

THE ROLE OF VENTURE CAPITALISTS IN BANKRUPTCY

*Khaled Abdou, Pennsylvania State University, Berks Campus, P.O. Box 7009, Tulpehocken Road,
Reading, PA 19610, 610-396-6173, kka1@psu.edu*

*Oscar Varela, Department of Economics and Finance, University of New Orleans, 2000 Lakeshore Drive,
New Orleans, LA 70148, 504-280-6905, ovarela@uno.edu*

ABSTRACT

The paper investigates the effect of monitoring techniques and the characteristics of venture capitalists in bankrupt venture capital-backed public companies. First, this research fills the gap in existing academic literature that investigates the relationship between venture capitalists and their portfolio companies *after* an IPO. Second, since the venture capital industry is unique, the determinants of bankruptcy are expected to be different from those brought to light in previous literature. And finally, the paper studies the role of venture capitalists' monitoring techniques to determine the success of such companies after an IPO.

INTRODUCTION

The paper investigates the role of venture capitalists when a venture-backed company that has already gone public is failing. The main questions that this study raises are divided into two categories. One section of the research examines the different characteristics of venture capitalists (VCs) in the case of bankruptcy; questions addressed include whether less experienced VCs have the same effect on their portfolio companies as seasoned VCs and how the current holdings of portfolio companies affect VCs' decisions about whether to rush toward liquidation¹ and move on to a new portfolio company or to attempt a turn-around. The second section focuses on the ability to estimate the probability that a public venture-backed company will go bankrupt. This chapter investigates the determinants in this situation and whether they are the same as have been described by the previous literature in the case of manufacturing non-VC-backed companies.

There are two points that support the motivation for this research. First, venture capitalists are required to hold a specific percentage of their companies after the initial public offering. VCs cannot sell their ownership at the point of an IPO due to the lock-up period (Gompers and Lerner, 1999). Hence, it is in the interest of VCs to monitor the company and its market price for a fair amount of time after the IPO. Previous literature does not reveal how VCs behind failed companies behave after the lock-up period. Second, earlier research has investigated the determinants of success for venture-backed companies, and this research has been conducted *at* the time of an IPO. The situation is expected to be different *after* the IPO. In addition, previous literature investigated the determinants of bankruptcy for non-venture-backed, mostly non-high-tech firms. Assuming that the "one-size-fits-all" approach does not hold, the key determinants of bankruptcy for the sample collected should be different from for the sample(s) investigated previously in other studies.

¹ Throughout this paper, liquidation can also be referred to as reorganization, bankruptcy or declaration as defunct.

METHODOLOGY

Logit Analysis

The first set concerning the likelihood of success or failure are tested by the following logistic model:

$$Success = \alpha + \beta_1^+ PER + \beta_2^+ RNDS + \beta_3^{-/+} RECENT + \beta_4^+ AGE + \beta_5^{Insig} DE + \beta_6 MB + \beta_7 IND + \beta_8 SALES + \varepsilon$$

Where:

- SUCCESS is a dummy variable equal to “one” if the portfolio company did not file for bankruptcy, and “zero” otherwise.
 - PER is the percentage of the fund that is invested in the portfolio company.
 - RNDS is the average number of rounds that a venture capitalist invested in the portfolio company.
 - RECENT refers to the number of recent successes of the venture capital fund within the last two years (excluding the year of delisting). The number of recent successes is measured by the number of IPOs in which the VC firm took part. Again, many funds invest in one company, while RECENT is a ratio that is specific to each fund. To overcome this problem, the same technique is used here. RECMN is the mean of RECENT of funds j and k that invest in company i, and RECMD is the median of RECENT of funds j and k that invest in company i.
 - AGE refers to the average age of the venture capital firms that invest in company i. This is used as a proxy for the level of experience of a VC. AGE is calculated as the number of years between the firm’s inception and the delisting year of the portfolio company.
 - DE is the portfolio company’s ratio of debt to equity.
 - MB is the portfolio company’s ratio of market to book.
 - IND is a dummy variable equal to “one” if the company is high-tech and “zero” otherwise.
 - SALES is the portfolio company’s sales.
- ε is the random error term.

The LOGIT model measures the probability of SUCCESS of a public VC-backed company. The model proposes that the commitment of a VC’s proxied by PER held by the fund in the portfolio company has a positive relation with success. Similarly, the experience of a VC’s proxied by AGE has a positive relation with success. In addition, the model infers that financial leverage (DE) will not be a significant factor for bankruptcy. In addition, a high number of recent successes by the VC (RECENT) will be negatively related to the success of portfolio firms. On the other hand, if RECENT is a proxy for reputation, a positive relation is established with success, and, finally, it is expected that the closer the monitoring of a VC’s proxied RNDS, the higher the probability of success.

Multiple Regression Analysis

The second set concerning the duration of portfolio companies is tested by the following OLS model:

$$DURATION = \alpha + \beta_1^+ PER + \beta_2^{Insig} LNRNDS + \beta_3^{-/+} LNRECENT + \beta_4^+ LNAGE + \beta_5^{Insig} DE + \beta_6 MB + \beta_7 IND + \beta_8 LNSALES + \varepsilon$$

Where:

- DURATION is the number of years of the life of a bankrupt portfolio company. It is calculated as the year of delisting minus the year of IPO.
- LNRNDS is the Ln of the RNDS variable.
- LNRECENT is the Ln of the RECENT variable. LNRECMN and LNRECMD variables

follow the same application.

- LNAGE is the Ln of the AGE variable.
- LNSALES is the Ln of the SALES variable.

The regression model measures the effect of a VC's monitoring techniques and of the characteristics of the VC and the company on the duration of the life of a bankrupt VC-backed company. Most of the arguments discussed above apply here. The model expects that the higher the commitment (PER) of the VC in a portfolio company, the longer its life. On the other hand, the number of recent successes (RECENT) is expected to have either a negative or a positive relation with the duration (DURATION) of the life of a bankrupt company. Moreover, the experience of a VC (proxied by AGE) should have a positive effect on the life of a bankrupt company. Finally, closer monitoring (RNDS) is expected to have an insignificant effect on extending the life of a bankrupt company.

RESULTS AND CONCLUSIONS

The first section reveals that VC monitoring of portfolio companies has a positive effect on the success of those companies. Moreover, a low amount of sales is the main predictor of bankruptcy. This is consistent with previous research concluding that VC-backed companies generate more revenue than non-VC-backed companies. As expected, financial leverage is not a significant factor in predicting bankruptcy for VC-backed portfolio companies.

The second section researches the partial effect of VCs on extending the life of their portfolio companies, which means that VCs can only affect their portfolio companies for a limited amount of time. This effect depends on the reputation, experience and behavior of VCs. The results show that more experienced VCs and VCs whose portfolio companies have not gone public during the previous two years tend to extend the life of their bankrupt portfolio companies. A higher level of monitoring does not have a significant effect on extending the life of a failed portfolio companies. The high-tech industry has a negative effect on the duration of life, while as expected, financial leverage is insignificant in affecting the life of bankrupt portfolio companies.

This study confirms that VCs continue to have an effect on the companies in which they have invested, even after they go public. In addition, the study specifies the key factors that affect the success of VC-backed companies and the effect on the life of bankrupt portfolio companies.

REFERENCES

Available upon request