Journal of Financial Economics 114 (2014) 36–53

Contents lists available at ScienceDirect

Journal of Financial Economics

journal homepage: www.elsevier.com/locate/jfec

Price informativeness and stock return synchronicity: Evidence from the pricing of seasoned equity offerings ☆

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ARTICLE INFO

Article history:
Received 13 October 2012
Received in revised form
13 December 2013
Accepted 6 January 2014
Available online 10 July 2014

JEL classification:
G14
G24
G32

Keywords:
Seasoned equity offerings
Stock return synchronicity
Price informativeness

ABSTRACT

We investigate what stock return synchronicity reflects in terms of price informativeness by examining its effect on the pricing of seasoned equity offerings (SEOs). Based on 5,087 SEOs from 1984 to 2007, we find a significantly negative relation between stock return synchronicity (estimated as the logit transformation of the *R*-squared statistic from a two-factor regression) and SEO discounts (the percentage differences between pre-offer day closing prices and offer prices). The negative relation is strongest when there is no analyst coverage, and it declines as analyst coverage increases. This shows that stock price is more informative when stock return synchronicity is higher and also that information asymmetry can be mitigated by analyst coverage. We further decompose stock return synchronicity into the market comovement and industry comovement components and find that both components are equally important in affecting SEO discounts.

1. Introduction

Stock return synchronicity measures the degree to which individual stocks comove with the market, reflecting the amount of systematic volatility relative to idiosyncratic volatility (or total volatility). In empirical analyses, stock return synchronicity is typically measured by the *R*-square derived from the standard market model. While extensive studies have been written on stock return synchronicity, whether a higher *R*-square reflects a higher or lower level of informativeness of stock prices remains a point of debate. Morck, Yeung, and Yu (2000), Wurgler (2000), Durnev, Morck, and Yeung (2004) suggest that companies have higher stock return synchronicity because less firm-specific information is being incorporated into the stock prices. Therefore, stock prices for companies with a higher *R*-square are less informative. However, Kelly (2005) and Dasgupta, Gan, and Gao (2010) argue that a rapid incorporation of information into the stock prices reduces idiosyncratic return volatility and raises the *R*-square. As a result, higher stock return synchronicity reflects a higher level of price informativeness. Chan, Hameed, and Kang (2013) find a positive relation between stock return synchronicity and liquidity, arguing that stocks with less firm-specific information face less information asymmetry.

We provide empirical evidence for what stock return synchronicity reflects by examining its effect on the pricing of seasoned equity offerings (SEOs). The literature shows the discounting of SEO prices, and the offering price is generally below the closing market price on the day

☆ We thank Tom Chemmanur, Shane Corwin, Tim Loughran, Ronald Masulis, Jay Ritter, three anonymous referees, and the seminar participants at Cheung Kong Business School, the Guanghua School of Management at Peking University, and the 2012 Asian Finance Association Meetings (Taipei) for their useful comments.

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http://dx.doi.org/10.1016/j.jfineco.2014.07.002
0304-405X/

before issue. A common explanation for SEO discounts is the existence of information asymmetry between company managers and outside investors. As outside investors are relatively uninformed, they demand compensation to protect themselves against the adverse information that managers could possess. As such, when a company issues new shares in the SEO, it has to price them at a discount to compensate uninformed investors for the adverse information risk. Many previous studies employ proxies for information asymmetry, including stock return volatility (Altinkilic and Hansen, 2003; Corwin, 2003), dispersion in analysts' earnings forecasts (Marquardt and Wiedman, 1998), and the quality of a firm's accounting information (Lee and Masulis, 2009) and have found support for the adverse information argument related to SEO discounts.

Given that SEO discount is positively related to the degree of information asymmetry, an examination of how the discount is affected by stock return synchronicity can provide direct evidence for what stock return synchronicity reflects in terms of price informativeness. If an increase in stock return synchronicity reflects less informative stock prices, it is accompanied by a higher SEO discount due to a higher degree of information asymmetry. Otherwise, if an increase in stock return synchronicity reflects that more information has been incorporated into the stock price, the improvement in the information environment lowers the SEO discount. Because an SEO discount is directly observable, our investigation of the relation between stock return synchronicity and price informativeness is an improvement over previous related studies that adopt indirectly observed metrics such as the proximity of Tobin's marginal q to its optimal level (Durnev, Morck, and Yeung, 2004) or the association between current returns and future earnings (Durnev, Morck, Yeung, and Zarowin, 2003).

We conduct our empirical analysis based on 5,087 SEOs on the NYSE, Amex, and NASDAQ between 1984 and 2007. For each offering, we calculate the SEO discounts, measured as the percentage difference between pre-offer day closing prices and offer prices. We follow the previous studies by introducing a number of explanatory variables for SEO discounts. Stock return synchronicity is estimated as the logit transformation of the R-squared statistic from a two-factor regression, which reflects the proportion of variation in the return of an individual stock, explained by the market and industry return. The results show that, after controlling for other explanatory variables, the magnitude of the SEO discount is negatively related to stock return synchronicity. In addition, we decompose stock return synchronicity into two components: comovement with the market and with the industry. We find that both components are equally important in explaining SEO discounts and the stock price should be more informative for an issuing firm with a higher market comovement or a higher industry comovement.

Among the explanatory variables we control for, a key variable is analyst coverage. Bowen, Chen, and Cheng (2008) show that analyst coverage can reduce information asymmetry among investors and lower the cost of raising equity capital. Our empirical analysis, therefore, allows for the interaction of stock return synchronicity and analyst coverage in explaining SEO discounts. Empirical analysis shows that the negative relation between SEO discount and stock return synchronicity is strongest for firms without analyst coverage and diminishes across firms as analyst coverage increases. This suggests that, when there is no or little analyst coverage, investors are more concerned about the information asymmetry of a company with lower stock return synchronicity. However, when a company is covered by more analysts, investors are less prone to the adverse selection risk and the effect of stock return synchronicity on SEO discounts weakens.

This paper makes a contribution to the literature on both SEO discounts and stock return synchronicity. It is the first study to show that higher stock return synchronicity reflects a better information environment at the time of the SEO, thus mitigating the extent of information asymmetry and lowering the discount when selling the newly issued shares. Furthermore, we provide direct evidence suggesting that an increase in stock return synchronicity reflects a higher, not lower, level of stock price informativeness.

The rest of the paper is organized as follows. Section 2 reviews the related literature on SEO discounts, stock return synchronicity, and analyst activities. Section 3 explains the data and reports the preliminary results. Section 4 presents the main empirical results, and Section 5 concludes the paper.

2. Literature review

In this section, we summarize the reasons for the SEO discounts and discuss the different views on what stock return synchronicity reflects in terms of price informativeness. We also explain why it is imperative to control for analyst activity in examining the effect of stock return synchronicity on SEO discounts.

2.1. SEO discounts

Extensive evidence exists for SEO price discounting.[1] In fact, various studies show that SEO discounts have increased over time. For example, Smith (1977) reports an average SEO discount of only 0.5% from 1971 to 1975, and Loderer, Sheehan, and Kadlec (1991) find a 1.4% discount from 1980 to 1984 and Mola and Loughran (2004) find a 3.0% discount in the period 1986–1999.[2]

A number of explanations have been offered for SEO discounts. One common explanation is the adverse selection hypothesis, which states that SEOs convey negative information to the market (Myers and Majluf, 1984; Miller

[1] This paper and most of the previous studies about SEOs focus on SEO discounts, which are the differences between pre-offer-day closing prices and offer prices. Altinkilic and Hansen (2003) also investigate SEO underpricing, which is the difference between offer-day closing prices and offer prices.

[2] Mola and Loughran (2004) argue that there are two main reasons for the average SEO discount to increase over time. First, firms issuing seasoned equity in the later period are subject to a higher level of uncertainty than issuers in earlier periods. Second, investment banks have increased power in extracting rents from issuers through the discounting of offer prices.