Journal of Accounting Research / Volume 54, Issue 4 / pp. 1149-1186

Original Article

Performance Measures in Earnings-Based Financial Covenants in Debt Contracts

NINGZHONG LI

First published: 12 May 2016

https://doi.org/10.1111/1475-679X.12125

Accepted by Philip Berger. I am extremely grateful to an anonymous referee for his or her guidance. I thank Ray Ball, Ian Gow, Anya Kleymenova, Yun Lou, Chul Park (discussant), Madhav Rajan, Scott Richardson, Lakshmanan Shivakumar, Bin Srinidhi, Irem Tuna, Jeffery Wooldridge, Jingjing Zhang (discussant), and workshop participants at City University of Hong Kong, London Business School, London School of Economics, University of Houston, University of Texas at Dallas, and Washington University, and participants of the 2011 AAA Annual Meeting and the 2011 CAPANA Annual Meeting for valuable comments. I am grateful to Amir Sufi for sharing the loan agreement data online and Florin Vasvari for sharing the cleaned bond transaction data. I thank Ying Huang, Xin Li, Bo Liu, Liping Lu, Connie Neish, and Yu Xie for excellent research assistance, and the London Business School RAMD Fund and University of Texas at Dallas for financial support. All errors are my own.

PDF

ABSTRACT

This paper examines how performance measures are defined in major earnings-based financial covenants in loan contracts to shed light on the economic rationales underlying the contractual use of performance measures. I find an earnings-based covenant is typically based on a performance measure close to earnings before interest, tax, amortization, and depreciation expenses (EBITDA). However, my empirical analyses show that EBITDA is less useful in explaining credit risk than earnings before interest and tax expenses (EBIT) and even the bottom-line net income. Thus, measuring credit risk cannot fully explain the choice of accounting performance measures in earnings-based covenants. I conjecture that contracting parties choose an EBITDA-related measure, instead of a measure calculated after depreciation and amortization expenses (e.g., EBIT), to make the performance measure less sensitive to investment activities, which can be controlled through other contractual terms, such as a restriction on capital expenditure, and provide empirical evidence consistent with this conjecture.

Aghion, P., M. Dewatripont, and P. Rey. "On Renegotiation Design." *European Economic Review* **34** (1990): 322–29.

Web of Science® | Google Scholar

Aghion, P.; M. Dewatripont; and P. Rey. "Renegotiation Design with Unverifiable Information." *Econometrica* **62** (1994): 257–82.

Web of Science® | Google Scholar

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

Web of Science® | Google Scholar

Ball, R.; R. Bushman; and F. Vasvari. "The Debt-Contracting Value of Accounting Information and Loan Syndicate Structure." *Journal of Accounting Research* **46** (2008): 247–88.

Web of Science® | Google Scholar

Ball, R., and L. Shivakumar. "The Role of Accruals in Asymmetrically Timely Gain and Loss Recognition." *Journal of Accounting Research* **44** (2006): 207–41.

Web of Science® | Google Scholar

Barth, M.; W. Beaver; and W. Landsman. "Accruals, Cash Flows, and Equity Value." *Review of Accounting Studies* **3** (1999): 205–29.

Google Scholar

Beatty, A.; S. Liao, and J. Weber. "The Effect of Private Information and Monitoring on the Role of Accounting Quality in Investment Decisions." *Contemporary Accounting Research* **27** (2010a): 17–47.

Web of Science® | Google Scholar

Web of Science® | Google Scholar

Cassar, G.; C. Ittner; and K. Cavalluzzo. "Alternative Information Sources and Information Asymmetry Reduction: Evidence from Small Business Debt." *Journal of Accounting and Economics* **59** (2015): 242–63.

Web of Science® | Google Scholar

Chava, S., and M. Roberts. "How Does Financing Impact Investment? The Role of Debt Covenants." *Journal of Finance* **63** (2008): 2085–2121.

Web of Science® | Google Scholar

Christensen, H., and V. Nikolaev. "Capital Versus Performance Covenants in Debt Contracts." *Journal of Accounting Research* **50** (2012): 75–116.

Web of Science® | Google Scholar

Christensen, H.; V. Nikolaev; and R. Wittenberg-Moerman. "Accounting Information in Financial Contracting: The Incomplete Contract Theory Perspective." *Journal of Accounting Research* **54** (2016): 397–435.

Web of Science® | Google Scholar

Dechow, P. "Accounting Earnings and Cash Flows as Measures of Firm Performance: The Role of Accounting Accruals." *Journal of Accounting and Economics* **18** (1994): 3–42.

Web of Science® | Google Scholar

Demerjian, P. "Information, Monitoring, and Manipulation: The Economic Role of Covenant Measurement." Working paper, Emory University, 2009.

Google Scholar

Demerjian, P. "Accounting Standards and Debt Covenants: Has the "Balance Sheet Approach" Led to a Decline in the Use of Balance Sheet Covenants?" *Journal of Accounting and Economics* **52** (2011): 101–258.

Dichev, I., and D. Skinner. “Large-Sample Evidence on the Debt Covenant Hypothesis.” *Journal of Accounting Research* **40** (2002): 1091–1123.

Web of Science® | Google Scholar

Dyreng, S.; R. Vashishtha; and J. Weber. “Direct Evidence on the Informational Properties of Earnings in Loan Contracts." Working paper, MIT, 2016.

Google Scholar

Easton, P.; S. Monahan; and F. Vasvari. “Initial Evidence on the Role of Accounting Earnings in the Bond Market.” *Journal of Accounting Research* **47** (2009): 721–66.

Web of Science® | Google Scholar

El-Gazzar, S., and V. Pastena. “Negotiated Accounting Rules in Private Financial Contracts.” *Journal of Accounting and Economics* **12** (1990): 381–96.

Web of Science® | Google Scholar

Garleanu, N., and J. Zwiebel. “Design and Renegotiation of Debt Covenants.” *Review of Financial Studies* **22** (2009): 749–81.

Web of Science® | Google Scholar

Gigler, F.; C. Kanodia; H. Sapra; and R. Venugopalan. “Accounting Conservatism and the Efficiency of Debt Contracts.” *Journal of Accounting Research* **47** (2009): 767–97.

Web of Science® | Google Scholar

Grossman, S., and O. Hart. “The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration.” *Journal of Political Economy* **94** (1986): 691–719.

Web of Science® | Google Scholar

Hillegeist, S.; E. Keating; D. Cram; and K. Lundstedt. "Assessing the Probability of Bankruptcy." *Review of Accounting Studies* **9** (2004): 5–34.

Web of Science® | Google Scholar

Huang, Y.; N. Li; and J. Ng. "Relative Compensation Usefulness of Accounting Performance Measures." Working paper, University of Texas at Dallas, 2015.

Google Scholar

Huberman, G.; and C. Kahn. "Limited Contract Enforcement and Strategic Renegotiation." *American Economic Review* **78** (1988): 471–84.

Web of Science® | Google Scholar

Huberman, G.; and C. Kahn. "Default, Foreclosure, and Strategic Renegotiation." *Law and Contemporary Problems* **52** (1989): 49–61.

Web of Science® | Google Scholar

Jensen, M., and W. Meckling. "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure." *Journal of Financial Economics* **3** (1976): 305–60.

CAS | Web of Science® | Google Scholar

Leftwich, R. "Accounting Information in Private Markets: Evidence from Private Lending Agreements." *Accounting Review* **58** (1983): 23–42.

Web of Science® | Google Scholar

Leuz, C. "The Role of Accrual Accounting in Restricting Dividends to Shareholders." *European Accounting Review* **7** (1998): 579–604.

Google Scholar

Web of Science® | Google Scholar

Moody's, 2000. “Putting EBITDA in Perspective: Ten Critical Failings of EBITDA as the Principal Determinant of Cash Flow." Special comment, Moody's Investors Service.

Google Scholar

Myers, S. C. “Determinants of Corporate Borrowing.” *Journal of Financial Economics* **5** (1977): 147–76.

Web of Science® | Google Scholar

Nini, G.; D. Smith; and A. Sufi. “Creditor Control Rights and Firm Investment Policy.” *Journal of Financial Economics* **92** (2009): 400–20.

Web of Science® | Google Scholar

Ohlson, J. A. “Financial Ratios and the Probabilistic Prediction of Bankruptcy.” *Journal of Accounting Research* **18** (1980): 109–31.

Web of Science® | Google Scholar

Ozel, B. “Aggregate Earnings and Loan Values." Working paper, UCLA, 2014.

Google Scholar

Roberts, M., and A. Sufi. “Control Rights and Capital Structure: An Empirical Investigation.” *Journal of Finance* **64** (2009): 1657–95.

Web of Science® | Google Scholar

Smith, C., and J. Warner. “On Financial Contracting: An Analysis of Bond Covenants.” *Journal of Financial Economics* **7** (1979): 117–61.

Web of Science® | Google Scholar

Google Scholar

Watts, R. L. "Conservatism in Accounting, Part II: Evidence and Research Opportunities." *Accounting Horizons* **17** (2003b): 287–301.

PubMed | Web of Science® | Google Scholar

Wight, R.; W. Cooke; and R. Gray. " Understanding the Credit Agreement," in *Loan Syndications & Trading*, edited by A. Taylor and A. Sansone. New York: McGraw-Hill, 2007: 209–392.

Google Scholar

Wight, R.; W. Cooke; and R. Gray. *The LSTA's Complete Credit Agreement Guide*. New York: McGraw-Hill, 2009.

Google Scholar

Wooldridge, J. *Econometric Analysis of Cross Section and Panel Data*, Second edition. Cambridge, MA: MIT Press, 2010.

Google Scholar

Citing Literature