



CreditRiskMonitor's assessment of Black Box Corporation's ("Black Box") "high risk" status has been determined by a combination of factors:

Monthly Average FRISK® Score.....	Page 2
The FRISK® Score Components	3
Company Report Detail.....	4
FRISK® Deep Dive and Adjusted Market Cap Volatility	5
FRISK® Stress Index.....	6
Peer Analysis on Alternate Suppliers and Customers.....	7
Quarterly Performance Ratios.....	8
Quarterly Leverage Ratios.....	9
Quarterly Liquidity Ratios and Rates of Return	10
.....	
About This Report/Contact CreditRiskMonitor.....	11

MONTHLY AVERAGE FRISK® SCORE

CreditRiskMonitor's proprietary FRISK® score has Black Box Corporation, (NASDAQ: BBOX) at a 2, one of the highest probabilities of bankruptcy in the next 12 months.

Business Name	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2018
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
Black Box Corporation	6	5	4	4	4	4	4	3	2	2	2	2	2

The FRISK® score is 96% accurate in predicting the risk of corporate failure/bankruptcy over a 12-month horizon. All FRISK® scores are recalculated every night for each subsequent 12-month period.

Probability of bankruptcy within 12 months			
	FRISK®	From	To
Best	10	0.00%	0.12%
	9	0.12%	0.27%
	8	0.27%	0.34%
	7	0.34%	0.55%
	6	0.55%	0.87%
Worst	5	0.87%	1.40%
	4	1.40%	2.10%
	3	2.10%	4.00%
	2	4.00%	9.99%
	1	9.99%	50.00%

While the percentage risk of bankruptcy varies at each FRISK® score, 96% of public companies that eventually go bankrupt enter the FRISK® "red zone" prior to filing. A FRISK® score of 5 or less is an important warning sign.

THE FRISK® SCORE COMPONENTS

At the core of the CreditRiskMonitor process is our 96% accurate FRISK® score, which indicates a company's level of financial stress on a scale of 1 to 10, based on the probability of bankruptcy over a 12-month horizon. The FRISK® score incorporates a number of powerful risk indicators including:

A "Merton" type model using stock market capitalization and volatility

Financial ratios, including those used in the Altman Z"-Score Model

Bond agency ratings from S&P, Moody's and Fitch (when available)

Crowdsourced CreditRiskMonitor Usage Data

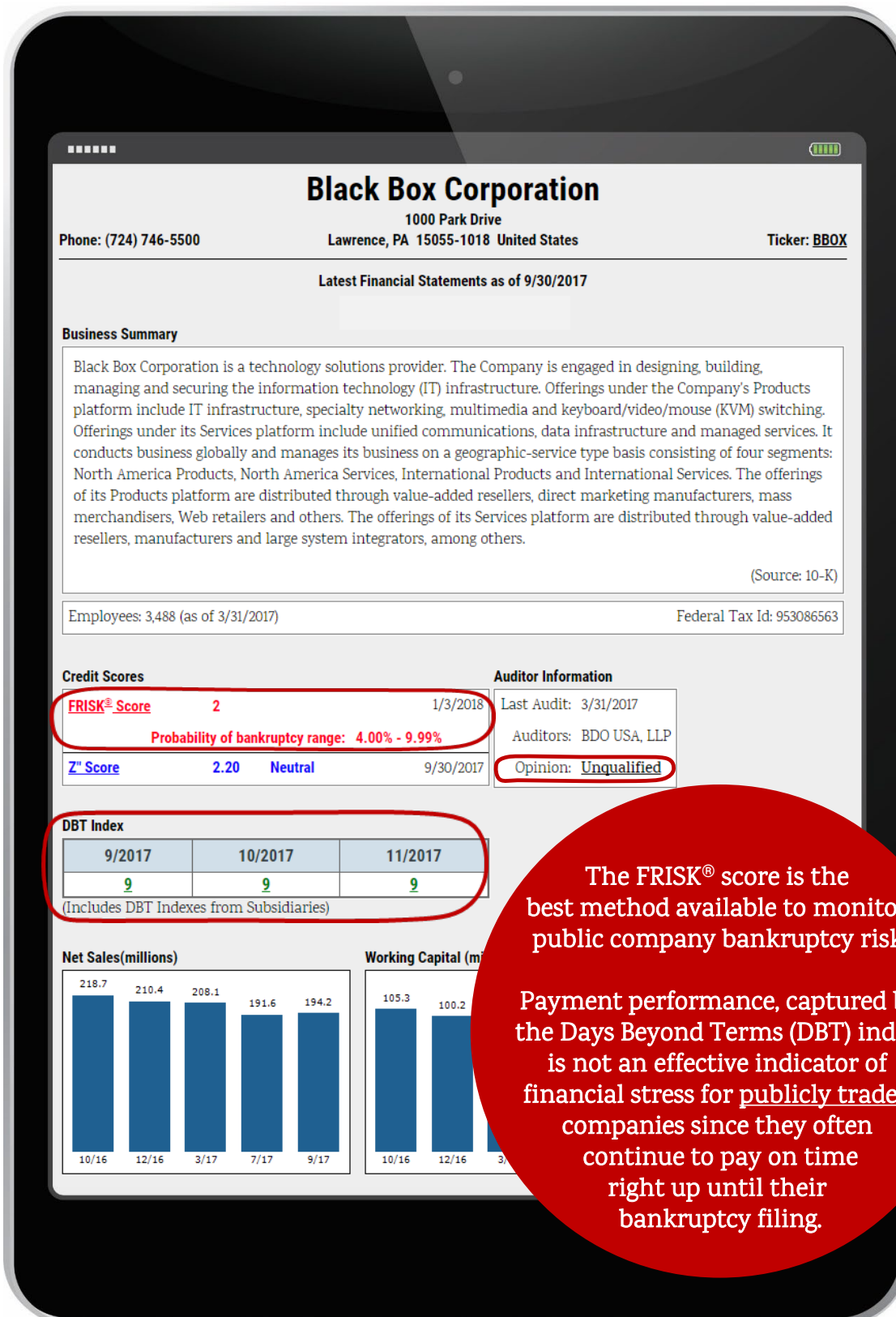
Crowdsourcing, has enhanced the accuracy and timeliness of the FRISK® score. We collect and analyze data patterns from thousands of CreditRiskMonitor subscribers, including professionals from more than 35% of the Fortune 1000 and other large corporations worldwide.

The crowdsourcing advantage is even more powerful in our FRISK® score since many of the professionals who use our service are credit managers:

- Credit managers control one of the largest sources of working capital going into a company
- They are not held to the same "Fair Disclosure" restrictions that prevent non-disclosed information sharing on public companies
- Credit managers use a variety of non-public information sources such as their own company's management and sales representatives to be alerted to concerns in a public company's performance
- It is commonly known credit managers confidentially share information with other credit managers, thus collectively, their behavior helps to provide advanced insight to financial problems in public companies

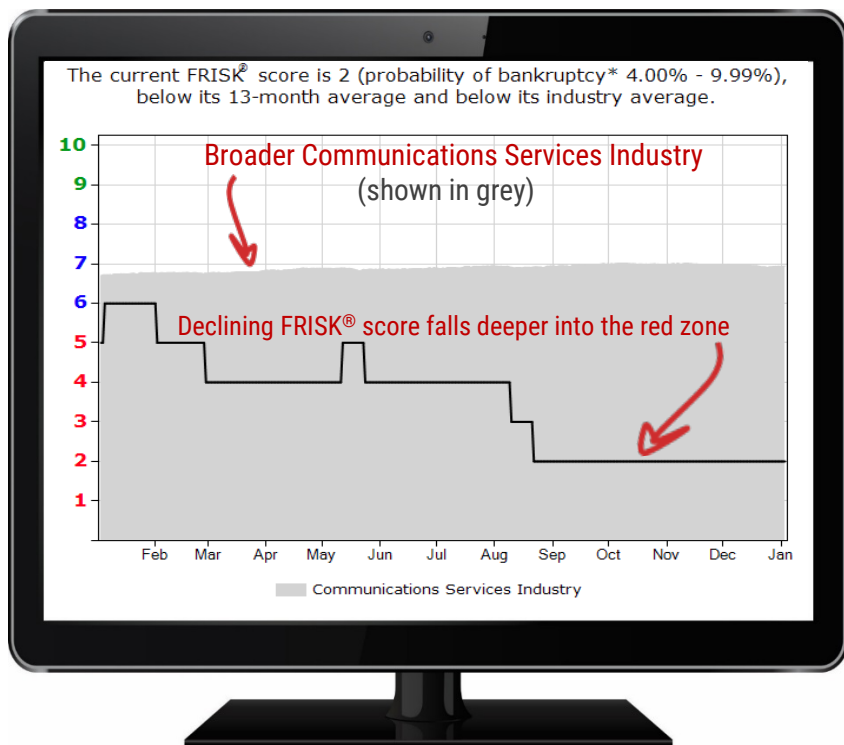
[Read more in Credit Research Foundation's quarterly journal article, "Assessing Public Company Financial Risk by Crowdsourcing the Research of Credit Professionals"](#)

COMPANY REPORT DETAIL



The FRISK® score is the best method available to monitor public company bankruptcy risk. Payment performance, captured by the Days Beyond Terms (DBT) index, is not an effective indicator of financial stress for publicly traded companies since they often continue to pay on time right up until their bankruptcy filing.

FRISK® DEEP DIVE



The FRISK® score relative to the broader Communications Services industry raises an additional red flag signaling heightened risk relative to peers, as well...

MAKING IMMEDIATE ATTENTION REQUIRED.

ADJUSTED MARKET CAP VOLATILITY



One of the inputs of the FRISK® score is a company's market cap volatility, adjusted for dividends, over the course of a year. Incorporating this information allows us to capture the "wisdom of markets" on a daily basis. This ensures our subscribers are getting the most up to date view of the risks they face since stocks tend to be more liquid and faster moving than bond prices and ratings.

FRISK® STRESS INDEX

Rank	Business Name
1	Black Box Corporation
2	RadiSys Corporation
3	Atlas Technology International Inc
4	Qumu Corp
5	Alliance Media Holdings Inc
	Evans & Sutherland Computer Co
	Inc

Primary industry codes only Primary and secondary industry codes

Businesses From: All Businesses CLEAR

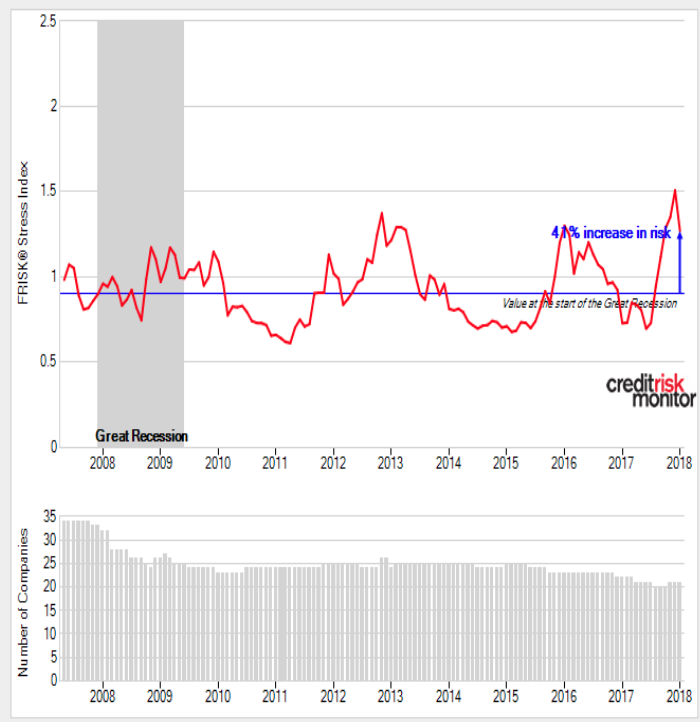
In Industry: SIC 3577: Computer peripheral equipment, not elsewhere classified

Country: United States

UPDATE RESULTS

Scale: Auto

Total Companies in all months: **44**



The FRISK® Stress Index shows the collective probability of failure in a group of companies (such as an industry, country or portfolio) over the next 12 months. It is designed to show trends in risk level across groups of companies and is shown on a zero to 50 scale, with 50 being the most risky.

SIC code 3577 (Computer peripheral equipment, not elsewhere classified) reflects an industry subsector whose recent average probability of failure has increased 41% since 2007. Black Box is among the weakest names in the industry as evidenced by its FRISK® score of 2.

[Request a Personalized Demo](#)

PEER ANALYSIS ON ALTERNATE SUPPLIERS AND CUSTOMERS

Black Box demonstrates bottom quartile ranking in key financial ratios (shown in red) vs. its Communication Services industry peers.

The Peer Analysis expands to provide a ranking of a company's competitors, which can help provide options for alternate suppliers or new customers.

Peer Analysis

2017.3

Sector: Services, Industry: Communications Services

REFRESH

Businesses in Peer Group: 1868

Ranking Within Peer Group: 126

Number Of Peers Ranked: 332

Company Value: 2.20

Peer Group Range: Low -35,281.93, Median 1.45, High 17.67

Credit Ratings

ZScore: 126, 332, 2.20, -35,281.93, 1.45, 17.67

Performance ratios:

Ratio	Ranking	Value	Low	Median	High
Net Sales (Thousands of U.S. Dollars)	37	80	194,164	0	171,469, 39,668,000
Gross Margin % Of Sales	261	323	29.10	-2,378.46	53.23, 183.76
Gross Margin % Of Sales -- TTM	259	323	28.59	-197.07	52.61, 140.74
SG&A % Of Sales	204	319	31.00	2.59	23.26, 68.19
SG&A % Of Sales -- TTM	198	318	28.75	2.76	23.26, 68.19
Operating Margin % Of Sales	300	348	-3.80	-4,964.92	2.76, 140.74
Operating Margin % Of Sales TTM	288	348	-2.21	-4,960.92	2.76, 140.74
EBITDA Margin Of Sales	226	247	-1.35	-4,643.78	2.76, 140.74
EBITDA Margin Of Sales -- TTM	229	253	0.11	-4,643.04	2.76, 140.74
Net Profit Margin % Of Sales	289	348	-5.87	-4,006.48	2.76, 140.74
Net Profit Margin % Of Sales - TTM	273	348	-2.69	-5,184.83	2.76, 140.74
Pre-tax Income % Of Sales	283	348	-4.62	-4,964.63	2.76, 140.74
Effective Tax Rate	24	337	-27.15	-1,670.12	2.76, 140.74
Depreciation % Of Prop/Plant/Equipment	274	329	36.72	0.00	2.76, 140.74
Capital Expense % Of Prop/Plant/Equipment	170	294	23.99	0.14	21.5, 140.74
Interest Coverage	212	225	-1.46	-7,006.00	7.64, 26,501.00
Interest Coverage -- TTM	218	244	0.17	-15,310.25	6.61, 3,634.12

Liquidity ratios:

Ratio	Ranking	Value	Low	Median	High
Cash Ratio	231	345	0.18	0.00	0.30, 354.09
Quick Ratio	148	335	0.90	0.00	0.78, 356.30
Current Ratio	84	345	1.67	0.00	1.06, 356.35

Efficiency ratios:

Ratio	Ranking	Value	Low	Median	High
Accounts Receivable Turnover	165	345	6.53	0.00	6.34, 90.55
Days Sales Outstanding	169	348	55.87	0.00	57.06, 3,590.55
% of Inventory Financed by Vendors	220	237	71.84	5.38	546.39, 58,000.39
% of Inventory Financed by Vendors -- TTM	233	250	66.57	3.88	532.83, 59,549.09
Inventory Turnover	233	290	5.50	-2,586.09	18.12, 9.78
Inventory Turnover TTM	239	299	5.79	-1,464.49	18.12, 9.78
Days Sales in Inventory	234	271	66.31	-0.14	18.12, 9.78
Inventory to Working Capital	130	285	0.86	-279.00	18.12, 9.78
Accounts Payable Turnover	64	294	8.27	-4.34	18.12, 9.78
Accounts Payable Turnover -- TTM	61	301	8.87	-2.15	18.12, 9.78

Leverage & debt coverage:

Ratio	Ranking	Value	Low	Median	High
Total Debt to Equity Ratio	173	297	1.02	0.00	0.00, 140.16
Debt to Tangible Equity Ratio	149	201	2.02	0.00	0.00, 140.16
Total Debt to Assets Ratio	143	317	0.29	0.00	0.00, 140.16
Short-Term Debt % of Total Debt	61	304	4.46	0.00	0.00, 140.16
Short-Term Debt % of Working Capital	41	306	4.99	-67,533.33	0.00, 140.16
Liabilities to Net Worth Ratio	183	224	4.87	0.08	1.62, 140.16
Total Liabilities to Equity Ratio	221	320	2.46	0.08	1.36, 1,017.57
TTM EBITDA Over Total Debt	211	231	0.01	-55.16	0.39, 62.56

Green - Ranked in Upper Quartile of Peer Group
 White - Ranked in the Middle Two Quartiles of Peer Group
 Red - Ranked in Lower Quartile of Peer Group
 Orange - Confidential
 Grey - Data is Not Available

Legend:

- 1 OT Optima Telekom dd
- 2 Digistar Corporation Berhad
- 3 Orascom Telecom Media and Tech
- 4 KT Corp
- 5 KT Corp (ADR)
- 6 Now Corp
- 7 Aware, Inc.
- 8 Palestinian Telecommunication
- 9 Tek India Limited
- 10 Now Corp
- 11 OKINAWA CELLULAR TELEPHO
- 12 Chunghwa Telecom Co., Ltd
- 13 Chunghwa Telecom Co., Ltd (AD
- 14 SW Innovative Holdings Inc
- 15 Astel AO
- 16 Slovatski Telekom dd

QUARTERLY PERFORMANCE RATIOS

Net loss in four of the last five quarters

Performance Ratios - Sequential Quarters

(Thousands of U.S. Dollars)

Period Ended	13 weeks 9/30/2017	13 weeks 7/1/2017	13 weeks 3/31/2017	13 weeks 12/31/2016	13 weeks 10/1/2016
Net Sales \$	\$194,164	\$191,644	\$208,132	\$210,370	\$218,749
% change	1.31%	-7.92%	-1.06%	-3.83%	0.12%
Gross Margin \$	\$56,493	\$52,603	\$58,420	\$62,443	\$54,444
% change	7.40%	-9.96%	-6.44%	14.69%	-19.52%
% of sales	29.10%	27.45%	28.07%	29.68%	24.89%
change as % of incremental sales	154.37%	n/m	n/m	n/m	-4,910.41%
SG&A \$	\$60,183	\$58,948	\$55,794	\$56,274	\$55,134
% change	2.10%	5.65%	-0.85%	2.07%	-11.85%
% of sales	31.00%	30.76%	26.81%	26.75%	25.20%
change as % of incremental sales	49.01%	n/m	n/m	n/m	-2,756.13%
Operating margin \$	(\$7,372)	(\$12,897)	(\$262)	\$2,762	(\$6,538)
% change	42.84%	-4,822.52%	-109.49%	142.25%	-340.37%
% of sales	-3.80%	-6.73%	-0.13%	1.31%	-2.99%
change as % of incremental sales	219.25%	n/m	n/m	n/m	-3,441.64%
EBITDA \$	(\$2,621)	(\$8,473)	\$4,475	\$7,469	(\$1,920)
% change	69.07%	-289.34%	-40.09%	489.01%	-124.75%
% of sales	-1.35%	-4.42%	2.15%	3.55%	-0.88%
change as % of incremental sales	232.22%	n/m	n/m	n/m	-3,598.14%
EBIT \$	(\$7,165)	(\$13,027)	(\$121)	\$2,699	(\$6,579)
% change	45.00%	-10,666.12%	-104.48%	141.02%	-314.79%
% of sales	-3.69%	-6.80%	-0.06%	1.28%	-3.01%
change as % of incremental sales	232.62%	n/m	n/m	n/m	-3,584.39%
Pre-tax income \$	(\$8,966)	(\$14,245)	(\$1,164)	\$1,644	(\$7,629)
% change	37.06%	-1,123.80%	-170.80%	121.55%	-511.05%
% of sales	-4.62%	-7.43%	-0.56%	0.78%	-3.49%
change as % of incremental sales	209.48%	n/m	n/m	n/m	-3,526.02%
Net income (loss) \$	(\$11,400)	(\$9,747)	(\$1,789)	\$1,320	(\$6,105)
% change	-16.96%	-444.83%	-235.53%	121.62%	-1,182.56%
% of sales	-5.87%	-5.09%	-0.86%		-2.79%
change as % of incremental sales	-65.60%	n/m	n/m		57%
Tax expense \$	\$2,434	(\$4,498)	\$625		
Effective tax rate	-27.15%	31.58%	-53.69%		
Depreciation expense \$	\$2,435	\$2,324	\$2,339		
% of sales	1.25%	1.21%	1.12%		
% of capital expenses	153.05%	211.85%	225.52%		
% of PP&E, net (annualized)	36.72%	32.57%	31.12%		
Capital expenditures \$	\$1,591	\$1,097	\$1,097		
% change	45.03%	6.92%	-54.72%		
% of PP&E, net (annualized)	23.99%	15.37%	13.80%		
% of working capital (annualized)	6.12%	4.77%	4.29%		
Interest coverage ratio	(1.46)	(6.96)	4.29		(1.83)
% change	79.08%	-262.14%	-39.40%	487.16%	-128.45%
Free cash flow \$	(\$948)	(\$17,364)	\$14,170	\$6,786	\$2,995
% change	94.54%	-222.54%	108.81%	126.58%	-66.01%
Source:	10-Q 11/3/2017	10-Q 8/10/2017	10-K 5/11/2017	10-Q 2/3/2017	10-Q 11/4/2016

Insufficient interest coverage ratio & negative free cash flow in the last two quarters

QUARTERLY LEVERAGE RATIOS

Year-over-year stockholders' equity & tangible net worth decreased 14% and 13% respectively

Leverage Ratios - Sequential Quarters

(Thousands of U.S. Dollars)

Period Ended	9/30/2017	7/1/2017	3/31/2017	12/31/2016	10/1/2016
Total debt \$	\$129,165	\$99,172	\$89,746	\$95,349	\$101,734
% change	30.24%	10.50%	-5.88%	-6.28%	-11.46%
Stockholders' equity \$	\$127,125	\$134,823	\$141,649	\$142,575	\$146,881
% change	-5.71%	-4.82%	-0.65%	-2.93%	-4.46%
Total debt to equity ratio	1.02	0.74	0.63	0.67	0.69
% change	38.12%	16.10%	-5.26%	-3.44%	-7.32%
Tangible net worth \$	\$64,041	\$68,200	\$72,829	\$71,494	\$73,464
% change	-6.10%	-6.36%	1.87%	-2.68%	-5.85%
Total debt to tangible net worth	2.02	1.45	1.23	1.33	1.38
% change	38.70%	18.00%	-7.60%	-3.69%	-5.96%
Total assets \$	\$439,219	\$412,952	\$427,117	\$436,448	\$454,502
% change	6.36%	-3.32%	-2.14%	-3.97%	-2.10%
Total debt to assets ratio	0.29	0.24	0.21	0.22	0.22
% change	22.44%	14.33%	-3.84%	-2.37%	-9.58%
Tangible assets \$	\$376,135	\$346,329	\$358,297	\$365,367	\$381,085
% change	8.61%	-3.34%	-1.94%	-4.12%	-1.91%
Short-term debt \$	\$5,756	n/a	\$964	\$1,385	n/a
% change	n/a	n/a	-30.40%	n/a	n/a
Short-term debt % of total debt	4.46%	n/a	1.07%	1.45%	n/a
% change	n/a	n/a	-26.06%	n/a	n/a
Short-term debt % of working capital	4.99%	n/a	1.06%	1.38%	n/a
% change	n/a	n/a	-23.44%	n/a	n/a
Total liabilities \$	\$312,094	\$278,129	\$285,468	\$293,873	\$307,621
% change	12.21%	-2.57%	-2.86%	-4.47%	-0.92%
Total liabilities to equity ratio	2.46	2.06	2.02	2.06	2.09
% change	19.01%	2.36%	-2.23%	-1.59%	3.71%
Total liabilities to tangible net worth ratio	4.87	4.08	3.92	4.11	4.19
% change	19.50%	4.04%	-4.64%	1.84%	5.23%
Total debt to EBITDA ratio (annualized)	n/a	n/a	n/a	n/a	n/a
% change	n/a	n/a	n/a	n/a	n/a
Source:	10-Q 11/3/2017	10-Q 8/10/2017			10-Q 4/2016

Total liabilities to tangible net worth ratio signals heightened risk in the last 5 quarters

QUARTERLY LIQUIDITY RATIOS AND RATES OF RETURN

The company's cash ratio trended just slightly above the lower quartile of the industry peer group in Q3 2017

Liquidity Ratios - Sequential Quarters

(Thousands of U.S. Dollars)

Period Ended	9/30/2017	7/1/2017	3/31/2017	12/31/2016	10/1/2016
Current assets \$	\$287,306	\$254,022	\$268,647	\$275,040	\$285,842
% change	13.10%	-5.44%	-2.32%	-3.78%	-2.57%
% of short-term debt	4,991.42%	n/a	27,867.95%	19,858.48%	n/a
Current liabilities \$	\$171,850	\$161,356	\$177,513	\$174,803	\$180,539
% change	6.50%	-9.10%	1.55%	-3.18%	8.17%
Working capital \$	\$115,456	\$92,666	\$91,134	\$100,237	\$105,303
% change	24.59%	1.68%	-9.08%	-4.81%	-16.75%
% of sales (annualized)	14.87%	12.09%	10.95%	11.91%	12.03%
Cash \$	\$30,462	\$10,465	\$14,247	\$13,808	\$16,124
% change	191.08%	-26.55%	3.18%	-14.36%	-24.52%
% of short-term debt	529.22%	n/a	1,477.90%	996.97%	n/a
Cash ratio	0.18	0.06	0.08	0.08	0.09
% change	173.19%	-19.18%	1.65%	-11.53%	-30.23%
Quick assets \$	\$154,870	\$123,831	\$142,791	\$147,167	\$162,243
% change	25.07%	-13.28%	-2.97%	-9.29%	4.40%
% of short-term debt	2,690.58%	n/a	14,812.34%	10,625.78%	n/a
Quick ratio	0.90	0.77	0.80	0.84	0.90
% change	17.44%	-4.60%	-4.45%	-6.32%	-3.48%
Current ratio	1.67	1.57	1.51	1.57	1.58
% change	6.19%	4.02%	-3.81%	-0.63%	-9.93%
Source:	10-Q 11/3/2017	10-Q 8/10/2017	10-K 5/11/2017	10-Q 2/3/2017	10-Q 11/4/2016

Negative returns in 4 of the last 5 quarters

Rate of Return - Sequential Quarters

(Thousands of U.S. Dollars)

Period Ended	13 weeks 9/30/2017	13 weeks 7/1/2017	13 weeks 3/31/2017	13 weeks 12/31/2016	13 weeks 10/1/2016
Return on equity	-8.46%	-6.88%	-1.25%	0.90%	-3.97%
% change	-22.88%	-448.38%	-239.62%	122.63%	-1,203.22%
Return on net tangible equity	-16.72%	-13.38%	-2.50%	1.80%	-7.82%
% change	-24.90%	-434.84%	-239.26%	122.96%	-1,183.09%
Return on total assets	-2.68%	-2.32%	-0.41%	0.30%	-1.33%
% change	-15.30%	-460.10%	-239.82%	122.30%	-1,211.94%
Return on tangible assets	-3.16%	-2.77%	-0.49%	0.35%	-1.59%
% change	-14.07%	-459.59%	-239.78%	122.29%	-1,210.07%
Source:	10-Q 11/3/2017	10-Q 8/10/2017	10-K 5/11/2017	10-Q 2/3/2017	10-Q 11/4/2016

ABOUT THIS REPORT/CONTACT CREDITRISKMONITOR



CreditRiskMonitor is a financial risk analysis and news service that helps credit, supply chain and financial professionals stay ahead of and manage risk quickly, accurately and cost effectively. More than 35% of the Fortune 1000, plus over a thousand other large corporations worldwide, rely on our financial risk coverage of over 57,000 global public companies.

CreditRiskMonitor's High Risk Reports feature companies that are exhibiting a significantly high level of financial distress, as indicated by our proprietary FRISK[®] score. The ultimate goal of the High Risk Report series is two-part: provide an early warning for those doing business with an increasingly distressed company and inform of the many signals that should be examined when assessing financial risks.

[Request a Personalized Demo and Risk Assessment](#)

[Read more High Risk Reports, Bankruptcy Case Studies and other resources](#)

Contact us at:

845.230.3000

creditriskmonitor.com/contact-us