The Indonesian Capital Market Review

Volume 4
Number 2 *July*

Article 4

7-30-2012

A Study of Financial Performance and Stock Return in IPO Underpricing Phenomenon on the Indonesia Stock Exchange (IDX)

Agus Irfani
Faculty of Economics, the University of Pancasila, agus_irfani@univpancasila.ac.id

INDONESIAN
CAPITAL MARKET REVIEW

A Study of Financial Performance and Stock Return in IPO Underpricing Phenomenon on the Indonesia Stock Exchange (IDX)

Agus Irfani*
Faculty of Economics, the University of Pancasila

It is widely believed that financial performance of listed companies on stock exchange might potentially affect long-term stock return. However, the impact of financial performance on underpricing is still in debate. The purpose of this study is to examine the effect of financial performance on underpricing at the same period and the effect of both financial performance and underpricing on the long-term stock return on the Indonesia stock exchange (IDX). By employing judgemental sampling method, the sample of this reseach includes 43 underpriced stocks taken from the population of 51 initially public offered stocks on the IDX during 2008-2010. This research uses multiple regression technique to test the hypothesis. This study concludes that not all financial performance ratios affect the underpricing and the long-term stock return in 2011. In addition, this study does not find any empirical evidence about the effect of underpricing on the long-term stock return.

Keywords: *Financial performance, initial stock return, long-term stock return, underpricing*

Introduction

Underpricing in initial public offering (IPO) is a common phenomenon in almost every capital market, but a number of previous studies found that factors affecting underpricing are vary greatly from each other. Loughran et al. (1994) documented that contributing factors of underpricing is not always consistent from one study to another, depending on firm characteristics and economic conditions of country where stock exchange is. Ibbotson (1975), Jegadeesh et al. (1993), Carter and Manaster (1990), and Michaely and Shaw (1994) examined the impact of firm characteristics include offer size, offer price, underwriter reputation, and risk factors on underpricing and they found that all of the characteristics do not simultaneously impact on underpricing.

Bhabra and Pettway (2000) found that financial performances revealed in firm prospectus before the IPO affect IPO underpricing and stock return in the long-term after IPO. Lewellen (2004) predicted underpricing and the long-term stock return by using financial performances during 1963-2000 and found that the performances do not affect underpricing but it influences significantly on the long-term stock return. The finding affirmed previous research findings conducted by Jarrell and Darkey (1992), Jain and Kini (1994), Aydoğan and Gürsoy (2000), and it is supported by Sivaprasad and Muradoglu (2010).

In studying financial performance and stock return in IPO underpricing phenomenon on the Indonesia Stock Exchange (IDX), this research considers that mostly IPO stocks on the IDX were underpriced. Hakiman (2005) found

*Jl. Srengseng Sawah, Jagakarsa, Jakarta 12640, Indonesia, Phone: +628151875885, E-mail: agus_irfani@univpancasila.ac.id or agus_irfani@yahoo.com.

72.73% of 143 IPO stocks on the IDX during the period of 1996-2004 were underpriced. Likewise, Irfani (2011a) found 82.05% of 78 IPO stocks on the IDX during the period of 2003-2008 were underpriced.

A number of previous studies documented that underpricing phenomenon does not only happen on the IDX, but also occurs on many other capital markets in the world. McGuiness (1992), Sufar (1987), and Ismail et al. (1993) found such indication that underpricing occurs in many stock exchanges, in various numbers of samples, various periods, and various rates. Aggarwal et al. (1993) found the level of underpricing in the Brazil Stock Exchange reached 78.51%; Loughran and Ritter (2004) found 31.42% underpricing rate in Singapore Stock Exchange and 13.6% in Turkey Stock Exchange; Lowry et al. (2006) found a 22.00% level of underpricing in the United Stated of America (US Stock Exchanges); and Taufil (2007) found a rate of 46.44% underpricing in Malaysia Stock Exchange.

McDonald and Fisher (1972), Ibbotson (1975), and Muscarella and Vetsuypens (1989a) documented the existence of IPO underpricing, which is statistically highly significant in the stock exchanges of developed countries like the US and Europe. Rock (1986) found that underpricing indicates the presence of asymmetric information among investors on the exchange. For that the companies deliberately underpriced their stocks in order to attract uninformed investors. Beatty and Ritter (1986) argue that underpricing phenomenon has been widely tested in various capital markets and has been widely studied in the literature review of research results, but until now no one can yet explain the exact variables contributor to the occurrence of this phenomenon, so they concluded that underpricing is a market uncertainty.

Ritter (1991), Loughran and Ritter (1995), Ritter (1998), and Purnanandam and Swaminathan (2002) documented that the short-term underpricing will have an impact on the long-term underperformance during three years after the IPO period. Referring to this previous finding, this study will also examine the effect of underpricing on the long-term stock return on the Indonesia Stock Exchange (IDX) during three years after the IPO period. The stock return which is studied in this research is the stock return in 2011. Considering that the sample of this study includes IPO stock on the IDX during the period of 2008-2010, it means that the return in 2011 will represent respectively the lead one year after the IPO period of 2010, lead two years after the IPO period of 2009, and lead three years after the IPO period of 2008.

The objectives of this research are to examine the effect of financial performances on underpricing and to test the effect of financial performances simultaneously with the underpricing during the same period of 2008-2010 on the stock return in 2011.

Literature Review

Underpricing phenomenon on stock exchange

Irfani (2011a) defined underpricing as a condition in which the offering price of IPO stock is lower than the closing price in the first day trading on secondary market. Underpricing phenomenon occurs in almost all stock exchanges in the world, but the results of previous studies found that no definite answers about the predictor variables to the occurrence of underpricing and it impacts on long-term stock return (Loughran et al., 1994, Loughran and Ritter, 2004). Due to the uncertainty estimator variables of underpricing and the resulting conditions, Lowry et al. (2006) assert that the discussion about underpricing will always be the actual until a clear idea is found about how it happened and its impact on stock performance in the long run.

Numerous studies documenting that IPO stocks generally suffer underpricing. Bundoo (2007) provided evidence of underpricing on the Mauritius Stock Exchange, Africa, by using the entire population of companies that go public during the period 1989-2005. This study found that almost all companies experienced underpricing on the first trading day and 19 of the 40 companies had initial positive return for seven consecutive days in the stock post-IPO

https://scholarhub.ui.ac.id/icmr/vol4/iss2/4
DOI: 10.21002/icmr.v4i2.3618

trading. The test results show that the large size of the market capitalization of stocks and positive returns are the variables that explain the increasing levels of underpricing on the Mauritius Stock Exchange. Under conditions of increased market index, the greater the capitalization value stocks will be higher levels of underpricing it.

Tinic (1988) documented the results of his studies that IPO of shares mostly experienced underpricing. Tinic (1988) developed and test the hypothesis of underpricing as a form of insurance against legal liability and related to the lack of good reputation of investment bankers. Tinic (1988) portrayed the condition of underpricing is not always advantageous for the parties concerned. For issuers means sacrificing some of their return should be obtained if IPO price is higher. For underwriters whose income is in the form of commission, which is the percentage of IPO proceeds, the lower IPO prices also mean less income. However, the underpricing is also beneficial to underwriter, because the more likely the stocks are sold. As for investors, they can be caught on the wrong paradigm, namely that IPO shares were underpriced, but from the existing data not all IPO share is underpriced, there is some overpricing or fixed at the offering price, so that if investors buy this stock just because underpricing they will potentially lose.

Greenblatt and Hwang (1989) claim that underpricing is a signal of issuers that have more information to indicate the expected value and variance of returns to less-informed investors. Contrary to the above theory that connects between underpricing and private information where the issuer has the information that is not owned by the investor, Benveniste and Spindt (1990) says that the informed investors reveal information to the underwriter through the reservation before the specified bid price and underpricing is compensation for informed investors to the information they convey to the underwriter.

Welch (1989) found substantial evidence of post-issuing market activities of the companies doing an IPO, issuers enter the market with the intention to issue shares in the future. However there is a reason to believe that price increases will affect the owners of the company back to the market to have more funds are generated. Jagadeesh et al. (1993) found the first day return is a very effective signal affects the activity of the issuance of shares in the future. Meanwhile, Michaely and Shaw (1994) completely rejected the signal, because there is no evidence whatsoever to suggest that the market trend of higher returns or higher dividend payments trends will lead to more underpriced IPO. Elucidation of the signaling group said that the action of issuers that voluntarily reduce IPO prices (underpriced) is to create the impression of ”good image” to investors.

Knopf and Teall (1999) also found a lot of empirical evidence about the existence of IPO underpricing as an anomaly. That is why the issues of underpricing in initial public offerings (IPO) is still as the center of attention in the financial literature. According to Knopf and Teall (1999), measuring the uncertainty of the IPO price is much more complicated than determining the price at the next offering (seasoned issues). The difficulty in measuring the IPO price is donated by the absence of price history and lack of public information.

Loughran and Ritter (2004) and Irfani (2011a) documented a number of studies on IPO underpricing by a number of researchers with the object of study in the capital markets in different countries of the world, based on sample size and study period varied. Summary results of these studies showed an average positive initial return a number of studies (see Table 1).

Financial performance and underpricing

Ibbotson (1975), Jegadeesh et al. (1993), Carter and Manaster (1990), and Michaely and Shaw (1994) found evidence that underpricing is not significantly influenced by offer size, offer price, underwriter reputation, and risk factors. Lewellen (2004) found that financial performances do not affect underpricing but they influence significantly long-term stock return. However, Bhabra and Pettway (2000) documented that the financial performances pre-

Tabel 1. IPO underpricing studies in some countries

Country	Researcher	Sample size	Time period	Avg. initial return
Australia	Lee, Taylor and Walter; Woo	381	1976 - 1995	12.10%
Austria	Aussenegg	76	1984 - 1990	6.50%
Belgium	Rogiers, Manigard and Ooghe	28	1984 - 1999	10.10%
Brazil	Leal, Hernandex, Maturana	62	1979 - 1990	78.50%
Canada	Job and Riding; Jog and Srivastava	258	1971 - 1992	5.40%
Chile	Aggarwal, Leal and Hernandex	55	1982 - 1997	8.80%
Denmark	Jakobsen and Sorenson	117	1984 - 1998	6.40%
Finland	Keloharju	85	1984 - 1992	9.60%
France	Husson and Jacquillat; Leleux, Muzyka; Pallard, and Belletante	187	1983 - 1992	4.20%
Germany	Ljungqvist	407	1978 - 1999	27.70%
Greece	Kazantzis and Levis	79	1987 - 1991	48.50%
Indonesia	Hakiman, Irfani	202	1996 - 2008	21.76%
Israel	Kandel, Sarig and Wohl	28	1993 - 1994	4.50%
Italy	Cherubini, Ratti, Giudici & Paleari	135	1985 - 1998	20.30%
Mexico	Aggarwal, Leal and Hernandex	37	1987 - 1990	33.00%
Netherlands	Wessels; Jenkinson	143	1982 - 1999	10.20%
New Zealand	Vos and Cheung; Camp	201	1979 - 1999	23.00%
Nigeria	Ikoku	63	1989 - 1993	19.10%
Norway	Emilsen, Paderson and Saettern	68	1984 - 1996	12.50%
Poland	Aussenegg	149	1991 - 1998	35.60%
Portugal	Alpalhao	62	1986 - 1987	54.40%
Spain	Rahnema and Fernandex	71	1985 - 1990	35.00%
Sweeden	Rydqvist	251	1980 - 1994	34.10%
Switzerland	Kunz and Aggarwal	42	1983 - 1989	35.80%

Source: Loughran and Ritter (2004) and Irfani (2011a)

sented in the prospectus of issued companies are matched measure for IPO's underpricing and post-IPO stock return. Teoh et al. (1997; 1998) reveal that the influence of financial performance presented in the prospectus to underpricing indicates the presence of asymmetric information.

Teoh et al. (1997; 1998) suggest that this empirically rare media covering the financial condition of a company for three years before the company went public so that investors tend to rely to a prospectus to find out information and assess the companies that go public. Bhabra and Petway (2000) affirm that the investor can find the most detailed information about the issuer through the offering prospectus. Limited information available on the market caused investors tend to rely only on the information included in the prospectus. These conditions encourage and motivate managers to report favorable information by beautifying its financial statements (accounting reports fashioning) through managing the discretionnary accruals to control reported earnings levels (Ducharme et al., 2000). This effort is actually logical given the manager wants to raise the opportunity to get fully subscribed issue.

The fact of the relationship between accounting information and equity prices at the time of bidding led to the assumption that firms have incentives to manipulate performance can increase acceptance by setting the level of reported earnings, or earnings management (Teoh et al., 1997; 1998). They provide empirical evidence that financial engineering has a positive effect on stock prices offered. By fashioning the fundamental accounting performance presented in the offering prospectuse, the manager of issuing companies is likely to create underpricing conditions through the high increase of the stock price in the first trading day on secondary market.

Teoh et al. (1998) believes that the level of discretionary accruals is a manifestation of earnings management that is driven by a lack of systematic information held by the investor as compared to information held by the issuer. The use of accrual is done by shifting future earnings to current earnings and current cost to future costs, so that reported earnings in the IPO period is higher than it should. Teoh et al. (1998), Chambers (1999), and Beneish (2001) in their articles reveal that uncertainty when initial public offerings (IPO) is shown to cause

https://scholarhub.ui.ac.id/icmr/vol4/iss2/4
DOI: 10.21002/icmr.v4i2.3618

opportunistic behavior of managers issuer company triggered by information asymmetry. That is why Teoh et al. (1997 and 1998) conclude that significant effect of financial performance on the underpricing indicates the presence of asymmetric information phenomenon.

Financial performance and long term stock return

Irfani (2011) documented a number of evidences that are widely found by many researchers in various stock exchange in the world that that there is a logical connection between the financial performances and long-term stock performance. It is logical if the good performance for issuers will likely to have an impact on the well growth of share price in the future which leads relatively to the high stock returns in the long run. Jarrell and Darkey (1992) investigated the influence of financials performance on expected return of 576 stocks on the NYSE and other stock exchanges in the United States of America (USA) during the period 1963-1990. They found that EPS, ROA, ROE, sales growth, and cash flow are the most significant influence on stock returns of individual companies in the US.

Some studies also use financial ratios of market price relatively to financial performance as predictors of stock return. Aydogan and Gürsoy (2000) examined empirically PER (price earnings ratio) and PBV (price to book value) as predictors of stock returns in emerging capital markets. They found that the ratios have a significant ability to explain stock returns over time. This finding is consistent with the results of Fama and French (1992) and other studies in the capital markets of developed countries, such as Ferson and Harvey (1997), Fama and French (1998), as well as similar studies in the emerging markets conducted by Bekaert et al. (1997), Claessens et al. (1998), Patel (1998), and Rouwenhorst (1999).

Lewellen (2004) used financial ratios to predict the expected return of shares in the US capital markets. It investigated the influence of book to market ratio on earnings-price ratio of stock returns during the observation period 1946-2000. The result shows that book to market ratio and earnings-price ratio significantly affect stock returns during the observation period 1963-2000. Penman et al. (2007) found empirical test results of the influence of positive book-to-price of the stock return, but if it is associated with leverage, the book-to-price is negatively related to future stock returns.

Eldomiaty and Kamel (2009) tested the contribution of financial performance covering the liquidity, financial leverage, and P/B ratio on the performance of stocks in Egypt stock exchange. Their test results show that P/B ratio is the best representation of the financial performance of a positive effect on stock returns. Aga and Kocaman (2006) examined the relationship between inflation, the index of industrial, PER, and stock returns in Istanbul stock market and find that inflation and the industrial index can not predict stock returns, but PER is able to predict stock returns.

Sivaprasad and Muradoglu (2010) empirically test the relationship between financial leverage and stock returns on utilities and industrial oil and gas industry in the London capital market. They found a significant positive relationship between financial leverage and the expected return on the shares of industrial utilities. But in the stocks of oil and gas industry there is a negative relationship between financial leverage and the expected return. These findings are similar to tests performed by Korteweg (2004), Dimitrov and Jain (2005), and Penman et al. (2007) that indicate a causal relationship between financial leverage and stock returns vary in different industries. The argument is that natural resources based industries are more sensitive to sources of debt financing. Increasing the amount of funding in the form of debt will cause greater financial risk and this condition potentialy decreases the further return.

IPO underpricing and long term stock return

Previous studies on the relationship between underpricing and long-term stock returns found different results. Many researchers find a negative causal relationship of underpricing and

long-term underpricing stock return, but others found the opposite indication. Ritter (1991) studied the stock price from day one trading up to three years after listing date on the exchange and revealed that the price of underpricing stock when IPO in the long-term periods experienced underperformance in the span of one year to three years after the listing date. This might be contributed by two factors: *first*, investors will continue to be overoptimistic on the potential growth of corporate profits, and *second*, the company took advantage of the opportunities that exist in the exchange.

Loughran and Ritter (1995) noted the occurrence of post-IPO underperformance over the past 20 years reveals that investors systematically overoptimistic about the prospects of the new company first issued shares to the public (IPO). Their results have inspired many articles in leading journals to discuss about the dangers of investing in the IPO, as academic research shows that the underperformance in one year or more post-IPO extends to many countries. Even Ritter (1998) documented three empirical patterns of IPO: the short-run underpricing, hot issue markets, and long-run underperformance.

On the other hand, Thomadakis et al. (2010) analyzed the long-term expected return of 254 IPO shares in the Greek capital market during the period 1994-2002 based on the buy-hold abnormal returns (BHAR) and cumulative abnormal returns (CAR) after 36 months of trading on the stock. The results of empirical testing they found are different from the previous evidence internationally. These findings suggest that positive stock return in the long-run post-IPO is not affected by the short-run underpricing due to the large demand for the shares during the period of "hot issue".

Moreover, results of previous studies on the performance of the IPO were controversial. Brav and Gompers (1997) showed that firms that go public do no worse than the measures based on size and book-to-market ratios. Later, they showed that the average value weighted return dramatically reduced the size of the IPO effect on underperformance. Purnanandam and Swaminathan (2002) used a measure of the intrinsic value based on industry-matched price/sales and price/EBITDA of similar companies that have gone public. They found that the company's IPO price was about 50% above the price of comparable company, and this is a very big difference. They also found that initial overpricing (the opposite of underpricing) of the comparison companies can help to predict the existence of conditions for long-term stock underperformance.

Jain and Kini (1994) revealed that higher earnings at the time of the IPO will lead to underperformance in a few years after the offering, despite sales growth and high levels of capital expenditure. Teoh et al. (1997) showed empirical evidence of underperformance in some periods after IPO due to the use of discretionary accruals. Teoh et al. (1998) showed a positive relationship between IPO underpricing, long run underperformance, and discretionary accruals in the fiscal year of IPO. The growing accruals in the IPO period is related to the negative performance in the future.

Research Method

The type of this study is categorized as empirical explanatory research by examining some hypotheses that have been formulated based upon the objectives. The sample of this study includes 43 underpriced stocks taken from the population of 51 IPO stocks on the Indonesia Stock Exchange (IDX) during 2008-2011. The research variables include financial performance, underpricing, and long-term stock return. The financial performances are indicated by four financial ratios, namely debt to equity ratio (DER), return on equity ratio (ROE), price earning ratio (PER), and price to book value ratio (PBV) that are presented in the prospectus of initial public offering (IPO) on the IDX during the period 2008-2010. The underpricing is indicated by the positive initial return in which the offering price is lower than the closing price in the first day trading on the exchange. The long-term stock return is the expected return of the studied stock during 2011 and it is assumed to represent one year to three years after the IPO period of 2008-2010. This study employs a statistical approach by using multiple regression

https://scholarhub.ui.ac.id/icmr/vol4/iss2/4
DOI: 10.21002/icmr.v4i2.3618

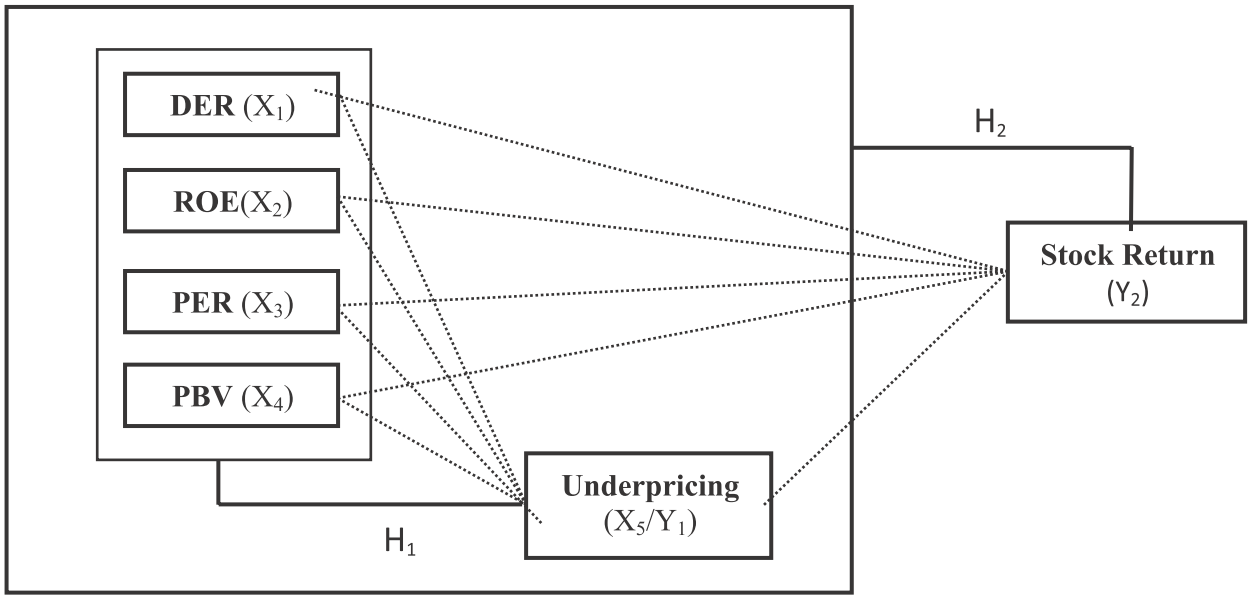

Figure 1. Research model

method to test the hypothesis in order to realize the research objectives.

Research hypotheses

The hypotheses that will be tested are given below:

H_1: Debt to equity ratio (*DER*), return on equity ratio (*ROE*), price earning ratio (*PER*), and price to book value ratio (*PBV*) affect underpricing, or mathematically the model is given below:

$UP = \alpha + \beta DER + \beta ROE + \beta PER + \beta PBV + \varepsilon$

where:

UP : underpricing that is indicated by positive initial return of the IPO stock during 2008-2010.
DER : debt to equity ratio presented in the offering prospectus at the IPO period 2008-2010.
ROE : return on equity ratio presented in the offering prospectus at the IPO period 2008-2010.
PER : price earning ratio presented in the offering prospectus at the IPO period 2008-2010.
PBV : price to book value ratio presented in the offering prospectus at the IPO period 2008-2010.

H_2: Debt to equity ratio (*DER*), return on equity ratio (*ROE*), price earning ratio (*PER*), price to book value ratio (*PBV*), and underpricing influence stock return. Mathematically it can be expressed in a model below:

$SR = \alpha + \beta DER + \beta ROE + \beta PER + \beta PBV + \beta UP + \varepsilon$

where:

SR : stock expected return during 2011.
DER : debt to equity ratio presented in the offering prospectus at the IPO period 2008-2010.
ROE : return on equity ratio presented in the offering prospectus at the IPO period 2008-2010.
PER : price earning ratio presented in the offering prospectus at the IPO period 2008-2010.
PBV : price to book value ratio presented in the offering prospectus at the IPO period 2008-2010.
UP : underpricing that is indicated by positive initial return of the IPO stock during 2008-2010.

The conceptual model can be seen in Figure 1.

Tabel 2. The results of hypothesis 1 testing

$UP = \alpha + \beta DER + \beta ROE + \beta PER + \beta PBV + \varepsilon$

Dependent variable: Underpricing (*UP*)
Independent variables: *DER*, *ROE*, *PER*, and *PBV*

	Model	Constant	Coefficient of Independent variables			
			DER	*ROE*	*PER*	*PBV*
β/ Standardized *β*		-0.106	0.0663	0.749	0.042	-0.032
t - statistic		-1.447	0.600[a]	6.824[a]	0.318	-0.244
p - value (sig.)[b]		0.156	0.552	**0.000***	0.752	0.808
R	0.742					
R^2	0.551					
Adj. R^2	0.504					
F-statistic	11.944[c]					
P-value (sig.)[d]	0.000*					

* significant at α (significancy level) = 1%
a. *t*-table= 2.69228 (α = 1%, one tail, *df* = 38)
b. *p*-value for *t*-statistic (probability value for variable significance)
c. *F*-tabel = 3.56 (α = 1%, *k* = 4, *df* = 38)
d. *P*-value for *F*-statistic (probability value for model significance)

Result and Discussion

The effect of financial performance on underpricing

Result

The testing for hypothesis 1 (H_1) of this study is to examine the effect of debt to equity ratio (*DER*), return on equity ratio (*ROE*), price earning ratio (*PER*), and price to book value ratio (*PBV*) on underpricing. As a consequence of the simultaneous test to predict a dependent variable by regressing all of independent variables at once is the need to previously perform a series of classical assumptions testing. Result of the test done on this study shows that there is no problem of multicollinearity, heteroscedascticity, normality, and autocorrelation. Thus, the hypothesis testing of the model by using mutiple regression is theoretically allowed.

The result shows that this research model is feasible to predict underpricing by using *DER*, *ROE*, *PER*, and *PBV* as predictors which represent financial performance. It is proven by the probability value for model significancy is 0.000 which means significant at α of 1% as well as the *F*-statistic value of 11.944 that is higher than the *F*–table coefficient of 3.56. The result presented in Table 2 also indicates the strong multicorrelation at 0.742 of *R* coefficient among the four independent variables and the underpricing. By the adjusted R^2 coefficient of 0.504 means that 50.4% of underpricing variability is contributed by *DER*, *ROE*, *PER*, and *PBV*. However, the coefficient of standardized beta reveals that only *ROE* has a significant contribution to underpricing.

The most important result of this test is that only *ROE* significantly affects the underpricing at probability value of 0.000 or significancy level (α) of 1%. It is also proven by its *t*-statistic value of 6.8240 which is higher than the *t*-table value of 2.69228. This finding consequently rejects the null hypothesis 1 due to the finding that underpricing is significantly and positively affected by *ROE*. The other independent variables do not affect the underpricing at all, reflected by their insignificant probability values and *t*-statistic value.

Discussion

Although not all financial performance indicators proved to affect the underpricing, at least this study has contributed new evidence related to the testing of the factors to be predictors of underpricing. That is the discovery of empirical evidence that return on equity (*ROE*), which is presented in the prospectus of initial public offering (IPO), proved to have a positive and significant effect on underpricing. This find-

https://scholarhub.ui.ac.id/icmr/vol4/iss2/4
DOI: 10.21002/icmr.v4i2.3618

ing contradicts the research result of Lewellen (2004) on the US capital markets during 1946-2000 that financial performances do not affect underpricing. On the other hand, this evidence affirms the finding of Bhabra and Pettway (2000) that the financial performances presented in the prospectus of issued companies are match measure for IPO's underpricing.

This finding explains that the influence of *ROE* written in the initial offering prospectus on the underpricing is understandable given the limited information held by the investors about the issuer's financial performance. For the less informed investors, *ROE* is considered as the most important indicator of financial performance, because it describes the company's ability to distribute profits to shareholders. For this reason they are willing to pay the high price on the shares issued by companies that have high *ROE*. This is thought to lead to higher stock prices on the first day trading on the exchange rather than the stock price offered on the IPO which is called by underpricing.

The expressions of Teoh et al. (1997; 1998) that the influence of financial performance presented in the prospectus to underpricing indicates the presence of asymmetric information seems to be logical. The limited information available on the market caused investor tends to rely only on the information stated in the prospectus. Bhabra and Petway (2000) affirm that investors can find the most detailed information about the issuer through the offering prospectus. Ducharme et al. (2000) warned that such condition could encourage manager of the issuers to report favorable information though accounting reports fashioning by managing the discretionnary accruals to control the reported earnings levels in order to utilize the opportunity to get fully subscribed issue. It is supported by Teoh et al. (1998) who state that financial engineering has a positive effect on the high increase of stock prices in the first day trading on secondary market and led to create underpricing.

This study agrees with the statement of Teoh et al. (1997; 1998) that the impact of financial performance revealed in the offering prospectus on underpricing indicates the presence of asymmetric information. But the finding of this study does not fully support the statement of Chambers (1999), Ducharme et al. (2000), and Beneish (2001) that the asymmetric information in underpricing phenomenon reflects the opportunistic behavior of manager in managing the earning. This study believes that this condition does not necessarily depict the existence of earnings management by the manager of issuers. The arguments are (1) this study found only one financial ratio that is able to explain the underpricing; (2) referring to Eldomiaty and Kamel (2009), the earnings management is more logically explained by the *PBV* effect on underpricing, but this study did not find evidence of such causal relationship; (3) referring to Teoh et al. (1998), the investigation of earnings management requires a specific study in examining the development of the issuer's financial performance periodically and the impact on daily stock price movements during the hot issues 30 days post-IPO and it still needs to be proven by the positive effect of the financial performance to the long-run stock performance.

The effect of financial performance and underpricing on stock return

Result

The testing for hypothesis 2 (H_2) of this study is to examine the effect of debt to equity ratio (*DER*), return on equity ratio (*ROE*), price earning ratio (*PER*), price to book value ratio (*PBV*), and underpricing (*UP*) on stock return (*SR*). Before performing multiple regressions of all predictors simultaneously to the dependent variable, this study has conducted a series of classical assumptions test and found that the research model applied in this study does not contain any problem of multicollinearity, heteroscedascticity, normality, and autocorrelation. Thus, the hypothesis testing of the model by using mutiple regression is theoretically allowed.

The result shows that this research model is feasible to predict stock return by using *DER*, *ROE*, *PER*, *PBV*, and underpricing (*UP*) as independent variables which represent financial performance. It is proven by the probability

Tabel 3. The results of hypothesis 2 testing

$SR = \alpha + \beta DER + \beta ROE + \beta PER + \beta PBV + \beta UP + \varepsilon$

Dependent variable: Stock return (*SR*)
Independent variables: *DER*, *ROE*, *PER*, *PBV*, and *UP* (Underpricing)

	Model	Constant	Coefficient of Independent Variables				
			DER	*ROE*	*PER*	*PBV*	*UP*
β/ Standardized *β*		-0.178	0.120	-0.011	0.755	0.005	-0.004
t-statistic		-2.627	1.073	-0.071	5.629[a]	0.037	-0.244
p-value (sig.)[b]		0.012	0.290	0.944	**0.000***	0.971	0.981
R	0.751						
R^2	0.564						
Adj. R^2	0.505						
F-statistic	9.568[c]						
P-value (sig.)[d]	0.000*						

* significant at α (significancy level) = 1%
a. *t*-tabel = 2.70722 (α = 1%, one tail, *df* = 37)
b. *p*-value for *t*-statistic (probability value for variable significance)
c. *F*-tabel = 3.86 (α = 1%, *k* = 5, *df* = 37)
d. *P*-value for *F*-statistic (probability value for model significance)

value for model significancy is 0.000 which means significant at α of 1% as well as the *F*-statistic value of 9.568 that is higher than the *F*-table coefficient of 3.86. The result presented in Tabel 3 also indicates the strong multicorrelation at 0.751 of *R* coefficient among the five independent variables and the stock return. By the adjusted R^2 coefficient of 0.505 means that 50.5% of stock return variability is contributed by *DER*, *ROE*, *PER*, *PBV*, and *UP*. However, the coefficient of standardized beta reveals that only *PER* has a signifcant contribution to underpricing, that is 0.755 or 75.5% level of stock return sensitivity toward the variability of *PER*.

The most important result of this test is that only *PER* significantly affects the stock return at probability value of 0.000 or significancy level (α) of 1%. It is also proven by its *t*-statistic value of 5.6290 which is higher than the *t*-table value of 2.70722. This finding consequently rejects the null hypothesis 2 due to the finding that stock return is sigificantly and positively affected by *PER*. While the other independent variables do not affect the underpricing at all that is reflected by their improper probability values and *t*-statistic value.

Discussion

The finding of this study that *PER* significantly affects stock returns is reasonable. Theoretically, the periodical movement of both *PER* and stock return reflect the well growth of share price on the exchange. The relationship of those variables is moderated by the market stock price movement and the fundamental earning stability. If the earning per share of issuers is stable, then the positive growth of the price will lead to the increase of *PER* and the stock return, and vice versa. However, Irfani (2012a) asserts that higher *PER* will lead the stock price further away from its fundamental value or the share price will tend to bubble. The data shows that the average price to earning ratio of the studied stock during 2008-2010 is quite high amounted to 15.28 times. It means that the stock price has been 15.28 times from its fundamental earning per share. Irfani (2012a) reveals that although the average *PER* of shares on the Indonesia Stock Exchange (IDX) has been quite high, but it is still lower than the *PER* of the Indonesian Composite Index on the IDX itself that reached 17.75 times by the end of January 2012. It is higher than the market *PER* of Strait Times Index (Singapore), Dow Jones Industrial Average (USA), Hang Seng Index (Hongkong), and SET50 Index (Thailand) that amounted to respectively 6.93 times, 13.03 times, 9.04 times, and 12.96 times by the same period. Irfani (2012a) explains that high *PER* of the Indonesian Composite Index may be contributed by the increase of the Indonesian rating on long-

https://scholarhub.ui.ac.id/icmr/vol4/iss2/4
DOI: 10.21002/icmr.v4i2.3618

term debt and credit to be investment grade respectively from BB- to BBB- given by Fitch Ratings as of December 15th, 2011 and from Ba1 to Baa3 given by Moody's Investor Service a month later. Accordingly, Irfani (2012a) warns that it potentially trigger the Indonesian economy to be bubble.

The result of this study supports the previous research findings documented by Aydogan and Gürsoy (2000) on emerging capital markets, Lewellen (2004) and Penman (2007) on the US Stock Exchange, Aga and Kocaman (2006) on Istanbul Stock Exchange, and Eldomiaty and Kamel (2009) on Egypt Stock Exchange. They all found the significant effect of *PER* on stock return. However, this finding differs from the research result conducted by Irfani (2011a) on the IDX during 2003-2008 that there was no evidence of the influence of *PER* on stock return.

The absence of *DER* effect on stock returns in this study may be contributed by the less attention of investor toward leverage factor in the issuer's capital structure. Whereas the fact shows that the average debt to equity ratio (*DER*) of all the stocks examined in this study is quite high, amounting to 3.63 which means that the amount of the company's debt is 3.63 times from its equity capital. However, investors seem to consider *PER* rather than *DER* in deciding to buy shares. This finding is not consistent with the results of previous studies conducted by Sivaprasad and Muradoglu (2010) on the London Stock Exchange, Korteweg (2004), Dimitrov and Jain (2005), and Penman et al. (2007) on various emerging stock exchanges.

The lack of *ROE* effect on stock returns in this study provide evidence that the significant influence of *ROE* on underpricing as found in the results of the first hypothesis testing not due to the presence of earnings management by issuers. Jain and Kini (1994) and Teoh et al. (1997; 1998) revealed that the possibility of earnings management before the IPO could result in the occurrence of underpricing in the short-run and stock underperformance in the long-run post IPO. However, it turns out that this study found that *ROE* which affected underpricing in the IPO period of 2008-2010 has no effect anymore on the share expected return during 2011. It means that the effect of *ROE* on underpricing only indicates the presence of asymmetric information but does not reflect the existence of earnings management.

The influence of *ROE* on underpricing in this study indicates asymmetric information in the form of "hidden information". As Irfani (2011d) explains that hidden information might be reflected by the lack of public information for investors. That is why investors tend to invest in the primary market only uses financial performance stated in the prospectus. However, the phenomenon of asymmetric information in the IPO period is not necessarily to be accompanied by "the hidden action" in terms of earnings management (Irfani, 2011e). That is proven in this study by the lack of *ROE* and the underpricing futher effect on stock return in to be underperformance in the long-run.

The evidence that *PBV* does not affect stock return as it found in this study is not consistent with the results of previous studies conducted by Irfani (2011a), Eldomiaty and Kamel (2009), Rouwenhorst (1999), Patel (1998), Claessens et al. (1998), Fama and French (1998), Bekaert et al. (1997), Ferson and Harvey (1997), and Fama and French (1992). They all found evidence that *PBV* has a significant ability to explain stock returns over time in some emerging capital markets. Eldomiaty and Kamel (2009) in his research found the average P/B ratio in Egypt Stock Exchange is very significant in explaining the stock price because it is below 3.33 times as the maximum standard of P/B applied in Egypt. It is equal to the minimum conservative standard of B/P ratio of 30% applied on the New York Stock Exchange (NYSE)[1].

The fact shows that the average *PBV* ratio of 43 stocks under study during the 2008-2010 period amounted to 3.2421 times. Referring to Eldomiaty and Kamel (2009), Irfani (2011a) revealed that the 0.30 or 30% minimum conservative standard of B/P ratio used on the New

[1] The formulation of book-price ratio used on the NYSE is inversely proportional to the formulation of the P/B ratio used in Egypt and the PBV ratio used in Indonesia. If the minimum standards of book-price ratio on the NYSE is 30% then the figure would be equivalent to 3.33 times the maximum standard of P/B ratio and PBV ratio.

York Stock Exchange (NYSE) is equal to 3.33 times (100/30) of *PBV* maximum standard in Indonesia. It is due to the "book-price ratio" or B/P ratio used on the NYSE is inversely proportional to the *PBV* formula used in Indonesia. Given that has not been found a clear standard of maximum *PBV* that is applied in Indonesia, this study will refer to the NYSE and Egypt standard. Based on these references it could be concluded that the average *PBV* of 3.2421 times that is found in this study has been already high due to nearly touch the maximum standard. It means that the market prices of the studied stocks have been quite far running from the fundamental value. Theoretically, as Eldomiaty and Kamel (2009) concluded, *PBV* reflects the shareholder value, higher *PBV* should corresponds with higher stock return. However such evidence did not found in this study. This seems to be a home-work for advanced research in the future to find the clear explanation.

The absence of the underpricing effect on the long-term expected return in this study supports the research results of Irfani (2011a) and Thomadakis et al. (2010). Irfani (2011a) argued that the issuers of the underpriced stocks during IPO still have a chance to perform in managing its finances, so the issuer still have opportunities to generate growth in financial and operational performance in the period after the IPO. Positive growth performance of the company that published widely on the exchange during post-IPO periods will be able to give a positive signal to the market and potentially increase the market price of its stock in the future. Thomadakis et al. (2010) who analyzed the long-term expected return of 254 shares of the IPO in the Greek capital market during the period 1994-2002 after 36 months of trading on the exchange found that underpricing did not related with the long-term expected returns. He argued that the underpricing is expected to continue during the days of "hot issue" in the secondary market but did not affect the long-run return.

Instead, the result of this study does not support previous studies conducted by Ritter (1991), Loughran and Ritter (1995), and Ritter (1998). Ritter (1991) found that the phenomenon of underpricing in the IPO during the period 1975-1984 in the US is a short-term phenomenon that affects the long-term underperformed in the first one to three years post-IPO with varying levels of underperformance. It is due to the investors overoptimistic behavior and the utilization of this condition by issuer as "windows of opportunity". Ritter (1998) documented three empirical patterns of IPO, the short-run underpricing, hot issue markets, and long-run underperformance. Differences in the results of these studies were made possible by the existence of differences in conditions between the United States capital market and capital markets of other countries, including the Greek capital market where Thomadakis et al. (2010) studied and the Indonesian capital market where Irfani (2011a) and this present study were conducted.

Conclusion

This study found evidence that not all indicators of financial performance effect on underpricing as well as long-term stock returns. Only the return on equity (*ROE*), which proved to influence on underpricing and only the price earning ratio (*PER*) is shown to affect the long-term stock return. The effect of *ROE* on underpricing might be a portrait of asymmetric information during the IPO, but it did not necessarily reflect the existence of hidden action in the form of earnings management. It is proven by the absence of further negative impact of both *ROE* and underpricing on the long-term stock return.

The lack of further negative impact of *ROE* on long term stock return does not support the theory of earning management stated by Jain and Kini (1994) and Teoh et al. (1997; 1998). The absence of *DER* effect on underpricing as well stock returns might be contributed by the less attention of investor toward leverage factor in the issuer's capital. The lack of underpricing effect on long-term stock return supports the research results of Irfani (2011a) and Thomadakis et al. (2010), but contradicts the previous findings of Ritter (1991), Loughran and Ritter (1995), and Ritter (1998).

https://scholarhub.ui.ac.id/icmr/vol4/iss2/4
DOI: 10.21002/icmr.v4i2.3618

The significant effect of *PER* on stock returns is understandable because it is in line with the theoretical paradigm and it supports the findings of Aydogan and Gürsoy (2000), Lewellen (2004), Penman (2007), Aga and Kocaman (2006), and Eldomiaty and Kamel (2009). But it contradicts the study result of Irfani (2011a). The absence of *PBV* effect on stock return is still questionable and it needs to be further studied. The fact shows that the average *PBV* of stocks that are studied is considered to be high which means that the stock price has been quite away from its fundamental value.

Reference

Aga, M. and Kocaman, B. (2006), An Empirical Investigation of the Relationship between Inflation, P/E Ratios and Stock Price Behaviors using a New Series Called Index-20 for Istanbul Stock Exchange, *International Research Journal of Finance and Economics*, 6.

Aggarwal, R.L. and Hernandez, F. (1993), The Aftermarket Performance of Initial Public Offerings in Latin America, *Financial Management*, 20, 42-53.

_____, Liu, C., and Rhee, S.G. (2002), Investor Demand for IPOs and Aftermarket Performance: Evidence from Hongkong Stock Market, *Working Paper*.

Aydoğan, K. and Gürsoy, G. (2000), *P/E and Price-to-Book Ratios as Predictors of Stock Returns in Emerging Equity Markets*, Bilkent University.

Beatty, R.P. and Ritter, J.R. (1986), Investment Banking, Reputation, and the Underpricing of Initial Public Offerings, *Journal of Financial Economics*, 15, 213-232.

Bekaert, G., Erb, C.B., Harvey, C.R., and Viskanta, T.E. (1997), The Cross-Sectional Determinants of Emerging Market Equity Returns, in Carman, P. (Ed.), *Quantitative Investing for the Global Markets***,** Glenlake.

_____ (2000), Foreign Speculators and Emerging Equity Markets, *Journal of Finance*, 55, 565-614.

Beneish, M. (2001), Earnings Management: A Perspective, *Working Paper*.

Benveniste, L.M. and Spindt, P.A. (1989), How Investment Bankers Determine the Offer Price and Allocation of New Issues, *Journal of Financial Economics,* 24, 343-361.

Bhabra, H.S. and Pettway, R.H. (2000), *IPO Prospectus Information and Subsequent Performance*, October 12.

Brav, A. and Gompers, P.A. (1997), Myth or Reality? The Long-Run Under-performance of Initial Public Offerings: Evidence from Venture Capital and Nonventure Capital-backed Companies, *Journal of Finance*, 52, 1791-1822.

_____ and Gompers, P.A. (1998), Is the Abnormal Return Following Equity Issuances Anomalous?, *Harvard University Working Paper*, December.

Bundoo, S.K. (2007), An Analysis Of IPOs Underpricing in Mauritius, *African Journal of Accounting, Economics, Finance and Banking Research*, 1(1).

Carter, R.B. and Manaster, S. (1990), Initial Public Offerings and Underwriter Reputation, *Journal of Finance*, 45, 1045-1067.

Chambers, D.J. (1999), Earnings Management and Capital Market Misallocation, *Working Paper*, December.

Chambers, D. and Dimson, E. (2008), IPO Underpricing Over the Very Long Run, *Working Paper,* December.

Claessens, S., Dasgupta, S., and Glen, J. (1995), Return Behaviour in Emerging Stock Markets, *The World Bank Economic Review*, 9(1), 131-151.

_____ (1998), The Cross-section of Stock Returns: Evidence from the Emerging Markets*, Emerging Markets Review,* Winter, 4-13.

Dimitrov, V. and Jain, P.C. (2005), *The Value Relevance of Changes in Financial Leverage*, http://ssrn.com/abstract= 708281.

DuCharme, L.L., Malatesta, P.H., and Sefeik, S.E. (2004), Earning Management, Stock Issues, and Shareholder Lawsuit, *Journal of Accounting and Economics*, 71, 27-49.

Eldomiaty, T.I. and Kamel, H. (2009), Shareholder Value and the Articulation of P/B and Stock Return in Egypt's CASE50 Index, *International Research Journal of Finance and Economics*, 23.

Fama, E.F. (1991), Efficient Capital Markets II, *Journal of Finance*, 46(5), 1575-1617.

Fama, E.F. and French, K.R. (1992), The Cross-section of Expected Stock Returns, *Journal of Finance*, 47(2), 427–465.

_____ and French, K.R. (1998), Value versus Growth: The International Evidence, *Journal of Finance*, 53, 1975-1979.

_____ and Kenneth R. French (2003), New Lists: Fundamentals and Survival Rates, *CRSP Working Paper*, 530, 03-15.

Ferson, W.E. and Harvey, C.R. (1997), Fundamental Determinants of National Equity Market Returns: A Perspective on Conditional Asset Pricing, *Journal of Banking & Finance*, 21(11-12), 1625-1665.

Grinblatt, M. and Hwang, C.Y. (1989), Signaling and the Pricing of Unseasoned New Issues, *Journal of Finance*, 44, 393-420.

Hakiman (2005), Model Penentuan Harga IPO di Bursa Efek Jakarta dengan Menggunakan Metode Real Option, *Dissertation,* Universitas Padjadjaran, Bandung.

Ibbotson, R.G. (1975), Price Performance of Common Stock New Issues, *Journal of Financial Economics*, 2(3), 235-272.

Indonesia Stock Exchange (2009, 2010, 2011, 2012), *IDX-Activity,* Data Center, www.idx.co.id.

Irfani, A.S. (2009a), Pengujian *Asymmetric Information* pada Saham-saham IPO 2003-2008 di Bursa Efek Indonesia, *Jurnal Ekonomi Perusahaan*, 16(1).

_____ (2009b), Pengaruh Kurs IDR/USD terhadap Indeks Harga Saham Gabungan, Indeks Harga Saham Individual, dan Return Saham di Bursa Efek Indonesia, *Jurnal Ekonomi Perusahaan*, 16(2).

_____ (2011a), Kajian Kepemilikan Investor Asing dan *Return* Saham dalam Fenomena *Asymmetric Information* dan Fenomena Underpricing di Bursa Efek Indonesia, *Dissertation,* Universitas Pancasila.

_____ (2011b), Pengaruh Kepemilikan Asing dan Kinerja Fundamental terhadap Imbal Hasil Saham dalam Fenomena *Underpricing* di Bursa Efek Indonesia*, Pusat Penelitian dan Pengembangan Ekonomi, FE, Universitas Pancasila*.

_____ (2011c), Pengaruh Imbal Hasil Pasar dan Nilai Tukar Mata Uang Asing terhadap Kepemilikan Asing dan Implikasinya pada Imbal Hasil Saham di Bursa Efek Indonesia, *Pusat Penelitian dan Pengembangan Ekonomi, FE, Universitas Pancasila*.

_____ (2011d), Initial Public Offering (IPO), *Harian Ekonomi NERACA,* 2, Jakarta: 25th October.

_____ (2011e), Bursa dan Informasi, *Harian Ekonomi NERACA,* 2, Jakarta: 3rd November.

_____ (2012a), Investment Grade dan Potensi Bubble, *Harian Ekonomi NERACA,* 1, Jakarta: 25th January.

_____ (2012b), Implikasi Kurs dan Indeks Saham pada Return Saham Tahun 2011 di Bursa Efek Indonesia*, Pusat Penelitian dan Pengembangan Ekonomi, FE, Universitas Pancasila*.

Ismail, K., Abidin, Z., and Zainuddin, N. (1993), Performance of New Stock Issues on the KLSE, *Capital Market Review*, 1(1), 81-95.

Jain, B.A. and Kini, O. (1994), The Post-issue Operating Performance of IPO Firms, *Journal of Finance*, December.

https://scholarhub.ui.ac.id/icmr/vol4/iss2/4
DOI: 10.21002/icmr.v4i2.3618

Jarrell, G.A. and Darkey, F.C. (1992), The Longer-Term Relation Between Accounting Performance and Stock Returns, *Bradley Policy Research Center*, University of Rochester, New York, 14627.

Jegadeesh, N., Weinstein, M. and Welch, I. (1993), An Empirical Investigation of IPO Returns and Subsequent Equity Offerings, *Journal of Financial Economics*, 34(2), 153-175.

Knopf, J.D. and Teall, J.L. (1999), The IPO Effect and Measurement Of Risk, *Journal of Financial and Strategic Decisions*, 12(2).

Korteweg, A. (2004), *Financial Leverage and Expected Stock Returns: Evidence from Pure Exchange Offers*, http://ssrn.com/abstract=597922.

Lewellen, J. (2004), Predicting Returns with Financial Ratios, *Journal of Financial Economics*, 74, 209–235.

Loughran, T., Ritter, J.R., and Rydqvist, K. (1994), Initial Public Offerings: International Insights, *Pacific-Basin Finance Journal*, 2, 165-199.

_____ (1995), The New Issues Puzzle, *Journal of Finance*, 50(1), 23-51.

_____ (2004), Why has IPO Underpricing Changed Over Time?, *Financial Management*, 33, 5-37.

Lowry, M. and Schwert, G.W. (2002), IPO Market Cycles: Bubbles or Sequential Learning?, *Journal of Finance*, 57.

_____, Officer, M.S., and Schwert, G.W. (2006), The Variability of IPO Initial Returns, *Working Paper*, California Los Angeles.

McDonald, J. and Fisher, A.K. (1972), New Issue Stock Price Behavior, *Journal of Finance,* 27(1), 97-102.

McGuiness, P. (1992), An Examination of the Underpricing of Initial Public Offerings in Hong Kong: 1980-1990, *Journal of Business Finance and Accounting*, 19(2), 165-186.

Michaely, R. and Shaw, W.H. (1994), The Pricing of Initial Public Offerings: Tests of Adverse-Selection and Signaling Theories, *Review of Financial Studies,* 7(2), 279-319.

Muscarella, C.J. and Vetsuypens, M.R. (1989a), A Simple Test of Baron's Model of IPO Pricing, *Journal of Financial Economics*, 24(1), 125-135.

Patel, S.A. (1998), Cross-sectional Variation in Emerging Markets Equity Returns; January 1988-March 1997, *Emerging Markets Quarterly*, 2, 57-70.

Pearl, J. (2000), *Causality: Models, Reasoning, and Inference,* Cambridge: Cambridge University Press.

Penman S.H., Richardson, S.A., and Tuna I. (2007), The Book-to-Price Effect in Stock Returns: Accounting for Leverage, *Journal of Accounting Research*, 45(2), 427-468.

Phylaktis, K. and Ravazzolo, F. (2001), *Stock Prices and Exchange Rate Dynamics*.

Portes, R. and Rey, H. (1999), The Determinants of Cross-border Equity Flows, *NBER Working Papers,* 7336.

Purnanandam, A.K. and Swaminathan, B. (2002), Are IPOs Underpriced?, *Johnson Graduate School of Management Working Paper*.

Ritter, J.R. (1984), Signaling and the Valuation of Unseasoned New Issues: A Comment, *Journal of Finance*, 39(4), 1231-1237.

_____ (1998), Initial Public Offerings, in Logue, D. and Seward, J. (Eds.), *Contemporary Finance Digest*, 2(1), 5-30.

Rock, K. (1986), Why New Issues are Underpriced, *Journal of Financial Economics*, 15, 187-212.

Rouwenhorst, K.G. (1999), Local Return Factors and Turnover in Emerging Stock Markets, *Journal of Finance*, 54, 1439-1464.

Sivaprasad, S. and Muradoglu, Y.G. (2010), Using Leverage as a Risk Factor in Explaining the Cross Section of Stock Returns, *University of Westminster, Working Paper*.

Sufar, S.B. (1987), Performance of New Issues - The Malaysian Case, Understanding the Behavioral Patterns of Stock Prices, *Leeds Publications*, 164-171.

Taufil, M.K.N. (2007), The Long Run Performance of Initial Public Offerings in Malaysia, *Paper presented in the MFA 9th Conference*, 12th-13th June, KL.

Teoh, S.H., Wong, T.J., and Rao, G.R. (1997), Are Accruals During an Initial Public Offering Opportunistic?, *Working Paper*.

_____, Welch, I., and Wong, T.J. (1998), Earnings Management and the Long-Run Market Performance of Initial Public Offerings, *The Journal of Finance,* 53(6).

Thomadakis, S., Nounis, C.P., and Gounopoulos, D. (2010), Long Term Performance of Greek IPOs, *European Financial Management Journal*.

Tinic, S.M. (1988), Anatomy of Initial Public Offerings of Common Stock, *Journal of Finance*, 43(4), 789-822.

Welch, I. (1989), Seasoned Offerings, Imitation Costs, and the Under pricing of Initial Public Offerings, *Journal of Finance*, 44.

https://scholarhub.ui.ac.id/icmr/vol4/iss2/4
DOI: 10.21002/icmr.v4i2.3618