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IPO underpricing: What about the shipping sector?☆

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ABSTRACT

This paper looks at IPO underpricing in the shipping sector. This sector is of interest as it has unique characteristics, among them pro-cyclicality, long history, and ownership concentration. Moreover, the average level of underpricing in shipping is reported to be substantially lower than the overall level. The effects of shipping-specific factors on underpricing are exhaustively studied in this paper for the first time. In connection with shipping characteristics, we hypothesize several underpricing theories to be relevant explanations of underpricing in the shipping sector. More specifically, we investigate an investor sentiment theory as shipping is highly exposed to business cycles; an information asymmetry argument as there seems to be low information asymmetry in shipping; and two ownership and control theories, namely, the Brennan and Franks managerial control theory and the Stoughton and Zechner agency cost theory, due to the highly-concentrated ownership prevalent in the shipping sector. In addition, we consider a partial adjustment theory that has gained substantial empirical support in the literature. In order to test the aforementioned theories and shipping-specific factors, we perform a cross-sectional regression analysis using a sample of 60 shipping IPOs from four different stock exchanges. The partial adjustment theory and the Stoughton and Zechner agency cost theory are supported by the results, while the investor sentiment theory, information asymmetry argument, and the Brennan and Franks managerial control theory are rejected. Importantly, the Stoughton and Zechner theory and downward price revisions prevalent among shipping firms can partially explain the low underpricing "puzzle" in shipping. The robustness of the obtained empirical results is verified using a control sample of non-shipping IPOs.

1. Introduction

This paper investigates initial public offerings (IPOs) in shipping firms. We choose to focus on this particular sector because of its unique characteristics and low level of underpricing compared to other sectors. More specifically, shipping firms tend to have a highly-concentrated ownership structure. Shipping is also a sector that is more exposed to business cycles. Further, several studies suggest that the shipping sector exhibits low information asymmetry. The aforementioned characteristics have been hypothesized to be important for shipping firms' IPO decisions. We therefore advocate a sector-level approach for explaining IPO performance as it may give us further insights into a well-known "puzzle" of IPO underpricing.

The existing IPO literature concentrates on an overall IPO market and does not fully control for firm-specific characteristics. As firm characteristics may differ across industries, studies at the sector level should be encouraged. While shipping IPOs have been investigated before (Grammenos and Marcoulis, 1996; Merikas et al., 2009), this paper considers additional shipping-

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specific factors and underpricing theories. We suggest to look at characteristics that make the shipping sector distinct from other sectors, such as pro-cyclicality, highly-concentrated ownership, high tangibility, and long history.

Typically, shipping firms are family-owned or have a highly-concentrated ownership structure which may positively impact underpricing according to the managerial control theory (Brennan and Franks, 1997). On the contrary, the agency cost theory by Stoughton and Zechner (1998) suggests a negative relationship between family ownership and underpricing as family firms are less exposed to agency problems. Neither of these control theories has gained sufficient empirical support, hence, it is difficult to claim that one theory is superior to another one, and further testing is required.

Merikas et al. (2009) argue that the shipping sector exhibits lower information asymmetry due to high tangibility and long history. As implied by the information asymmetry argument, underpricing should be lower for shipping IPOs.

Another distinct feature of the shipping industry is its exposure to business cycles. As reported by Ritter (1984), IPO underpricing tends to be higher during the "hot" periods and respectively lower during the "cold" periods in the market. Such herding behavior of investors in the "hot" IPO markets, which results in first-day positive abnormal returns, is consistent with investor sentiment theory of underpricing. Furthermore, pro-cyclicality might be able to resolve the long-term IPO underperformance "puzzle". As investors are overly optimistic about "hot" IPOs, presumed underpricing could simply arise from bubble-pricing, while long-term underperformance could be regarded as mean reversion of a price to a fundamental value. Thus, the effect of business cycles on IPO performance in the shipping sector is expected to be significant.

This paper, therefore, hypothesizes that the aforementioned unique characteristics related to shipping may shed light on the sources of IPO underpricing. In addition to the investor sentiment theory, information asymmetry argument, and two ownership and control theories, we also test a partial adjustment theory by Benveniste and Spindt (1989). This theory has gained considerable empirical support in the literature and seems to be an adequate explanation of underpricing from a theoretical viewpoint.

In this paper, we investigate different IPO underpricing explanations using a sample of 60 shipping IPOs from four different stock exchanges, associated with a developed shipping sector, namely, NYSE, NASDAQ, London Stock Exchange (LSE), and Oslo Stock Exchange (OSE). We find an average underpricing of 2.8% in our sample of shipping IPOs, which is rather low compared to non-shipping IPOs. The low level of underpricing in shipping is partially explained by the results of this paper. Conforming to our expectations, the partial adjustment theory is able to explain most of the variation in shipping IPO underpricing. More specifically, the prevalence of negative price revisions in our sample results in low underpricing. Moreover, our results reveal that the Stoughton and Zechner agency cost theory can partially explain low underpricing in shipping. This result clearly undermines the Brennan and Franks managerial control theory. The sample in our analysis also renders the investor sentiment theory and information asymmetry argument insignificant. Among shipping-specific factors, we find post-IPO ownership concentration and pre-IPO family ownership to be significant. The robustness of the results obtained for a sample of shipping IPOs is verified by constructing a control sample of non-shipping IPOs and testing for significant differences between the two samples.

The results of this paper can be useful for managers and investors in their decision-making. Depending on the validity of the various theories, what constitutes the optimal strategy for both managers and investors will vary. From a manager's perspective, for instance, if the investor sentiment theory is supported, it would be beneficial to time the IPO or to utilize so-called "windows of opportunity" in the "hot" markets where investors are overly-optimistic and are willing to pay more for the stock. From investors' perspective, for instance, if the Stoughton and Zechner agency cost theory is true, an optimal strategy would be to invest in non-family IPOs as they are underpriced more compared to family IPOs, and then short-sell IPO stock and realize profits from underpricing. In short, there are many proposed theories of IPO underpricing. As some of these theories are mutually exclusive and provide opposite predictions, more empirical research is needed on IPO underpricing to provide clarity and enable decision-makers to make more informed decisions.

The main contribution of this paper is empirical testing of sector-relevant IPO underpricing theories and factors, in contrast to other studies that focus only on several leading theories. The findings of this paper can be also relevant outside shipping, for example, for other sectors that exhibit similar characteristics. The energy sector and industrial sector share several characteristics with the shipping sector, such as sensitivity to business cycles, highly-concentrated ownership, high tangibility, and low total asset turnover. Therefore, IPO underpricing in those sectors might be driven by the same factors as in shipping. However, in the information technology and telecommunications sectors, which exhibit opposite characteristics, we should expect underpricing theories with mirrored predictions to be relevant, as well as high underpricing on average. Hence, the results of this paper have the potential to be applicable to other sectors and, therefore, are of essential interest to a broader audience.

2. Related literature

The initial public offering (IPO) is the public sale of a firm's stock for the first time. There are a number of reasons why firms choose to go public, such as capital needs, publicity, potential M&As, and diversification. However, it is agreed in the literature that the primary reason for going public is the need to raise capital for the firm's investment or production activities. Therefore, it is natural to assume that an optimal pricing strategy for a firm would be to set the highest possible price based on the market valuation of stock.

This is not what we observe, however, as IPO firms tend to underprice stock, i.e., the offer price is lower than the fair value of the stock. The argument regarding firms' inability to incorporate public and private information into the offer price seems