

Evidence of the Relationship Between Credit Ratings and Reporting Discontinued Operations

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To test whether standard setters' objective of improving the usefulness of the financial statements by enacting Accounting Standards Update (ASU) 2014-08 was achieved, this study compares the relationship between credit ratings and discontinued operations under Statement of Financial Accounting Standard (SFAS) No. 144 and ASU 2014-08. If discontinued operations are interpreted by credit ratings agencies as non-recurring, they should have no or low persistence and should be unrelated to credit ratings. The study finds that the relationship between reported discontinued operations and credit ratings under SFAS No. 144 is significant, the implication being that credit ratings agencies perceived discontinued operations as recurring. In contrast, the relationship is insignificant under ASU 2014-08, discontinued operations are now viewed as non-recurring and the objective of standard setters was achieved. The results of the study contribute to extant literature on discontinued operations and the relevance of separately stated or disclosed items.

Keywords: Discontinued Operations; Credit Ratings; APB No. 30; SFAS No. 144; ASU 2014-08

Data Availability: All data are available from public sources.

Introduction

The Financial Accounting Standards Board's (FASB) Conceptual Framework recognizes that one objective of financial reporting is to provide information that is useful for assessing the amount, timing, and uncertainty of an entity's future cash flows (FASB, 2010). A guiding philosophy is that an income statement is more useful for this purpose if non-recurring items are separated from income from continuing operations. This study examines whether ASU 2014-08, *Reporting Discontinued*

Operations and Disclosures of Disposals of Components of an Entity, improved the usefulness of financial statements by testing whether the relationship between credit ratings and discontinued operations changed after its implementation compared to the earlier period when discontinued operations were defined more broadly under Statement of Financial Accounting Standard (SFAS) No. 144. Credit ratings are important due to their significant impact on financial markets and financing decisions (e.g., Blume et al., 1998; Hand et al., 1992; Kisgen, 2006), and financial information impacts credit ratings (e.g., Blume et al., 1998; Ziebart & Reiter, 1992). The study's results inform academics, standard-setters, and financial statement users.

For the most part, the results of extant literature support that gains and losses reported as special items are transitory (Jones & Smith, 2011), or at least more transitory than other components of income (Burgstahler et al., 2002). But, Dechow and Ge (2006) found that the persistence of core earnings can be impacted by special items if investors misunderstand their transitory nature. Separately stated items should have less persistence than recurring or core earnings and therefore should have little or no relationship with market valuations such as stock price and credit ratings.

While the presentation of discontinued operations as a separately stated item in the income statement has been consistent over the last 45 years, the rules for what qualifies as a discontinued operation have changed. Beginning in 1973, under Accounting Principles Board (APB) Opinion No. 30, asset disposals qualifying for discontinued operations accounting were narrowly defined as a component of a business that represented a major line or class of customer. SFAS No. 144 replaced APB No. 30 in 2001 and expanded the type of asset disposals that qualified by redefining a component as comprising "operations and cash flows that can be clearly distinguished, operationally and for financial reporting purposes, from the rest of the entity" (SFAS No. 144 – codified under ASC 205-20-20, 2). It also eliminated the requirement that the disposed component represent a major line or class of customer. In 2014, ASU 2014-08 revised the criteria for discontinued operations treatment to again be more restrictive by adding a requirement that the disposal represent a "major strategic shift" for the company (ASU 2014-08, 69). In each instance, the standard setters' goal was to improve the usefulness of the resulting financial statements (e.g., SFAS No. 144, 6).

Given the more inclusive definition of discontinued items under SFAS No. 144, it may have been that the FASB believed under APB No. 30 companies were including at least some non-recurring items in continuing operations. There is evidence that supports the misclassification of non-recurring items. For example, comparing the persistence of continuing operations under the two regimes, Curtis et al. (2014) found the broader scope of discontinued operations under SFAS No. 144 produced more persistent income from continuing operations among firms reporting discontinued operations.

By returning to a more restrictive definition of discontinued operations under ASU 2014-08, it appears standard setters believe SFAS No. 144 was too expansive, and the results of extant research suggest they may be correct. For example, Barua et al. (2010) found that companies shift operating expenses to discontinued operations to increase core earnings and to meet or beat analysts' forecasts. SFAS No. 144's definition of discontinued operations may have enabled managers to smooth or otherwise manipulate earnings (Barua et al., 2010; Dickins et al., 2017).

The present study finds that the relationship between reported discontinued operations and credit ratings under SFAS No. 144 is significant; credit ratings reflect that at least some of discontinued operations were recurring. In contrast, the relationship is insignificant under ASU 2014-08; discontinued operations are now more likely to be viewed as non-recurring and the objective of standard setters was achieved. These results contribute to extant research about the goal of the Conceptual Framework to provide decision-useful financial reporting (e.g., Burgstahler et al., 2002; Dechow & Ge, 2006; Jones & Smith, 2011). The results also address a gap in the literature on discontinued operations (e.g., Barua et al., 2010; Curtis et al., 2014).

Background, Literature Review, and Hypothesis

Background

In 1973, the Accounting Principles Board (the Board) issued APB No. 30 to, among other things, provide criteria to assist preparers in determining how to account for the disposal of a segment of the business. The Board noted that many accountants believe the income statement is more useful if the results of continuing operations are reported separately from the operations of a segment of the business that has been or will be discontinued.¹ APB No. 30 mandated such treatment.

APB No. 30 narrowly defined a segment of a business as a component of an entity that represents a major line of business or class of customer. It specifically noted that companies should distinguish the disposal of a business segment from those asset disposals that occur in the normal course of operating a business. The Board stated that the results of discontinued operations were required to be reported after income from operations but not as an extraordinary item.

The 2001 release of SFAS No. 144 expanded the definition of disposals to be accounted for as discontinued operations to include “component operations.” A component “comprises operations and cash flows that can clearly be distinguished, operationally and for financial reporting purposes, from the rest of the entity” (SFAS No. 144, 5). This standard also eliminated APB No. 30’s requirement that the disposed component represent a major line of business or class of customer. Instead, sales of individual buildings, or the closing of individual stores or plants could qualify as discontinued operations. Not surprisingly, and consistent with the expectations of the FASB (SFAS No. 144, 6), the number of U.S. publicly-traded companies reporting discontinued operations was significantly greater under SFAS No. 144 (mean of 315 per year from 2002 to 2014) than under APB No. 30 (mean of 88 per year from 1989 to 2001) (difference of 227, $p < 0.001$).

Literature Review

While there are several studies that analyze the impact of financial information or events on credit ratings, none address the current study’s contribution, the relevance of discontinued operations under varying accounting standards. For instance, Jorion et al. (2009) provided evidence that decreases in credit ratings are associated with certain changes in accounting quality. Ayres et al. (2010) investigated whether credit analysts incorporate information from tax reporting alternatives in addition to financial data prepared using Generally Accepted Accounting Principles (GAAP). They reported evidence that book–tax changes signal negative information to credit rating agencies.

More closely related to this investigation, Chen et al. (2015) tested whether credit ratings are influenced by underfunded multiemployer pension plan obligations (MEPPs) under two different accounting standards. The newer standard, effective in 2011, required more disclosure related to underfunded MEPPs. They found that both before and after the passage of the accounting standard, the underfunding was negatively associated with a firm’s credit rating suggesting information conveyed in the expanded disclosure was already known to creditors. Other studies provided evidence consistent with the idea that rating agencies use both public and private information when assigning credit ratings (Ziebart & Rieter, 1992; Hand et al., 1992).

Specific to the impacts of discontinued operations, Curtis et al. (2014) examined the influence of changes in accounting on the usefulness of disaggregated income components in predicting a company’s future income. They found the broader scope of discontinued operations under SFAS No. 144 produced more persistent income from continuing operations among firms reporting

¹ Interestingly, APB 30, paragraph 5, references “accountants” vs. users of financial information. Also, while the FASB does not explicitly express agreement with this view, agreement is implicit in that the FASB adopted provisions in line with this view.

discontinued operations. Similarly, under SFAS No. 144, Barua et al. (2010) found that firms shift losses to discontinued operations to meet or beat analysts' expectations.

Hypothesis

The semi-strong version of the efficient market hypothesis (EMH – Fama, 1965; Fama, 1970) suggests that market prices reflect all available public information, including accounting information (Beaver, 1968; Beaver, 1970; Jensen, 1978). Credit ratings are valuation measures which are influenced by accounting and other public and private information (Ziebart & Reiter, 1992; Hand et al., 1992). Companies perceived as having greater financial prospects (higher future cash flows) generally receive higher credit ratings.

Chen et al. (2015) found underfunding of pension liabilities disclosed in footnotes to financial statements to be associated with credit ratings under two different accounting standard regimes. In addition, Jorion et al. (2009) found that changes in the quality of accounting information impact credit ratings. This evidence, which is consistent with the EMH, demonstrates credit ratings reflect economic information no matter how (or if) it is reflected in the financial statements. Therefore, to the extent SFAS No. 144's expanded criteria resulted in gains and losses from *recurring* asset disposals being reported as discontinued operations, credit rating agencies will consider them in estimating companies' future cash flows. In contrast, by narrowing the definition of discontinued operations, ASU 2014-08 likely decreased the possibility that gains and losses are separately stated, improving the transparency of transitory items, and enabling credit rating agencies to better predict future cash flows. Our hypothesis, which is examined under two periods to detect changes resulting from adoption of ASU 2014-08, is:

H1: Discontinued operations are a significant predictor of credit ratings. Discontinued gains increase credit ratings and discontinued losses reduce credit ratings.

Methodology

Sample

To evaluate the study's hypothesis, six years of data are collected and segmented into two equal three-year periods representing the SFAS No. 144 years (2012 to 2014) and the ASU 2014-08 years (2015 to 2017). Sample firms are those located in the U.S. (Compustat *fic* = 'USA'), traded on a major stock exchange (Compustat data item *stko* = 0), reporting discontinued operations (Compustat data item *do*) other than zero, and reporting a stock price (Compustat data item *prc_p*) greater than zero at fiscal year-end.² The sample of discontinued operations firms was merged by GVKEY with the Standard & Poor's domestic long-term issuer credit rating (Compustat data item *spltrm*). The sample was further refined to eliminate firms with negative common shareholders' equity (Compustat data item *ceq*), and those with no reported total assets (Compustat data item *at*), long-term debt - total (Compustat data item *dltt*), earnings before income and taxes (Compustat data item *ebit*), net income (Compustat data item *ni*), or interest expense (Compustat data item *xint*), as these data are necessary to construct ratios used in the regression model. The resulting sample includes 1,322 firm year observations. All continuous variables are winsorized at the 1st and 99th percentiles to reduce the likelihood of influential outliers.

As depicted in Table 1, of the 1,322 observations, 798 are in the SFAS No. 144 period and 524 are in the ASU 2014-08 period. This decrease is expected due to the more stringent requirements for reporting discontinued operations under ASU 2014-08.

² More specifically, data is from Compustat-Capital IQ, Monthly Updates, North America-Fundamentals Annual data base and the Ratings data base.

Table 1 - Frequency Distribution of Firms

SFAS No. 144 Fiscal Years 2012-2014:

Year	Fiscal Year	Number of Firms	Percentage
1	2012	250	31.3
2	2013	283	35.5
3	2014	265	33.2
Sub-total		798	100.0

ASU 2014-08 Fiscal Years 2015-2017:

Year	Fiscal Year	Number of Firms	Percentage
1	2015	197	37.6
2	2016	163	31.1
3	2017	164	31.3
Sub-total		524	100.0
Total		1,322	

Table 2 presents the observations by industry representation within each period. As depicted, reporting of discontinued operations is not distributed evenly across industries. The industries comprising the largest percentages of observations in the SFAS No. 144 period are durable manufacturers (18.30 percent), services (10.27 percent), retail (9.52 percent) and utilities (9.52 percent). In comparison, in the ASU 2014-08 period, durable manufacturers (20.42 percent), computers (10.11 percent), retail (9.54 percent), and services (8.78 percent) comprise the largest percentages.

Table 2 - Industry Classification of Sample Firms

Industry	Primary SIC codes	SFAS No. 144 Fiscal Years 2012-2014		ASU 2014-08 Fiscal Years 2015-2017	
		Observations	%	Observations	%
Agriculture	1-999		0.75	3	0.57
Chemicals	2800-2824, 2840-2899	56	7.02	42	8.02
Computers	7370-7379, 3570-3579 and 3670-3679	52	6.52	53	10.11
Durable Manufacturers	3000-3999, excluding 3570-3579 and 3670-3679	146	18.30	107	20.42
Extractive Industries	2900-2999, 1300-1399	68	8.52	35	6.68
Financial Institutions	6000-6499	60	7.52	44	8.40
Food	2000-2111	23	2.88	11	2.10
Insurance & Real Estate	6500-6999	23	2.88	15	2.86
Mining and Construction	1000-1999, excluding 1300-1399	35	4.39	22	4.20
Other	9000 and above	3	0.38	3	0.57
Pharmaceuticals	2830-2836	9	1.13	10	1.91
Retail	5000-5999	76	9.52	50	9.54
Services	7000-8999, excluding 7370-7379	82	10.27	46	8.78
Textiles & Printing	2200-2790	42	5.26	27	5.15
Transportation	4000-4899	41	5.14	23	4.39
Utilities	4900-4999	76	9.52	33	6.30
Total		798	100.0	524	100.0

This classification uses Compustat data item Standard Industrial Classification – Historical (*sicb*).

The distribution of observations by credit rating is presented in Table 3. In both periods, most of the observations are clustered in the middle of the credit ratings falling in the B- to A range (numerical sequencing of 7 to 17). Over 95 percent of the SFAS No. 144 observations fall within this range, while just under 95 percent of the ASU 2014-08 observations are in the range.

Table 3 - Numerical Equivalents of Standard & Poor's Credit Rating

Credit Rating	Numerical		SFAS 144 2012-2014		ASU 2014-08 2015-2017	
	Equivalent		Firms	Percentage	Firms	Percentage
AAA	22		1	0.13	0	0.00
AA+	21		3	0.38	1	0.19
AA	20		6	0.75	5	0.96
AA-	19		3	0.38	7	1.34
A+	18		13	1.63	4	0.76
A	17		44	5.51	28	5.35
A-	16		52	6.52	25	4.78
BBB+	15		68	8.52	56	10.71
BBB	14		126	15.79	76	14.53
BBB-	13		90	11.28	60	11.47
BB+	12		69	8.65	58	11.09
BB	11		81	10.15	59	11.28
BB-	10		76	9.52	61	11.66
B+	9		58	7.27	34	6.50
B	8		59	7.39	23	4.40
B-	7		40	5.01	15	2.87
CCC+	6		3	0.38	4	0.76
CCC	5		4	0.50	2	0.38
CCC-	4		0	0.00	1	0.19
CC	3		1	0.13	1	0.19
C	2		0	0.00	0	0.00
D	1		3	0.38	3	0.57
Total			798	100.00	*523	100.00

*For the ordered Probit model one observation was deleted due to missing values, so only 523 observations were used.

Research Design

The following regression equation, which is consistent with extant related research (e.g., Alalia et al., 2012; Ayres, 2016; Blume et al., 1998), is used to test the study's hypothesis using an ordered Probit³ model:

$$\text{CREDITRATING}_{i,t+4} = \alpha_0 + \delta_1 \text{DOAT}_{i,t} + \delta_2 \text{INTCOV}_{i,t} + \delta_3 \text{LEV}_{i,t} + \delta_4 \text{RETURN}_{i,t} + \delta_5 \text{DEBTCOV}_{i,t} + \delta_6 \text{LOGAT}_{i,t} + \delta_7 \text{BETA}_{i,t} + \delta_8 \text{INDUSTRY}_{i,t} + \delta_9 \text{YEAR}_{i,t} + \epsilon_{i,t}$$

³ The model was also estimated using a generalized linear model (GLM) and the results were consistent with the ordered Probit findings.

Variables used in the equation are summarized in Table 4. The dependent variable, CREDITRATING, is the Standard and Poor's long-term domestic credit rating (Compustat data item *spltrm*), converted from letter grades to numerical equivalents (Ayres, 2016). Credit ratings are provided monthly. To allow sufficient time for a firm's credit rating to reflect the financial reporting of the most recent fiscal year-end, CREDITRATING is measured four months after the date of each observation's fiscal year-end (Ayres, 2016).

DOAT, the variable of interest, is constructed as discontinued operations (Compustat data item *do*) divided by total assets (Compustat data item *at*).⁴ A significant DOAT coefficient suggests credit rating agencies perceive discontinued operations as being relevant to assigning a credit rating – they are expected to have some persistence.

Variables that prior research has shown to be highly correlated with credit ratings are included in the regression equation. These are, leverage (LEV), which is calculated as long-term debt (Compustat data item *dltt*) divided by long-term debt plus total assets. This variable is expected to have a negative coefficient since higher leverage is expected to be negatively related to a firm's credit rating. RETURN, calculated as operating income (Compustat data item *ebit*) divided by sales (Compustat data item *sale*), is expected to be positive since favorable operating performance positively impacts credit ratings. The interest coverage ratio, INTCOV, is earnings before interest and taxes (Compustat data item *ebit*) divided by interest expense (Compustat data item *xint*). The coefficient on INTCOV is expected to be positive since a higher coverage ratio represents a better ability to meet interest payments. LOGAT is the log of total assets. A positive coefficient is expected since larger firms tend to be less risky. Debt coverage, DEBTCOV, is measured as earnings before interest (Compustat data item *ebitda*) less interest expense (Compustat data item *xint*) and taxes (Compustat data item *txl*), divided by total liabilities (Compustat data item *lt*). DEBTCOV is expected to have a positive coefficient as greater liquidity suggests lower risk.

Previous studies provide evidence that as a firm's equity risk increases (BETA), it is less likely to service its debt. Consistent with prior studies investigating credit ratings, (Blume et al., 1998; Jorion et al., 2009; Ziebart & Reiter, 1992), the study includes BETA in the equation and estimated it using monthly returns over the sixty-month period prior to the fiscal year-end. It is expected to have a negative coefficient as more risk, higher BETA, should result in lower credit ratings.

To control for industry-specific fixed effects, the study includes INDUSTRY, which is one of 15 (16 industries detailed in Table 2, minus 1) indicator variables to control for industry-specific fixed effects (Barth et al., 1998; Easton & Pae, 2004). In addition, to control for the year specific fixed effects, the variable YEAR is included.

Table 4 - Definition of Regression Dependent and Independent Variables

Compustat Data Items in (*italics*)

(addition (+) and subtraction (-) assumed to occur before division (/))

Variable	Definition
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⁴ Because discontinued operations are typically comprised of two components, gains or losses on the sale of assets and net operating costs expected to be incurred prior to disposition of the discontinued unit, and the recorded value of total assets is more stable than operating income or sales, DOAT is deflated by total assets. Deflating by total assets is also consistent with the methodology used by Guragai et al. (2020).

DEPENDENT

VARIABLE:

CREDITRATING

Standard & Poor's Domestic Long-term Issuer Credit Rating (*splterm*), converted from letter grades to numerical equivalents. To provide sufficient time for a firm's credit rating to reflect the financial reporting of the most recent fiscal year-end, the rating is measured four months after the date of each observation's fiscal year-end.

INDEPENDENT

VARIABLES:

DOAT

Discontinued Operations (*do*) divided by total assets (*at*).

INTCOV

Interest Coverage is earnings before interest and taxes (*ebit*) / interest expense (*xint*). If Interest Coverage Ratio is < -1 then it is set to = -1 and if > 25 then set to 25. An average of the three most recent years is used.

LEV

Leverage Ratio is long-term debt (*dltt*) / long-term debt (*dltt*) + total assets (*at*). An average of the three most recent years is used.

RETURN

Return is operating income (*ebit*) / sales (*sale*). An average of the three most recent years is used.

DEBTCOV

Debt Coverage is earnings before interest (*ebitda*) – interest expense (*xint*) – taxes (*txi*) / total liabilities (*lt*). If Debt Coverage is < -1 then it is set to = -1 and if > 5 then set to 5. An average of the three most recent years is used.

LOGAT

Natural log of total assets (*at*).

BETA

Market model betas were estimated using monthly returns over a 60 month period prior to the fiscal year-end of each observation.

Descriptive statistics of variables included in the regression equations are presented in Table 5. Panel A shows the mean and median of the SFAS No. 144 variables reported for discontinued operations and Panel B presents the mean and median for the variables during the ASU 2014-08 period. Also presented are the 25th and 75th percentiles for each variable.

Table 5 - Descriptive Statistics of Dependent and Independent Variables

PANEL A

SFAS No. 144 Fiscal Years 2012-2014 (n = 798):

Variable	Mean	25 th	Median	75 th
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		Percentile		Percentile
CREDITRATING	12.312	10.000	13.000	14.000
DOAT	0.002	-0.001	0.000	0.002
INTCOV	5.887	2.181	3.892	7.938
LEV	0.466	0.339	0.453	0.570
RETURN	0.113	0.062	0.103	0.169
DEBTCOV	0.125	0.071	0.115	0.172
LOGAT	8.808	7.793	8.666	9.668
BETA	1.422	0.891	1.328	1.814

PANEL B

ASU 2014-08 Fiscal Years 2015-2017 (n = 524):

Variable	Mean	25 th Percentile	Median	75 th Percentile
CREDITRATING	12.390	10.000	13.000	14.000
DOAT	0.002	-0.001	0.000	0.001
INTCOV	6.328	2.609	4.327	8.895
LEV	0.487	0.358	0.473	0.609
RETURN	0.106	0.059	0.106	0.164
DEBTCOV	0.125	0.072	0.121	0.175
LOGAT	9.008	7.900	8.846	9.928
BETA	1.317	0.905	1.234	1.644

The dependent variable CREDITRATING is not significantly different between the periods (SFAS No. 144 = 12.312 and ASU 2014-08 = 12.390). However, sample firms in the ASU 2014-08 period are more leveraged (LEV, $p < 0.05$), larger (LOGAT, $p < 0.05$), and less risky (BETA, $p < 0.01$) than sample firms in the SFAS No. 144 period (not tabulated). Differences may, in part, be due to period specific economics, the impact of which are accounted for in the YEAR fixed effects variables included in the regression equation.

Discussion

Results

Correlation analysis presented in Table 6 depicts that some of the independent variables used in the regression equation are highly correlated. Statistical diagnostics reveal variance inflation factors (VIFs) associated with all of the independent variables are less than three. Therefore, collinearity is not adversely impacting the power of the study's tests to detect significance of the relationship between DOAT and CREDITRATING.

Table 6 - Correlations of Independent Variables Used in the Regression Equation
(n = 1,322)

VARIABLE	INTCOV	LEV	RETURN	DEBTCOV	LOGAT	BETA
DOAT	-0.027	-0.010	-0.065*	-0.011	-0.034	-0.012
INTCOV		-0.578**	0.258**	0.636***	0.158**	-0.253***
LEV			-0.028	-0.417***	-0.118***	0.172***
RETURN				0.345***	0.328***	-0.225***
DEBTCOV					-0.094***	-0.176***
LOGAT						-0.190***

*, **, *** Significant at $p < 0.05$, $p < 0.01$, $p < 0.001$, respectively.
Variable definitions are shown in Table 4.

Two regressions are estimated, one for each of the time periods, SFAS No. 144 (years 2012 to 2014) and ASU 2014-08 (years 2015 to 2017). The results of the regressions are presented in Table 7. For ease of interpretation, the coefficients on the fixed effects variables are not tabulated.

Table 7 - Results of Ordered Probit for SFAS 144 (2012-2014 Fiscal Years) and ASU 2014-08 (2015-2017 Fiscal Years)

$$\text{CREDITRATING}_{i,t+4} = \alpha_0 + \delta_1 \text{DOAT}_{i,t} + \delta_2 \text{INTCOV}_{i,t} + \delta_3 \text{LEV}_{i,t} + \delta_4 \text{RETURN}_{i,t} + \delta_5 \text{DEBTCOV}_{i,t} + \delta_6 \text{LOGAT}_{i,t} + \delta_7 \text{BETA}_{i,t} + \delta_8 \text{INDUSTRY}_{i,t} + \delta_9 \text{YEAR}_{i,t} + e_{i,t}.$$

Independent Variables	Predicted Sign	SFAS 144, 2012-2014		ASU 2014-08, 2015-2017	
		Coefficient	p-value	Coefficient	p-value
DOAT	Positive	4.4447	0.013	0.2858	0.887
INTCOV	Positive	0.0625	<0.001	0.1064	<0.001
LEV	Negative	-1.6250	<0.001	-1.2635	<0.001
RETURN	Positive	0.4048	0.427	0.9983	0.128
DEBTCOV	Positive	1.84631	0.008	1.7843	0.058
LOGAT	Positive	0.7602	<0.001	0.6397	<0.001
BETA	Negative	-0.4704	<0.001	-0.5221	<0.001
Total observations		798		*523	
Model F-value		79.63	$p < 0.001$	41.97	$p < 0.001$
R ²		0.71		0.67	

Variable definitions are shown in Table 4. The coefficients on INDUSTRY and YEAR are not presented for ease of interpretation.

*For the ordered Probit model one observation was deleted due to missing values, so only 523 observations were used.

In the SFAS No. 144 period the coefficient on DOAT is positive and significant ($p = 0.013$) suggesting that discontinued operations in this period are viewed as persistent and considered when assigning credit ratings. In comparison, in the ASU 2014-08 period, the coefficient on DOAT is not significant ($p = 0.887$). These results demonstrate that in this period discontinued operations are viewed as having little or no persistence.

In both periods, the coefficients on four of the six control variables are significant and the signs are in the expected direction. The variables LEV and BETA have significant negative coefficients while the variables INTCOV and LOGAT, have significant positive coefficients. The DEBTCOV coefficient is significant in the SFAS 144 model and moderately significant ($p = 0.058$) in the ASU 2014-08 model. The coefficient on RETURN is not significant in either time period. As a robustness test, RETURN is replaced with return on assets (ROA), measured as net income divided by total assets. Results are substantially unchanged. In the SFAS No. 144 period, the coefficient on DOAT remains significant ($p < 0.01$) and the coefficient on ROA is significant ($p < 0.001$), but the coefficient on DEBTCOV is no longer significant. In the ASU 2014-08 period, the coefficient on DOAT remains insignificant and the coefficient on ROA is significant ($p < 0.01$), and the coefficients on the remaining independent variables are significant in the direction predicted.

Contributions

This study found that during the SFAS No. 144 period, the relationship between reported discontinued operations and credit ratings was positive and significant. This suggests that the amounts reported as gains and losses from discontinued operations influence the reporting company's credit rating. This result is likely due to the relatively broad definition of discontinued operations in use under SFAS 144. Although the FASB's Conceptual Framework supports the notion that an income statement is more useful for decision making if non-recurring items are separated from income from continuing operations, it appears the provisions of SFAS No. 144 did not achieve this goal. It may be that this was an unintended consequence of expanding the definition of qualifying items from that of APB No. 30, or it may be that the more inclusive definition allowed managers greater flexibility to present recurring losses outside of continuing operations in the income statement.

In contrast, no relationship was found between reported discontinued operations and companies' credit ratings during the subsequent ASU 2014-08 period. This suggests that under the narrower definition, included gains and losses are more likely to be non-recurring. It appears standard setters recognized that the definition of discontinued items under SFAS No. 144 was not consistent with the goal of the Conceptual Framework, and ASU 2014-08's more restrictive definition appears to improve the usefulness of the income statements.

These results contribute to extant research about the goal of the Conceptual Framework to provide decision-useful financial reporting (e.g., Burgstahler et al., 2002; Dechow & Ge, 2006; Jones & Smith, 2011) and address a gap in the literature on discontinued operations (e.g., Barua et al., 2010; Curtis et al., 2014).

Importantly, the results suggest that users of financial information are not misled when recurring gains and losses are reflected as separately stated discontinued operations. Consistent with the EMH, credit ratings reflect relevant economic information no matter how it is reported in the financial statements. Managers need not expend effort attempting to recharacterize gains and losses. This result informs standard-setters and supports the idea of a conceptual framework for accounting versus more prescriptive accounting standards.

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