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Stairway to heaven or gateway to hell? A competing risks analysis of delistings from Hong Kong's Growth Enterprise Market☆

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ABSTRACT

A competing risks hazard model is employed to examine the reasons for Hong Kong's Growth Enterprise Market (GEM) companies transferring to the Main Board (MB) in the period 2000–2012. In our sample during the period 21 companies or 15% of the original stock moved up to the MB. The modal life expectancy of a GEM company was about eight years. Companies that did not move up to the MB were at a small risk of delisting due to long term suspension or liquidation, but the great majority just remained where they were. Regarding the factors behind transfer to the MB, of the 129 companies listed on the GEM in the period, we find that companies with higher net profit and greater product market power were more likely to graduate in the following year. However, companies with lower growth, higher financial risk and those audited by more prestigious partnerships were more likely to delay transfer to the MB by another year and hence more likely to liquidate. We also find evidence that VC backing is economically important: it increases the hazard of promotion six-fold. Thus, a listing on the GEM in this period was, for a significant minority of companies a 'stairway to heaven' and for much smaller proportion a 'gateway to hell'.

1. Introduction

A large body of literature suggests that small, young and particularly high tech firms wishing to grow are constrained by imperfections in debt markets (Cressy, 2011). As a result firms with fast growth potential tend to raise equity via venture capital in the first instance or go directly to the secondary markets set up for this purpose: in the US, the Nasdaq; in the UK, the AIM; in France, the CAC; in Hong Kong, the GEM; and so on. Expectation is that, after having reached a sufficient level of operations and a sufficiently low level of risk, these firms may graduate to one of the Main markets to gain access to a wider range of financial instruments at premium rates. A growing body of literature, however, shows that a significant proportion of IPOs fail to do this and either linger on in the secondary markets or end their lives in bankruptcy. The reasons for failure in Western markets, particularly the US and Canada, are now quite well documented: being too young, small, or financially risky, having insufficient growth, poor advisers, and facing too much competition, may all lead firms down the slippery slope to market delisting and liquidation. (See the literature summary in Appendix 1 to the paper). The alternative and possibly more important outcome, namely promotion from the secondary to the primary market, has, however, scarcely been studied,[1] and the reasons behind such promotions are thus unknown. In theory, these two risks are in competition with one another: failure to transfer up ('heaven') may result ultimately in transfer down ('hell'). We believe therefore that it is crucially important to know the reasons behind success or failure of quoted secondary market firms because the large firms these promotions facilitate produce a high percentage of a country's output, profits and jobs.[2]

The present paper helps plug this gap in the literature by explaining some of the empirical drivers of transfers to the Main from the secondary markets. It focuses uniquely on data from Hong Kong's GEM (Growth Enterprise Market) and its Main Board, over the period 1999–2012. We study this market because of its geographical distinctiveness (Eastern rather than Western — the focus of all other studies of delistings), also because no study of delisting from this market has been done to date and finally, as a prelude to an analysis of the Mainland China markets of Shanghai and Shenzen. Bearing in mind the competing nature of the two identified risks we use, again uniquely in the literature, a competing hazards (CH) model, as our primary tool of analysis. This, like the well known Cox proportional hazards model, allows for

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[1] See Carpentier and Suret (2011) for an exception.

[2] For European data on the relative contribution of small and large firms, see the various reports of the European Observatory for SMEs (see EIASM, 1996), and for the US, reports of the Small Business Administration (SBA, 2012).

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the history of company performance and current characteristics to influence its current hazard rate but allows also for the fact that occurrence of one of the two outcomes may pre-empt the other.[3]

So, what are our main findings? We show that several of the factors explaining failure identified in the literature operate in reverse to explain the hazard of transfer from GEM to the Main board. Thus, higher profits, higher sales growth and lower financial risk, long run competitive advantage and a good macro environment all conspire to elevate firms to the Main board and to propel it away from bankruptcy and liquidation. VC backing enhances the hazard of promotion some six-fold in a given year but is mitigated by the firm capturing long run competitive advantage. These results we believe are both interesting and add significantly to the literature. The results we establish, moreover, accord with intuition and common sense and may serve as input to policy decisions on the Hong Kong Stock Exchange.

The rest of the paper is organised as follows. In Section 2 we provide a literature review and in Section 3 the hypotheses for subsequent testing. This is followed in Section 4 by a description of the institutional context of the study. Section 5 introduces the data and provides some descriptive statistics. Section 6 explains the competing hazards model and is followed by Section 7 which reports the empirical findings. A final section reviews the outcomes and concludes.

2. Literature review

In an early study, Hensler, Rutherford, and Springer (1997) found that survival rates on the NASDAQ in the period 1975–84 were increasing in the age and size of company at IPO but also in IPO initial (first day) returns and in the extent of insider ownership. The role of insider ownership in survival may be related to the incentives to management performance provided by a larger stake in the company.[4] Jain and Kini (1999), studying US SDC data, found that survival (defined as non-delisting) varied with calendar time and was higher for those with more inside ownership, better pre-IPO operating performance and more prestigious investment bankers. In a subsequent paper (Jain & Kini, 2000) they also showed that VC involvement in the IPO process increased the survival rates of IPOs. Interestingly, VC-backed IPOs also carried out significantly more investment in R&D and relied on more prestigious analysts and investment bankers by comparison with their non-VC backed counterparts. It is, they argue, the VC's ability to influence management with regard to the strategic resource allocation that enhances their investee companies post-IPO survival rates. In other words, VC strategic technological advice is important in company survival.

Fama and French (2001) in a study of US Nasdaq companies also found that the number of new listings varied over time, sharply increasing from 156 during the period 1973–1979 to 549 during the period 1980–2001. However, in a later paper, Fama and French (2004) examined the impact of newly listed firms' characteristics on their survival and disappearance in mergers, versus their delisting for poor performance. The two main characteristics affecting delistings were low profitability and low company growth rates. In a subsequent study, Fama and French (2004) concluded that the decline in cost of equity encouraged small firms to go public and this in turn explained the higher failure rates observed.

Bhabra and Pettway (2003) found that, as compared with subsequent equity offerings or acquisitions by the firm, the quality of information provided in the IPO prospectus had a fundamental role in predicting the survival and failure of IPOs. However they also noted that the value of this information declines rapidly with time following IPO: more recent information is more valuable. Kooli and Meknassi (2007) investigated the impact of issuing characteristics and the information contained in the prospectus on the probability that an IPO firm survives in the long run. Using an Accelerated Failure Time (AFT) model on the survival profile of new issues on the US SDC in the period 1985–2005, they, like Jain and Kini (1999), concluded that the probability of survival increased with VC involvement and with the degree of underpricing. Moreover, they found that a larger size of IPO was associated with a lower delisting risk. Finally, a positive impact of underwriter reputation on the probability of survival could be identified. Jain and Kini (2008) investigated the effect of the strategic investment choices at the time of the IPO on operating performance and the likelihood of failure for the newly public US companies. They found a positive relation between the changes in post-issue operating performance, the extent of diversification and industry-adjusted capital expenditure intensity. Interestingly, they also found that companies with high commitment to R&D and pre-issue diversified product lines were more likely to survive. This fact seems to adumbrate the impact of VCs strategic investment in R&D discussed above. van der Goot, van Giersbergen, and Botman (2009) analysed the survival determinants of Internet companies doing IPOs on the US NASDAQ during the period 1996–2001. Using a Cox proportional hazard model, they found that the average number of risk factors mentioned in the IPO prospectus (e.g. credit risk, competition risk and industry risk), for the internet IPOs was four times higher than non-internet IPOs. Moreover, the survival of Internet IPOs was smaller (2.4 years) compared with the non-Internet IPOs (10 years). In a related study, Bhattacharya, Demers, and Joos (2010) found accounting information could be used to predict the failure rate of Internet IPOs. Demers and Joos (2007) analysed the main determinants of IPO failure in the US over the period 1980–2000 and estimated an out-of-sample IPOs failure forecasting model with data on both the characteristics of the intermediaries and accounting information. They found that forecasts were negatively associated with one-year post-IPO abnormal returns. There were also significant differences between non-tech and high-tech IPOs in the US with these differences driven by investments in intangible assets, operating performance and financial leverage. They concluded that IPO long-run return anomalies may persist over significant periods of time.

Cumming and Johan (2010) model VC exit decisions in terms of the marginal benefits and costs of exit over time. They then use hazard rate analysis to examine the factors determining the time to exit for 557 Canadian and 1607 US VC-backed firms over the period 1991–2004. They allow for three different types of exit for the VC: IPO, private (acquisitions, secondary sales and buybacks), and write-offs. Investment duration is measured by the number of days from the first VC investment to the VC exit (date of IPO, private exit or write-off). They find that expansion stage investments and large deals are exited more quickly than the rest and that corporate VC investments are of much shorter duration than private independent VCs. Higher previous stock market returns just before exit also enhance the chances of immediate profitable exit as marginal returns to exiting increase relative to marginal costs. They also identify country factors in the duration of VC investments, with Canadian VCs exiting through IPO significantly faster than US VCs. Finally, and interestingly for our analysis to follow, the hazard of a writeoff is higher for smaller investments and lower when market conditions are good.[5]

Johan (2010), in a paper with particular relevance to our study, examines various measures of IPO performance (short and long run returns, trading volume and time to IPO after announcement) for a sample of firms on the Toronto Stock Exchange's junior and senior

[3] Needless to say, a company that is bankrupt in the current year cannot transfer to the Main board in the coming year.

[4] Cumming and Mackintosh (2003) (CM)investigate the determinants of full and partial exits by VCs from their investee companies across the US and Canada. CM argue that a VC will exit from an investment at the time when the expected present discounted value of marginal return to effort of the VC in the business is less than the corresponding cost of effort. This may imply for some VCs and companies the relinquishing of only part of their holdings because future benefits may be larger if some foothold in the company is maintained (VC holdings as a real option).

[5] These results were most marked for American rather than Canadian VCs, where significant effects were less in evidence.

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