasting period is shorter may consider factors that influence the amount of revenue with more precise.

According to Harnett (2000: 109), calculated from the number of days in the date of the prospectus until the end of the forecast period, it is expected that the longer the time remaining, the more certain the management to the possibility of future events. This is due to the longer time interval forecasting earnings, it is expected that the uncertainties faced by the company is bigger, so that actual profit that occurs will deviate greater.

Gounopoulos Dimitrios research (2004: 10) there is some support in the literature for a positive relationship between the forecasting error and the time interval as a forecasting process that involves uncertainty and risk (namely the accuracy tends to deteriorate with time interval). More specifically, there is a view that the longer the time interval, the greater the likelihood of unexpected changes. Chen et al. (2001) argue that the forecasting error can be expected to increase as the estimated time interval lengthening. They also revealed a significant positive relationship between time intervals and the forecast error. Lee et al. (1993) have argued that the longer the document the forecast period, the greater the opportunity for management to exercise discretion in the maintenance and capital expenditure decisions, so that enabling the actual results and predicted to be harmonized. Brown et al (1987) and Kasznik (1999) showed that the shorter the time interval in months between the date of the prospectus and the end of the year related to forecasting, then would be more accurate revenue forecast error.

4.5. The Effect of Macroeconomic Conditions to Revenue Forecast

Macroeconomic condition variables turned out to significantly affect the revenue forecast. Based on t count of -2.296 with a significance value of 0.026, less than 0.05.

This shows that the macro-economic conditions as measured by the GDP of a country affect the company's revenue forecast's when doing the IPO. Negative coefficient signs in accordance with the expectations of the study, because the better the GDP of a country then smaller the forecasting error occurs.

According to Harnett (2000: 109), if GDP is used as a measurement tool, then constant value is needed and some steps that represent the data trend. This study uses nominal rupiahs, adjusted to GDP data to measure changes in economic conditions, because these numbers are considered more representative of events and nominal rupiahss that estimated and reported.

This study consistent with Gounopoulos Dimitrios (2004: 10) with a critical challenge for any economy is the optimal allocation of savings to investment opportunities. Gross domestic product (GDP) is the basis we employ to measure the economic conditions. Pedwell et al. (1994) and Hartnett and Romcke (2000) showed that the ability to accurately predict influenced by the variability of the prevailing economic conditions from the beginning to the end of the forecast period. They specify, very clearly, that the economic conditions more stable, is more difficult to predict accurately. In addition, Chan et al. (1996) reported that the

greater fluctuations in economic activity, the more absolute forecast errors one would expect in the estimate. In this case, a small change in GDP resulted in a lower level of error in the estimates of income.

4.6. The Effect of Premium Shares to Revenue Forecast

Share premium variable did not significantly affect the revenue forecast. Based on the results in Table 4.10, t obtained by invitation -1.215 0.230 significance greater than 0.05. Signs of regression coefficients that show a negative relationship, this means pemium shares do not become signal in revenue forecasts. This study is not consistent with the study of Lee et al (1993) in Harnett (2000: 109) which explains that there is a positive association between the forecasting errors with stock premium. Neither is consistent with research Yunita Florence (2007) whose research and test risk management in the company forecast revenue which do an IPO with-determinants determinants to see the error of forecasting (prediction). Company which is proxied with IPO motif (Float motive), Subscription price premium, range of activities and international examine the relationship between the motives that IPO; Research hypothesis is subsription price premium; Range of activities and international exposure associated with revenue forecast errors.

CONCLUSION

1. Company age proved no effect on the company forecast revenue in companies doing IPOs during the period 2007-2012. This is because the Company age does not fully reflect the company's revenue forecast when the IPO was good.
2. The size of the company does not affect forecast revenue in companies doing IPOs during the period 2007-2012. This is because the size of the company is less used as consideration in predicting revenue when the company doing an IPO.
3. Old shareholdings proved no effect on revenue forecasts in companies doing IPOs during the period 2007-2012. This is because the old shareholders showed only slightly higher private information distributed to potential new shareholders.
4. Time Interval proven has effect on revenue forecasts in companies doing IPOs during the period 2007-2012. This is because forecasting a shorter period of time affect the amount of revenue with more precise.
5. Macroeconomic Conditions proven macro conditions into consideration.
6. Premium shares proved no effect on revenue forecasts in companies doing an IPO for an effect on the revenue forecast in companies doing IPOs during the period 2007-2012. This is because the predicted revenue while doing an IPO, the company makes the period 2007-2012. This shows that, when buying a stock IPO investors see premium share as consideration in predicting revenue.

LIMITATION OF THE STUDY

1. Some of the variables in this study using the same proxy causing the amount of data that had outliers.
2. Many of the data are incomplete, either due to incomplete data sources or can not find the company's IPO prospectus.
3. Limited proxy or variables used in conducting this research, so that the independent variables discussed are less able to describe the dependent variable in depth.
4. Limitations of the data so that there is unperfect results.
5. Incompatibility in this study with previous studies may be due to differences in capital market conditions studied, the characteristics of the sample, the number of observations, and the study period.

SUGGESTION

1. For further research, we recommend using the type of industries in the same sector. Research on the same industry will provide more valid data.
2. Measurement of company size and old shareholdings in this study using the same total equity. For further research are expected to use different measurements for the results obtained would be better.
3. For the issuers who will perform the initial public offering is expected to pay more attention when the time interval will be doing an IPO.

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