Gift card breakage: Evidence of an anomalous recognition pattern

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ABSTRACT

This study investigates whether a pattern emerges in retail companies' recognition of gift card breakage income and whether that recognition pattern is abnormal. Results using 45 US publicly traded retail firms for the period 2005 – 2011 suggest that retailers are more likely to recognize breakage in the last quarter of their fiscal year and that this recognition pattern may be anomalous. The results should be informative for accounting regulators and standard setters who may be concerned about the use of breakage income as an earnings management tool.

Keywords: Breakage, Gift Cards, Transaction Timing, Recognition Patterns

INTRODUCTION

Retail gift cards are a relatively recent phenomenon; they replaced gift certificate programs in the late 1990's. A unique by-product of gift card sales is breakage. Breakage represents the portion of gift card balances that is not redeemed for merchandise (Kile & Wall, 2008); estimates of annual breakage vary widely, but a recent report cited breakage at $6.8 billion (Anderson, 2012). Remarkably, breakage is recognizable as income if gift card redemption is remote.

The advent of gift card programs created accounting challenges, most notably the decision to derecognize the gift card liability and recognize breakage income when redemption is remote. Conceptually, unredeemed gift card balances could remain on the balance sheet indefinitely as deferred revenue. Yet in practice, retailers guesstimate non-redemption, using historical redemption rates as basis for determining if unused gift card balances will not be redeemed. If balances are determined unredeemable, retailers derecognize the gift card liability and recognize breakage income without ever having to deliver a product or a service. Importantly, regardless of when breakage income is recognized, it is always accretive.

A lingering question is whether the recognition of breakage income in retailers' financial statements is unsystematic or the outcome of a managed decision. As such, the intent of this study is to examine the recognition of breakage income within the retail sector to determine whether a recognition pattern emerges, and whether that pattern is abnormal. An abnormal pattern might suggest deliberate, managed timing decisions by retail firms. Using annual report values from the retail industry, this study finds that retailers are more likely to recognize breakage income in the last quarter of their fiscal year, and that this recognition pattern appears to be unusual.

LITERATURE REVIEW

Conceptually, gift card breakage can be calculated as:

$$\text{Breakage} = (1 - \text{redemption rate}) \text{ x Gift Card Sales}$$

So, a firm with a 97% redemption rate that sells $100,000 in gift cards would expect breakage of 3%, or $3,000. Obviously, determining the redemption rate is multifaceted, but for sake of argument, assume that the redemption rate is objectively determinable. As such, the more salient and discretionary consideration is the recognition of breakage income in financial statements. Here, subjectivity increases because the timing of redemption is unknown. While different recognition methods are employed for breakage, a common approach is recognition when redemption is "remote." Financial events are remote when "the chance of the future events or events occurring is slight (Financial Accounting Standards Board Statement No. 5, 1975)." Incredibly, this popular method allows breakage income to be earned as a result of nothing happening (Fried, Holtzman, & Rotenstein, 2015).

It is widely understood that the recognition of any financial activity can sometimes be a perplexing undertaking (see e.g., Pounder, 2009); the recognition of breakage income is no exception. What is less appreciated is that significant latitude exists in generally accepted accounting principles (GAAP) surrounding the interaction of the matching concept, recognition principles, and the periodicity assumption. To be blunt, financial decision-makers have leeway to

decide which accounting period a financial activity can or should be recognized in. As evidence, simply look at the accounting for extraordinary items, discretionary accruals, loan loss reserves, or even bad debts. These types of timing-related decisions are highly subjective; as such, seemingly simple decisions, such as whether to recognize an event in the last month of the first fiscal quarter or the first month of the second fiscal quarter become provocative. On this, one can concede that the ambiguity built into the recognition process advantages financial decision-makers and enables management discretion in reporting financial activity.

Importantly, literature substantiates the idea that timing-related decisions are observable, influence financial results, and ultimately affect financial statement quality and users of financial information. Academics have found that recognition patterns emerging in financial results are representative of managements' timing-related decisions (see e.g., Bartov, 1993; Jones & Bublitz, 1990; Thomas, 1989; White, 1970). Frequently, these patterns suggest a managed choice by financial managers (Das, Shroff, & Zhang, 2009) to influence financial results. Notably, managements' timing-related decisions impact financial statements attributes like comparability and affect key stakeholders (Zhang, 2005). For example, the difficulty with timing-related decisions from an analyst's perspective is that comparable year-on-year results are skewed by frequent changes in recognition policies (Atkins, 2005) and they result in higher forecast errors by financial analysts (Collins, Hopwood, & McKeown, 1984). Similarly, discretionary timing choices mask actual results, inhibiting investors' abilities to obtain clear pictures of retailers' operations (Gryta, 2007). Given the uncertainty surrounding gift card redemptions, it should be evident that retailers have similar timing-related latitude when determining the recognition of breakage income. Marden and Forsyth (2007) summarized the consequence of such discretionary choices:

> Being able to control when, where, and how a substantial amount of [gift card breakage] revenue can be inserted into the financial statements can be beneficial for management, but can be misleading for financial statement readers… (p.33)

Rappeport (2007) added "that such subjectivity [to recognize breakage] could be dangerous as firms count on unused gift cards to pad their revenues" (para. 8). Yet, despite these warnings, literature has not exhaustively examined the timing-decision related to breakage income. Unanswered questions include when do retail firms generally recognize breakage income? Are recognition patterns similar across the retail sector? Do some financial quarters accrue more benefit from breakage income than others? If a recognition profile exists among retail firms, what can be discerned from any observable pattern? The scope of this study is to explore the recognition of breakage income across the retail sector to determine whether a recognition pattern emerges, and whether that pattern is abnormal. Here, it is hypothesized that the timing of breakage income recognition is not incidental and that a remarkable recognition pattern will emerge.

METHODOLOGY

The purpose of this study is to evaluate whether a pattern emerges in retail companies' recognition of gift card breakage income and whether that recognition pattern is unusual. Determining whether a recognition pattern exists is accomplished by comparing mean quarterly breakage income as a percentage of annual breakage income. Determining whether the

recognition paradigm is unusual is determined by (1) comparing the observed frequency of an initial breakage recognition event to an expected frequency, and (2) by comparing mean quarterly breakage income as a percentage of quarterly total sales. One-way ANOVA procedures are used to test for differences in the means; a goodness of fit test is used to compare the frequency distribution.

This research uses publicly available data by quarter for the fiscal years 2005-2011 providing up to 28 quarterly observations for each retailer. The period was selected because of the significant growth of gift card programs that occurred in the 2000's and because the seven-year period ensures a sufficient sample size when testing for statistical significance. The target population for this study includes current US publicly traded firms classified as retail trade. The US Department of Labor (2010) defines retail trade as:

> …establishments engaged in selling merchandise for personal or household consumption and rendering services incidental to the sale of the goods. (para. 1)

The study population consists of those retailers with formal gift card programs within the following retail trade groups: apparel and accessories; building material, hardware, and garden supply; eating and drinking; food stores; home furniture, furnishings, and equipment; and miscellaneous retail. The six lines of trade are widely recognized and used by both market analysts and the Security and Exchange Commission (SEC) to understand the retail industry. Primary data collection on quarterly breakage income was accomplished by electronically searching retailers' quarterly press releases, 10-Q and 10-K filings from SEC EDGAR, and other public-domain publications including newspapers, wire services, and broadcast transcripts, looking for keywords such as "breakage," "gift cards," stored value cards," or "unredeemed." The final sample is comprised of 45 firms which disclosed quarterly gift card breakage values during the sample period.

Determining a recognition pattern requires a review of breakage income by quarter. Here, it is hypothesized that recognition of breakage income will vary significantly by quarter, with some quarters accruing more benefit than others because retail firms will make similar timing decisions. To test this assumption, the null hypothesis is:

$$(1)\ \mu\text{BREAKAGE}_{\frac{q1}{t}i} = \mu\text{BREAKAGE}_{\frac{q2}{t}i} = \mu\text{BREAKAGE}_{\frac{q3}{t}i} = \mu\text{BREAKAGE}_{\frac{q4}{t}i}$$

Quarterly breakage income as a percentage of total annual breakage income is calculated for each firm beginning in the year breakage income was first recognized; this calculation provides the absolute percentage share of breakage income recognized in a year by quarter. The sum of the four quarterly observations per firm per year totals 100%. The individual firm data is then grouped by quarter and the mean for each quarter for all firms is calculated. A one-way ANOVA test is used to evaluate the hypothesis, assuming 95% confidence level. If the null hypothesis is rejected ($p < .05$) a Tukey HSD post hoc test will determine where significant differences occur between quarters.

Assuming a timing pattern emerges, both the timing of the initial instance of breakage income recognition and the relative size of the breakage transaction by quarter is considered to assess whether that pattern is unusual. First, retail firms ultimately decide to derecognize breakage that has accrued since the beginning of their respective gift card program; for simplicity, call this the initial breakage income event. All things being equal, this initial event

should be random across the year; that is, the likelihood that a firm elects the first, second, third, or fourth quarter should be random since there is no mandate within GAAP regarding the timing of this entry. Here, it is hypothesized that an abnormal pattern will be apparent if the initial event occurs more frequently in one quarter than others. To test this assumption, the null hypothesis is:

(2) $p_{q1} = p_{q2} = p_{q3} = p_{q4}$

For each firm, its initial recognition event is determined by breakage income's first appearance in quarterly results. The frequency of occurrences are summed by quarter and compared to a hypothetical distribution, derived by totaling the observed frequencies and dividing the total by four. A goodness-of-fit test is used at a 95% confidence level to evaluate this hypothesis.

Second, breakage income as a percent of total revenue provides a measure of relativeness. All things being equal, breakage income as a percent of sales should not vary significantly over time because redemption rates are relatively static and relatively high; approximately 50% of gift cards are redeemed within four weeks and approximately 80% are redeemed within 6 months (First Data Corporation, 2011). An abnormal pattern is hypothesized if the relative size of breakage income differs significantly by quarter. To test this assumption, the null hypothesis is:

(3) $\mu \frac{\text{BRKG}}{\text{SALES}}\%_{q1} = \mu \frac{\text{BRKG}}{\text{SALES}}\%_{q2} = \mu \frac{\text{BRKG}}{\text{SALES}}\%_{q3} = \mu \frac{\text{BRKG}}{\text{SALES}}\%_{q4}$

Quarterly breakage income as a percent of total sales is calculated for each firm beginning in the year breakage income was first recognized. The individual firm data is then grouped by quarter and the mean for each quarter for all firms is calculated. A one-way ANOVA test is used at a 95% confidence level to evaluate this hypothesis. If the null hypothesis is rejected ($p < .05$), a Tukey HSD post hoc test determines where significant differences occur between quarters.

FINDINGS OF THE STUDY

Breakage income and the timing of the initial breakage income event were collected by quarter for each of the 45 identified firms, resulting in 624 firm quarters and 45 unique instances, respectively. Descriptive statistics for the sample are in Table 1 (Appendix). Quarterly breakage income as a percent of annual breakage income by firm was analyzed to determine the pattern of breakage income recognition. Both the frequency of occurrence of the initial breakage recognition event and breakage income as a percentage of total revenue by quarter by firm were analyzed to determine if any timing pattern that emerged was abnormal. There is statistically significant evidence that retailers are more likely to recognize breakage income in the last quarter of their fiscal year, and that this timing pattern may be irregular.

Existence of a Recognition Pattern

A quarterly breakage percent was calculated by dividing a firm's quarterly breakage income by its annual breakage income each year, resulting in four quarterly observations totaling 100% per firm per year. Percentages for any given year were not calculated until a firm

derecognized the gift card liability for the first time. The individual firm data was then grouped by quarter and the mean for each quarter was calculated. Mean (median) quarterly breakage income as a percent of annual breakage income ranged from 16.07% (17.04%) in the first quarter to 49.44% (40.44%) in the fourth quarter. Table 2 (Appendix) provides the descriptive statistics by quarter.

The ANOVA requirement of a normal distribution was violated (AD = 37.73, $p < .005$); data transformations did not improve normality. As such, the Kruskal-Wallis test was employed as a non-parametric, but widely accepted alternative to a one-way ANOVA. The results of the Kruskal-Wallis test, adjusted for ties, is significant at a 95% confidence level (H = 187.52, 3 d.f., $p = .000$), indicating that there is at least one significant difference in medians among the factors. Therefore, the null hypothesis (1) is rejected.

A limitation of the Kruskal-Wallis test is that the test does not indicate which quarters differ significantly. Like ANOVA, the Kruskal-Wallis test requires a post hoc test when the null hypothesis is rejected. Since there is no equivalent Kruskal-Wallis post hoc test that is equivalent to an ANOVA post hoc test, Dytham (2011) recommends using pairwise Mann-Whitney tests. Post hoc, pairwise comparisons with two-tailed Mann-Whitney tests determined which medians differed among quarters; the Bonferroni technique adjusted the required confidence level to reject the null hypothesis to 99.167%. Summarized output for the six comparison tests, adjusted for ties, is in Table 3 (Appendix). The results of these post hoc tests indicated significant differences in medians at the 99.167% confidence level between the fourth quarter and all three other quarters. The results suggest no significant difference in medians between the first three quarters.

Timing of Initial Breakage Income Recognition Event

For each retail firm, its initial breakage recognition event was determined by establishing when breakage income first appeared in its quarterly results. 45 unique occurrences were summed by quarter. A chi-square goodness of fit test was performed to examine how retailers' initial breakage recognition event differed from a theoretical distribution by quarter. Retailers significantly preferred to record their initial breakage recognition event in the fourth quarter, X^2 (3, N = 45) = 21.58, $p < .001$. These results suggest a rejection of the null hypothesis (2).

Relative Size of Quarterly Breakage Income

Breakage income as a percent of total sales (BRKG/SALES%) was calculated by dividing breakage income by revenue for each of the 624 firm quarters in the sample. BRKG/SALES% serves as a proxy for the relative size of the breakage transaction and also controls for seasonality of a retailers' operations. Mean (median) quarterly breakage income as a percent of total sales ranged from 0.11% (0.05%) in the first quarter to 0.44% (0.17%) in the fourth quarter. Table 4 (Appendix) presents descriptive statistics for breakage income as a percent of total sales by quarter.

BRKG/SALES% did not follow a normal distribution (AD = 113.66, $p < .005$). Attempts to normalize the data through transformation failed. Once again, the ANOVA requirement of a normal distribution was violated. Therefore, non-parametric testing using Kruskal-Wallis was employed.

The results of the Kruskal-Wallis test, adjusted for ties, is significant at a 95% confidence level (H = 73.40, 3 d.f., p = .000), indicating that there is at least one significant difference in median among the quarters. The null hypothesis (3) is rejected. Post hoc, pairwise comparisons with two-tailed Mann-Whitney tests determined which medians differed among quarters; the Bonferroni technique adjusted the required confidence level to reject the null hypothesis to 99.167%. Summarized output for the six comparison tests, adjusted for ties, is in Table 5 (Appendix). The results of these post hoc tests indicated significant differences in medians at the 99.167% confidence level between the fourth quarter and all three other quarters. Notably, there is no significant difference in medians between the first three quarters.

DISCUSSION

It is easy to expect that gift card redemption rates for individual firms are relatively static during the course of a year; that is, there is no reason to believe that gift cards sold in the 1st fiscal quarter will have significantly different redemption rates than those sold in the 4th fiscal quarter. As such, it is assumed that the only fluctuating variable when determining breakage income is the level of gift card sales. With this in mind, then, the collective results seem to suggest that retailers are more likely to recognize breakage income in the last quarter of their fiscal year. More so, because both the initial de-recognition of breakage income and fourth quarter breakage income as a percent of total sales differed significantly from a hypothetical distribution and from the first three quarters, respectively, retailers' decisions may be a result of a managed choice. This is especially insightful when one considers that there was no statistically significant difference in the relative size of breakage income in quarters one, two, or three, which suggests that abnormal assumptions about unredeemed gift card balances are made in the fourth quarter.

Differing explanations for this observed phenomenon are imaginable. One possibility is that retailers are simply recording breakage income at a predetermined point after the initial sale of a gift card. For example, if most gift card sales occur in the fourth quarter, then one could surmise that breakage is simply being recognized in the same quarter, perhaps one or two years later. However, the results seem to refute this explanation in that the relative size of fourth quarter breakage income was significantly larger than the other three quarters, respectively. There is no reason to believe that consumer redemption habits would change significantly in the fourth quarter, and therefore there is no reason to believe that breakage income as a percent of total sales would suddenly increase either.

A second possible explanation for the observed recognition pattern, which would be consistent with prior literature, is that since the fourth quarter is frequently considered a "settling-up" quarter, retailers are merely attempting to adjust their full-year results by ensuring that their balance sheets are fair representations of economic reality. This is clearly plausible. Along this line, a third explanation, also consistent with prior literature, is that these timing related decisions are the result of a managed choice. The author believes that this latter explanation is highly credible because prior literature has found that retailers use breakage to manage earnings when meeting consensus EPS forecasts (Kaufinger & Neuenschwander, 2015). Retailers may intentionally record more breakage income in the fourth quarter because of earnings pressure surrounding full year results. It seems very likely that external pressures to meet fourth quarter consensus forecasts, and indirectly full-year forecasts, propel retail managers

to recognize more breakage income in the fourth quarter than was recognized earlier in the year when meeting quarterly results is not as vital.

STUDY LIMITATIONS AND FUTURE RESEARCH

A primary limitation involves the sample. The research uses a convenience sample because retail firms are not required to disclose breakage recognition policies or breakage amounts. As a result, the 45 firms used in this study may not be representative of the retailing industry at large. A secondary limitation stems from significant violations of normality; it is assumed however that the use of non-parametric tests overcame much of this limitation. While this research adds to the body of literature on transaction timing and managed choice, many questions remain unanswered like whether the stock market views the timing of breakage income positively or negatively or whether the practice is as pervasive in the retail sector as the results suggest. These would be fruitful areas for future study.

SUMMARY

This study provides evidence that retailers are more likely to recognize breakage income in the last quarter of their fiscal year. More so, because fourth quarter breakage income as a percent total sales differed significantly from the first three quarters, respectively, the results suggest that retailers' breakage decisions may be a result of a managed choice. This assertion is bolstered by the finding that retailers are more likely to record the initial breakage income event in their fourth fiscal quarter, despite no clear mandate to do so within GAAP. The results should be of interest to standard setters, analysts, investors, and retail managers who are concerned about actual or apparent attempts to time revenue transactions to influence accounting results.

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APPENDIX

Table 1: Descriptive Statistics

Variable	*N**	*M*	*SD*	Min	Median	Max	Skewness	Kurtosis
Breakage ($ thousands)	624	1,414	4,017	0	200	43000	6.29	49.51
Sales ($ millions)	624	1,474	4,127	0.901	245	26026	3.75	13.49

** Firm quarters*

Table 2: Descriptive Statistics - Quarterly Breakage % of Annual Breakage

Quarter	*N**	*M*	*SD*	Min	Median	Max	Skewness	Kurtosis
1	156	16.07%	14.8%	0.00%	17.04%	92.65%	2.06	8.72
2	156	18.41%	17.0%	0.00%	18.47%	100.00%	2.10	7.06
3	156	16.08%	13.5%	0.00%	16.33%	95.28%	2.32	11.58
4	156	49.44%	29.6%	0.00%	40.44%	100.00%	0.53	(0.87)

** Firm quarters*

Table 3: Post Hoc Mann-Whitney Pairwise Comparisons - Breakage by Quarter

Quarter	1	2	3	4
1	---			
2	*U* = 12931 *Z* = 0.958 *p* = .336	---		
3	*U* = 12257 *Z* = 0.112 *p* = .908	*U* = 12845 *Z* = 0.850 *p* = .395	---	
4	*U* = 21163 *Z* = 11.290 ***p* = .000**	*U* = 20590 *Z* = 10.571 ***p* = .000**	*U* = 21310 *Z* = 11.475 ***p* = .000**	---

Table 4: Descriptive Statistics of BRKG/SALES% by Quarter

Quarter	*N**	*M*	*SD*	Min	Median	Max	Skewness	Kurtosis
1	156	0.11%	0.2%	0.00%	0.05%	1.37%	3.91	23.16
2	156	0.15%	0.3%	0.00%	0.06%	3.52%	7.92	78.73
3	156	0.14%	0.4%	0.00%	0.06%	4.05%	9.04	96.09
4	156	0.44%	0.8%	0.00%	0.17%	7.42%	5.15	34.94

** Firm quarters*

Table 5: Post-Hoc Mann-Whitney Pairwise Comparisons - BRKG/SALES%

Quarter	1	2	3	4
1	---			
2	*U* = 12922 *Z* = 0.946 *p* = .335	---		
3	*U* = 12490 *Z* = 0.404 *p* = .688	*U* = 12584 *Z* = 0.522 *p* = .598	---	
4	*U* = 17943 *Z* = 7.248 ***p* = .000**	*U* = 17301 *Z* = 6.443 ***p* = .000**	*U* = 17819 *Z* = 7.093 ***p* = .000**	---