

Behind the Numbers

A monthly report for the retail CFO

Metrics That Matter: Bankrupt-"Z" Scores

Among the tools available to analyze the financial health of companies is one calculation known as the Altman Z-Score, created by Dr. Edward I. Altman of New York University in the 1960s.

The result of a financial variety of reverse engineering, the Z-Score, and its updated version the Z"-Score, were developed by looking at companies that had declared bankruptcy and

$$Z'' = \frac{\text{EBIT}}{\text{Total Assets}} \times 6.72 + \frac{\text{Total Equity}}{\text{Total Liabilities}} \times 1.05 + \frac{\text{Working Capital}}{\text{Total Assets}} \times 6.56 + \frac{\text{Retained Earnings}}{\text{Total Assets}} \times 3.26$$

Higher Z"-scores generally indicate a lower probability of bankruptcy.

analyzing select ratios leading up to that point to detect a predictive pattern. The Z"-Score calculates and combines four financial ratios, assigning each a different weighting to add up

to a total score as shown in the equation above.

In addition to the equation, the Z"-score involves a scale to measure a company's standing. Scores higher than 2.6 suggest financially sound companies, while scores below 1.1 indicate fiscal danger. Scores in between indicate a neutral position. To properly understand a particular company's metric, analysts must take into consideration the trend over time, not just the current snapshot.

Also important to note is that companies in the neutral zone—Wal-Mart Stores, Albertson's, Dick's Sporting Goods, Sears Holdings—do not have a significantly different risk of bankruptcy than companies in the financially sound zone. However, the neutral score indicates they are moving closer to the point where financial soundness becomes a concern.

Wal-Mart, one of the world's leaders in net income, appears in the neutral zone largely because of its extremely efficient financial operations.

Although the numbers that go into calculating the Z"-Score can be influenced by external factors—such as currency revaluation—Valley Cottage, N.Y.-based CreditRiskMonitor, a financial-information service, points to the Z"-score as a useful measure for identifying the retailers most at risk of filing for bankruptcy protection.

Quarterly Z"-Score

Company	Ending Oct/Dec 2004	Ending Jan/Mar 2005	Ending Apr/Jun 2005	Ending Jul/Sep 2005	Ending Oct/Dec 2005	Ending Jan/Mar 2006
General Merchandise						
Big Lots, Inc.	N/A	5.67	N/A	N/A	4.68	5.90
Dollar General Corp.	4.79	5.41	5.17	4.85	4.51	4.97
BJ's Wholesale Club, Inc.	3.76	3.89	3.92	4.11	4.08	4.21
Costco Wholesale Corp.	2.97	3.25	3.28	3.32	3.04	3.04
Family Dollar Stores, Inc.	5.57	5.77	5.63	5.15	4.72	4.58
Sears Holdings Corp.	6.21	6.17	N/A	1.85	1.63	2.26
J.C. Penney Co., Inc.	3.23	3.29	3.22	3.03	2.49	3.07
Target Corp.	N/A	3.29	N/A	N/A	N/A	3.05
Wal-Mart Stores, Inc.	1.61	1.98	N/A	1.78	1.70	1.86
Specialty Apparel						
Abercrombie & Fitch Co.	5.25	5.48	5.33	5.56	5.34	6.46
American Eagle Outfitters	7.73	8.31	9.11	9.07	8.69	8.37
AnnTaylor Stores Corp.	5.95	5.11	5.64	5.60	5.26	5.55
Chico's FAS, Inc.	9.23	8.63	8.39	9.58	8.81	9.54
Charming Shoppes, Inc.	N/A	5.20	N/A	N/A	N/A	4.58
The Gap Inc.	6.09	6.41	7.02	7.07	6.91	7.52
Pacific Sunwear of California	6.20	7.23	7.17	6.12	7.09	7.39
The TJX Cos., Inc.	2.89	2.64	N/A	N/A	2.37	2.92
Drug						
Longs Drug Stores Corp.	3.32	3.55	3.43	3.44	3.17	3.35
Rite Aid Corp.	-0.81	-0.39	-0.27	-0.48	-0.61	-0.08
Walgreen Co.	5.27	5.74	5.66	5.56	5.27	5.61
Supermarket						
The Great Atlantic & Pacific Tea Co.	-0.30	0.06	0.69	4.25	2.02	N/A
Albertson's, Inc.	1.48	1.58	1.60	1.70	1.68	1.78
The Kroger Co.	0.79	0.67	1.04	0.91	0.87	1.12
Publix Super Markets	3.74	4.13	4.36	4.09	3.98	N/A
Safeway Inc.	1.63	1.50	N/A	1.60	1.48	N/A
Whole Foods Market	3.50	4.08	4.15	4.73	4.55	2.72
Hard Lines						
Best Buy Co., Inc.	2.27	3.60	3.50	3.73	2.72	N/A
Circuit City Stores, Inc.	3.61	4.96	N/A	N/A	3.00	4.40
Cabela's Inc.	3.57	3.19	2.34	3.27	2.93	N/A
Pier 1 Imports, Inc.	6.78	6.23	N/A	N/A	5.28	5.36
Dick's Sporting Goods, Inc.	1.72	1.98	1.56	2.18	2.14	2.44
Sharper Image Corp.	4.04	4.94	4.33	4.16	3.06	N/A
The Sports Authority, Inc.	2.60	2.61	N/A	2.97	2.80	2.98
Williams-Sonoma, Inc.	3.93	4.55	4.36	4.56	4.38	4.97
Home Centers						
Home Depot, Inc.	4.47	4.64	4.12	4.46	4.16	4.40
Lowe's Cos., Inc.	3.58	3.41	3.28	3.79	3.68	3.92

Score results can be interpreted as follows:

Financially sound: Higher than 2.6

Neutral: 1.1 to 2.6

Fiscal danger: Below 1.1

Source: CreditRiskMonitor