

[Home](#) > [Journal of Economics and Finance](#) > Article

Predicting corporate financial distress: Reflections on choice-based sample bias

Published: June 2002

Volume 26, pages 184–199, (2002) [Cite this article](#)

[Journal of Economics and Finance](#)

[Aims and scope](#) →[Submit manuscript](#) →Harlan D. Platt¹ & Marjorie B. Platt¹ 2115 Accesses  129 Citations [Explore all metrics](#) →

Abstract

Financial distress precedes bankruptcy. Most financial distress models actually rely on bankruptcy data, which is easier to obtain. We obtained a dataset of financially distressed but not yet bankrupt companies supplying a major auto manufacturer. An early warning model successfully discriminated between these distressed companies and a second group of similar but healthy companies. Previous researchers argue the matched-sample design, on which some earlier models were built, causes bias. To test for bias, the dataset was partitioned into smaller samples that approach equal groupings. We statistically confirm the presence of a bias and describe its impact on estimated classification rates.

Access this article

Log in via an institution →

Buy article PDF 39,95 €

Price includes VAT (Poland)

Instant access to the full article PDF.

Rent this article via [DeepDyve](#) ↗

[Institutional subscriptions](#) →

Similar content being viewed by others



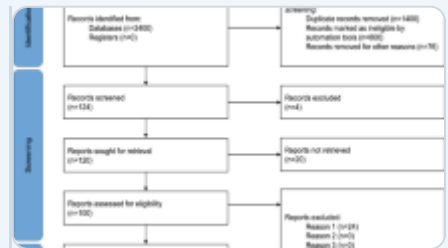
Artificial intelligence in Finance: a comprehensive review through bibliometric and content analysis

Article | Open access
20 January 2024



Artificial Intelligence and Fraud Detection

Chapter | © 2022



Machine learning-driven credit risk: a systemic review

Article | Open access
16 July 2022

References

Altman, E. I. 1968. "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy." *Journal of Finance* 23: 589–609.

[Article](#) [Google Scholar](#)

Altman, E. I., and R. Haldeman. 1995. "Corporate Credit Scoring Models: Approaches and Tests for Successful Implementation." *Journal of Commercial*

Altman, E. I., G. Marco, and F. Varetto. 1994. "Corporate Distress Diagnosis: Comparisons Using Linear Discriminant Analysis and Neural Networks (the Italian Experience)." *Journal of Banking and Finance* 18: 505-529.

[Article](#) [Google Scholar](#)

Asquith P., R. Gertner and D. Scharfstein. 1994. "Anatomy of Financial Distress: An Examination of Junk-Bond Issuers." *Quarterly Journal of Economics* 109: 1189-1222.

[Article](#) [Google Scholar](#)

Barniv, R., A. Agarwal, and R. Leach. 1997. "Predicting the Outcome Following Bankruptcy Filing: A Three-Stage Classification Using Neural Networks." *International Journal of Intelligent Systems in Accounting, Finance, and Management* 6: 177-194.

[Article](#) [Google Scholar](#)

Beaver, W. 1966. "Financial Ratios as Predictors of Failures." *Journal of Accounting Research* 4(Supplement): 71-102.

[Article](#) [Google Scholar](#)

Bibeault, D. B. 1998. *Corporate Turnaround: How Managers Turn Losers into Winners*. New York: McGraw Hill.

[Google Scholar](#)

Boritz, E. J., and D. Kennery. 1995. "Effectiveness of Neural Network Types for Prediction of Business Failure." *Expert Systems with Applications* 9: 503-512.

[Article](#) [Google Scholar](#)

Brown, D. T., C. M. James, and R. M. Mooradian. 1992. "The Information Content of Distressed Restructurings Involving Public and Private Debt Claims." *Journal of Financial Economics* 33: 92-118.

[Google Scholar](#)

Dixon, W. J., and F. J. Massey, Jr. 1969. *Introduction to Statistical Analysis*, 3rd edition. New York: McGraw Hill.

[Google Scholar](#)

Frydman, H., E. I. Altman, and D. Kao. 1985. "Introducing Recursive Partitioning for Financial Classification: The Case of Financial Distress." *Journal of Finance* 60: 269-291.

[Article](#) [Google Scholar](#)

Gambola, M. J., M. E. Haskins, J. E. Ketz, and D. D. Williams. 1987. "Cash Flow in Bankruptcy Prediction." *Financial Management* 16: 55-65.

[Article](#) [Google Scholar](#)

Gilson, S. C. 1989. "Management Turnover and Financial Distress." *Journal of Financial Economics* 25: 241-262.

[Article](#) [Google Scholar](#)

Gilson, S. C., K. John, and L. H. P. Lang 1990. "Troubled Debt Restructurings: An Empirical Study of Private Reorganization of Firms in Default." *Journal of Financial Economics* 27: 315-353.

[Article](#) [Google Scholar](#)

Guffey, D., and W. Moore. 1991. "Direct Bankruptcy Costs: Evidence from the Trucking Industry." *Financial Review* 26: 223-225.

[Article](#) [Google Scholar](#)

Hill, N. T., S. E. Perry, and S. Andes. 1996. "Evaluating Firms in Financial Distress: An Event History Analysis." *Journal of Applied Business Research* 12(3): 60-71.

[Google Scholar](#)

Hofer, C. W. 1980. "Turnaround Strategies." *Journal of Business Strategy* 1: 19-31.

[Google Scholar](#)

John, K. L., H. D. Lang and J. Netter. 1992. "The Voluntary Restructuring of Large Firms in Response to Performance Decline." *Journal of Finance* 47: 891-917.

[Article](#) [Google Scholar](#)

Lau, A. H. 1987. "A Five-State Financial Distress Prediction Model." *Journal of Accounting Research* 25: 127-138.

[Article](#) [Google Scholar](#)

Lin, P., L. Ko, and E. Blocher. 1999. "Prediction of Corporate Financial Distress: An Application of the Composite Rule Induction System." Presented at the 1999 Annual Meetings of the American Accounting Association, San Diego.

Lo, A. 1986. "Logit versus Discriminant Analysis: A Specification Test and Application to Corporate Bankruptcy." *Journal of Econometrics* 31: 151-178.

[Article](#) [Google Scholar](#)

Manski, C. F., and S. R. Lerman. 1977. "The Estimation of Choice Probabilities from Choice Based Samples." *Econometrica* 45: 1977-1988.

[Article](#) [Google Scholar](#)

McFadden, D. 1984. "Econometric Analysis of Qualitative Response Models." In *Handbook of Econometrics, Vol. 2*, edited by Z. Griliches and M. Intriligator. Amsterdam: North Holland.

[Google Scholar](#)

Mensah, Y. M. 1984. "An Examination of the Stationary of Multivariate Bankruptcy Prediction Models: A Methodological Study." *Journal of Accounting Research* 22: 380-395.

[Article](#) [Google Scholar](#)

Palepu, K. G. 1986. "Predicting Takeover Targets: A Methodological and Empirical Analysis." *Journal of Accounting and Economics* 8: 3-35.

[Article](#) [Google Scholar](#)

Platt, H., and M. B. Platt. 1991a. "A Note on the Use of Industry-Relative Ratios in Bankruptcy Prediction." *Journal of Banking and Finance* 15: 1183-1194.

[Article](#) [Google Scholar](#)

—. 1991b. "A Linear Programming Approach to Bond Portfolio Selection." *Economic and Financial Computing* 1: 71-84.

[Google Scholar](#)

—. 1992. "Credit Risk and Yield Differentials for High Yield Bonds." *Quarterly Journal of Business and Economics* 31(3): 51-68.

[Google Scholar](#)

—. 2000. "Leveraged Buyout Failure Risk: Advice for Managers and Bankers." *Journal of Corporate Renewal* 13: 8, 10, 31.

[Google Scholar](#)

Platt, H., M. B. Platt, and J. G. Pedersen. 1994. "Bankruptcy Prediction with Real Variables." *Journal of Business Finance & Accounting* 21: 491-510.

[Article](#) [Google Scholar](#)

Schipper, K. 1977. "Financial Distress in Private Colleges." *Journal of Accounting Research* 15 (Supplement): 1-40.

[Article](#) [Google Scholar](#)

Theodossios, P. 1993. "Predicting Shifts in the Mean of a Multivariate Time Series Process: An Application in Predicting Business Failures." *Journal of the American Statistical Association* 88: 441-449.

[Article](#) [Google Scholar](#)

Theodossios, P., E. Kayha, R. Saidi, and G. Philippatos. 1996. "Financial Distress and Corporate Acquisitions: Further Empirical Evidence." *Journal of Business Finance and Accounting* 23: 699-719.

[Article](#) [Google Scholar](#)

Whitaker, R. B. 1999. "The Early Stages of Financial Distress." *Journal of Economics and Finance* 23: 123-133.

[Article](#) [Google Scholar](#)

Wruck, D. H. 1990. "Financial Distress, Reorganization, and Organizational Efficiency." *Journal of Financial Economics* 27: 419-444.

Yang, A. R., M. B. Platt and H. D. Platt. 1999. "Probabilistic Neural Networks in Bankruptcy Prediction." *Journal of Business Research* 44: 67-74.

[Article](#) [Google Scholar](#)

Zhang, G., M. Hu, E. Patuwo, and D. Indro. 1999. "Artificial Neural Networks in Bankruptcy Prediction: General Framework, and Cross-Validation Analysis." *European Journal of Operational Research* 116: 16-32.

[Article](#) [Google Scholar](#)

Zmijewski, M.E. 1984. "Methodological Issues Related to the Estimation of Financial Distress Prediction Models." *Journal of Accounting Research* 22 (Supplement): 59-82.

[Article](#) [Google Scholar](#)

Author information

Authors and Affiliations

College of Business Administration, Northeastern University, USA

Harlan D. Platt & Marjorie B. Platt (Harold A. Mock Professor of Accounting)

Rights and permissions

[Reprints and permissions](#)

About this article

Cite this article

Platt, H.D., Platt, M.B. Predicting corporate financial distress: Reflections on choice-based sample bias. *J Econ Finan* **26**, 184–199 (2002). <https://doi.org/10.1007/BF02755985>

Issue Date

June 2002

DOI

<https://doi.org/10.1007/BF02755985>

Keywords

[Financial Distress](#)

[Public Firm](#)

[Correct Classification Rate](#)

[Bankruptcy Prediction](#)

[Distressed Firm](#)

Search

Search by keyword or author



Navigation

Find a journal

Publish with us

Track your research