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Distressed firms and the secular deterioration in usefulness of accounting information

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Abstract

We investigate the relative and incremental usefulness of earning, cash flows, accruals and book values of financially distressed firms to extend our understanding of the price–earnings relationships of distressed firms. As expected, we find that earnings usefulness deteriorates with the onset of distress. We document that the decline in usefulness of earnings is initially gradual and then steep. We also document a surprisingly comparable decline in the usefulness of operating cash flows. Further, we find that accruals continue to provide incrementally useful information beyond cash flows up to 1 year prior to the bankruptcy or liquidation election. Our results hold even when the effects of book values and solvency measures are controlled.

Keywords: Value relevance; Financial distress; Accounting earnings; Cash flows; Book values

1. Introduction

Repeatedly, accounting earnings have been found to be the premier measure of performance for shareholder value (Barth et al., 2001; Biddle et al., 1995; Chambers et al., 1999; Dechow, 1994; Penman and Sougiannis, 1998). However, studies of troubled firms report that the usefulness of earnings deteriorates with the onset of financial distress. For example, Burgstahler and Dichev (1997), Collins et al. (1999) and Hayn (1995) report that the earnings of firms with losses cannot explain positive share values. These studies report that the missing information is the implicit value proxied by book value. Hence, book value provides useful information about the liquidation value of the assets. Thus, positive earnings are sufficient to explain value, but negative earnings are not. Book value takes over as the determinant of share price.

Since earnings and book values are steeped in accounting rules and management choices, some theorists and practitioners argue that operating cash flows are conceptually preferable. Arbitrary rules and management manipulations of accruals do not contaminate cash flows. Hanna (1995) reports that cash flows of distressed firms are more value relevant than are earnings. Black's (1998) study of the incremental usefulness of earnings and cash flows over the life cycle provides similar results for firms in decline.

These studies and the increased U.S. business failure rates, starting in the early eighties and persisting to the present (Council of Economic Advisers, 2001), motivate the following questions. When do earnings lose their premier place in explaining value for distressed firms? Do cash flows also suffer a similar degradation in usefulness? Can book values offset the degradations? What is the intertemporal behavior of the incremental usefulness of accruals?

The motivation for these questions derives from the assumption of going concern. Accruals are expected to lose their value relevance with the onset of severe distress. In contrast, cash flows capture the ability of firms to meet short-term obligations and determine their ability to survive

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the early signs of distress. Hence, theorists often assert that cash flows are more useful than earnings in cases of distress (Black, 1998). In addition, Burgstahler and Dichev (1997) find that book values of loss firms are more value relevant. Specifically, for distressed firms, book values are more useful than earnings (or losses), as firms adapt their resources to alternative uses, including liquidation. Thus, book value provides 'downside protection' to distressed firms.

We study distressed firms from an ex post perspective: we sample delisted firms whose stocks are delisted as a result of either bankruptcy or liquidation elections. We measure the value relevance of earnings, operating cash flows, book value, and accruals on an intertemporal basis, beginning 8 years prior to delisting. The choice of 8 years follows Altman et al. (1977), who reported that distress is discernible as early as 5 years before bankruptcy. Our findings indicate that the explanatory usefulness of all three measures (earnings, cash flows, and cash flows with accruals) degrades earlier than the eighth year. The usefulness of book values also declines prior to the eighth year, but its decline is more gradual than the decline in usefulness of the three operating performance measures. The severity of the decline in usefulness of cash flows and cash flow plus accruals is unexpected, given the preferences for cash flow over earnings. These results hold when book values are used jointly with the operating measures. But unexpectedly, the deterioration in cash flows is at least as severe as is the decline in earnings. Finally, our results suggest that accruals are value relevant up to the point of delisting.

The remaining Sections of this study are: hypotheses and models (Section 2), statistical tests (Section 3), sample selection and descriptive statistics (Section 4), results (Section 5) and conclusion (Section 6).

2. Hypotheses and models

Since accounting and financial conjectures lead us to expect that earnings of distressed firms are not as useful as cash flows (Black, 1998), we seek to provide empirical evidence on the proposition by studying the relationship between accounting measures and share prices as companies approach bankruptcy or liquidation. The accounting measures that we study are earnings (basic earnings per share before extraordinary items), operating cash flows, asset book values and operating cash flows combined with accruals. The studies of distress in the accounting and finance literature have used earnings and cash flows variables to identify distress with mixed results. Altman (1983), Gentry et al. (1985) and Casey and Bartczak (1985) report earning ratios are superior predictors of failure than cash earning ratios.

Subramanyam and Wild (1996) report an inverse relation exists between distress and the informativeness of accounting accruals for stock returns. Hayn (1995), Collins et al. (1999) and Burgstahler and Dichev (1997) observe that losses are less informative than profits in explaining firm value. The accounting informativeness studies indirectly suggest that accounting earnings may not be the premier performance measure of distressed firms. In fact, Wang and Eichenseher (1998) find that informativeness of cash flow earnings and the informativeness of accounting accruals are inversely related.

The earnings informativeness literature indicates that distress reduces the usefulness of accounting earnings. An explanation is that many accruals are built on the accounting profession's 'going-concern' assumption, which contradicts the economic reality of the distress process. While earnings have strong explanatory power for healthy firms but not for distressed firms (Burgstahler and Dichev, 1997; Collins et al., 1999), stock values for distressed firms derive their value from the liquidation value of the firms' assets. Therefore, we expect the earnings usefulness to deteriorate secularly as delisting approaches. We posit:

H1. The association between firm value and earnings of distressed firms declines as termination approaches.

Operating cash flows do not suffer from the going-concern assumption and concomitant accounting allocations. Consequently, the usefulness of operating cash flow information may not be similarly affected by distress, unless the distress is so great that value is dominated by the liquidation value of assets rather than the value of the cash flows. Hence, we study of usefulness of cash flows:

H2. The association between firm value and operating cash flows of distressed firms declines as termination approaches.

Following Burgstahler and Dichev (1997), we study the relevance of book value as distress sets in. Their assertion is that shareholder value will be driven by the adaptation value of the company's assets. However, to the extent that assets are not adaptable or to the extent that there are significant liquidation costs, the deterioration in operations will also cause the book value relationship to deteriorate. How much is an empirical issue. We therefore posit:

H3. The association between firm value and book value of assets of distressed firms declines as termination approaches.

Our final analysis focuses on the incremental usefulness of accruals of distressed firms. Firms are required to report cash flow information in their financial statements in recognition of the complementary role of cash flows to other accounting information (SFAS 95, 1987). Ali (1994), Bowen et al. (1987), Dechow (1994), and Rayburn (1986) evaluated the incremental usefulness of operating cash flows by examining the incremental information content of cash flows. They find that both cash flows and accruals provide incremental information relative to each other. Whether accruals of financially distressed firms are incrementally useful is unclear. We expect that the informational useful-