

**The relation between distress-risk, B/M and return.
Is it consistent with rational pricing?**

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(B.Comm. Hons.)

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Declaration and list of papers published

I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution.

Kaylene Zaretsky

The following conference papers have been published from the thesis:

‘Investors pay for exposure to distress-risk’, Australasian Banking and Finance Conference, Sydney, December 2003.

‘Does B/M increase as financial distress increases?’, Australasian Banking and Finance Conference, Sydney, December 2002.

‘An investigation into the relationship between size, B/M, return premiums and distress’, Midwest Finance Association Conference, Chicago, March 2002.

‘An investigation into the relationship between financial distress and asset returns using financial distress indicators’, AAANZ Doctoral Colloquium, Auckland, June 2001.

Abstract

Fama and French (1995, 1996) argue that the high-minus-low (HML) book-to-market (B/M) factor in their 1993 three-factor model is a proxy for a distress-risk return premium and that the model is consistent with rational pricing. Alternative views are that the HML premium is caused by irrational behaviour or market inefficiencies. Dichev (1998) finds that high distress-risk firms have low, not high, B/M and earn low returns. He also finds a systematic relation between the distress-risk characteristic and return, independent of the B/M characteristic. The effect of differences in the methodology used by Fama and French (1995) and Dichev (1998) has not been examined. In addition, there is no evidence of whether a distress-risk return premium is important in describing returns.

Examination of the characteristics and returns of sorted distress-risk portfolios shows that most high distress-risk, positive book-equity NYSE-AMEX firms do have high B/M. However, for both the NYSE-AMEX and NASDAQ, small firms with high distress-risk have low B/M ratios. A positive relation between distress-risk and return is not found for either NYSE-AMEX or NASDAQ firms. A distress-minus-solvent (DMS) return premium constructed using Fama and French (1993) methodology is negative and significant. Regression results show that both the HML and the DMS factors are important in describing the time-series of returns. However, the HML factor is of only marginal importance when examining sorted distress-risk portfolio returns. In addition, the HML coefficients are related to the B/M characteristic, rather than distress-risk, when both sorted distress-risk and characteristic-balanced portfolio returns are examined.

The combined evidence suggests that HML cannot be interpreted as a return premium related to financial distress. However, a systematic relation does exist between distress-risk and return. The evidence supports a market inefficiency or irrational

behaviour, rather than a risk based explanation of asset returns. Investors pay too much for financially distressed firms and subsequently earn low returns.

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