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The accounting treatment for breakage of gift cards

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Abstract

Breakage refers to the amount on a gift card that customers fail to redeem. This paper examines the effects of different breakage estimation methods on breakage revenue recognition and breakage revenue disclosure. IFRS 15 currently has guidelines regarding revenue recognition, but explicit standards for the accounting treatment of breakage are missing. This is also the case for regulations regarding how breakage revenue needs to be disclosed.

This thesis conducts a comparative analysis of the most used breakage estimation methods which concludes that all methods use historical data to some extent.

It argues that the statistical redemption rate method is the most accurate but most complex method. It requires more information regarding breakage to be disclosed and because of its accuracy, the breakage revenue recognized will not have to be adjusted. The proportional redemption rate method estimates the highest breakage rate leading to a higher breakage revenue that is recognized. Because the breakage revenue is higher, overall revenue will be higher than actuality giving users of the financial statements a skewed view of the actual financial position of the company. The middle point of these two options is the time-based approach or the historical redemption rate method.

Keywords: gift cards breakage, revenue recognition, breakage revenue, IFRS 15, financial reporting

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1. Introduction

Revenue is one of the most important figures to both preparers and users of financial statements, but it is also one of the most difficult things to get right (Bragg, 2010). This particularly plays a role in the revenue recognition process for gift cards, where gift card rights are not always exercised in full. According to Cable News Network, millions of gift cards, which have a collective value of billions of dollars, go unused each year (2023). This concept of unused gift card rights is called breakage and companies that offer gift cards are left with the task of estimating this breakage (Kile Jr, 2007).

Estimating breakage can be complicated because offering gift cards results in performance obligations for companies and these companies then have to estimate when it is no longer probable that a customer will redeem their gift card. However, some companies offer gift cards with no expiration dates which means that said company has an indefinite obligation (Kile Jr.). This results in two main factors needed for revenue recognition, the timing aspect (when to issue) and the amount to be recorded (how much to issue), being unknown (Beil, 2013). This means that the method used to estimate the breakage of gift cards impacts the way revenue is recognized and ultimately also how gift cards are disclosed on a company's financial statement.

1.1 Research objective

The method used to estimate breakage is of utter importance due to the fact that it influences revenue recognition and revenue disclosure. This thesis focuses on how the methods used to estimate breakage impact the recognition process of breakage revenue and analyzes how this influences the disclosures of an entity in its financial statements. This leads to the following research question that will be studied and answered in this thesis:

“How do methods used to estimate breakage for gift cards impact revenue recognition patterns and financial statement disclosures?”

To address this main question, I will explore the following sub-questions:

1. What are the different breakage estimation methods?
2. How is revenue generated from breakage recognized according to IFRS?

3. How is breakage revenue reported in the financial statements?

This research aims to analyze how different breakage estimation methods impact the revenue and the revenue recognition process of a company as well as the presentation of their financial statements. The first sub-question clarifies the various methods that an entity can use to estimate breakage which is crucial for understanding the focus of this thesis, the effects of these methods. The second sub-question describes how breakage revenue is recognized in the books of an entity and this is important for answering the main question because it gives insights as to how the methods used for breakage estimation affect revenue recognition. The third sub-question has a similar role as the second sub-question but in regards to the financial statements. Answering this question is relevant to the main research question because the method used to estimate the breakage will influence where the breakage revenue is placed, and what role it plays in the financial statement of an entity.

Answering this research question is socially relevant because it affects various stakeholders, specifically customers and investors. Understanding how the methods used to estimate breakage affect revenue recognition can help with the disclosure of breakage revenue which translates to better transparency of financial statements for its users. Increased transparency can lead to investors making better-informed decisions. Better disclosure of breakage revenue can also show if customers are being treated fairly because high breakage rates can suggest that consumers are losing value on their unused gift card balances. This in turn could contribute to regulations about consumer protection and financial literacy among customers.

On the other hand, the topic of breakage estimation requires accountants to make assumptions by using their judgment due to the fact that there's not much regulated guidance. By researching the estimation methods used for breakage we can acquire data to help develop auditing procedures to assess the reasonableness of management's estimates. This knowledge can be significant when developing guidelines for the disclosure of breakage revenue. As a result, the quality of financial statements improves which helps with transparency and comparability across different companies. This makes this thesis also scientifically relevant.

1.2 Structure Overview

The remainder of this thesis is organized as follows. Section 2 provides a review of existing literature. It offers insights into how breakage is defined and gives background information on what leads to breakage and what makes breakage estimation important. This section also gives an overview of how breakage revenue is recognized according to IFRS 15 and how this breakage revenue is currently being disclosed. Section 3 describes the methodology as well as the data used in this thesis and this is followed by section 4 which provides the results and discussion of this research. To conclude, section 5 offers a conclusion and provides insights regarding future research possibilities.

2. Literature review

This section offers an insight into the breakage of gift cards, by first providing information regarding the definition of breakage. This is followed by an explanation of IFRS 15 and how revenue generated from breakage relates to the IFRS 15 standard. Next, the reasons behind why breakage estimation is a necessary procedure are discussed and to conclude, the methods to disclose breakage revenue in the financial statements are discussed.

2.1 The definition of breakage

Gift card breakage is a term used to describe the value of a gift card that customers fail to redeem (Hennes & Schenck, 2014). When customers decide to make non-refundable prepayments to a firm, they are given the right to receive goods or services in the future while the company obtains a performance obligation towards that client (KPMG, 2022). Examples of these non-refundable prepayments include gift cards, vouchers and, non-refundable tickets. The unused balance on the gift card translates to unexercised rights and this is what is meant by the breakage of gift cards (KPMG, 2022).

Most firms opt for a gift card program because gift cards provide benefits for not only their customers but also themselves (Kile, 2007). Benefits for customers include that buyers and gift recipients can get a variety of product choices that are restricted to the one, or a limited group of retailers, that issued the gift cards. Some retailers also offer the option to choose from a variety of gift card designs depending on the occasion, use their gift cards multiple times to pay for merchandise, and replace their old gift cards in case they get stolen or lost (Gujarathi, 2012). Because these gift cards can only be used at the retailers that issue them they are often referred to as closed-system or closed-loop cards (Marden & Forsyth, 2007). This can be incredibly beneficial to the retailers as they can gain significant economic benefits from increased sales, marketing opportunities, cash flow and inventory management, and most importantly breakage. Reported estimates of breakage by consumer research groups vary from 10% to 19% and this gives breakage the potential to be a significant factor for many companies to make the decision to issue gift cards (Kile, 2007).

Breakage can be the result of many different things, for example, the gift card expiring, the gift card getting lost or customers simply forgetting to use a small remaining balance of the gift card

(Marden & Forsyth, 2007). A series of unexpected events, like the organization going out of business or the gift card holder moving too far away, can also make it impossible to redeem the gift card and thus leading to breakage (Montero & Grey, 2019).

In an attempt to protect consumers, the CARD Act was introduced in 2009 (Marden & Forsyth, 2007). This act stands for 'credit card accountability, responsibility and disclosure' and it led to a huge restriction of the expiration dates for gift cards. This resulted in an indefinite performance obligation of the firm to the customer as well as a complex dilemma to estimate the likelihood of a customer not using that gift card over its lifetime (Hennes & Schenck, 2014). Another factor that can make breakage a more complex topic is laws. Some states, specifically American states like Delaware, have state laws regarding unclaimed property (Montero & Gray, 2019). Since breakage is the unexercised right of a customer, it may fall under this law in such states. This also means that in these states, the revenue generated from breakage has to, either entirely or partly, go to the state.

2.2 Breakage revenue recognition and IFRS 15

2.2.1 The International Financial Reporting Standard 15

The International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB) published the International Financial Reporting Standard 15 (IFRS 15) in 2014. The title of this new standard is Revenue from Contract with Customers and the introduction of the IFRS 15 marked the end of the International Accounting Standard 'Revenue' 18 (IAS 18), International Accounting Standard 'Construction Contracts' 11 (IAS 11), and all revenue related interpretations (Napier & Stadler, 2020). This new standard established a common standard for recognizing revenue and it was necessary because the previous standards were only suitable for simple transactions like the sale of goods (Tong, 2014). According to the IASB, IFRS 15 offers an extensive and solid framework for revenue recognition, revenue measurement, and the disclosure of revenue (Tong, 2014). This should help with the comparability of revenue and it should minimize the need for explicit guidance to be established on a case-by-case basis to address possible issues regarding revenue recognition.

A new standard means changes and changes in accounting regulations can significantly amend the way accounting numbers are calculated by changing the ways in which assets, liabilities,

expenses, and most importantly revenues are measured and recognized (Napier & Stadler, 2020). Revenue specifically, is a significant tool to measure the performance of an entity and it is commonly used by investors and other users for making comparisons and investment decisions (Tong, 2014). Changes in the way this is measured and recognized are extremely important because these numbers serve as the basis for several contractual and regulatory purposes. On the other hand, these changes can also lead to companies revising the ways in which they operate (Napier & Stadler, 2020).

The main principle of IFRS 15 is that a company can recognize revenue when the promised goods or services have been transferred to the customers. The revenue recorded should depict the extent to which an entity expects to be compensated in exchange for those goods or services.

To apply this main principle, a company needs to follow the following five steps:

1. Identify the contract with the customer. According to IFRS, a contract is defined as “an agreement between two or more parties that creates enforceable rights and obligations”. IFRS also states that contracts with customers can be oral, written, or implied by a company's customary business practices but that the rights and obligations stemming from a contract must be enforceable by law. In the case of gift cards, the customer receives the right to get a product or service for the amount stated in the gift card (Gujarathi, 2012).
2. Identify the performance obligation. IFRS defines a performance obligation as “a promise in a contract with a customer to transfer a good or service to the customer”. For issuers of gift cards, this performance obligation would be the merchandise or services that the customer would be entitled to, when said customer tries to redeem the gift card (Kile, 2007).
3. Determine the transaction price. Like mentioned in step one, for gift cards, this is the amount stated in the gift card.
4. Allocate the transaction price to the performance obligation. The goal of this fourth requirement is for companies to allocate the amount that they expect to receive for exchanging the promised goods or services, to each individual performance obligation identified in the contract.
5. Recognize revenue when (or as) the entity satisfies a performance obligation. The revenue can be recorded when the company satisfies its performance obligation by giving

the client physical control of the good. This transfer of control, and thus giving the gift card holder control over the merchandise or services, is a significant criterion in determining when the revenue should be recognized (Kile, 2007).

In the situation of a simple sale of a retail product, applying these five requirements is simple (Tong, 2014). But, in cases of more complicated revenue transactions, the terms of the contract as well as related facts and judgment are required. This is also the case for the breakage of gift cards, and all revenue generated as proceeds from this breakage.

2.2.2 Breakage revenue recognition

Accounting for breakage can be significantly more costly and complicated than the average person might think (Marden & Forsynth, 2007). This is due to the fact that the longer the gift card goes unused, the longer it stays on the books of a company with all the expenses that this may bring.

When a customer buys a gift card, a payment is received upfront but the transfer of merchandise or services is delayed at the customer's discretion (Kile, 2007). The company issuing the gift card will recognize the cash received as a deferred revenue liability (or gift card liability) for the amount of the gift card (Montero & Gray, 2019). Once the gift cards are redeemed, the issuer of the gift card can recognize a sale revenue in the amount of redemption and it simultaneously reduces the gift card liability with the said amount (Gujarathi, 2012). This is in accordance with the 5th step of the IFRS 15, which says that the transfer of product is an important requirement for the revenue to be recognized on the balance sheet (Kile, 2007).

However, the amount of gift card liability grew exponentially over the years, as customers did not redeem (or partially redeemed) their gift cards. In other words, the breakage of these gift cards grew significantly (Montero & Gray, 2019). In the case of this breakage, the gift card liability would have to be decreased and a breakage revenue would be gained despite the company not having met its performance obligation (Hennes & Schenck, 2014). To help with this issue, the FASB said that unredeemed gift cards should be removed from the books and revenue should be recognized once the likelihood of that gift card being redeemed is 'remote' (Fried et al., 2015). However, what exactly is meant by a remote likelihood of redemption was not explained (Hennes & Schenck, 2014). Another reason for a firm to recognize breakage revenue is due to the expiration date. To be able to remove this gift card liability, retailers and

issuers of gift cards then have to estimate the weighted average gift card breakage (Kile, 2007). If the gift card has an expiration date, breakage revenue should be recognized for the remaining balance of the card at the expiration date (Marden & Forsyth, 2007).

2.3 The importance of breakage estimation

As mentioned already, what exactly is meant by a remote likelihood of redemption is not explicitly explained (Hennes & Schenck, 2014). And this is necessary so that the gift card liability can be decreased and breakage revenue can be recognized.

The main thing for understanding how to identify breakage revenue is that revenues should be identified whether they are “realized or realizable” and earned (Marden & Forsyth, 2014). According to the Statement of Financial Accounting Concepts 5, this means that “revenues are considered to have been earned when the entity has substantially accomplished what it must do to be entitled to the benefits represented by the revenues”. However, the problem with the breakage of gift cards is not realization, but more so when the earnings processed are actually completed (Marden & Forsyth, 2014).

Companies use the deferred gift card revenue liability approach, but this presents challenges for auditors due to the fact that roughly 70% of gift card holders don't use their cards within a month (Kile, 2007). Past experience with redemption indicates that typically 75% of the value of gift cards purchased is redeemed within 12 months, another 12% is redeemed after that but before 24 months, and only 3% is redeemed after two years but within 3 years of the gift card being purchased (Gujarathi, 2012). The 10% that is over, is on average never redeemed. This leads to the need for an in-depth analysis of breakage during multiple years, to make the estimation of breakage patterns reliable. Realistically, retailers recognize an initial adjustment of gift card breakage which is a one-time recognition that covers the estimation period (multiple years) required to establish a pattern of gift card redemption, and secondly, recurring adjustments to keep estimates current (Kile, 2007). Many companies find that the longer a card is outstanding or similarly cards that have been used that have relatively small remaining balances are less likely to be redeemed (Marden & Forsyth, 2007).

With an estimated \$41 billion of gift card value that went unspent between 2005 and 2011, the estimation of breakage revenue is undoubtedly becoming an important topic (Hennes & Schenck, 2014). Apart from this, the advancements in technology have made gift card management

systems easier to operate thus allowing retailers and issuers of gift cards to have the opportunity to easily track gift card activity. The lack of guidance in regards to how breakage revenue should be measured is clear and has led to different companies using different methods to account for their breakage (Marden & Forsyth, 2014). These different methods and their corresponding effect on revenue recognition patterns and disclosure will be studied further in this thesis.

2.4 Disclosure of breakage revenue

The placement of gift card breakage in financial statements further causes additional uncertainty and variation in financial reporting (Kile, 2007). Even though more companies are disclosing gift card information, useful quantitative disclosures, indicating amounts of annual gift card sales and breakage are rarely published. Companies can choose how to disclose their gift card revenues due to the fact that the IASB has not yet established standards through IFRS in regard to how to measure and report gift card liability when breakage has to be estimated (Marden & Forsyth, 2007). Breakage requires making an estimate and this can decrease the comparability of financial statements between different organizations as the managers of each may make different estimates based on their judgment (Montero & Gray, 2019). This judgment is obviously dependent on each manager's individual level of education and experience.

Generally, the practices of including the amount of unredeemed gift cards in sales or as a reduction in the cost of goods sold lead to misleading, overstated gross margins (Kile, 2007). This is backed up by the argument that the proceeds from unredeemed gift cards are not accompanied by any inventory costs. Instead, to at least separate these proceeds from sales, gift card breakage that happens repeatedly could be included in "other revenue" and the amount could be separately disclosed in a footnote, if significant (Kile, 2007). Non-recurring breakage from multiple periods is an unsustainable element of operations and meets the definition of a special item. Either way, the accounting treatment of gift card transactions and their breakage should be included in the footnotes (Kile, 2007).

Because there's no standard way of accounting or disclosing gift card revenues, there's no way of knowing what process is being used to estimate their breakage (Marden & Forsyth, 2007). That is unless the company decides to disclose this information in the footnotes of their financial statement. Being able to control when, where, and how breakage revenue can be added to their

financial statement can be beneficial for management but also misleading for users of financial statements and definitely deserves additional examination (Marden & Forsyth, 2007).

An example of the benefits for managers is taxes (Gujarathi, 2012). The sale of gift cards is treated as advance payments for tax purposes, which generally means that the revenue is taxed the moment the cash is received (Nesi, 2006). However, in the case of gift cards specifically, an exception was made due to it giving the customer the right to an inventoried good. Companies can defer the recognition for the sale of the gift card until it is redeemed for a maximum of two years (Gujarathi, 2012). In the meantime, the cash received from these unredeemed gift cards can be seen (and used) as “borrowed cash” without interest for the companies that issue gift cards and this can then be used for different investment purposes (Montero & Gray, 2019).

Another example of a possible benefit is the protection against state laws. Some states have the unclaimed property state law which would coerce companies to hand over all the revenues from unredeemed gift cards to the state (Marden & Forsyth, 2007). This can drive companies to not recognize any breakage income but keep the cumulative amount of unredeemed gift cards in the “gift card liability” account (Gujarathi, 2012). As mentioned already, this gives the issuer of the gift card the opportunity to use this cash freely, as some sort of “borrowed cash” without interest (Montero & Gray, 2019).

2.5 Hypotheses

In the previous sections of this thesis, relevant literature regarding the main research question and sub-questions were discussed. Building on these findings, I propose the four hypotheses discussed below.

Marden and Forsyth (2014) made the lack of guidance in regard to how breakage revenue should be measured very clear. The main consequence of this lack of guidance is the various methods that different companies use to estimate and account for their breakage. I expect this to cause a significant difference between the breakage revenues recognized by these different companies. This leads me to my first two hypotheses:

Hypothesis 1: The percentage of revenue recognized from breakage is higher for companies employing conservative breakage estimation methods, compared to those using more aggressive methods like statistical modeling or historical redemption patterns.

Hypothesis 2: Companies utilizing statistical modeling techniques to estimate breakage for gift cards demonstrate more volatile revenue recognition patterns over time compared to those using simpler methods, due to the sensitivity of statistical models to changes in redemption behavior and market conditions.

Companies that issue gift cards and deal with breakage are required to make an estimate which can decrease the comparability of financial statements between different organizations (Montero & Gray, 2019). This is because the managers of these firms may make different estimates based on their own personal judgment. Consequently, I expect companies providing extensive details about their breakage estimation methods to have greater credibility. In line with this, I derive the third hypothesis:

Hypothesis 3: Firms that disclose detailed information about their breakage estimation methods in financial statements exhibit greater transparency and credibility in the eyes of investors and stakeholders, leading to increased investor confidence and potentially lower costs of capital.

According to Kile Jr. (2007), companies that choose to include the amount of unredeemed gift cards in their sales, often have a misleading, overstated gross margin. I expect these companies to disclose less about the breakage in their financial statements. As a result of this, I thus propose the fourth and final hypothesis:

Hypothesis 4: The choice of breakage estimation method significantly influences financial statement disclosures, with companies employing more complex methods providing additional narrative disclosures and sensitivity analyses to enhance the understanding of breakage estimates and associated risks among users of financial statements.

3. Data and Methodology

The main objective of this thesis is to study the effects of different breakage estimation methods on the revenue recognition and revenue disclosure process for all revenue generated from breakage. To study these effects, a comparative analysis of the most used breakage estimation methods is done to find their impact. This section discusses the breakage estimation methods used mostly by firms and thus answers the first sub-question in this thesis.

3.1 Data

Data has been collected from eight accounting firms and two actuarial firms by using a non probability sampling technique (Alvi, 2016).

The accounting firms were chosen based on their profitability, five-year projections, and staff compensations (Inside Public Accounting, n.d.). These factors made them rank in the top ten best accounting firms in the world. All data used in this thesis is publicly available on the websites of these firms. These eight firms are Deloitte, PricewaterhouseCoopers Services (PWC), Ernst & Young (EY), KPMG, RSM International (RSM), BDO, CliftonLarsonAllen (CLA) and last but not least Baker Tilly. An overview of these companies and their 2023 profitability in the United States of America can be seen in Table 7.1.

Apart from these accounting firms, data from two actuarial firms will also be used. These two firms, Kyros and Milliman, were chosen based on their specialization. Kyros is the only actuarial firm in the world that focuses only on reward programs, and Milliman is one of the world's largest actuarial firms focused on predictive modeling.

3.2 Analysis

Some customers redeem their gift cards relatively quickly while others use their gift cards at a much later date and some may never even redeem it. Redemption is a very important terminology for gift card breakage estimation because it refers to the amount of gift card value that is used by the customer (Rowland & Rosenblum, 2022).

3.2.1 The time-based approach

Companies that issue gift cards, can look back and analyze the redemption rate over the past years. Suppose that company A issued gift cards in 2020 with a total value of \$100.000. In 2025, company A could analyze the redemption from 2020 - 2024, and calculate the redemption rates (Johnson, 2023). A typical example of this is given in Figure 3.1.

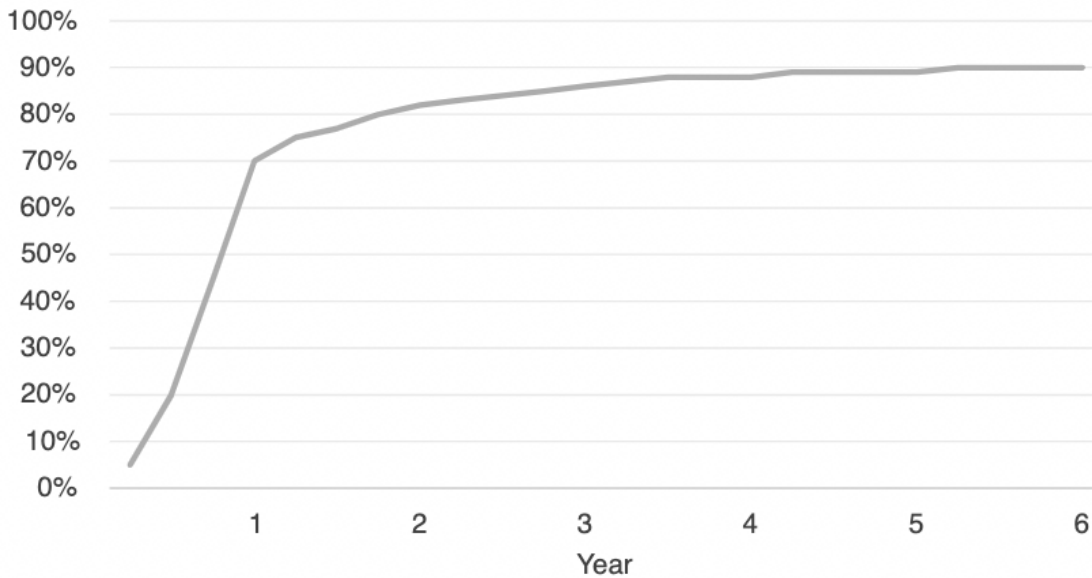


Figure 3.1 Average redemption curve of gift cards within the first six years

Figure 3.1 shows that redemptions usually peak in the first two years after a gift card has been sold (Jason, 2023). Figure 3.1 also shows that the redemption rate oftentimes never reaches 100% (Rowland & Rosenblum, 2022). After a period of six years, the redemption curve hits a plateau at approximately 90%. This leads to the possibility of estimating breakage by using a time-based approach. After a certain amount of time has passed, for example, six years, we can assume that the unredeemed value is breakage. In the example of company A, this would mean a breakage revenue of \$10.000 ($\$100.000 * [1 - 0.9]$).

According to the firm Milliman (2022), estimating breakage by using a time-based approach means estimating breakage based on a chosen activation period. This is the period in which the gift card value is a liability for the issuer. This activation period is thus comparable to an expiration date for the gift card. Milliman (2022) explained this approach by firstly using three estimation methods, the multiplicative approach, the additive approach, and the cede ratio method to compute the expected redemption rate for each activation period (shown in Table 3.1).

Time based method	Equation
Multiplicative approach	$redeemed\ amount \times development\ factor$
Additive approach	$redeemed\ amount + estimated\ future\ redemptions$
Cede ratio method	$activation\ amount \times (1.0 - historical\ breakage\ ratio)$

Table 3.1 Time based breakage estimation methods

With all these methods, we look at the value of the gift cards that have been redeemed so far and correct it with either the development factors, which are unique factors from the past, estimated future redemptions, or a historical breakage ratio. These three methods all give an estimation for the ultimate redemption of a certain activation period, which then has to be subtracted from the total value of gift cards sold to get the final estimated breakage (Milliman, 2022).

If the example of company A is used for the additive approach or the cede ratio approach, a breakage revenue of \$10.000 will once again be obtained. The multiplicative approach can not be used in the example of company A because unique factors from the past are not presented in this example.

3.2.2 The historical redemption rate method

The time-based approach discussed in the former section clearly uses historical data, and the firm Baker Tilly agrees. According to Baker Tilly, a company's redemption rate of the past five to ten years, gives an accurate breakage rate (Johnson, 2023). Companies should analyze the redemption rates yearly, which will show a peak in the first two years as shown in Figure 3.1. Baker Tilly recommends that new companies use a five to ten percent breakage rate for their first year until more information regarding redemption is available. As time goes by, redemption rates will start to reach 0% and this gives the company a clear estimate of the breakage (Johnson, 2023). As this process continues, 100% of breakage revenue should eventually be recognized. The difference between this method and the time-based approach is that with this method breakage is estimated yearly based on only the redeemed amount in that year. With the

time-based method approach, total breakage is estimated for the time that the company is liable for the gift card value instead of just for a year.

3.2.3 The proportional redemption rate method

On the other hand, if a firm expects to have breakage that firm can also choose to estimate breakage in proportion to the redemption value that has been redeemed so far (Deloitte, n.d.). The firms Deloitte, PWC, EY, KPMG, RSM, BDO, and CLA all prefer this method.

The first question for a company wanting to use this method is whether or not they expect to be entitled to a certain breakage amount (KPMG, 2017).

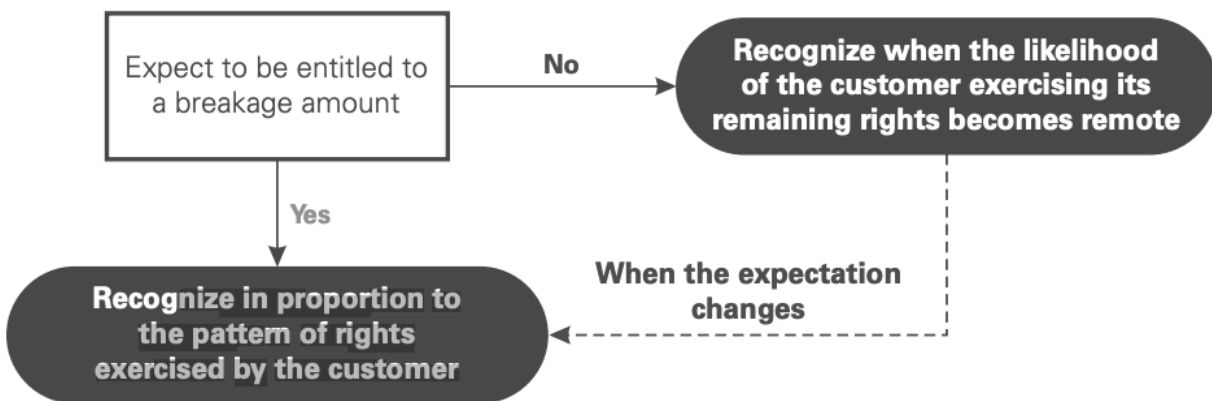


Figure 3.2 When to recognize breakage in proportion to the redeemed value of the gift card

If the company expects to be entitled to breakage then they can use this proportional redemption method as shown in Figure 3.2. According to CLA, this can be done with a process divided into two steps, but having a reliable way to track all gift card activity is necessary for this method (Blacik, 2022). The first step for a company is establishing its yearly redemption rates as well as its yearly forfeitures (breakage) rates. Then the forfeiture rate has to be divided by the redemption rate to find the proportionate recognition rate. Step two is to estimate the actual breakage and the revenue generated from breakage by using this proportionate recognition rate. Suppose that company A sold \$100,000 worth of gift cards and in the first year 80% is used. This 80% is the redemption rate and the remaining 20% would be the forfeiture of that first year. To estimate breakage, the proportionate recognition rate gives the following,

$$\text{proportionate recognition rate} = 20\% : 80\% = 25\%$$

$$\text{actual breakage} = 25\% * \$100.000 = \$25.000$$

The reason for using the 25% instead of the 20%, is because this method does not look at the value of the gift cards that the company sold (Blacik, 2022). It looks at the value of those gift cards that were used, which also makes this method a more conservative approach.

When using this method, companies need to take the possibility of customers redeeming a certain gift card value after it has been categorized as breakage (RSM, 2019). This is called a ‘constraint on variable consideration’ and the amount for which this is probable should not be categorized as breakage (EY, 2020).

As shown in Figure 3.2, companies that can not make reasonable expectations regarding redemption and breakage rates, need to recognize breakage when the likelihood of the customer redeeming its gift card becomes remote (PWC, 2023). Although the term remote is not clearly defined, CLA recommends companies recognize any remaining balance on a gift card as breakage revenue after two years of non-activity (Blacik, 2022).

This method varies from the two previously discussed methods in the sense that the proportional recognition rate will usually lead to a breakage that’s higher than the actual breakage. One thing this method has in common with the time-based approach is that estimated breakage should be updated each period (BDO, 2018).

3.2.4 The Statistical Redemption Rate Method

Last but not least, companies can also choose statistics to compute the exact estimation of their breakage. The firm Kyros uses a predictive model to estimate breakage. A predictive model can be built by a company itself by using its historical data but the company would also need modeling capabilities in mathematics to not only make sure the model works by training the model, but also to be able to enter new information into the model (Llaguno, 2020). If the latter is not done correctly, the model will only analyze static history instead of possible changes and the model would not be able to be improved. This means that a clear overview of all transactional data in a company’s gift card program from the past needs to be available (Llagano, 2020). This makes this method the most accurate to estimate breakage, but it also makes this method the most complex because this data is often not well organized by companies. It does however provide helpful insights for the company because of how accurate it is.

4. Results and discussion

The main question of this thesis was to research what impact the methods used to estimate breakage can have on the revenue recognition process for breakage revenue as well as the impact of the estimation method used on the way breakage is disclosed. To answer this question, the assumption was made that there are no state laws regarding unclaimed property.

Firstly, to account for a gift card transaction, a deferred revenue liability or a gift card liability account is recognized when a customer buys a gift card and the retailer receives a cash payment (mentioned in section 2.2.2). In case of breakage, when the breakage rate is established and breakage is computed, the deferred revenue liability account can be decreased with the estimated breakage amount and breakage revenue can be recognized for that same amount. The way breakage is estimated plays a huge role in this revenue recognition process because different estimation methods yield a different breakage rate and thus a different breakage revenue.

Using the proportional method results in a higher breakage revenue compared to a situation where the other methods are used. This is because it looks at breakage as a percentage of the gift cards used, instead of as a percentage of the gift card sold. However, this can lead to an inaccurate breakage estimation since breakage is the amount of gift card value sold that goes unused. The problem with this overestimation is that the amount of breakage revenue recognized can still be redeemed by the customer since it is higher than the actual breakage. If the customer decides to redeem a certain amount that was already deemed as breakage, adjusting entries in the general ledger would have to be made. This however means that the first hypothesis can be accepted. The first hypothesis was:

Hypothesis 1: The percentage of revenue recognized from breakage is higher for companies employing conservative breakage estimation methods, compared to those using more aggressive methods like statistical modeling or historical redemption patterns.

A more accurate depiction of breakage can be found with the statistical redemption rate method. This complex method uses data from past transactions to make a predictive model which then estimates breakage. This model also uses mathematics so that this model can handle future changes. Because these models have mathematical modeling capabilities, changes are easily and

quickly incorporated into the estimation which makes these estimations more sensitive to changes. This result is consistent with the second hypothesis which was:

Hypothesis 2: Companies utilizing statistical modeling techniques to estimate breakage for gift cards demonstrate more volatile revenue recognition patterns over time compared to those using simpler methods, due to the sensitivity of statistical models to changes in redemption behavior and market conditions.

The time-based approach and historical redemption rate method are both very similar and they both yield the same average breakage rate. The breakage rate obtained with these two methods is usually lower than the breakage rate computed with the proportional method since this method overly exaggerates the breakage. On the other hand, the breakage rate estimated with the time-based approach and historical redemption rate method is higher than the statistical redemption rate method, since the latter is more accurate. This means that the breakage revenue and ultimately the revenue recognized is the biggest when using the proportional method and the smallest when using the statistical method.

The effect of breakage estimation methods on the disclosure of breakage revenue is mainly due to the impact of the chosen method on the revenue recognition process. IFRS 15 does not provide clear standards when it comes to disclosure of breakage revenue but revenue recognition is important for the disclosure of revenue generated by breakage. Companies choose to add the gift card liability account separately on their balance sheet or combine this account with their deferred revenue liability account. When the breakage revenue has to be recorded companies decrease the liability account. For the disclosure of the breakage revenue, companies can choose to combine this with the sales revenue on the income statement or simply add this in the notes of the financial statement if the breakage is what they deem as a significant amount.

As mentioned already, using the proportional redemption rate method results in the highest breakage estimate. If the retailer decides to combine this breakage revenue with the sales revenue, the revenue will be over-exaggerated. Apart from this, sales revenue should be recorded when there is a change in inventory taking place. This is not the case with breakage because no performance obligation is being met.

Whether companies that issue gift cards choose to combine the breakage revenue with their sales revenue or not, they often add additional information regarding how breakage was estimated in

the notes of the financial statement. This further helps with the understanding of breakage rates for stakeholders and investors. Better insights for investors lead to greater ability to make well-informed decisions and greater transparency which could potentially lead to more investments. This is consistent with hypothesis three which is hereby accepted:

Hypothesis 3: Firms that disclose detailed information about their breakage estimation methods in financial statements exhibit greater transparency and credibility in the eyes of investors and stakeholders, leading to increased investor confidence and potentially lower costs of capital.

Disclosing additional information is especially important with a complex method like the statistical redemption rate method. Although this method gives an accurate estimation of breakage, the complexity of it all makes it harder to understand. A company using this method would likely have to give additional information to help stakeholders understand how the estimation was made, which further helps with transparency. This leads to enough evidence to accept the fourth hypothesis which was:

Hypothesis 4: The choice of breakage estimation method significantly influences financial statement disclosures, with companies employing more complex methods providing additional narrative disclosures and sensitivity analyses to enhance the understanding of breakage estimates and associated risks among users of financial statements.

When using the time-based approach or the historical redemption rate method, companies have to choose whether they want to add the breakage revenue to the sales revenue or in the notes of the financial statement.

5. Conclusion and recommendations

The objective of this thesis was to identify the effects of the breakage estimation methods used on breakage revenue recognition and breakage revenue disclosure. Based on a comparative analysis of the most used estimation methods, the following can be concluded. The statistical redemption rate method is the most accurate but most complex method. Because of its complexity, more information regarding breakage is disclosed in the financial statements and because of its accuracy, the breakage revenue recognized will likely not have to be adjusted. The proportional redemption rate method estimates the most breakage leading to a higher breakage revenue that is recognized. However because this is usually exaggerated, adjustments in the revenue will have to be made in the future. Because the breakage revenue is higher, overall revenue will be higher than actuality giving users of the financial statements a skewed view of the actual financial position of the company.

The one thing all these four methods have in common is their usage of historical data to some extent. Since the proportional method overestimates the breakage revenue and the statistical method is too complex, using the time-based approach or the historical redemption rate method might be a reasonable trade-off.

Since more and more companies are choosing to issue gift cards, breakage is becoming more important. Adding additional information regarding gift cards and their breakage in the financial statements seems necessary to better the understanding of stakeholders and for greater transparency. Although there is no performance obligation being met, breakage revenue is still revenue generated through sales and should be combined with the sales revenue. Detailed information about how the exact amount of the breakage was computed can then be disclosed in the notes.

This research was relevant because breakage estimation requires accountants to make assumptions based on their judgments instead of by standard guidelines. The analysis of different estimation methods studied in this thesis could contribute as necessary data in the development process of auditing procedures regarding breakage estimation and the disclosure of breakage revenue.

5.1 Limitations and recommendations for future research

To better understand the implications of this thesis, the limitations must also be looked at.

Firstly, the assumption was made that state laws regarding unclaimed property did not apply. However, state laws do apply in many states and this can significantly impact how many gift cards are issued, and breakage revenue is recognized and disclosed regardless of which estimation method is used.

Second, taxes were not taken into consideration in this thesis. But revenue leads to tax obligations that can also influence the revenue recognition of breakage revenue and how this is disclosed.

Further research regarding the effects of state laws and taxes on the revenue recognition and disclosure process for breakage revenue is needed.

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7. Appendix

Rank	Firm	Net Revenue
1	Deloitte	\$ 27.936.000.000
2	PWC	\$ 21.336.000.000
3	Ernst & Young	\$ 21.071.000.000
4	KPMG	\$ 13.710.000.000
5	RSM	\$ 3.709.126.000
6	BDO	\$ 2.822.600.000
7	Grant Thornton	\$ 2.310.364.000
8	Forvis	\$ 1.685.539.000
9	CLA	\$ 1.663.489.755
10	Baker Tilly	\$ 1.583.300.000

Table 7.1 Top ten accounting firms based on their 2023' net revenue