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Fire sale acquisitions: Myth vs. reality

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ABSTRACT

We provide empirical evidence on the conjecture that in economic crises, firms could be forced to sell at deep discounts, or fire sale prices. Using the conventional stock price near the announcement date, we find instead distressed firms in crisis periods receive a 30% higher offer premium than distressed firms in normal periods; they also receive a 34% higher premium than non-distressed firms in crisis periods. Acquirers also do not gain, at announcement and over the long-term. Acquirers, however, may perceive they realize fire sale discounts if the reference is the targets' highest price in the previous 52 weeks.

1. Introduction

The role of fire sales in financial crises is unknown. Although the notion is often alluded to in research papers (Diamond and Rajan, 2009a, 2009b) and popular press, it is not clear whether the notion of distressed firms in crisis periods selling at deep discounts is generally true empirically. Given the current global financial crisis, this issue is especially timely and important. Additionally, loss of value to the shareholders of selling firms is among the costs attributed to financial crises. We address the issue by examining mergers and acquisitions transactions involving selling firms in weakened bargaining positions (i.e. under distress and/or in periods of economic crisis). We are specifically interested in potential costs to the shareholders of the various types of selling firms associated with these fire sales and the role that financial crises play in deepening fire sale discounts. We additionally evaluate potential fire sale bargains from the perspective of the acquirers, in both the short- and long-term. This paper reports the results of a large scale formal investigation of whether or not the fire sale conjecture has empirical support.

Firms facing distress may be compelled to sell assets at a deep discount if they are in a position of diminished bargaining power. For instance, Koutsomanoli-Filippaki and Mamatzakis (2009) find that as firms become closer to default they become less efficient. This may lead acquirers to pay less. The discount, if it exists, represents a cost of distress to the selling firm. This cost could also be seen as an indirect bankruptcy cost if the sale is involuntary. Shleifer and Vishny (1992) theoretically identify a set of conditions necessary for a fire sale to occur. The paper predicts that assets which are not easily used in other industries will be the most likely targets for fire sale discounts. In general, they suggest that illiquidity is the source of fire sale discounts. They also note that a fire sale is even more likely in a period of general distress in the industry as this will lead to fewer high value purchasers. Wang et al. (2009) find that firms that are less liquid and less profitable suffer more in a stock crash. In the current global crisis, these factors are likely to be present. Also, it becomes less likely that a target firm will be able to attract the bid they desire. This is due to the fact that potential bidders may also be financially compromised, or become more averse to the risks of acquisitions, such as costs and the impact of financing the acquisitions.[1] Under the condition that qualified related acquirers may not participate, the firm may be forced to sell to a lower value user when the target's industry is distressed, leading to fire sale prices and losses to the target. Additionally, distress is more prevalent during financial crises, which leads to a greater number of targets with reduced bargaining power in these periods.[2]

Pulvino (1998) tests this theory using data on the sale of aircrafts. He finds that when an airline is in distress, the sale of aircrafts takes place at fire sale discounts. The discount is deepened when the airline industry is also in distress. A sale is also more likely to be to a non-airline during industry distress which leads

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[1] Acquiring targets in the same industry during a period of industry downturn would be equivalent to making a double down bet, which would call for less risk aversion when the prevailing mood is the opposite.

[2] Bruche and Gonzalez-Aguado (2010) note that recessions lead to an increase in defaulting firms.

to the assets being deployed by lower value users. The combination of liquidity issues and distress is likely needed for fire sales to occur. Pulvino (1998) does not present evidence of fire sales from the bidders' viewpoint. In order for a fire sale to exist from the bidders' perspective, the perceived fire sale discount would need to result in a transfer of wealth from the target to the acquirer.

Coval and Stafford (2007) show that distressed mutual funds that face liquidity crunches are forced to sell positions at fire sale discounts. The authors focus on stocks with a high proportion of institutional ownership and then examine the price impact to these stocks when an institution is faced with a liquidity crunch. However, compared to illiquid real assets in distressed firms, mutual funds may choose to sell the most liquid financial assets. Eckbo and Thorburn (2008) examine automatic bankruptcy auctions in Sweden and find evidence of fire sale discounts when the auction involves partial liquidation, but find no evidence of fire sales in cases of going concern liquidations. Chong et al. (2006) show that forced bank mergers in Malaysia are associated with poor performance and that acquirers gain at the expense of targets. Although the results do not depend on distress or crisis periods, the results are consistent with the notion of reduced bargaining power that gives the acquirer the upper hand. Ellul et al. (2009) find that when distressed insurance companies sell downgraded bonds they are forced to do so at fire sale discounts and the purchasers of these bonds gain.

Fire sale research is also related to the literature on asset sales and divestments. Lang et al. (1995) argue that asset sales are likely to be associated with distressed firms seeking access to otherwise difficult to obtain financing. This is known as the financing hypothesis and is related to the concept of fire sales. A related motivation for partial sales may be a potential agency problem in which the manager seeks to retain control of the firm.[3] If the managers believe that their firms can survive and they can hold on to their jobs, they may be more willing to accept a fire sale price in divesting a certain business segment (a partial acquisition to the acquirer) in order to obtain enough funding to survive. However, it is also possible that distressed firms will sell off the most valuable piece of their business in order to survive (i.e. the crown jewel gambit) which may lead to premiums rather than discounts.

We offer empirical evidence as to the existence and cost of fire sales. We examine the cost for target firms, represented by the premium for acquisitions relative to benchmarks. We also evaluate the potential gain/loss to acquirers by purchasing assets at perceived discounted prices at the announcement date, and over three years, as perceived discounted prices may still not represent a gain to acquirers if the merger does not lead to the expected synergies.

Overall, we find no evidence of fire sales in the conventional sense. Since fire sales are usually attributed to firm distress and firm liquidity issues, when we concentrate on these circumstances, we do not find that they are empirically related to reduced prices or transfer of wealth to acquiring firms using traditional premium proxies. In fact, we document higher premiums for distressed firms using five different proxies for distress including performance measures and measures from bankruptcy prediction models. Announcement returns are also not in support of fire sales. Distressed targets see more positive announcement returns than non-distressed targets, consistent with higher premiums. Also, acquirers of distressed firms see negative announcement returns. We do not generally find that acquirers benefit from the acquisition of distressed firms as the long-term returns, an ex post-test of a bargain buy, are typically negative and significant. Additionally, we document higher premiums during crisis periods, which we proxy using recessions and banking crises. We do not generally find that the acquirers benefit from crisis acquisitions in terms of long-term returns.

There may be a behavioral explanation for the higher premiums observed in the acquisition of distressed firms and acquisitions taking place during crisis periods. Baker et al. (2009) note the widespread use of the 52-week high in merger valuation. Using this reference point, we find a perceived fire sale discount for both distressed firms and crisis period acquisitions in terms of price paid. We find the magnitude of traditional premium paid is positively related to perceived discount based on the 52-week high, lending support to the notion that acquirers do use the previous high as a reference for fundamental value. Equivalently, they regard current price as temporarily depressed and believe it will be corrected later. However, we find that the perceived discount in the case of firm distress does not lead to superior long-term acquirer performance.

The remainder of the paper is as follows. In Section 2, we discuss related literature and develop hypotheses for empirical tests. In Section 3, we describe the data and document trends in merger activity including firms under distress or when the economy is in crisis. In Section 4, we discuss the methodology used in testing our hypotheses. In Section 5, we report the empirical results and offer analysis. In Section 6, we conclude.

2. Background and predictions

2.1. Other related research

Our paper is also related to studies of the role of market conditions in merger characteristics and performance. The role of market valuation in mergers and acquisitions has been well explored. Rhodes-Kropf et al. (2005) empirically test the impact of misvaluation on the merger market. They show mergers are more likely to occur during times of overvaluation, and that both firms involved are usually overvalued. This would suggest decreased merger activity during times of financial crises. This lack of activity, and lack of buying firms, could lead to a fire sale in the mergers market.

Bouwman et al. (2009) examine the role of market valuation in merger quality. The authors focus on the difference between mergers taking place in times of high valuation and those taking place during times of low valuation. They find that for high valuation periods, acquirers see higher announcement returns but lower long run returns than would be seen in periods of low valuation. They conclude this is not the result of overpayment by acquirers as they document a lower (higher) premium paid on average during high (low) value periods. These results suggest acquirers may perceive higher (lower) fundamental values for targets during lower (higher) valuation periods, which is consistent with our results using traditional premium proxies.

2.2. Premiums

A key component to the analysis of fire sales is the measurement of premium. Whether or not fire sales that transfer wealth from the targets to the acquirers ultimately exist depends on subsequent returns. At the point of sale, however, the ex ante perception of the fire sale discount (premium) depends on the eyes of the beholder. Although the customary reference point for premium is the current stock price, however, if the acquirer views the current price as temporarily depressed, it may use a higher reference as the target's fundamental value. We compare these two reference points empirically.

[3] Papers documenting positive announcement returns following asset sales include: John and Ofek (1995), Berger and Ofek (1999), and Dittmar and Shivdasani (2003). This positive reaction may be related to greater corporate focus or the market's reaction to the firm averting liquidation, although continuation may lead to less value than a 100% sale.