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Financial statement presentation of discontinued operations: Determinants and consequences

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ABSTRACT

US GAAP requires firms to separately report income from discontinued operations within the income statement. Current financial reporting guidance, however, allows managers to either aggregate or disaggregate operating income (or loss) and gain (or loss) from discontinued operations on the face of the income statement. Using this unique setting, we hand-collect data on the presentation of discontinued operations (i.e., aggregated versus disaggregated presentation) to understand factors that affect the discretionary presentation choices in financial statements. We show that managers' disaggregation preference in reporting discontinued operations reflect properties of prospect theory and mental accounting theory. We fail to find empirical evidence that investors' valuation of discontinued operations is different for aggregated and disaggregated presentations. These results should help managers, regulators, and investors understand the implications of discontinued operations' presentation choices in financial reporting.

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1. Introduction

This study investigates factors that affect the presentation choices of discontinued operations in financial statements. Managerial preference in financial statement presentation is an important area of research in accounting literature (Bonner, Clor-Proell, & Koonce, 2014; Harris, 1998; McVay, 2006; Riedl & Srinivasan, 2010; Schrand & Walther, 2000). Prior literature suggests that managers use discretion in disclosing and presenting financial information. Both the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) suggest that firms should provide users with more disaggregated information to help investors make rational investment decisions. Archival evidence on the causes and consequences of managerial decision to disaggregate financial statement items, however, is limited (Riedl & Srinivasan, 2010).

We use the setting of discontinued operations presentation to examine this issue. As per US Generally Accepted Accounting Principles (GAAP), firms must report results of discontinued operations separately on the face of the income statement. However, GAAP allows managers the choice of aggregating the operating income (loss) from discontinued operations and the gain (loss) on disposal of assets as

one line-item or disaggregating this information as two line-items in the income statement. We use this discretionary presentation choice to better understand factors that affect managerial decisions when presenting financial information. We extend the analysis to determine if managers' presentation choice affects investors' valuation of discontinued operations.

We hand-collect information on presentation formats from the 10-Ks of firms that have reported discontinued operations for the first time during 1994–2012. We then restrict the sample to those firms that have reported both operating income or loss from discontinued operations (income portion, hereafter) and gain or loss on disposal (gain portion, hereafter), either in aggregated or disaggregated form. We estimate logistic regressions to test hypotheses about managerial decisions in presenting discontinued operations.

Psychology literature extensively uses prospect theory to understand how individuals value gains and losses. S-shaped value curve of prospect theory is widely used to show that individuals prefer loss aversion and that the value curve for losses has a steeper slope than for gains (Kahneman & Tversky, 1979; Tversky & Kahneman, 1992). Mental accounting theory, on the other hand, addresses whether individuals prefer to aggregate gains and losses into one mental account or disaggregate them as two separate accounts (Thaler, 1985, 1999). Drawing on the S-shaped value curve, mental accounting theory posits that aggregation preference depends on whether the items presented are in the form of gains or losses (Bonner et al., 2014; Thaler, 1985, 1999).

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In the case of discontinued operations, consider a hypothetical scenario where the firm experiences a large gain on disposal and a small operating loss from discontinued operations. The firm has a choice to report these items as two separate line-items or one combined line-item. If the firm chooses to report two separate line-items, mental accounting theory suggests that individuals will first value utility from gain on disposal and disutility from operating loss in two separate mental accounts and then generate a net utility. If the firm chooses to report one line-item, individuals will only value utility from the net gain. As prospect theory postulates, disutility from the operating loss has a steeper slope than utility from the gain on disposal. Thus, in this example, we argue that managers will prefer to aggregate the large gain on disposal and the small operating loss from discontinued operations as one line-item to maximize the utility value of the financial statement users. Consistent with this argument, for the income-increasing sample, our results show that managers will prefer to aggregate the income and gain portions of discontinued operations if either portion is negative, but the net amount is positive.

In another hypothetical scenario, the firm experiences loss on disposal as well as operating loss on discontinued operations. Again, the firm has a choice to report these two losses as two separate line-items or combine them as one large loss and report one line-item. Prospect theory and mental accounting theory suggest that disutility from two smaller losses should be more than the disutility from one large loss. If managers prefer users of their financial statements to experience less disutility from reporting of losses, we argue that managers will prefer to aggregate disposal loss and operating loss as one line-item in the above scenario. Concentrating on our income-decreasing sample, our archival empirical evidence provides marginal support for this hypothesis.

For our valuation test, we first replicate part of Black, Carnes, and Richardson (2000) and show that investors value discontinued operations positively (negatively) when the net effect of discontinued operations on net income is positive (negative). Then, we extend Black et al.'s (2000) model to test whether valuation of discontinued operations is different depending on managers' presentation choices. We find no empirical evidence that investors' valuation of discontinued operations is dependent on aggregated versus disaggregated presentation.

We make two key contributions to the accounting literature. First, we provide empirical evidence that managers' financial statement presentation choices closely follow prospect theory and mental accounting theory. Bonner et al. (2014) conducts a series of experiments to show that financial statement presentation is partly explained by mental accounting propositions. In their behavioral experiments, the authors show that managers are more likely to aggregate when mixed gains and losses result in overall net gain. Bonner et al. (2014) also shows that managers prefer to aggregate several losses into one large loss. Our archival empirical evidence supports their experimental results related to managers' financial statement presentation choices. This study complements accounting literature that mainly examines whether managers opportunistically highlight gains and hide losses in presenting financial information.

Second, we examine whether investors condition their valuation of discontinued operations on presentation choices. Regulators, investors, and managers should be interested in understanding whether presentation formats of financial information affect users' perceptions. Bonner et al. (2014) shows that an individual's investment decision differs depending on whether the same performance information is shown in aggregated or disaggregated form. We fail to find archival support for their experimental findings. Although managers have preferences in presenting discontinued operations, our results fail to find support that these preferences affect investors' judgments about discontinued operations and firm value. Bonner et al.'s (2014) experiment focuses on above-the-line income statement items (i.e., the effect of gains and losses from fair value accounting treatment) whereas our study focuses on below-the-line income statement items (i.e., discontinued operations).

It is possible that investors' valuation differs systematically conditional on presentation choices for above-the-line items versus below-the-line items. Further research in this area is warranted.

The remainder of this paper is organized as follows. Section 2 presents background information on discontinued operations, a review of extant literature, and hypotheses development. Section 3 presents the research methodology and sample selection process. Section 4 contains the results of this study. Section 5 concludes, discusses limitations, and provides suggestions for future research.

2. Literature review and hypotheses development

2.1. Regulatory background and presentation choices on discontinued operations

FASB Concepts Statement No. 2, *Qualitative Characteristics of Accounting Information*, recommends that information contained in financial statements should be decision-useful to the users. Consistent with this framework, the FASB requires that firms report income from continuing and discontinued operations separately. Before the issuance of Statement of Financial Accounting Standards No. 144 (SFAS 144, hereafter), firms used APB 30 to classify only major disposal of business segment(s) as discontinued operations. However, SFAS 144 allowed lower-level groups of assets (or components) to be classified as discontinued operations as long as both of the following conditions are met: (a) the operation and cash flows of the component have been (or will be) eliminated from the ongoing operation of the entity as a result of the disposal transaction and (b) the entity will not have any significant continuing involvement in the operation of the component after the disposal transaction.

Although the FASB has periodically changed the definition of discontinued operations, the fundamental way of presenting discontinued operations on the income statement has remained relatively the same. Firms can present the income (or loss) from discontinued operations and the gain (or loss) on disposal in an aggregated or disaggregated form on the face of the income statement. Appendices B and C provide examples of the ways that companies may present discontinued operations. As shown in Appendix B, Aaron Rents, Inc. and Subsidiaries (Aaron, hereafter) presented its earnings from discontinued operations in an aggregated format, although footnote disclosure suggests that the company had both income and gain portions from discontinued operations. Appendix C shows that The Boeing Company and Subsidiaries (Boeing, hereafter) reported the income and gain portions from discontinued operations separately on the face of the income statement. In this study, Aaron's presentation is coded as aggregated and Boeing's presentation as disaggregated.

2.2. Discontinued operations and financial statement presentation

Accounting research has extensively examined manager's disclosure behavior (Bonner et al., 2014; Dye & Sridhar, 2004; Healy & Palepu, 2001). The FASB has a stated preference that managers should choose presentation formats that are most appropriate for the information being communicated to the intended users. Prior literature relies on two competing theories, informational reasoning and opportunistic motivation, to understand managers' discretionary disclosure behavior.

Literature using the informational reasoning hypothesis argues that managers strategically choose presentation formats to convey financial information (Bradshaw & Sloan, 2002; Burgstahler & Dichev, 1997; DeGeorge, Patel, & Zeckhauser, 1999). For example, Riedl and Srinivasan (2010) show that the presentation of special items is dependent on the persistence and materiality of such items. Their results suggest that managers are more likely to include special items as separate line items on the income statement if these special items are less likely to persist in the future. Riedl and Srinivasan (2010) conclude that managers present special items to inform users of their future persistence.

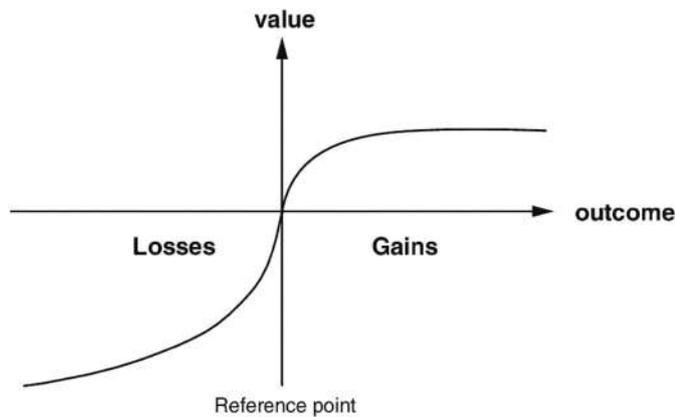


Fig. 1. Prospect theory value curve. Note: Fig. 1 presents prospect theory value function. The value function is defined over gains and losses. It is S-shaped, being concave for gains and convex for losses. The value function is steeper for losses than for gains, indicating an individual's loss-aversion behavior.

However, many other empirical studies use the opportunistic motivation hypothesis to suggest that managers opportunistically choose presentation formats that allow them to hide bad news and highlight good news. For example, *Schrand and Walther (2000)* show that managers are more likely to separately announce a prior-period gain from the sale of assets than a loss in their earnings press releases. *McVay (2006)* finds evidence that managers opportunistically shift reported expenses from core expenses to special items in order to overstate their core earnings. *Bowen, Davis, and Matsumoto (2005)* provide evidence that managers emphasize metrics that reflect more favorably on firm performance. In summary, these results suggest that managers will prefer to emphasize good news while downplaying bad news.

Prior literature generally suggests that firms discontinue operations to refocus on their major core operations (*Lord & Saito, 2017; Saito, 2019*). Reporting of discontinued operations might be perceived by investors as good news or bad news depending on their evaluation of how such discontinuation affects future earnings. Using a valuation framework, *Black et al. (2000)* examines how investors perceive and react to the reporting of discontinued operations. The authors provide empirical evidence that, for single occurrences, the effect of discontinued operations on stock price is in the same direction as its effect on net income.² Since our current study uses first-time occurrences of discontinued operations during the sample period, we assume that income-increasing (income-decreasing) discontinued operations are viewed as good news (bad news) by investors.

Related to the presentation choice, *Bonner et al.'s (2014)* experimental study suggests that managerial preference for aggregation depends on the arguments of prospect theory (*Kahneman & Tversky, 1979; Tversky & Kahneman, 1992*) and mental accounting theory (*Thaler, 1985, 1999*). Fig. 1 presents prospect theory's value function that has several important features. As shown in the figure, the value function is S-shaped, being concave for gains and convex for losses. It is steeper for losses than for gains, suggesting that a small loss gives greater disutility than the utility given by a proportional gain. Related to discontinued operations presentation, let's assume that the firm experiences \$100 overall income from discontinued operations, comprised of a \$500 gain portion (i.e., gain on disposal) and a \$400 loss portion (i.e., operating loss on discontinued operations). Prospect theory addresses how an individual would value single outcomes, such as an investor's reaction to a \$100 net gain if managers choose an aggregated presentation and separate reactions to a \$500 gain and a \$400 loss if managers choose a disaggregated presentation.

² We replicate part of *Black et al.'s (2000)* study and find similar results for reporting of single occurrences of discontinued operations.

Mental accounting theory, on the other hand, addresses whether an individual would rather combine a \$500 gain portion and a \$400 loss portion into one mental account or consider them as two separate accounts. Based on the prospect theory's value-curve, mental accounting theory predicts that the utility from a \$100 net gain with aggregated presentation outweighs net utility derived from separate valuations of a \$500 gain and a \$400 loss with disaggregated presentation. In general terms, individuals will prefer to aggregate an overall gain comprised of a large gain and a small loss to reduce the effects of steeper disutility from a loss condition. Consistent with this prediction, *Bonner et al.'s (2014)* experiment shows that managers are more likely to aggregate when financial statement line items have mixed gains and losses, with an overall net gain. When income-increasing discontinued operations are reported, our sample will have one of two conditions: (1) both income and gain portions are positive; (2) either the income or gain portion is negative but the net sum is positive (i.e., a mixed gain and loss situation). According to mental accounting theory, managers should prefer to aggregate when either the income or gain portion is negative but the sum of the two is positive. Thus, we hypothesize that managers are more likely to aggregate in mixed gain and loss conditions for our income-increasing sample. A formal hypothesis is presented below:

H1A. In the income-increasing sample, managers are more likely to choose aggregated presentation when either the gain or income portion of discontinued operations is negative.

Based on the prospect theory value-curve, mental accounting theory predicts that individuals will prefer to aggregate an overall loss comprised of several smaller losses. As Fig. 1 shows, losses have a steeper slope closer to the reference point (i.e., the no gain or loss point), suggesting that the disutility experienced from two smaller losses will be more than the disutility from one large loss in aggregation. Consistent with this prediction, *Bonner et al. (2014)* shows that managers will prefer to aggregate several smaller losses into a single line-item. In our income-decreasing discontinued operations sample, two possible scenarios exist: (1) both the income and gain portions are negative; (2) either the income or gain portion is positive but the net sum is negative (i.e., a mixed gain and loss situation). If mental accounting theory holds, managers should prefer to aggregate discontinued operations if both income and gain portions are negative. A formal hypothesis is presented in alternative form below:

H1B. In the income-decreasing sample, managers are more likely to choose aggregated presentation when both the income and gain portions of discontinued operations are negative.

2.3. Firm valuation and presentation choices

The efficient market hypothesis suggests that presentation choices should not affect investors' reactions to discontinued operations if the same information is presented in either format (*Basu, 1997; Fama, 1970*). However, *Bonner et al. (2014)* shows that investors' valuation depends on the presentation choices of economic transactions in aggregated versus disaggregated formats. In another study, *Hirst and Hopkins (1998)* suggest that investors and analysts process and weigh information about unrealized gains and losses differently when such information is presented in the statement of comprehensive income compared to when the same information is presented in the statement of stockholder's equity. *Maines and McDaniel (2000)* also show that alternative presentation formats affect nonprofessional investors' processing of information related to comprehensive income. They further argue that financial statement formatting and presentation choices affect how investors weigh the acquired information. In summary, prior accounting literature shows that investors' perceptions about financial information may depend on how that information is presented, contrary to the efficient market hypothesis. Based on prospect and mental

accounting theory as well as results documented in prior accounting literature, we present the following hypothesis related to investors' valuation of discontinued operations:

H2. The presentation format affects investors' valuation of discontinued operations.

3. Research design and sample selection

As mentioned in the hypothesis development section, firms that report income-increasing discontinued operations will fall into one of two groups: (1) both the income and gain portions are positive; or (2) either the income or gain portion is negative but the net sum is positive. We use this setting to analyze whether reporting choices differ for firms that have both portions positive (indicated by the variable *BP*) compared to firms that have a net positive sum with one of the portions negative (indicated by the variable *NP*). To test H1A, we employ a logistic regression as follows:

$$Aggregated_i = \beta_0 + \beta_1 NP_i + \beta_2 Disposed_i + \beta_3 AbsDo_i + \beta_4 Size_i + \beta_5 Roa_i + \beta_6 Lev_i + \beta_7 Mtb_i + \beta_8 Sfas_i + Industry\ dummies_i + Stock\ exchange\ dummies_i + e_i \quad (1)$$

where, for firm *i*:

<i>Aggregated</i> =	1 if the firm reports the operating income (income portion) and disposal income (gain portion) from discontinued operations as a combined, one-line item on the face of the income statement and 0 otherwise.
<i>NP</i> =	1 if the combined income from discontinued operations is positive but either of the income or gain portions is negative and 0 otherwise.
<i>Disposed</i> =	The number of segments disposed.
<i>AbsDo</i> =	The absolute value of discontinued operations scaled by total assets at year-end.
<i>Size</i> =	The natural log of total assets at year-end.
<i>Roa</i> =	Return on assets calculated as net income before discontinued operations divided by total assets at year-end.
<i>Lev</i> =	Firm leverage calculated as total liabilities divided by total assets at year-end.
<i>Mtb</i> =	The market value of equity divided by the book value of equity.
<i>Sfas</i> =	1 if the fiscal year of discontinued operations is 2002 or after and 0 otherwise.

In Eq. (1), β_1 is the coefficient of interest to test H1A. A positive β_1 coefficient indicates that firms reporting income-increasing discontinued operations (DOs) are more likely to aggregate when either of the income or gain portions is negative. Based on the empirical evidence from prior literature, we include observable control variables. We control for the number of discontinued segments by including the variable *Disposed*. The magnitude of discontinued operations may result in different reporting choices. As such, we use *AbsDo* to control for the size of discontinued operations. Since firms of unequal sizes may have different investing and information environments as well as different numbers of analysts following (Atiase, 1985; Riedl & Srinivasan, 2010), we control for firm size by including the variable *Size*. We control for other firm characteristics, namely profitability, leverage, and firm growth that are likely to affect discretionary disclosure behavior (Gigler & Hemmer, 2001; Li, 2008; Miller, 2002; Schrand & Walther, 2000). *Sfas* is used in the model to control for any effects of SFAS 144 on disclosure choices. We also control for industry and stock exchange differences, since it is reasonable to assume that firms across industries and exchanges report their financial statements differently.

To test H1B, we use the sample of income-decreasing DOs and replace the variable *NP* with the variable *BN* in Eq. (1), where *BN* is an indicator variable equal to 1 if both the income and gain portions are negative. When reporting income-decreasing DOs, we argue that firms with both portions negative should prefer an aggregated presentation. Thus, we expect a positive β_1 coefficient.

H2 tests whether investors' valuation is different depending on the reporting choice for discontinued operations. We first use the following model adopted from Black et al. (2000) to test whether discontinued operations have value implications for our current sample:

$$Price = \beta_0 + \beta_1 BVEP_i + \beta_2 NIP_i + \beta_3 DOP_i + \beta_4 EIP_i + \beta_5 SIP_i + e_i \quad (2)$$

where for firm *i*:

<i>Price</i> =	The market value of equity three months after fiscal year-end divided by the number of shares outstanding at fiscal year-end.
<i>BVEP</i> =	The book value of equity divided by the number of shares outstanding at fiscal year-end.
<i>NIP</i> =	Net income before special items, discontinued operations, and extraordinary items divided by the number of shares outstanding at fiscal year-end.
<i>DOP</i> =	Discontinued operations divided by the number of shares outstanding at fiscal year-end.
<i>EIP</i> =	Extraordinary items divided by the number of shares outstanding at fiscal year-end.
<i>SIP</i> =	Special items divided by the number of shares outstanding at fiscal year-end.

For the income-increasing DO sample, we use the following modified version of Eq. (2) to test H2:

$$Price = \beta_0 + \beta_1 BVEP_i + \beta_2 DOP_i + \beta_3 NIP_i + \beta_4 SIP_i + \beta_5 EIP_i + \beta_6 NP_i + \beta_7 Aggregated_i + \beta_8 NP_i * Aggregated_i + e_i \quad (3)$$

In Eq. (3), β_8 is the coefficient of interest. A significant positive or negative β_8 coefficient indicates that investors value the aggregated presentation of income-increasing discontinued operations differently when such reporting contains negative value on either the income or gain portions. For the income-decreasing sample, we replace *NP* in Eq. (3) with *BN*, where *BN* is an indicator variable equal to 1 if both the income and gain portions are negative. For the income-decreasing DO sample, a significant positive or negative β_8 coefficient indicates that investors value aggregated presentation of income-decreasing discontinued operations differently when both the income and gain portions are negative.

Table 1 describes the sample selection process and final sample composition. As presented in Table 1A, 2,477 unique firms reported discontinued operations for the first time during the sample period from 1994 to 2012. For those firms, we hand-collect data on how gains and losses from discontinued operations are presented, resulting in 958 firms that reported both the income and gain portions on discontinued operations. Table 1B shows the final sample composition for the income-increasing and income-decreasing samples by aggregation preference and signs of the income and gain portions. As displayed in Table 1B, 418 (540) firms reported income-increasing (income-decreasing) DOs. For the income-increasing sample, 237 firms (56.70%) reported both positive income and gains while the remaining 181 firms (43.30%) reported either the income or gain portion as negative. Among the 237 firms that reported both positive income and gain portions, 84 firms (35.44%) presented the information in aggregated form. Among the 181 firms that reported net positive DO with either the income or gain portions as negative, 82 firms (45.30%) presented such information in aggregated form. This descriptive evidence is consistent

Table 1A
Sample selection.

Sample period 1994–2012	Total
Total U.S. domestic firm years (i.e., popsrc = D and fic = USA in Compustat), excluding financial service firm years (i.e., SIC codes 6000–6999); Traded on AMEX, NYSE, or NASDAQ; and Data item (DO) NOT equal to zero in Compustat during 1994–2012	9739
Unique firms with first time reporting of data item DO in Compustat during 1994–2012	2477
Sample firms that have reported both the income (or loss) from discontinued operations and gain (or loss) on disposal	958

Table 1B
Income-increasing and income-decreasing sample firms by presentation types.

Income-increasing sample firms			
Presentation	Same sign (i.e. Both positive)	Different sign (i.e. Net positive)	Total
Aggregated	84	82	166
Disaggregated	153	99	252
Total	237	181	418
Income-decreasing sample firms			
Presentation	Same sign (i.e. Both negative)	Different sign (i.e. Net negative)	Total
Aggregated	116	69	185
Disaggregated	275	80	355
Total	391	149	540

with the arguments of H1A that income-increasing firms are more likely to aggregate income and gain portions when either portion is negative.

Similarly, for the income-decreasing sample, 116 firms out of 391 firms (i.e., 29.67%) presented aggregated information when both portions had the same signs. Among 149 firms that reported net negative DO (i.e., different signs), 69 firms (46.31%) presented such information in aggregated form. This descriptive evidence is not consistent with H1B, which argues that income-decreasing sample firms are more likely to aggregate income and gain portions when both portions are negative. Analyzing the income-decreasing sample further, we found that firms in computer and durable goods industries represented 228 of the 540 sample firms. 166 of these 228 firms in computer and durable goods industries reported the same signs for the income and gain portions. Related to presentation choice, almost 85% of these 166 firms chose disaggregated reporting. Our additional analysis revealed that firms in computer and durable goods industries generally preferred disaggregated presentation choice for both the income-increasing and income-decreasing samples, irrespective of the signs of the income and gain portions. These industry composition analyses provide support for our decision to include industry effects in the regression estimations.

Table 2 presents descriptive statistics of the full sample. Out of the total 958 firms that reported both income and gain portions, 37% presented such information in aggregated form. Table 2 further suggests that around 41% of firms reported negative values on both the income and gain portions. As indicated by the mean of the variable *BP*, 25% of firms reported positive values on both portions. The variable *NN* has a mean of 0.154, suggesting that around 15% of the firms reported net negative DO, where either the income or the gain portion was positive. Finally, around 19% of firms reported net positive DO, where either the income or the gain portion was negative. These statistics provide evidence that there was variation in reporting of positive and negative values of the income and the gain portion for the sample. Most firms

Table 2
Descriptive statistics.

Variable	N	Mean	Median	Q1	Q3
<i>Aggregated</i>	958	0.366	0.000	0.000	1.000
<i>BP</i>	958	0.247	0.000	0.000	0.000
<i>BN</i>	958	0.408	0.000	0.000	1.000
<i>NP</i>	958	0.189	0.000	0.000	0.000
<i>NN</i>	958	0.154	0.000	0.000	0.000
<i>Disposed</i>	958	1.051	1.000	1.000	1.000
<i>AbsDo</i>	958	0.078	0.027	0.007	0.079
<i>Size</i>	958	6.016	5.900	4.530	7.306
<i>Roa</i>	958	-0.053	0.018	-0.052	0.053
<i>Lev</i>	958	0.259	0.235	0.041	0.401
<i>Mtb</i>	958	2.494	1.793	1.111	2.899
<i>Sfas</i>	958	0.540	1.000	0.000	1.000

Note: Table 2 presents the descriptive statistics for the variables used to test our hypotheses H1A and H1B. See Appendix A for variable definitions. All continuous variables presented here and included in regression analysis are winsorized at the 1 and 99% levels.

disposed one business segment as indicated by the variable *Disposed*. A mean value of 0.54 for the variable *Sfas* indicates that 54% of the firms in the sample are firms that are subject to SFAS 144 (i.e., after fiscal year 2001).

Table 3 displays the Pearson and Spearman correlation coefficients among the variables used in this study. Tables 3A and B present univariate statistics for income-increasing and income-decreasing samples, respectively. These univariate statistics provide some interesting insights into the hypotheses being tested. For the income-increasing sample, *Aggregated* is positively associated with *NP* and negatively associated with *BP*, providing univariate support for H1A. *AbsDo*, *Sfas*, and *Size* are significantly associated with *Aggregated* for both samples. For the income-decreasing sample, *Aggregated* is negatively associated with *BN* and positively associated with *NN*, which is against the argument of H1B. As discussed earlier in connection with Table 1B, the negative association between *Aggregated* and *BN* is largely driven by firms in the computer and durable goods industries. In untabulated univariate correlation tests, we excluded firms from these two industries and found that the *Aggregated* variable is positively (negatively) associated with *BN* (*NN*) at the 5% significance levels. Thus, the generalizability of any support for H1B in regression estimation is limited to industries other than the computer and durable goods industries.³

4. Results

Table 4 shows logistic regression estimation results from tests of H1A and H1B. The dependent variable is *Aggregated*, which is an indicator variable set equal to 1 if a firm reported both the income and gain portions of discontinued operations as one line-item on the face of the income statement and 0 if they are presented as two line-items. Estimation results for income-increasing and income-decreasing samples are reported separately in Table 4.

For the income-increasing sample, we hypothesized a significantly positive coefficient for *NP*, which would suggest that managers are more likely to aggregate if either the income or gain portions is negative, but the net sum is positive. Table 4 results provide support for our hypothesis H1A since the coefficient for *NP* is positive at a 5% significance level. For the income-decreasing sample, we hypothesized a significantly positive coefficient for *BN*, which would suggest that managers are more likely to aggregate if both the income and gain portions are negative. The coefficient of *BN* is positive at the 10% significance level for the income-decreasing sample, providing marginal support for H1B. However, the *BN* coefficient becomes insignificant if we fail to control for industry effects. Thus, even the marginal support of H1B for the income-decreasing sample is sensitive to variations of the models used, limiting the generalizability of these results.

Table 5A presents a replication of Black et al. (2000) to examine whether discontinued operations have value implications for our sample firms. We present Eq. (2)'s estimation results for the full sample as well as the income-increasing and income-decreasing samples separately. For the full sample, we combine income from discontinued operations, special items, and extraordinary items to generate variable *NRIP* to be consistent with Black et al.'s (2000) analyses. As shown in Table 5A, our sample firms exhibit similar characteristics to Black et al.'s (2000) sample. Results show that investors value non-recurring items in general, including discontinued operations. Related to discontinued operations, the coefficient of *DOP* is positive and significant for the income-increasing sample, suggesting that investors perceive reporting of the income-increasing DO as good news. For the income-decreasing sample, the coefficient of *DOP* is negative and significant, suggesting that investors perceive reporting of the income-decreasing DO as bad news. This result is in line with Black et al.'s

³ Our research design limits our ability to answer why the majority of firms in the computer and durable goods industries chose disaggregated presentation, irrespective of the sign of the DO or the signs of the income and gain portions.

Table 3A
Pearson and Spearman correlation analysis: income-increasing sample.

Variables	1	2	3	4	5	6	7	8	9	10
<i>Aggregated</i>	1	0.100 0.041	-0.100 0.041	0.072 0.142	-0.041 0.400	0.202 <0.0001	-0.015 0.757	0.075 0.125	-0.036 0.467	0.355 <0.0001
<i>NP</i>	2	0.100 0.041	-1.000 <0.0001	0.055 0.262	0.035 0.474	-0.235 <0.0001	-0.172 0.000	0.041 0.400	0.028 0.570	0.128 0.009
<i>BP</i>	3	-0.100 0.041	-1.000 <0.0001	-0.055 0.262	-0.035 0.474	-0.0001 <0.0001	0.172 0.000	-0.041 0.400	-0.028 0.570	-0.128 0.009
<i>Disposed</i>	4	0.042 0.393	0.024 0.627	-0.024 0.627	-0.039 0.428	0.078 0.109	0.028 0.572	-0.051 0.301	-0.007 0.881	0.078 0.110
<i>AbsDo</i>	5	-0.109 0.026	-0.104 0.034	0.104 0.034	-0.018 0.715	-0.368 <0.0001	-0.403 <0.0001	-0.018 0.710	0.133 0.006	-0.085 0.083
<i>Size</i>	6	0.191 <0.0001	-0.229 <0.0001	0.229 <0.0001	0.088 0.074	-0.379 <0.0001	-0.368 <0.0001	-0.018 0.385	0.133 0.155	-0.076 0.110
<i>Roa</i>	7	0.000 0.997	-0.139 0.004	0.139 0.004	0.000 0.994	-0.300 <0.0001	0.306 <0.0001	-0.117 0.017	-0.230 <0.0001	-0.010 0.835
<i>Lev</i>	8	0.057 0.243	0.013 0.787	-0.013 0.787	-0.041 0.399	-0.186 0.000	0.267 <0.0001	-0.135 0.006	-0.193 <0.0001	-0.019 0.706
<i>Mtb</i>	9	-0.051 0.297	-0.016 0.739	0.016 0.739	0.038 0.434	-0.006 0.906	0.022 0.656	0.202 <0.0001	-0.223 <0.0001	-0.081 0.098
<i>Sfas</i>	10	0.355 <0.0001	0.128 0.009	-0.128 0.009	0.072 0.141	-0.139 0.004	0.114 0.020	-0.059 0.232	-0.049 0.318	-0.058 0.238

Notes: Table 3A presents the Pearson and Spearman Correlation analyses for various variables used to test our hypotheses for the income-increasing sample. See Appendix A for variable definitions. The first row presents correlation coefficients and the second row presents the significance level. Pearson correlations are shown above the diagonal and spearman correlations are shown below the diagonal.

Table 3B
Pearson and Spearman correlation analysis: income-decreasing sample.

Variables	1	2	3	4	5	6	7	8	9	10
<i>Aggregated</i>	1	-0.157 0.000	0.151 0.000	0.025 0.569	-0.150 0.001	0.271 <0.0001	0.075 0.082	0.062 0.148	-0.009 0.829	0.565 <0.0001
<i>BN</i>	2	-0.157 0.000	-0.995 <0.0001	-0.052 0.225	0.137 0.001	-0.203 <0.0001	-0.047 0.276	-0.047 0.278	-0.033 0.440	-0.208 <0.0001
<i>NN</i>	3	0.151 0.000	-0.995 <0.0001	0.053 0.218	-0.136 0.002	0.204 <0.0001	0.048 0.263	0.052 0.229	0.035 0.423	0.204 <0.0001
<i>Disposed</i>	4	0.039 0.362	-0.025 0.560	0.026 0.547	-0.034 0.430	0.026 0.545	0.027 0.538	-0.003 0.949	-0.003 0.943	0.108 0.012
<i>AbsDo</i>	5	-0.244 <0.0001	0.276 <0.0001	-0.276 <0.0001	-0.010 0.811	-0.370 <0.0001	-0.390 <0.0001	-0.034 0.436	0.056 0.190	-0.199 <0.0001
<i>Size</i>	6	0.272 <0.0001	-0.194 <0.0001	0.195 <0.0001	0.047 0.277	-0.495 <0.0001	0.311 <0.0001	0.296 <0.0001	0.044 0.312	0.168 <0.0001
<i>Roa</i>	7	0.042 0.327	-0.043 0.319	0.048 0.270	-0.002 0.967	-0.299 <0.0001	0.232 <0.0001	0.034 0.435	0.099 0.022	0.079 0.068
<i>Lev</i>	8	0.057 0.185	-0.061 0.157	0.066 0.125	0.006 0.890	-0.142 0.001	0.342 <0.0001	-0.061 0.159	-0.035 0.418	-0.055 0.201
<i>Mtb</i>	9	0.037 0.385	0.005 0.901	-0.002 0.961	-0.020 0.650	-0.015 0.725	0.099 0.021	0.205 <0.0001	-0.124 0.004	-0.039 0.364
<i>Sfas</i>	10	0.565 <0.0001	-0.208 <0.0001	0.204 <0.0001	0.112 0.009	-0.284 <0.0001	0.189 <0.0001	0.020 0.647	-0.068 0.114	-0.037 0.385

Notes: Table 3B presents the Pearson and Spearman Correlation analyses for various variables used to test our hypotheses for the income-decreasing sample. See Appendix A for variable definitions. The first row presents correlation coefficients and the second row presents the significance level. Pearson correlations are shown above the diagonal and spearman correlations are shown below the diagonal.

(2000) conclusion that investors value the discontinued operation differently based on its overall impact on net income.

Table 5B presents estimation results of Eq. (3). For the income-increasing sample, we find that the variables *NP*, *Aggregated*, and the interaction of *NP* and *Aggregated* are all insignificant. This result implies that investors' valuation of discontinued operations is not dependent on presentation choices. We find similar results for the income-decreasing sample. Thus, H2 is not supported. Altogether, we do not find evidence that investors' perceptions of firm valuation resulting from discontinued operations are conditional on choice of presentation format despite managerial preference to aggregate in some situations and disaggregate in others. This result is inconsistent with experimental evidence of Bonner et al. (2014), which shows that investors' valuation of firms is systematically affected by managers' presentation choices. Bonner et al. (2014) uses gains and losses from fair value accounting treatment of financial instruments, an above-the-line income statement item, to examine presentation choices of managers. While our research

design does not address this inconsistency, it is possible that presentation formats of above-the-line income statement items affect investors' valuation systematically whereas presentation formats of below-the-line items, such as discontinued operations, do not have the same effect on firm valuation by investors. Future research should explore this possibility.

4.1. Additional tests

In order to test the possibility that overall disclosure quality of firms affects the results documented in Table 4, we control for overall firm disclosure quality (DQ) using the measures developed by Chen, Miao, and Shevlin (2015).⁴ The DQ measure ranges from 0 to 1 and captures the level of disaggregation of accounting data through a count of non-missing Compustat line items. Chen et al. (2015) shows that the DQ

⁴ We thank Chen et al. (2015) for sharing their disclosure quality measure, DQ, with us.

Table 4
Factors affecting presentation choices of discontinued operations.

Variables	Income-increasing sample		Income-decreasing sample	
	Estimate	t-value	Estimate	t-value
Intercept	-4.1599***	-6.38	-3.5068***	-5.42
NP	0.4894**	2.04		
BN			0.0471*	1.72
Disposed	0.1923	0.54	-0.4515	-0.99
AbsDo	0.8030	0.79	0.3594	0.50
Size	0.2782***	4.15	0.2855***	3.82
Roa	-0.7548	-1.20	-0.1580	-0.30
Lev	0.3499	0.70	0.5435	1.02
Mtb	-0.0072	-0.23	0.0074	0.34
Sfas	1.7971***	6.22	2.7691***	10.91
Industry effects	Yes		Yes	
Stock exchange effects	Yes		Yes	
N	418		540	
Pseudo R ²	0.297		0.321	

Note: Table 4 presents the estimated coefficients from Eq. (1). The dependent variable is *Aggregated*, which is an indicator variable equal to 1 if the firm reports operating income (or loss) from discontinued operations and gain (or loss) on disposal of discontinued operations in aggregated form on the face of the income statement and 0 otherwise. ***, **, * represents statistical significance at the 1%, 5%, and 10% levels, respectively. All significance levels are based on two-tailed tests. Coefficients and their t-values are bolded if the significance level is 10% or lower. See Appendix A for variable definitions.

Table 5A
Replication of Black et al. (2000).

Variables	Full sample		Income-increasing sample		Income-decreasing sample	
	Estimate	t-value	Estimate	t-value	Estimate	t-value
Intercept	7.6436***	13.70	8.4068***	10.34	6.5424***	8.01
BVEP	0.9295***	12.49	0.9030***	9.45	0.9818***	8.68
NIP	4.4227***	9.91	4.9217***	7.73	3.6909***	5.93
NRIP	0.8821***	3.66				
DOP			0.3891**	1.83	-0.0881*	1.72
SIP			0.9477*	1.66	0.3829	0.56
EIP			4.5335	1.10	-1.4979	-0.58
N	958		418		540	
Adj. R ²	0.572		0.607		0.517	

Note: Table 5A presents the estimated coefficients from Eq. (2). Following Black et al. (2000), the dependent variable, *Price*, represents firm i's market value of equity divided by common shares outstanding three months following the end of the fiscal year of discontinued operations reported. ***, **, * represents statistical significance at the 1%, 5%, and 10% levels, respectively. All significance levels are based on two-tailed tests. Coefficients and their t-values are bolded if the significance level is 10% or lower. See Appendix A for variable definitions.

measure is positively associated with the amount of detail in a firm's annual report: the higher the value of DQ, the higher the level of disaggregated data a firm has reported in its financial statements. Untabulated results show that the main conclusions from Table 4 remain the same for both samples, after controlling for overall firm disclosure quality.

4.2. Test of informational motivation to aggregated presentation choice

Riedl and Srinivasan (2010), among others, argue that managers' presentation choices may be driven by either opportunistic or informational motivations. If managers are opportunistic, they will use their presentation to bias users' decisions that favor managers' gains. If managers have informational motivations, they will choose presentation formats that best assist users in understanding the economic implications of the reported items. In this paper so far, we have assumed opportunistic motivation when arguing managers' aggregation preference. Alternatively, we test the possibility that managers' informational motivations drive their aggregated presentation choices.

Table 5B
Valuation implication of presentation choices of discontinued operations.

Variables	Income-increasing sample		Income-decreasing sample	
	Estimate	t-value	Estimate	t-value
Intercept	8.6517***	6.85	7.1196***	4.21
BVEP	0.9012***	9.38	0.9394***	7.96
DOP	0.3675*	1.68	0.1297	0.35
NIP	4.9006***	7.55	3.7309***	6.00
SIP	0.9490	1.33	0.3848	0.57
EIP	4.5896	1.09	-1.1462	-0.42
NP	-0.5264	-0.33		
BN			-1.4414	-0.88
Aggregated	-0.0073	0.01	2.6907	1.32
NP*Aggregated	0.2120	0.09		
BN*Aggregated			-1.4573	-0.62
N	418		540	
Adj. R ²	0.607		0.524	

Note: Table 5B presents the estimated coefficients from Eq. (3). Following Black et al. (2000), the dependent variable, *Price*, represents firm i's market value of equity divided by common shares outstanding three months following the end of the fiscal year of discontinued operations reported. ***, **, * represents statistical significance at the 1%, 5%, and 10% levels, respectively. All significance levels are based on two-tailed tests. Coefficients and their t-values are bolded if the significance level is 10% or lower. See Appendix A for variable definitions.

Using the experimental setting of discretion in presenting special items, Riedl and Srinivasan (2010) argue that managers driven by informational motivations will prefer to disaggregate special items in income statements if such special items are less persistent.⁵ Their empirical evidence shows that special items that are presented as separate line-items, as opposed to those combined with other items, are less persistent on the income statement. The authors conclude that managers are trying to inform the market that special items will not persist in the future by disaggregating the special items on the face of the income statement. Using a similar argument, we propose that managers will disaggregate discontinued operations if they believe that components of discontinued operations will not persist in the future.

In order to test informational motivations of aggregating discontinued operations, we follow Curtis, McVay, and Wolfe (2014) and examine reported discontinued operations' ability to predict firms' continuing income conditional on the presentation choice. Based on the arguments of Riedl and Srinivasan (2010), if managers are driven by informational motivations, disaggregated presentation should result in discontinued operations being less persistent compared to aggregated presentation. We use the following regression adapted from Curtis et al. (2014) to test earnings persistence of discontinued operations:

$$CIncome_{t+1} = \beta_0 + \beta_1 CIncome_t + \beta_2 Do_AT_t + \beta_3 Sfas_t + \beta_4 CIncome_t * Sfas_t + \beta_5 Do_AT_t * Sfas_t + \beta_6 Aggregated_t + \beta_7 Aggregated_t * Do_AT_t + Industry\ dummies_i + Stock\ exchange\ dummies_i + e_i \quad (4)$$

where:

$CIncome_{t+1}$ =	The income from continuing operations in year t + 1 scaled by total assets at the end of year t + 1, where t is the year of discontinued operations reported.
$CIncome_t$ =	The income from continuing operations in year t scaled by total assets at the end of year t, where t is the year of discontinued operations reported.
Do_AT_t =	The income from discontinued operations in year t scaled by total assets at the end of year t, where t is the year of discontinued operations reported.

⁵ Riedl and Srinivasan (2010) use the effect of special items on the firm's future performance as a test for persistence of special items.

Table 6
Discontinued operations and persistence of earnings.

Variables	Full sample		Income-increasing sample		Income-decreasing sample	
	Estimate	t-value	Estimate	t-value	Estimate	t-value
<i>Intercept</i>	-0.0013	-0.19	0.0264***	2.42	-0.0002	-0.01
<i>CIncome</i>	0.6059	6.07***	0.6846***	4.25	0.5872***	4.59
<i>Do_AT</i>	0.1284	3.33***	0.1070***	3.14	0.1821***	3.40
<i>Sfas</i>	0.0017	0.15	-0.0237	-1.44	0.0022	0.10
<i>CIncome*Sfas</i>	0.2137	1.00	0.2126	1.42	0.2532	1.56
<i>Do_AT*Sfas</i>	-0.1388	-0.79	0.1239	0.48	-0.1882	-0.47
<i>Aggregated</i>	0.0033	0.26	0.0204	0.90	0.0064	0.27
<i>Do_AT*Aggregated</i>	-0.1163	-0.60	-0.1019	-0.39	-0.1248	-0.31
<i>NP</i>			-0.0088	-0.50		
<i>Aggregated*NP</i>			-0.0196	-0.71		
<i>BN</i>					0.0116	0.57
<i>Aggregated*BN</i>					-0.0334	-1.09
Industry effects	Yes		Yes		Yes	
Stock exchange effects	Yes		Yes		Yes	
N	958		418		540	
Adj. R ²	0.363		0.474		0.303	

Notes: Table 6 presents the estimated coefficients from Eq. (4). The dependent variable is the income from continuing operation in year $t + 1$ where year $t = 0$ is the year of discontinued operations reported. ***, **, * represents statistical significance at the 1%, 5%, and 10% levels, respectively. All significance levels are based on two-tailed tests. Coefficients and their t-values are bolded if the significance level is 10% or lower. See Appendix A for variable definitions.

In Eq. (4), if managers are driven by informational motivations in their presentation choices, we should expect the persistence of discontinued operations to be lower for disaggregated presentation compared to aggregated presentation (i.e., we expect β_7 to be positive). We also divide the sample into income-increasing and income decreasing subsamples to test the persistence of DOs conditional on presentation choices.

Table 6 presents the results of estimating Eq. (4). Although the sample size in our study is significantly smaller than that of Curtis et al. (2014), our baseline results are consistent with their main results. As shown in Table 6, both income from continuing operations and income from discontinued operations predict future operating income for the full sample as well as for the samples of income-increasing and income-decreasing DOs. Our results are also consistent with Curtis et al. (2014) in that income from continuing operations has significantly more predictive power than income from discontinued operations for predicting future operating income. The interaction of income from discontinued operations and aggregation preference is not significant in the full sample or either of the subsamples, providing some support that the aggregation preferences are not driven by informational motivations.

Appendix A. Variables and their definitions

Variables	Definitions
<i>AbsDo</i>	The absolute value of discontinued operations scaled by total assets at year-end.
<i>Aggregated</i>	1 if the firm reports the operating income (income portion) and disposal income (gain portion) from discontinued operations as a combined, one-line item on the face of the income statement and 0 otherwise.
<i>BN</i>	1 if the income and gain portions from discontinued operations are both negative and 0 otherwise.
<i>BP</i>	1 if the income and gain portions from discontinued operations are both positive and 0 otherwise.
<i>BVEP</i>	The book value of equity divided by the number of shares outstanding at fiscal year-end.
<i>CIncome_t</i>	The income from continuing operations in year t scaled by total assets at the end of year t , where t is the year of reported discontinued operations.
<i>CIncome_{t+1}</i>	The income from continuing operations in year $t + 1$ scaled by total assets at the end of year $t + 1$, where t is the year of reported discontinued operations.
<i>Disposed</i>	The number of segments disposed.
<i>Do_AT_t</i>	The income from discontinued operations in year t scaled by total assets at the end of year t , where t is the year of reported discontinued operations.
<i>DOP</i>	Discontinued operations divided by the number of shares outstanding at fiscal year-end.

5. Summary, conclusion, and limitations

This study examines the determinants and consequences of discretionary presentation of discontinued operations, either in aggregated or disaggregated format. Confirming the predictions of prospect theory and mental accounting theory (Kahneman & Tversky, 1979; Thaler, 1985, 1999; Tversky & Kahneman, 1992), we show that managers prefer to aggregate when reporting mixed gains and losses. Consistent with Black et al. (2000), we show that investors value income-increasing (income-decreasing) discontinued operations positively (negatively). We fail to find evidence that managerial presentation choices for discontinued operations are driven by informational reasons. Overall, we identify circumstances in which managers choose to present discontinued operations information opportunistically.

Our results are subject to some limitations. First, although we have controlled for many factors found in prior literature, there might be other unobservable factors that affect the results documented in this study. Second, for our income-decreasing sample, we only find marginal, weak evidence that managers prefer aggregation when presenting several, smaller losses as they relate to discontinued operations. Furthermore, this result is sensitive to the model utilized. There appears to be no significant difference in aggregated and disaggregated presentation choices for the income-decreasing sample if industry effects are not controlled for. Thus, results from the income-decreasing sample should be interpreted with caution. Third, although we have tried to rule out the possibility of informational motivation of aggregated presentation, our empirical analysis to test informational motivation is limited to earnings persistence of discontinued operations. Future research may further analyze the informational motivation of discontinued operations presentation by examining other settings where such motivations may exist. Fourth, we only use first-time occurrences of discontinued operations due to a limitation in the data-collection process. Future research may expand this study by analyzing multiple occurrences of discontinued operations.

Declaration of Competing Interest

None.

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(continued)

Variables	Definitions
<i>EIP</i>	Extraordinary items divided by the number of shares outstanding at fiscal year-end.
<i>Lev</i>	Firm leverage calculated as total liabilities divided by total assets at year-end.
<i>Mtb</i>	The market value of equity divided by the book value of equity.
<i>NIP</i>	Net income before special items, discontinued operations, and extraordinary items divided by the number of shares outstanding at fiscal year-end.
<i>NN</i>	1 if the combined income from discontinued operations is negative but either of the income or gain portions is positive and 0 otherwise.
<i>NP</i>	1 if the combined income from discontinued operations is positive but either of the income or gain portions is negative and 0 otherwise.
<i>NRIP</i>	The sum of discontinued operations, special items, and extraordinary items divided by the number of shares outstanding at fiscal year-end.
<i>Price</i>	The market value of equity three months after fiscal year-end divided by the number of shares outstanding at fiscal year-end.
<i>Roa</i>	Return on assets calculated as net income before discontinued operations divided by total assets at year-end.
<i>Sfas</i>	1 if the fiscal year of discontinued operations is 2002 or after and 0 otherwise.
<i>SIP</i>	Special items divided by the number of shares outstanding at fiscal year-end.
<i>Size</i>	The natural log of total assets at year-end.

Appendix B. Example of aggregated presentation of discontinued operations of Aaron Rents, Inc. and Subsidiaries

AARON RENTS, INC. AND SUBSIDIARIES			
CONSOLIDATED STATEMENTS OF EARNINGS			
	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006
(In Thousands, Except Per Share)			
REVENUES:			
Rentals and Fees	\$ 1,178,719	\$ 1,045,804	\$ 915,872
Retail Sales	43,187	34,591	40,102
Non-Retail Sales	309,326	261,584	224,489
Franchise Royalties and Fees	45,025	38,803	33,626
Other	16,351	14,157	14,358
	<u>1,592,608</u>	<u>1,394,939</u>	<u>1,228,447</u>
COSTS AND EXPENSES:			
Retail Cost of Sales	26,379	21,201	25,207
Non-Retail Cost of Sales	283,358	239,755	207,217
Operating Expenses	705,566	617,106	525,980
Depreciation of Rental Merchandise	429,907	391,538	349,218
Interest	7,818	7,587	8,567
	<u>1,453,028</u>	<u>1,277,187</u>	<u>1,116,189</u>
EARNINGS FROM CONTINUING OPERATIONS BEFORE INCOME TAXES	<u>139,580</u>	<u>117,752</u>	<u>112,258</u>
INCOME TAXES	<u>53,811</u>	<u>44,327</u>	<u>41,355</u>
NET EARNINGS FROM CONTINUING OPERATIONS	<u>85,769</u>	<u>73,425</u>	<u>70,903</u>
EARNINGS FROM DISCONTINUED OPERATIONS, NET OF TAX	<u>4,420</u>	<u>6,850</u>	<u>7,732</u>
NET EARNINGS	<u>\$ 90,189</u>	<u>\$ 80,275</u>	<u>\$ 78,635</u>
EARNINGS PER SHARE FROM CONTINUING OPERATIONS	<u>\$ 1.61</u>	<u>\$ 1.35</u>	<u>\$ 1.35</u>
EARNINGS PER SHARE FROM CONTINUING OPERATIONS ASSUMING DILUTION	<u>\$ 1.58</u>	<u>\$ 1.33</u>	<u>\$ 1.33</u>
EARNINGS PER SHARE FROM DISCONTINUED OPERATIONS	<u>\$.08</u>	<u>\$.13</u>	<u>\$.15</u>
EARNINGS PER SHARE FROM DISCONTINUED OPERATIONS ASSUMING DILUTION	<u>\$.08</u>	<u>\$.13</u>	<u>\$.14</u>

Appendix C. Example of disaggregated presentation of discontinued operations of The Boeing Company and Subsidiaries

(Dollars in millions, except per share data)			
Year Ended December 31,	2004	2003	2002
Sales of products	\$ 43,960	\$ 41,389	\$ 46,317
Sales of services	8,497	8,867	7,514
Total Revenues	52,457	50,256	53,831
Cost of products	(37,443)	(35,100)	(39,149)
Cost of services	(7,232)	(8,692)	(6,336)
Boeing Capital Corporation interest expense	(350)	(358)	(319)
Total costs and expenses	(45,025)	(44,150)	(45,804)
	7,432	6,106	8,027
Income/(loss) from operating investments, net	91	28	(49)
General and administrative expense	(3,081)	(2,744)	(2,512)
Research and development expense	(1,879)	(1,651)	(1,639)
Gain on dispositions, net	23	7	44
Share-based plans expense	(576)	(456)	(447)
Goodwill impairment	(3)	(913)	
Impact of September 11, 2001, recoveries		21	2
Earnings from continuing operations	2,007	398	3,426
Other income, net	288	460	37
Interest and debt expense	(335)	(358)	(320)
Earnings before income taxes	1,960	500	3,143
Income tax (expense)/benefit	(140)	185	(847)
Net earnings from continuing operations	1,820	685	2,296
Income from discontinued operations, net of taxes	10	33	23
Net gain on disposal of discontinued operations, net of taxes	42		
Cumulative effect of accounting change, net of taxes			(1,827)
Net earnings	\$ 1,872	\$ 718	\$ 492
Basic earnings per share from continuing operations	\$ 2.27	\$ 0.86	\$ 2.87
Income from discontinued operations, net of taxes	0.01	0.04	0.03
Net gain on disposal of discontinued operations, net of taxes	0.05		
Cumulative effect of accounting change, net of taxes			(2.28)
Basic earnings per share	\$ 2.33	\$ 0.90	\$ 0.62
Diluted earnings per share from continuing operations	\$ 2.24	\$ 0.85	\$ 2.84
Income from discontinued operations, net of taxes	0.01	0.04	0.03
Net gain on disposal of discontinued operations, net of taxes	0.05		
Cumulative effect of accounting change, net of taxes			(2.26)
Diluted earnings per share	\$ 2.30	\$ 0.89	\$ 0.61

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