

# Value Relevance of Accounting Information and IPO Performance in Indonesia

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## Abstract

The relationship between ex-ante measures of uncertainty of IPO firms and post-IPO market performance is well documented in the extant empirical literature, both within the context of developed and emerging markets. The present study is the first to investigate the impact of ex-ante uncertainty, as proxied by various financial ratios and other information reported in the prospectuses, on the short-run performance of Indonesian IPO firms using a sample of 71 IPOs over the sample period 2000 through 2008. Results reported in the present study indicate the presence of a high average market-adjusted first-day IPO return, about 53%, in Indonesia. Furthermore, these strong initial IPO returns in Indonesia are reported to be positively related to the proxy of risk of financial distress but negatively related to proxies of past profitability and the degree of establishment of the issuing firms. The empirical evidence documented in the present study conforms to *a priori* expectations and are consistent with the empirical evidence reported for other developed and emerging markets. The results reported in this study should be comforting to general investors and regulators given the long-standing perception of the poor quality of accounting information in Indonesia.

**Keywords:** Indonesia, IPO, Underpricing, Ex-ante uncertainty

## 1. Introduction & Motivation

Empirical evidence from around the globe on the availability of significant positive short-run IPO returns is in abundance (Note 1) and the IPO literature is now relatively mature, with the main stylized facts established, and most theories have been subjected to rigorous empirical testing. The best-established explanation for the observed significant positive short-run IPO returns seems to come from the theories of asymmetric information. One of the asymmetric information models stipulates a positive relation between initial IPO returns and the ex-ante uncertainty about the firms going public (Beatty and Ritter, 1986; Rock, 1986). Various proxies have been used in the literature such as company characteristics, offering characteristics, prospectus disclosure, underwriters' reputation and aftermarket variables to capture the ex-ante uncertainty of the IPO firms and these proxies have been reported to

have significant relationships with IPO returns both within the context of developed and emerging markets (Note 2). Like many emerging markets, general investors in Indonesia lack the sophistication to do an in-depth analysis of new issues on their own. Also, alternative independent sources of information or analysis on IPOs are virtually non-existent in Indonesia. Consequently, in Indonesia the primary source of information to assess the ex-ante uncertainty is the prospectuses issued by the IPO firms.

But the quality of information reported in the IPO prospectuses has remained questionable over the years. It has been perceived that accountants and auditors in Indonesia often give in to the management and political pressures and 'cook' the books.

The present study examines the ex-ante uncertainty as a potential explanation for the IPO underpricing in Indonesia. Ex-ante uncertainty, in the present study, is captured through various computed financial ratios that represent three dimensions of an IPO firm: the degree of establishment, the profitability, and the risk of financial distress using a sample of 71 IPOs over the sample period 2000 through 2008. Results reported in the present study indicate the presence of a high average market-adjusted first-day IPO return of 53% in Indonesia. Furthermore, these strong initial IPO returns in Indonesia are reported to be positively related to the proxy of risk of financial distress, but negatively related to proxies of past profitability and the degree of establishment of the issuing firms. That means the higher the risk of financial distress the higher the uncertainty surrounding the issuing firm and, consequently, the higher the initial IPO returns. But the more established and the more profitable the issuing firm is the lower should be ex-ante uncertainty and, consequently, the lower the initial IPO returns. The results reported in the present study conform to *a priori* expectations and are consistent with the empirical evidence reported for other developed and emerging markets. Specifically, the results reported in this study should be comforting to general investors and regulators given the long-standing perception of the poor quality of accounting information in Indonesia.

The remainder of the paper is organized as follows. Section 2 provides a brief overview of the Indonesian IPO process. Section 3 delineates the data and methodology. Empirical findings are reported in Section 4. Section 5 concludes the paper.

## 2. A Brief Overview of the Indonesian IPO Process

The public offering process in Indonesia starts with the appointment of an underwriter or syndicate of underwriters, supporting agencies, and supporting professions such as trustees, public accountants and legal counsel. After the appointment of related parties, the potential issuer holds coordinating and technical meetings. The main goal of the coordination meeting is to coordinate assignments to each party in preparation of the IPO filings with the Capital Market & Financial Institutions Supervisory Agency of Indonesia, BAPEPAM-LK, which operates under the Ministry of Finance (Note 3). All the parties related to the IPO attend the coordination meetings and the process is usually completed with three or four meetings depending on the necessity. The technical meeting is held to discuss specific issues and attended by only the relevant parties; for example, if the matter of discussion is legal issues, the potential issuer, underwriter (lead underwriter if it is a syndicate) and the legal counsel must be present at the meeting. The supporting professions to the IPO such as public accountants, legal counsels, and appraisers prepare their own reports; for example, an independent audit report by the public accountant, the draft registration statement for the BAPEPAM-LK by the legal counsel, the appraisal report from the independent appraisers, and so on.

The IPO firms submit a registration statement for the IPO to BAPEPAM-LK after all the necessary supporting documents are ready. The registration statement is deemed effective within a certain time period after the submission date, provided the BAPEPAM-LK is satisfied with all the documents submitted. However, BAPEPAM-LK may require additional documentation from the potential issuer while the registration statement is pending or deemed effective. The marketing effort to sell the IPOs – for example, road shows – can start immediately following the submission of the registration statement with BAPEPAM-LK. However, the relevant prospectuses are printed only after obtaining approval from the BAPEPAM-LK which signals that the IPO process has formally commenced. The IPO process is essentially completed once the trading at the Indonesian Stock Exchange (IDX) begins.

## 3. Data, Methodology & Hypotheses

A visit to the Indonesian Stock Exchange (IDX) was made in late 2009. All the available IPO prospectuses were collected from the library for the period 2000–2008. Relevant stock prices and closing market index values (Jakarta Stock Exchange Composite [JCI] Index) were collected from the Bloomberg database. A total of 71 IPO firms over the period January 2000 through September 2008 are included in the final sample (Note 4).

The short-run IPO return is calculated as specified by Leal (2005) using the first-day returns adjusted for the market as follows:

$$MAR_{i,t} = \left[ \frac{(1+R_{i,t})}{(1+RM_t)} - 1 \right] \times 100 \quad (1)$$

$MAR_{i,t}$  and  $R_{i,t}$  represent the market adjusted return and the return for IPO<sub>i</sub> on day  $t$  respectively.  $RM_t$  is the return on the JCI Index on day  $t$ .  $R_{i,t}$  is computed as the rate of return between the closing price on the first trading day and the offer price.  $RM_t$  is computed as the percentage change between the closing index value on the first trading day and the offer day (Note 5).

The accounting data obtained from the prospectuses are in local currency and the financial ratios are calculated to proxy for three dimensions of IPO firms following the extant literature— the degree of establishment, the profitability and the financial distress. Each one of these three dimensions represent the ex-ante uncertainty about the issuing firm. The degree of establishment is captured by the age and size (measured by total asset) of the IPO firm. Four proxies are used to capture the past profitability of an IPO firm – net profit margin (net profit over net sales), operating profit margin (operating profit over net sales), return on asset (net profit over total assets) and return on equity (net profit over stockholder's equity). Current ratio measures the liquidity position of a firm. Given that the IPO firms in Indonesia, generally, have no or a very small amount of long-term debt in their capital structure, current ratio (current assets over current liabilities) is used as an ad-hoc measure of financial distress risk of an IPO firm. All the financial ratios are calculated on the averages of the last two financial statements prior to the firm going public.

First, univariate regressions of all ratios and other independent variables on the initial market-adjusted IPO returns were performed. Proxies with greater explanatory power, as evidenced from the univariate analysis, were then used in two multivariate models, with each using alternative proxies for past profitability, return on equity (ROE) and operating profit margin (OPM) of the IPO firm. The other variables used in the multivariate models are total assets, to proxy for size, and current ratio, to proxy for the risk of financial distress of the IPO firms (Note 6). The dependent variable in both multivariate models is the logarithm of the initial market-adjusted IPO returns. Specifically, the multivariate models are as follows:

$$(MAR_{i,t}) = ROE_{i,t} + CR_{i,t} + TA_{i,t} + \epsilon \quad (2)$$

$$(MAR_{i,t}) = OPM_{i,t} + CR_{i,t} + TA_{i,t} + \epsilon \quad (3)$$

Where  $i$  represents IPO firms in our sample  $i = 1$  to  $71$ , and  $t$  represents time dimension ranging 2000 to 2008. Market-adjusted first-day IPO return ( $MAR_{i,t}$ ) is used as the dependent variable in both multivariate models. The independent variable in the first model is return on equity ( $ROE_{i,t}$ ) as a proxy for firm's past profitability, current ratio ( $CR_{i,t}$ ) as a proxy for risk of financial distress, and total asset of the IPO firm ( $TA_{i,t}$ ) as a proxy for degrees of establishment. In the second multivariate model, only the variable return on equity ( $ROE_{i,t}$ ) is replaced by operating profit margin ( $OPM_{i,t}$ ) with other variables remaining the same. Again, all of the ratios are calculated on the average of the last two financial statements prior to the firm going public.

The working hypotheses in the present study are based on Beatty and Ritter's (1986) proposition I, which states that the greater the ex-ante uncertainty the greater the initial market-adjusted returns and vice versa. More specifically, the three hypotheses tested in the present study are as follows:

H<sub>1</sub>: The greater the degree of establishment of an issuing firm, the lower the ex-ante uncertainty and the initial market-adjusted returns on its IPO.

H<sub>2</sub>: The greater the past profitability of an issuing firm, the lower the ex-ante uncertainty and the lower the initial market-adjusted returns on its IPO.

H<sub>3</sub>: The greater the risk of an issuing firm's financial distress, the greater the ex-ante uncertainty and the initial market-adjusted returns on its IPO.

#### 4. Empirical Analysis

The number, size and the first-day underpricing of Indonesian IPOs included in the sample of the present study are reported in Table 1 by year. The number of IPOs included in the sample ranged from two in 2005 to 14 in 2007. The average offer size ranged from Rp. 31.895 billion in 2000 to 1.823479 trillion in 2008 (Note 7). While the first-day market-adjusted underpricing was at its lowest, 1.7%, in 2003, the largest first-day underpricing was 126% in 2001.

Insert Table 1 here

Table 2 contains descriptive statistics of the accounting data obtained from the IPO prospectuses of the sample Indonesian IPO firms. The median age of the IPO firms is 13 years – significantly higher than what is observed in the developed markets such as the US (six years; Ritter [1991]) but very much in line with other emerging markets like Brazil (14 years). The median offer size is 53.68 billion. The mean first-day market-adjusted underpricing is about 53%.

Insert Table 2 here

A summary of financial ratios is presented in Table 3. While the mean current ratio (CR) is reasonably high (1.744), the liquidity of the median IPO firm is very moderate (1.214). Also, the profitability of the sample of Indonesian IPO firms seems to be only moderate.

Insert Table 3 here

Table 4 presents the results of univariate regression of all the ratios and the independent variables on the initial market-adjusted IPO returns in Indonesia. Only one of the two proxies, firm size, utilized to capture the degree of establishment of the IPO firms seem to explain the initial market-adjusted returns in Indonesia. Two of the four proxies to capture the past profitability of the IPO firms, operating profit margin and ROE, seem to provide some explanation for the observed initial market-adjusted returns. Similarly, the ad-hoc proxy for financial distress risk, current ratio, seems to provide a reasonable explanation for the observed IPO performance in the short run.

Insert Table 4 here

Multivariate models were constructed using the proxies of significant explanatory power reported in Table 4. The results from the two multivariate models are reported in Table 5. The adjusted  $R^2$  in both models is reasonably high, about 26%. The results reported in Table 5 indicate that the higher the past profitability and the larger the size of the IPO firm, the lower the initial market-adjusted IPO returns in Indonesia. That means the more profitable and established an IPO firm is, the lower its ex-ante uncertainty and, consequently, the lower the observed initial IPO return. On the other hand, the higher the perceived financial distress risk of the IPO firm yields the higher initial returns. That means the higher the financial distress risk is, the higher the perceived ex-ante uncertainty about the IPO firms and, consequently, the larger the observed initial IPO return.

Insert Table 5 here

## 5. Concluding Remarks

The present study investigates the relationship between the observed initial market-adjusted IPO returns and the ex-ante uncertainty of the issuing firms in Indonesia using a sample of 71 IPO firms over a nine-year period, 2000 to 2008. The results documented in the present study are very similar to those reported in the extant literature for other developed and developing markets: the higher the ex-ante uncertainty surrounding the issuing firm, the higher the initial IPO returns and vice-versa.

The results reported in this study should be comforting to regulators and investors alike given the long-standing perception of the poor quality of accounting information in Indonesia.

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## Notes

Note 1. See the updates in Table 1; on the World Wide Web see Loughran et al. (1994) for a comprehensive global reference.

Note 2. For example, Lin and McNichols (1997) for the United States (US), Clarkson and Merkley (1994) for Canada, Keasey and McGuiness (1991) for the United Kingdom (UK), Lee et al. (1996) for Australia, Koh et al. (1990) for Singapore, Kim et al. (1993) for Korea, and Leal (2005) for Brazil.

Note 3. Bank Indonesia for banks and non-bank financial institutions; Pertamina for oil and gas companies; BAPEPAM-LK and the Indonesian Stock Exchange (IDX) for exchange-listed companies; and the Ministry of Finance, which oversees activities of the DG of taxation and BAPEPAM-LK.

Note 4. While more IPOs came to the market during this time period, the unavailability of prospectuses limited the sample size to 71 firms.

Note 5. The calculation of market-adjusted returns, by dividing  $(1+R_{i,t})$  by  $(1+RM_t)$ , is used to mitigate distortions in nominal returns instead of simple difference between  $R_{i,t}$  and  $RM_t$  which is common in the literature.

Note 6. The variables used in univariate and multivariate models are normalized by logarithmic transformation.

Note 7. The average conversion rate during the sample period: 1 US\$ = 9,000 Indonesian Rupiahs.

Table 1. Number, Size and the First-Day Underpricing of Indonesian IPOs 2000–2008

| Year      | # of IPOs | % of IPOs | Average Offer Size (inRp Mil.) | Total Offer Size (inRp Mil.) | First-day Market Adj. Under Pricing |
|-----------|-----------|-----------|--------------------------------|------------------------------|-------------------------------------|
| 2000      | 8         | 11%       | 31,895                         | 255,159                      | 58%                                 |
| 2001      | 13        | 18%       | 38,094                         | 495,222                      | 126%                                |
| 2002      | 6         | 8%        | 69,837                         | 419,023                      | 25%                                 |
| 2003      | 3         | 4%        | 678,815                        | 2,036,444                    | 2%                                  |
| 2004      | 5         | 7%        | 116,877                        | 584,387                      | 30%                                 |
| 2005      | 2         | 3%        | 1,583,750                      | 3,167,500                    | 12%                                 |
| 2006      | 8         | 11%       | 342,918                        | 2,743,340                    | 32%                                 |
| 2007      | 14        | 20%       | 646,043                        | 9,044,600                    | 44%                                 |
| 2008      | 12        | 17%       | 1,823,479                      | 21,881,746                   | 39%                                 |
| 2000–2008 | 71        | 100%      | 572,217                        | 40,627,421                   | 53%                                 |

Table 2. Descriptive Statistics ( $N=71$ )

(Currency: RP in billions)

|                                     | Mean   | Median | Maximum  | Minimum | St. Deviation |
|-------------------------------------|--------|--------|----------|---------|---------------|
| Years of Existence (Age)            | 15.37  | 13.00  | 46.00    | 2.00    | 11.04         |
| First-Day Market Adj. Under Pricing | 52.92% | 34.24% | 476.21%  | -43.83% | 72.99%        |
| Offer Size                          | 572.22 | 53.68  | 12253.26 | 7.80    | 1653.43       |
| Total Assets                        | 923.69 | 221.66 | 9597.13  | 9.86    | 1783.69       |
| Shareholder's Equity                | 335.42 | 94.59  | 2491.52  | -7.01   | 560.36        |
| Current Assets                      | 400.59 | 91.50  | 4997.67  | 1.39    | 771.81        |
| Current Liabilities                 | 329.65 | 66.65  | 4236.74  | 0.13    | 624.44        |
| Operating Profit                    | 107.10 | 14.50  | 2220.49  | -330.05 | 309.20        |
| Net Profit                          | 44.51  | 4.48   | 1115.71  | -297.98 | 162.41        |

Table 3. Summary of Financial Ratios ( $N=71$ )

|                               | Mean  | Median | Max    | Min    | St. Dev. |
|-------------------------------|-------|--------|--------|--------|----------|
| Current Ratio                 | 1.744 | 1.214  | 15.853 | 0.219  | 2.212    |
| ROA                           | 0.042 | 0.030  | 0.197  | -0.218 | 0.065    |
| ROE                           | 0.116 | 0.075  | 2.726  | -1.856 | 0.445    |
| Operating Profit Margin (OPM) | 0.083 | 0.100  | 0.362  | -1.416 | 0.267    |
| Net Profit Margin (NPM)       | 0.042 | 0.038  | 0.501  | -1.168 | 0.185    |

Table 4. Univariate Regressions for Selected Proxies to Explain Ex-Ante Uncertainty

| Independent Variables                         | Trans.      | Coefficient | Adj. $R^2$ |
|-----------------------------------------------|-------------|-------------|------------|
| <u>Firm's Degree of Establishment</u>         |             |             |            |
| Years of Existence                            | $\log(1+x)$ | -0.049      | -0.005     |
| Total Assets Average from Last Two Statements | $\log$      | -0.089*     | 0.143      |
| <u>Past Profitability</u>                     |             |             |            |
| NPM                                           | $\log(1+x)$ | -0.181      | -0.010     |
| OPM                                           | $\log(1+x)$ | -0.864***   | 0.033      |
| ROA                                           | $\log(1+x)$ | -0.675      | 0.000      |
| ROE                                           | $\log(1+x)$ | -0.314**    | 0.043      |
| <u>Financial Distress Risk</u>                |             |             |            |
| Current Ratio                                 | $\log(1+x)$ | 0.248*      | 0.090      |

Dependent variable:  $(MAR_{i,t})$ 

\*Significant at 0.01

\*\*Significant at 0.05

\*\*\*Significant at 0.10

Table 5. Multivariate Models

| Model          | Constant           | Return<br>on<br>Equity | Operating<br>Profit<br>Margin | Current<br>Ratio     | Total<br>Assets     | Adj. R <sup>2</sup> |
|----------------|--------------------|------------------------|-------------------------------|----------------------|---------------------|---------------------|
| Model with ROE | 0.831 <sup>*</sup> | -2.258 <sup>*</sup>    |                               | 0.454 <sup>***</sup> | -0.062 <sup>*</sup> | 0.262               |
| t-stat         | 3.076              | -2.831                 |                               | 1.918                | -2.680              |                     |
| Model with OPM | 0.828 <sup>*</sup> |                        | -5.249 <sup>*</sup>           | 1.233 <sup>***</sup> | -0.062 <sup>*</sup> | 0.262               |
| t-stat         | 3.058              |                        | -2.853                        | 1.902                | -2.696              |                     |

Dependent variable: ( $MAR_{i,t}$ )<sup>\*</sup> Significant at 0.01<sup>\*\*</sup> Significant at 0.05<sup>\*\*\*</sup> Significant at 0.10**Appendix A****Correlation Matrix of Independent Variables**

|                         | ROE                | CR                   | TA    | OPM   |
|-------------------------|--------------------|----------------------|-------|-------|
| ROE                     | 1.000              |                      |       |       |
| Current Ratio           | -0.044             | 1.000                |       |       |
| Total Assets            | -0.099             | -0.158 <sup>**</sup> | 1.000 |       |
| Operating Profit Margin | 0.278 <sup>*</sup> | -0.007               | 0.044 | 1.000 |

<sup>\*</sup> Significant at 0.01<sup>\*\*</sup> Significant at 0.05<sup>\*\*\*</sup> Significant at 0.10