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Firms' stock market flotation: Effects on inventory policy

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ABSTRACT

In this article, we argue that firms that are floated on the stock market are subject to close scrutiny by financial markets, which hinder them from implementing the type of empire-building overinvestment policies that may generate inventory accumulation (the signaling role of inventories). Also, listed firms have more resource availability to finance their investment projects and do not need to use inventories as a tool for dealing with their liquidity requirements (the liquidity role). Taking into account both these roles—*signaling and liquidity*—our main hypothesis is that after a firm is listed on the stock market, there is a decline in its inventory level as well as in its inventory variability, especially in those firms with larger liquidity needs (i.e., small firms and/or firms with financial difficulties). We further argue that the reductions in inventories will be larger for equity issues than for debt issues.

Using a sample of US manufacturing firms for the period 1994–2004, we find evidence that conforms to our theoretical predictions, suggesting a natural stabilizing mechanism that may smooth the economic cycle.

1. Introduction

There are different reasons that justify inventory investments. Focusing on the demand side, firms accumulate inventories as a buffer mechanism for attending unexpected demand and avoid stock outs. Under a supply-side perspective, inventories have different roles: They are indicators of operational mismanagement (Krautter, 1999), of future growth expectations (Lai, 2006), or credible signals that the firm is willing to compete fiercely in the future because it has enough slack to sell goods at a lower future price—*signaling role*—(Rotemberg and Saloner, 1989). But also, inventories allow companies to obtain liquidity in the short term—*liquidity role*—(Guariglia, 2000). For example, firms can obtain funds in case of a liquidity shock like an increase in lending rates by selling inventories at a price that is slightly lower than market value, for elastic-demand goods. In this way, inventories may be used as a substitute mechanism for financial instruments.

In this paper, we advance in this direction and we study the effect that firms' initial public offerings (IPOs) have on their inventory policies. To the best of our knowledge, this is an unexplored topic. The literature has mainly focused on the effect of an IPO in the overall firm's investment, ignoring the specificities of inventories. We believe that this is a relevant question to study, given the increased number of firms that float on the stock market, especially during expansive periods (Ritter and Welch, 2002). This, in turn, may affect inventory investment and, in the end, the overall economic cycle. Remarkably, inventories are responsible for up to 87% of the total peak-to-trough movement in GNP (Blinder and Maccini, 1991). The main conclusion of this paper is that there is a reduction in the inventory level after an IPO, suggesting a stabilizing mechanism that may smooth the overall economic cycle, since IPOs are pro-cyclical phenomena.

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Different effects are at work when financing issues and inventory investments are associated. First, inventories have a clear signaling role (Lai, 2006). According to different authors (Krautter, 1999; Lai, 2006), inventory accumulation is a signal of mismanagement. This means that those firms that are weakly monitored tend to accumulate more inventories. Tribó (2007) showed that the presence of specialists in monitoring, such as banks, reduces inventory levels as well as inventory variability. Under this view, a discount price should be observed in those firms that accumulate a large amount of inventories (Lai, 2006). Notably, financial markets are a powerful controlling mechanism and, thus, may preclude listed firms from accumulating a disproportionate amount of inventories and change them abruptly.

Second, after an IPO, there is a reduction in the cost of capital, which facilitates inventory investment (Lai, 2005). However, in the opposite direction, listed firms are less liquidity constrained and eventual liquidity shocks have lower effects on inventories (Guariglia, 2000), given that firms may use financial instruments to smooth these shocks. In this line, Kashyap et al. (1994) showed that liquidity measures are significant in explaining the inventory variation of firms that have difficulties in issuing bonds (without bond rating) but liquidity is not significant for explaining inventory variation for those firms that can issue bonds easily (with bond rating).

Finally, another strand of the literature connects inventories with overinvestment practices that are implemented when a firm has a specific ownership structure. Gomes and Novaes (2005) showed that in more diluted ownership structures (i.e., when there is a large amount of blockholders), overinvestment is less likely. This is so because the higher the number of shareholders, the more likely to have conflicting views on the type of investments to undertake. This prevents overinvestment actions like those that lead to intensive inventory accumulation. According to this view, ownership dilution, which is a common feature after an IPO, should hinder inventory accumulation.

Considering the foregoing arguments, we expect that, after an IPO, a firm should lower its inventory levels. This is the main claim of the paper and is consistent with the findings of Chen et al. (2005): a 2% inventory reduction per year in the US between 1981 and 2000. Higher number of firms listed on the stock market during this period,[2] jointly with the improvements in operational technology explaining the *great moderation* phenomenon in the US (Blanchard and Simon, 2000), will generate reductions in inventory level.

We address three extensions in this paper. First, we distinguish between final-good and raw-material inventories and hypothesize that inventory reduction in recently listed firms should be more pronounced for raw-material inventories. We argue that these are liquid-type inventories (less specific) and it is easier to sell them in the factor market. Hence, after an IPO, these more liquid inventories that a firm had relied on to raise liquidity will be the first ones to be substituted by financial instruments as liquidity-provider mechanisms. Second, we analyze different companies' characteristics and expect that firms with large liquidity needs or poorly monitored (i.e., small firms and/or with liquidity constraints) will benefit more from being listed on the stock market and their inventory reduction should be more pronounced. Last, looking beyond a firm's flotation, we study the effect of subsequent share issues by listed firms on inventory policy. We expect successive reductions in inventory levels, but on a smaller scale compared with the corresponding after the IPO. This logic also applies to debt issues, where we expect even lower effects. We test these theoretical contentions using a panel data sample of US manufacturing firms obtained from COMPUSTAT database for the period 1994–2004. Our results fully confirm our theory.

The remainder of the paper is organized as follows. Section 2 develops the theoretical underpinnings and presents the hypotheses to be tested. In Section 3, the empirical analysis is carried out. The paper concludes with some final remarks.

2. Hypotheses to contrast

We rely on the supply-side role of inventories as indicators, and marginally as liquidity providers for elastic-demand goods[3] to build up our theoretical framework, which connects changes in ownership structure with inventory policy.

Concerning the signaling role of inventories, different issues should be taken into account. First, inventories may signal an operational mismanagement (Krautter, 1999; Lai, 2006). Second, they may be connected to good firm's futures sales perspectives (Lai, 2006). Last, firms may want to obtain a high issuing price by signaling themselves as a strong competitor. A way to achieve this is, for example, by accumulating a large amount of inventories in the period previous to the IPO. Hendel (1996) argued the importance of having inventories to compete in prices during downturns as a way to prevent a firm's financial distress. These three arguments suggest that, after the IPO, operational managers are likely to face pressures from financial markets to reduce inventory levels. First, there is an increase in the management control due to the close scrutiny from the investors that trade shares in financial markets, discouraging inventory overinvestment. Second, once a firm is listed on the stock market, market prices are the "natural" signaling mechanisms for future sales perspectives that wrap up all relevant information like that of inventory accumulation. Last, if a firm had overinvested in the period previous to an IPO as a way to signal itself as a strong competitor, it would have to

[2] A measure of this trend is that the share of the IPOs as percentage of the overall market value has increased from less than 3% in 1990 to a peak of 13% in 2000 (Rousseau, 2006).

[3] If demand is quite elastic, with a slight reduction in prices it is possible to increase substantial liquidity by selling inventories.