The Mediating Explanation of the Refund Depth’s Effect

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ABSTRACT

This study thinks the strategy of high refund depth is not always valid for consumers. By creating two mediators of retailer’s loss and consumers’ expected refund excess, this study demonstrates two inverse effects of refund depth on believability of the lowest price. Specifically, retailer’s loss can mediate a positive relationship between refund depth and believability of the lowest price; inversely, consumers’ expected refund excess can mediate a negative relationship between them.

Keywords: believability of the lowest price, expected refund excess, guarantee strategy, refund depth, retailer’s loss.

INTRODUCTION

In order to increase consumer purchase intentions for products with high similarities, retailers often promote these products by a low-price strategy or a guarantee strategy (Chien, 2005; Levy, Grewal, Kopalle, & Hess, 2004; McWilliams & Gerstner, 2006). A guarantee strategy of the lowest price (price-matching guarantees, PMGs) is a combination of price strategy and guarantee strategy.

Prior studies on the guarantee strategy of the lowest price focus on the retailers’ motives and reasons (Baye & Kovenock, 1994; Belton, 1987; Chen, 1995; Hess & Gerstner, 1991; Png & Hirshleifer, 1987; Schnitzer, 1994; Shaffer & Zhang, 2000; Zhang, 1995), and they rarely probe into consumer reactions (Kukar-Kinney & Walters, 2003). In addition, among all guarantee strategies of the lowest price, refund depth is the most influential toward consumer perceptions before purchase and after purchase behaviors (Kukar-Kinney, 2003; Kukar-Kinney, 2006). Thus, studying the influence of the guarantee strategy of the lowest price on consumer reactions is necessary.

Retailers show that their commodity is the lowest price in market by offering a refund guarantee in order to attract low price followers. McConnell, Niedermeier, Leibold, El-Alayli, Chin, and Kuiper (2000) indicated that the availability of price guarantees reduces the experience of anticipated regret and transforms the nature of one’s prefactuals into less threatening simulations. However, this strategy involves a critical question; will all consumers believe the price of the product with the retailers’ high refund guarantee is the lowest price? Few studies explore the question, and they are lack of consistent conclusions. Such as Ku, Kuo, and Peng (2006) demonstrate a positive relationship between refund depth and believability, but Wong and Liu (2004) indicate a negative relationship, which is not significant. Thus, this study wants to clarify the relationship between refund depth and believability of the lowest price.

This study thinks information of a refund guarantee may have two kinds of entirely different interpretation by consumers. Specifically, this study creates two mediators of retailer’s loss and expected refund excess to explain the unstable relationship between refund depth and believability of the lowest price.

LITERATURE REVIEWS AND HYPOTHESES DEVELOPMENT

The Lowest Price Guarantee Strategy

Consumers expect to obtain high value from a purchased product, and especially, those sensitive to prices tend to regard a product with low price as a high value one. In an economic depression, consumers would more carefully compare prices, and retailers, in order to attract and satisfy them, would offer some promotions, such as discounts, coupons, free samples, and guarantees. Among these promoted strategy, the most familiar and popular one is a guarantee of the lowest price.

PMGs mean that a retailer would follow the lowest price in market in order to remain the level of low price and promise that if consumers could purchase a similar product at a lower price from other retailers, the retailer would...
refund the price difference or multiple times’ price difference (Kukar-Kinney & Walters, 2003; Sivakumar & Weigand, 1997). Unlike most other price promotions, PMGs do not cut price to promote the products; instead, the strategy promises low price as rivals (Sivakumar & Weigand, 1996). In addition, PMGs generally refer to a guarantee of the lowest price for all products in a store (Kukar-Kinney & Walters, 2003; Lurie & Srivastava, 2005). PMGs are generally adopted by retail stores. For instance, Carrefour has an operational strategy of “products cheaper than our competitors” and “lowest price every day”. RT-Mart has a slogan of “low price and satisfaction guaranteed”. Watsons indicates, “I swear, Watsons has the cheapest commodities” and “lowest price guaranteed”. In addition, retailers of electronic appliances, furniture stores, and even the department stores also often use PMGs. Thus, PMGs are important in marketing strategies. The measures of PMGs include refund depth (amount of money refunded), mode of refund, time limitations, geographical limitations, prices covered, items covered, and burden of proof (Sivakumar & Weigand, 1996). For example, some guarantees are active refund; some are passive (Wong and Liu, 2004). Some guarantees are one-time price difference refund; some are multiple-times (such as Watsons, two-times the difference amount refunded).

PMGs are important price tools for retailers, and are important market signals for consumers to judge price level. They are significantly influential on product selection and purchase decision for consumers. Lurie and Srivastava (2005) indicated that people would believe that only stores with the guarantee of the lowest price sell low price products. Through PMGs, retailers allow consumers to perceive a lower price, and reduce the possibility consumers searching for lower prices in other stores (Jain & Srivastava, 2000; Srivastava & Lurie, 2001). However, since more and more retailers guarantee the lowest price by refund, some stores have begun to enhance the refund depth. However, it relies on further studies to determine if the signal of high refund depth is effective. When implementing a strategy of refund depth, retailers must carefully evaluate its benefits, and they should recognize the evaluation models of consumers’ dealing with the signal of refund depth.

**Relationship between Refund Depth and Believability of the Lowest Price**

Believability of the lowest price reflects the consumers’ trust in the retailers’ guarantee of the lowest price (Kukar-Kinney & Walters, 2003); refund depth in the guarantee of the lowest price refers to the refund amount, which can be obtained by consumers when they fulfill the right offered in the retailers’ guarantee clauses (Kukar-Kinney, 2006; Kukar-Kinney & Walters, 2003), and chiefly refers to the price difference or multiples of the price difference (Sivakumar & Weigand, 1996).

With regard to the positive or negative influence of refund depth on believability of the lowest price, prior studies are lack of a consistent conclusion. Even there are some studies demonstrated that there is no significant relationship between refund depth and believability of the lowest price (Wong & Liu, 2004).

This study suggests that refund depth would not have the same influence for all consumers on believability of the lowest price, and the relationship would be determined by consumer’s thinking way for the information of refund depth. When consumers adopt positive thinking (retailer’s loss) for refund depth, the effect of refund depth would be positive, and inversely, when consumers adopt negative thinking (consumers’ expected refund excess), the effect would be negative. However, when consumers adopt both positive and negative thinking, the relationship would be insignificant. Following, this study elaborates the arguments of consumers’ thinking logic and psychological reactions for refund depth.

**Mediating Role of Retailer’s Loss**

First, this study elaborates the positive relationship between refund depth and believability of the lowest price by the first mediating variable, retailer’s loss. Since different stores have different price strategies, the guarantees of prices appear in newspaper advertisement and store posters in different forms (Sivakumar & Weigand, 1996). For instance, “five-times the refund of the difference” of Ai Mai, and “refund of difference” from Carrefour, shows the different levels of refund depth in the lowest price guarantee strategy.

When retailers promise high refund depth, the consumers may think that if the retailers’ products are not the lowest price once the consumers fight for their rights, the retailers would undertake higher loss to fulfill their responsibility (Boulding & Kirman, 1993). To avoid generation of higher refund costs in the future, before promising,
the retailers should have higher intentions of selling products with the lowest price in the market, and they should more discreetly make sure the price is lowest, instead of rashly adopt a guarantee strategy just as a tool of attracting consumers, in order to avoid after promising, incurring higher financial loss, retailers would really provide the lowest price (Boulding & Kirmani, 1993; Ku, Kuo, and Peng, 2006). Above analysis is from a view of the retailers’ intentions. In addition, from a view of the retailers’ abilities, high refund depth could be viewed as a signal of high ability. The retailers promising higher refund depth are more confident of their abilities to implement the lowest price guarantee strategy. Thus, for this kind of retailers, the consumers’ psychological risk and extra costs to obtain low price products from them would be lower, and thus, consumers would acquire greater benefits (Kukar-Kinney & Walters, 2003). Therefore, when retailers’ refund depth of the lowest price guarantee strategy is high, in order to avoid the great amount of loss in the future, retailers must be willing and capable of providing the products at the lowest price in the market. Under this kind of thinking, the consumers would tend to believe that the retailers’ products are at the lowest price (Ku, Kuo, & Peng, 2006).

\[ H_1: \text{When retailers’ refund depth in the lowest price guarantee strategy is high, retailers’ loss is great if their price is not the lowest price} \]

\[ H_2: \text{When retailers’ loss is great if their price is not the lowest price, the believability of the lowest price is high.} \]

**Mediating Role of Consumers’ Expected Refund Excess**

Second, this study elaborates the negative relationship between refund depth and believability of the lowest price by the second mediating variable, consumers’ expected refund excess. In price strategy, actual price and reference price are the critical factors which influence consumers’ perception (Thaler, 1985; Winer, 1986). When the reference price in the advertising is too high to be unreliable, the consumers would tend to totally reject this advertising (Lii & Lee, 2005). On the contrary, when the discount (actual price) in the advertising is too significant, the consumers would usually be suspicious of the advertising (Blair & Landon, 1981; Urbany, Bearden, & Weibaker, 1988). An extremely low price in advertising (actual price) would reduce the consumers’ trust (Goldberg & Hartwick, 1990; Urbany et al., 1988). Similar research indicated that the price which is near to reasonable price would tend to result in consumers’ trust (Compeau & Grewal, 1998; Goldberg & Hartwick, 1990; Gupta & Cooper, 1992; Mobley, Bearden, & Teel, 1988; Urbany et al., 1988). Based on above findings, too high reference price and too low actual price would reduce consumers’ trust in the information.

Similarly, proper refund depth would be reliable for consumers, and too large amounts of refunds would tend to lead to consumers’ suspicion (Fry & McDougall, 1974; Liefeld & Heslop, 1985; Wong & Liu, 2004), and their suspicion would significantly influence their reaction to the lowest price guarantee strategy (Kukar-Kinney & Walters, 2003). Thus, retailers should construct reasonable and identifiable refund depth to enhance consumers’ trust (Gupta & Cooper, 1992; Mobley et al., 1988). Based on the above, when the refund depth of the lowest price guarantee is higher, guarantee strategy would be less believable to consumers (Kukar-Kinney & Walters, 2003).

Upon the above, this study proposes the second mediating variable, the consumers’ expected refund excess, to elaborate the negative relationship between refund depth and believability of the lowest price. In the current retail market, with the development of internet technology, the sellers’ product prices would be more transparent, and the ability of consumers to search for prices is better (Sinha, 2000). Therefore, consumers would easily obtain the retailers’ information related to refund depth, and upon such information, consumers form a basic reference point of refund depth as a comparative basis. When refund depth is higher, there is a greater gap between the retailers’ refund depth and the consumers’ reference point for refund depth (the expected refund excess), and the consumers would be more suspicious of the lowest price guarantee strategy. On the contrary, when retailers construct a refund depth within the consumers’ expected scope (i.e., refund depth is acceptable), the gap between the consumers’ expected refund (reference point) and actual refund would be little, and the consumers would tend to trust in the lowest price.

\[ H_3: \text{When retailers’ refund depth in the lowest price guarantee strategy is high, consumers’ expected refund excess is great.} \]

\[ H_4: \text{When consumers’ expected refund excess is high, the believability of the lowest price is low.} \]
RESEARCH METHOD

Research Framework

The research framework includes one independent variable (refund depth), two mediating variables (retailer’s loss and consumers’ expected refund excess), and one dependent variable (believability of the lowest price). The researcher attempts to clarify the influence path of refund depth on believability of the lowest price by treating retailer’s loss and consumers’ expected refund excess as mediating variables. The research framework is shown in Figure 1.

![Figure 1: Research framework of this study](image)

Selection of Industries

Retailers of some industries relatively often adopt the lowest price guarantee strategy, including specialty stores, daily commodity retailers, 3C retailers, home and DIY shops, office supplies, etc. (Lurie & Srivastava, 2005). In addition, because study subjects are university students in Taiwan, according to their evaluations for above industries by the following three principles (1) consumption frequency, (2) familiarity, and (3) frequency of retailers’ use of the lowest price guarantee strategy, this study determines daily commodity industry as a research industry.

Operational Definitions and Measurement of Variables

All measurements are based on Likert 7-point scales (from fully disagree to fully agree; 1~7 points, respectively). A high score refers to a high level of a variable.

(1) Refund depth

This study follows the definition of refund depth in past literature (Kukar-Kinney, 2006; Kukar-Kinney & Walters, 2003; Sivakumar & Weigand, 1996). The operational definition of refund depth is that a retailer promise if consumers find a lower price than his/hers in other places for the same products, he/she would refund whole difference (one time), or even multiple differences (more than two times). This study adopts a way of the subjective measurement. In other words, this study asks consumers respond their perceptions about their received information of refund depth.

This study designs multiple versions of questionnaires for refund depth, from one-time to five-time price difference. The measurement which is self-designed includes the following three items:
1. Refund depth of the retail store is high.
2. Refund multiples of the retail store are great.
3. Refund guarantee of the retail store is significant.

(2) Retailer’s loss

The operational definition of retailer’s loss in this study is that consumers think the level of financial loss which retailers must undertake to fulfill the lowest price guarantee strategy, when consumers find lower prices in other retailers. The measurement includes the following three items:
1. When products are not at the lowest prices, the retail store will have significant financial loss.
2. When the products are not at the lowest prices, the retail store will have to provide significant refunds to consumers.
3. When the products are not at the lowest prices, the retail store will have great losses in refunds.
(3) The consumers’ expected refund excess

The operational definition of the consumers’ expected refund excess is that the retailer’s refund depth is out of the consumers’ anticipation based on general level in the market. The measurement includes the following four items:
1. The refund amount of the retail store is out of my expectation.
2. The refund multiple of the retail store is out of my expectation.
3. The promised refund of the retail store is more than the general level of current market.

(4) Believability of the lowest price

Based on past literature (Kukar-Kinney & Walters, 2003; Jain & Srivastava, 2000), the operational definition of believability of the lowest price in this study is a consumers’ belief about that the retailer’s products are at the lowest price in market. The measurement which is self-designed includes the following three items:
1. I believe that the retail store sells the lowest price product.
2. I believe that the product sold by the retail store is the cheapest.
3. The guarantee of the lowest price in the retail store is reliable.

Sample

This study conducted purposive sampling according to geographical distribution of the population. In total, five hundred questionnaires were distributed to university students in Taiwan. After deducting not returned and invalid questionnaires, this study obtained three hundred and twenty five valid questionnaires, and the valid return rate is 65.0%. With regard to sample structure, there are more females (66.2%) than males (33.8%); most of the schools are in northern Taiwan (41.5%); most of the targets study in Colleges of Liberal Arts and Business (38.5%); most are freshmen (30.5%); most consume at least once in a month (59.1%); as to the amounts of each consumption, less than NT$ 499 is the majority (61.5%).

Reliability and Validity of Measurements

This study tests reliability and validity of measurements by CFA (confirmatory factor analysis). Individual item reliability of these items is between 0.55~0.75, which are higher than the criterion of 0.5. Composite reliabilities of the three latent variables are between 0.75 and 0.86, which are more than the criterion (0.6), as suggested by Fornell and Larcker (1981). As to validity, factor loading (λ) of the latent variables is between 0.63 and 0.82, which is more than the threshold value (0.45), as suggested by Jöreskog and Sörbom (1992). Average variance extracted of the four latent variables is 0.56~0.73, which is higher than the threshold value (0.5). In terms of model fit, GFI=0.94; AGFI=0.91; RMR=0.041; RMSEA=0.042. Thus, the measurements of this study have good reliability and validity.

RESEARCH RESULTS

This study analyzes structural models by structural equation modeling (SEM) through AMOS 7.0 to validate the causal relationship among refund depth, retailer’s loss, consumers’ expected refund excess, and believability of the lowest price.

Causal Relationship among Latent Variables

CMIN/DF, GFI, AGFI, RMR, and RMSEA are often used to measure overall model fit (Anderson & Gerbing, 1988). The results indicate that CMIN/DF=1.244 less than 3; GFI=0.970 more than 0.9; AGFI=0.952 more than 0.9; RMR=0.043 less than 0.05; and RMSEA=0.028 less than 0.05. So, the structural model of this study has good overall model fit.

After demonstrating that the mediating model this study proposed involves a good overall model fit, this research will elaborate the results of the hypothesis test, according to symbol and significance of parameter estimates for all paths.
(1) H1: When retailers’ refund depth in the lowest price guarantee strategy is high, retailers’ loss is great if their price is not the lowest price.
Standardized path coefficient of the influence of refund depth on retailer’s loss is 0.451 (t=9.811, p<0.001), which is significant and reveals a positive relationship. Thus, H1 is supported. When retailers implement the lowest price guarantee strategy with high refund depth, the consumers’ perceived retailer’s loss would be high.

(2) H2: When retailers’ loss is great if their price is not the lowest price, the believability of the lowest price is high.

Standardized path coefficient of the influence of retailer’s loss on believability of the lowest price is 0.324 (t=5.013, p<0.001), which is significant, and the relationship is positive. Thus, H2 is supported. In other words, when consumers’ perceived retailer’s loss is high, they would tend to believe in the retailers’ guarantee of the lowest price.

(3) H3: When retailers’ refund depth in the lowest price guarantee strategy is high, consumers’ expected refund excess is great.

Standardized path coefficient of the influence of refund depth on consumers’ expected refund excess is 0.517 (t=11.792, p<0.001), which is significant, and the relationship is positive. Thus, H3 is supported. In other words, when retailers implement a lowest price guarantee strategy with high refund depth, consumers’ expected refund excess would be great.

(4) H4: When consumers’ expected refund excess is high, the believability of the lowest price is low.

Standardized path coefficient of the influence of consumers’ expected refund excess on believability of the lowest price is -0.255 (t=-3.785, p<0.001), which is significant; however, the relationship is negative. Thus, H4 is supported. In other words, when consumers’ expected refund excess is high, the consumers would not believe in the retailers’ guarantee of the lowest price.

Two mediating paths explain the influence of refund depth on believability of the lowest price. Subsequently, according to path parameter estimates between the latent variables, this research calculates the influential effects of refund depth on believability of the lowest price. Through the mediating of retailer’s loss, the effect is positive (0.146). On the other hand, through the mediating of consumers’ expected refund excess, the effect is negative (-0.132). Thus, total effect is weak.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Some retailers attract consumers through a guarantee strategy of the lowest price. Refund depth is a commonly used guarantee strategy, which aims to make consumers believe that their products are at the lowest prices in the market. However, it is not clear about the relationship between refund depth and believability of the lowest price. This study clarifies it through two mediating variables.

The influence of refund depth on believability of the lowest price is based on two paths. One is the influence of refund depth on consumers’ perceived retailer’s loss, and the influence of the consumers’ perceived retailer's loss on the consumers’ perceived believability of the lowest price; the other is the influence of refund depth on the consumers’ expected refund excess, and the influence of the consumers’ expected refund excess on the consumers’ perceived believability of the lowest price. Notably, these two paths oppositely elaborate the relationship between refund depth and believability of the lowest price. The first path describes a positive relationship, whereas the second elaborates on the negative relationship. Thus, the direction of the relationship between refund depth and believability of the lowest price would depend on the consumers’ thinking path with regard to the message of refund depth.

When consumers consider refund depth by the first path, upon retailers’ greater refund depth, consumers would think that retailers’ refund cost and financial loss would be greater once the retailers fail to honor their guarantee of the lowest price (Boulding & Kirmani, 1993). Thus, to avoid the future high refund loss, retailers should be more confident in the lowest prices of the products, and thus, the consumers would tend to believe that these products are at the lowest prices (Ku, Kuo, & Peng, 2006).

When consumers consider refund depth by the second path, they tend to compare the received information of refund depth with the general refund in the market. When the gap is less, they would believe in this information. However, when the information is significantly higher than their expectations, they would usually not believe it. Thus, when retailers’ refund depth is higher, the consumers’ perceived expected refund excess would be more significant. The consumers would be more likely to suspect the information, and tend to think that the retailers exaggerate their guarantee. Under this thinking, facing higher refund depth, the consumers would usually less believe that the product is at the lowest price.
Suggestions

Retailer’s loss, in this study, refers to financial loss. However, when retailers guarantee the lowest price and fail to meet their claim, they would not only have financial loss, but also suffer from reputation loss. However, this study does not probe into reputation loss. This research suggests that financial loss is tangible, reputation loss is intangible, and they are different. This study finds there is a positive relationship between refund depth and financial loss. How is the relationship between refund depth and reputation loss? In other words, when consumers find that a retailer fails to meet their guarantee, would the retailers offering five-times refund suffer greater reputation loss than those offering a one-time refund? Could it also explain the positive relationship between refund depth and believability of the lowest price by replacing financial loss by reputation loss? The answers to such questions will rely on future studies.

This study focuses on the lowest price guarantee strategy, and thus, in order to have targets that are more concerned and familiar with this strategy, this study selects university students as the targets because they are more sensitive to prices. However, not all university students are sensitive to prices. Price sensitivity could be related to personality, family economy, personal economy, and products. This study does not eliminate university students who are not sensitive to prices. This study suggests that future researchers could further probe into price sensitivity.

Retailers’ refund depth in the lowest price guarantee strategy would usually involve some restrictions or conditions, which is not explored by this study. This research suggests that there could be interaction between refund restriction and refund depth, which could influence believability of the lowest price, retailer’s loss, and expected refund excess, because consumers would care about getting refund under what restrictions or conditions, and these restrictions or conditions would influence the effects of refund depth and the meaning of refund depth for consumers.

Wirtz, Kum, and Lee (2000) suggested that clear and detailed guarantee clauses, as proposed by retailers, would reduce the consumers’ perceived risk. Thus, future researchers can try to determine if it is necessary to include clear and detailed guarantee clauses, when retailers implement high refund depth.

This study suggests that there may be close relationships between the two mediating paths and retailers’ reputation, since reputable retailers would enhance consumers’ perceived importance of retailer’s loss and reduce consumers’ perceived importance of expected refund excess. On the contrary, less reputable retailers would reduce consumers’ perceived importance of retailer’s loss and enhance consumers’ perceived importance of expected refund excess. Thus, for reputable retailers, the path of refund depth, retailer’s loss, and believability of the lowest price is strong, whereas, the path of refund depth, expected refund excess, and believability of the lowest price is weak. For less reputable retailers, the situation is the opposite. This study suggests that future researchers could further probe into above view.

This study thinks that expected refund excess is perhaps related to the criterion of comparison. For example, is the gap based on a comparison between actual refund level and refund level in the market, or is it upon the comparison between actual refund level and expected refund level of individual retailers? This study does not further probe into expected individual retailers’ refund depth, and this research suggests that future studies could try to determine if there is a correlation between individual retailers’ past refund depth and the consumers’ expected their refund depth.

Managerial Implications

This study demonstrates that the influence of refund depth on believability of the lowest price involves two different paths. Thus, there can be positive or negative relationships between refund depth and believability of the lowest price. It would depend on the consumers’ thinking after receiving the information of refund depth. The positive path is refund depth, retailer’s loss, and believability of the lowest price; and the negative path is refund depth, expected refund excess, and believability of the lowest price.

Upon higher refund depth, retailers should adopt some strategies to lead consumers to approach the positive path and avoid the negative path to enhance the believability of the lowest price. First, in order to approach the positive path, this study suggests that retailers could enhance consumers’ cognition that higher refund depth refers to retailers’ higher risk of loss. When the retailer fails to meet the guarantee of the lowest price, they would suffer from great loss. High refund depth demonstrates retailers’ confidence in the lowest price. However, the retailers must elaborate their actions by which they are sure the lowest price to avoid loss; for instance, having market survey units to investigate market
prices, having flexible mechanisms to adjust product prices, implementing total quality management to reduce costs and having price competitiveness. Second, in order to avoid the negative path, it is suggested that retailers should enhance consumers’ confidence in their guarantee of high refund depth in order to avoid consumers’ suspicions, due to exceed general refund level in the market. For instance, retailers could show past customers’ proof of refunds, the written guarantee from headquarters, overall good financial condition, operational principles, or a positive corporate image.

Upon lower refund depth, retailers should adopt some strategies to lead consumers to approach the negative path and avoid the positive path to enhance the believability of the lowest price. First, in order to approach the negative path, because most retailers in the market adopt low refund depth, consumers’ reference level is at low refund depth; therefore, this research suggests that retailers could emphasize that they do not use exaggerated commitment to guarantee the lowest price. Besides, the retailers could emphasize that other reputable retailers also adopt low refund depth to legitimate their measures. Because when the gap between the refund depth and the consumers’ reference level is little, the consumers would tend to believe in the refund guarantee and afterwards believe in the lowest price. Second, in order to avoid the positive path, this research suggests that retailers should emphasize that low refund depth is a moderate measure in order to avoid future disputes caused by high refund depth. This strategy could reduce the influence of positive path.

REFERENCES


