A COMPARATIVE ANALYSIS OF MAJOR US RETAILERS BASED ON ENTERPRISE MARKETING EFFICIENCY

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ABSTRACT

The purpose of this research was to analyze financial results of four major US retailers from June 2006 until August 2008 and compare their tactics to create shareholder's value, using key performance and enterprise marketing ratios. This is a relevant study given the different business models and strategies used by these companies, as well as their strong rivalry in the retail industry. The study highlighted Walmart and Costco given their recent growth and competitiveness. The results showed that Walmart was superior in attracting investors willing to pay a premium for the stock. On the other hand, Costco created an average of $10.32 dollars of sales for every dollar spent in Sales, General and Administrative expenses, whereas Walmart produced only $5.44. In other words, Costco created twice as much sales volume for every dollar spent in these expenses. Further, the Maximum Earnings Market Share displayed that Costco could have made $3,660 million more in that period, whereas Walmart spent $26,300 million more than needed to increase earnings in the same period.

JEL: M2, M3, G1

KEYWORDS: Marketing, Enterprise Marketing, Market Value, Efficiency, Market Share, Costco, Walmart, Retail Industry

INTRODUCTION

The purpose of this research is to analyze the four major retailers in the United States, including Sears, Target, Walmart and Costco in the ten quarters from June 2006 until August 2008 considering their use of money to create shareholder's value, calculated on key performance and enterprise marketing ratios. This study is relevant, given the different business models and approaches used by both companies, as well as their strong rivalry in the retail industry. Further, there is a growing concern around the world about how to compete with the giant Walmart, because of the enormous economies of scale that is putting many companies out of business. The organization if this paper is as follows: a) a Literature Review section to analyze existing research about this subject, b) a section about the background on the major U.S. retailers to give context to this research, including an introduction to determine the strategic group of the companies to analyze; c) The section about Data and Methodology explains the formulas used to calculate the different ratios, d) the Results section shows the outcomes of the data analyzed for this companies during that period of time; and e) The final section, Conclusion and Comments, discussed the implications of this investigation, as well as recommendations for future research.

LITERATURE REVIEW

Four major companies that represent the retail industry in the United States include Walmart, Costco, Target and Sears, and each one has a different business model, follows a unique strategy, has different locations and store sizes, product variety, selling techniques and economies of scale. Each one faces unique challenges and chases different targets markets, and uses different positioning strategies. Three of them have stores in different countries and confront different cultural challenges and adaptations to survive in an increasingly competitive landscape. Walmart is the behemoth that controls the industry with traditional *low prices everyday* (recently changed to "*Save money. Live better*") approach, and has become the largest

company in the world with more than $378 billion dollar in sales in 2008 (Walmart). Costco, on the other hand, has grown steadily during twenty-six years and has become a world leader in warehouse sales, with stores in seven countries of the world. Besides, Costco has created much excitement to more than 29 million members by offering premium, new and seasonal items including fine crystal, famous names' handbags, the latest in consumer electronics, plasma TV's, high-quality cheeses, imported wines, leather jackets and lobster (McGregor, 2008). Target has been constantly refocusing the retail strategy with a unique combination of stores decorated in a bright, red color and a line of products that includes soft goods, appliances, electronics, housewares, and gifts that has successfully positioned its stores in the minds of the consumers. Finally Sears, the over 100-year-old company well-known for selling large appliances and tools to many generations, that bought 54 K-Mart stores in 2005 to become one of the largest retailers in the United States.

There are many research papers about market efficiency and they all try to define it and the reasons that contribute to the highest possible efficiency. In their seminal work *The Analysis of Market Efficiency*, Preston and Collins define market efficiency as "the facility and effectiveness with the potential exchanges are accomplished" (Preston & Collins, 1966). Although perfect competition does not exist in real life, companies struggle to develop differentiation strategies and to increase revenues and market share. Previous studies also implied there needs to be a connection between the marketing efforts of a company, both about strategy and investment, and the value of the stock. In their research entitled *Marketing Meets Finance*, Cook et al. (2007) proved a connection between the marketing return on investment, or ROI of a company, and their matching trade value of the stock using Enterprise Marketing Efficiency ratios in the pharmaceutical industry, analyzing big companies like Novartis, GlaxoSmithKline and Johnson and Johnson. They found a strong connection between marketing and finance, and how to improve the quality of earnings and contribute to the shareholders value.

The paper also discusses the different marketing strategies or approaches of these competitors, in particular between Walmart that has a more traditional marketing approach based on low prices thanks to their economies of scale, as well as many large stores with countless products, and Costco with a no-advertising method, stresses word of mouth, added member services and Internet sales, and selected products using a "treasure hunt strategy" (Altamirano & Corona, 2010) to attract their members. Another important element to consider in the competitive analysis is to define who are the competitors, as well as potential, substitute and indirect competitors. Bergen and Peteraf (2002) did an excellent research paper about this topic, and developed a two-stage framework for competitor identification based on resource equivalence and competitor awareness that is applicable in most industries, including the retail field for this paper,

Background on Major U.S. Retailers

Strategic Group

First, there was a selection of a strategic group of companies, or clusters, with true competitors, based on the concept of strategic group within an industry defined as a set of companies that can (or might) serve common customer's needs, and have (or might get) equivalent resources (Cook, 2006). In other words, companies in a strategic group are essentially competing for the same customer, both existing and potential. The companies selected for this strategic group were Walmart, Costco, Sears and Target. Although different in size and resources, these four companies have many common products and services that appeal to a similar client, but each one with a different approach, business model, positioning and pricing strategy, number of stores and their size, number of items in store, promotions, and advertising strategies.

Sears (SHLD)

Sears Roebuck and Company started in 1886 and has been the classical retailer for over 100 years (cnnmoney.com, 2008), but in 2004 merged with K-Mart and formed a new group consisting of 1,426 K-Mart stores across 49 states, 872 full-line Sears stores and 300 specialty stores. Sears is a strong competitor in appliances, automotive and hardware stores nationwide, and with the creation of its own brand, *Sears Home Central*, it has become an icon in the retail industry for every household in the nation (Moon, 2005). Sears has postponed global expansion because of the disappointing financial results in the United States, and thus concentrated in Canada and Mexico only, with mixed results. Sears bought *Land's End*, a leader in catalog sales of clothing for middle to middle-upper class, to complement their line of products and now has available a large variety of branded products in their stores to attract more customers. On June 30, 2004, Sears agreed to buy 54 *K-Mart* stores with an investment of $620 million (Canlen, 2004) and lease seven stores from *Walmart* to revamp its *Sears Grand* store concept and improve market penetration.

Table 1: Financial Data of the Four Companies for 2006-2008, In Millions U.S. Dollars

Company	Aver. Sales $	Aver. COGS S	Aver. Gross profit	Aver. SG&A $	Aver. EBITDA $	Average Market value $	Aver. Share of Value SOV %	Share of Revenue SOR %
Sears Holdings	12,655	9,114	3,541	2,864	677	20,344	6.70	9.03
Target	15,313	10,198	5,115	3,439	1,677	46,425	15.86	11.10
Walmart	92, 518	68,515	24,003	17,170	6,832	200,135	68.19	67.29
COSTCO	15,313	14, 621	692	1,623	811	26,368	8.99	12.39

Source: Financial data retrieved from WRDS (Wharton Research Data Services) from 12/3 to 12/19 2008 from http://wrds.wharton.upenn.edu/ds/compq/fundq/ Compustat North America. *Table 1 above shows the comparison of the ratios for all four retailers regarding average sales per year in million $, , average cost of goods sold, taken directly from the reported data in million $, average gross profit also in US dollars from the same source, as well as factor consisting of the total of selling, general and administrative expenses for the one year period and divided by the number of periods under consideration. Another column shows the average earnings before interest and taxes but before depreciation (EBITA) for each company for the period under examination. The next column is the average market value, which is the value per share for each company multiplied by the common stocks outstanding taken at the end of each year under consideration, and then doing the average. As we can see the value of Walmart is almost 10 times the value of Sears and Costco, and five times the value of Target. The average share of value SOV is the average market value divided by the total value of the market of all four companies. Finally, the share of revenue factor is calculated based in the net earnings (profit after tax) for each company divided by the total earning of all four companies combined.*

Sears Holdings (SHLD) average sales per quarter were at 12,655 million for the period under examination corresponds to a revenue share of 9.03% for this strategic group. Sales reported at the end of the second quarter of 2008 (July 31) reached $11,762 million, with a stock price of $81.00/share. On April 1, 2009, the price was $52.13/share (finance.yahoo.com, 2008), with a hefty 35.64% loss in market value in only nine months. This is arguably due in part to the economic recession in the US and all over the world.

Target (TGT)

George D. Dayton opened *Goodfellows* in downtown Minneapolis in 1902, and marked the beginning of Target Corporation (TGT), even though the first Target store as we know it today, opened in 1962 with the idea to become a mass-market discount merchandiser and gradually developed into a store chain with trendy goods at affordable prices, aimed to deliver a great retail experience and provide the blend of style, substance and *oh-so-satisfying shopping* (target.com, 2008). Target follows a business model of a large department store and has 1,685 stores in 48 states in the US (including 218 super Target stores), combined with product lines that are predominantly everyday essentials and fashionable, differentiated merchandise at exceptional prices (target.com, 2008). Their brand image is essential for their marketing strategy, including the store size and image, as well as its appealing bright red color and bulls-eye symbol.

From table 1 above, Target sales averaged $15,313 million per quarter in the period under examination, equivalent to 11.10% of revenue for this strategic group of companies. The latest stock price reported on

April 1, 2009 was $36.06/share (finance.yahoo.com, 2008), which is 29% lower than a year ago when it was at $50.98. Similar to the Sears stock, Target's stock price declined because of the decrease in sales after the economy slowed down. Both Sears and Target follow a department store retail format, which is in the decline stage according to some experts (Moon, 2005). Several store chains with similar business model have vanished recently, including Montgomery Ward and Mervyns' (mervyns.com, 2008).

Walmart (WMT)

The behemoth of commerce and largest retailer in the world started in 1969 by Sam Walton, the richest man in the USA from 1985-1988 according to *Forbes* magazine (wikipedia.com, 2008). In 1984, the company opened three Sam's Club (to compete with Price Club – now Costco), and a Walmart Supercenter in 1988. Walmart's sales in 2008 were 378.79 billion (finance.yahoo.com, 2008), and became the largest company in the world by sales revenue. Walmart runs 971 discount stores, 2,447 supercenters, 132 neighborhood markets, and 591 Sam's Clubs in the United States; and 21 units in Argentina, 313 in Brazil, 305 in Canada, 149 in Costa Rica, 70 in El Salvador, 145 in Guatemala, 47 in Honduras, 394 in Japan, 1,023 in Mexico, 46 in Nicaragua, 54 in Puerto Rico, and 352 in the United Kingdom, as well as 202 stores through joint ventures in China (finance.yahoo.com, 2008). Its main business slogan, "*low prices every day*", was successful until 2005 when they shifted into an expansion approach (which caused some controversy) and changed their slogan to "*Save Money, Live better",* which works well, according to the company. In comparison with other retailers like Costco, Walmart pays 40% lower salaries and fringe benefits to its employees (Holmes & Zellner, 2004); its fundamental standard to achieve low prices is "Low wages for its employees, unrelenting pressure on suppliers, products cheap in quality as well as price, off shoring jobs" (Cascio, 2006***).*** *Walmart's (WMT) stock price on April 13, 2009 was $51.53 per share.* Nonetheless, Walmart is an emblem in retail stores worldwide and has a well-earned position as the global leader in low prices and product selection. Walmart competes strongly with other global retailers like Target, Sears and Costco because of its ability to offer lower prices than anybody else (category killer), and creates major concerns to other specialized retailers like Home Depot, Office Depot, Circuit City, and JC Penney's, because it is gradually absorbing many of their customers as well.

Costco (COST**)**

Mr. Solomon "Sol" Price sold Fed-Mart in 1975 to embark in a new retail venture geared toward small businesses: *Price Club*. Price invited Jim Sinegal, who started downloading mattresses at the age of 18 in Fed-Mart, to help him open the first *Price Club* warehouse in San Diego in 1976 (Cascio, 2006). He learned from Mr. Price the business of a high-volume warehouse with only a limited number of products, but left Price Club in 1983 to start Costco in Issaquah, Washington with partner Jeff Brotman. After competing against Price Club for many years, Costco merged with Price some years later (and became PriceCostco). Later Sinegal bought Price Club out and remained as CEO of Costco. With a casual way of running business, he created an empire of more than 544 stores in 40 states in the USA and eight world countries (McGregor, 2008), with yearly sales of $72 billion dollars (finance.yahoo.com, 2008). Sinegal's main philosophy is to keep low prices combined with a special assortment of products and create value to the more than 29 million members, in a no-frills environment of carefully selected goods. Costco's warehouses carry only about 4,000 products, compared to supermarkets that have 40,000 items, and some Walmart supercenters have as many as 150,000 items (Boyle, 2006).

From Costco's 4,000 products, around one-fourth (1,000) are new and seasonal products or special buys, such as expensive jewelry, European handbags, leather jackets, and many well-known branded products that attract many wealthy members. Regular products include food, health and beauty items, tires, consumer electronics, wine (Costco is biggest wine merchant in the USA), soft goods, groceries, and even caskets (Funeral Monitor, 2004, p.2, as cited in Chevalier, 2008). Sinegal 's strategy also includes added member services, namely new car purchases; business and personal insurance, roadside assistance, home

improvement items (drapes, kitchen countertops, and garage doors), travel, online investments, as well as a profitable website that offers exclusive products to its members. Sinegal not only pays and treats his employees very well, as noted before, but instills in them his "common business sense" and his ethical business principles: obey the laws, take care of our customers, take care of our people, and respect the suppliers (Davis, 2008). *Costco's (COST) stock price on April 13, 2009 was $46.41 per share.*

DATA AND METHODOLOGY

To do a comparison of these companies in connection to the Enterprise Marketing Efficiency approach, several different ratios were calculated using established formulas from *Competing for Customers and Capital* (Cook, 2006). These ratios include *Marketing Efficiency Ratios* (MER) such as *Share of Value* (SOV), *Share of Revenue* (SOR), *Value Sales Differential* (VSD), *Enterprise Marketing Efficiency* (EME), *Enterprise Marketing Expenses* (EME), *Risk-Adjusted Differential* (RAD), *Sales per Dollar* (SPD), *Profit per Point* (PPP), and *Maximum Earning Market Share* (MEMS), to assess each company's efficiency in the use of their resources to create profits.

Marketing Efficiency Ratios

Share of Value (SOV) is defined as the percentage of market value of a company compared to the total market value of the companies of a specific strategic group. Therefore, for a company i*,* the share of value will be calculated as follows:

$$SOV_i = \left[\frac{common\ stock\ price \times Number\ of\ shares\ outstanding}{market\ value\ of\ all\ companies\ in\ the\ strategic\ group}\right] \times 100 \tag{1}$$

Share of revenue (SOR), on the other hand, is the percentage of sales of a company in relationship to the total sales of all companies for that specific strategic group. It will be calculated as follows:

$$SOR_i = \left[\frac{total\ sales\ _i}{\sum sales\ of\ all\ companies\ in\ that\ strategic\ group}\right] \times 100 \tag{2}$$

Value Sales Differential (VSD) is the difference of share of value (SOV) minus share of revenue (SOR) (Cook, 2006), [VSD = SOV – SOR] and can be interpreted as the premium or discount that investors are willing to pay for a company stock in relationship to its revenue. If the VSD is positive, it means the investors are willing to reward a company with a higher market value than its revenues, which is good. Negative VSD, on the other hand, denotes that the investors are discounting the market value of a company relative to its sales revenue, which is not good. In other words, investors are willing to pay more for the stock of a company because they expect it to reach a higher value than its sales revenue shows. The competitive value-sales differential (δ_{ij}) for company *i* in a strategic group *j* populated by *n* firms in any given period is:

$$\delta ij = \left(\frac{v_j}{V_j} - \frac{r_i}{R_j}\right) x\, 100 \tag{3}$$

To adjust for enterprise marketing risk and compare data across companies, the VSD values of a company are divided by their standard deviation to create the *Risk-Adjusted Differential (RAD)* ratio, to compensate for dispersion from the mean deviation (Cook, 2006). RAD also allows for comparison between large and small companies, independent of sales revenue.

Enterprise Marketing Efficiency (EME): can be measured in two ways; the first is more linear and intuitive form called *Sales per Dollar (SPD),* and it is defined as the relation between total sales of a company divided by the amount of dollars invested in enterprise marketing expenses (Cook, 2006).

Enterprise Marketing Expenses (EME) is the total amount invested in Selling, General and Administrative Expenses (SG&A), directly from a company's income statement. The second method to measure the efficiency in using enterprise marketing expenses is a non-linear, more theoretical ratio: the *Marketing Efficiency Ratio (MER)* and can be described as the relationship between the enterprise marketing expenses of a company, and its current market share (Cook, 2006). If the firm spends less than required to maintain the current market share, the company is more efficient, and the MER is less than one. If the company spends more than required to maintain a specific market share, then it is less efficient and its MER is more than one. When the company spends exactly the amount required to maintain the current market share, MER is equal to one. Both of these Enterprise Marketing Efficiency ratios work well only if we assume a positive correlation between sales and Selling, General and Administrative expenses (SG&A).

Enterprise Marketing Expenses are the SG&A of a company and can be calculated for a strategic group as:

$$f = \sum_{l=1}^{n} f_i \quad where\ i \neq l. \tag{4}$$

n = number of competitors, and f = company's EME (Cook, 2006).

In order to maximize the use of enterprise marketing expenses and achieve the desired market share, it becomes necessary to determine the *Cost Per Point (CPP)* of market share, which is the required amount of money to buy the first market share point, and is calculated as:

$$\dot{k}i = (f \times x_i)/100 \tag{5}$$

The *Profit Per Point (PPP)* is the profit derived from each point of market share. The larger the gross profit of a company, the larger the profit per market share point.

The theoretical enterprise marketing expenses y for company *i* required to achieve a target share *m* of revenues is:

$$y_i = (f_i \times m_i)/(100 - m_i) \tag{6}$$

The Maximum Earnings Market Share, MEMS is calculated as follows:

$$\widehat{m_l} = 1 - \sqrt{\frac{\dot{k_l}}{\dot{p_l}}} \tag{7}$$

Where m_i = Company maximum earnings market share,
k_i = cost per point, CPP,
And p_i = profit per point, PPP (Cook, 2006).

Ideally, a company aims to reach a level of market share such that maximizes its revenue and that is calculated using Maximum Earnings Market Share (MEMS). In other words, MEMS is the point in market share where the company maximizes profits.

RESULTS

Based on the calculations of all these ratios for the four retailers during the period analyzed, the results are presented in three main areas: Gross margin comparison, performance, and Enterprise Marketing Efficiency, which was the purpose of this paper. Results included figure and tables to highlight the possible implications of Enterprise Marketing Efficiency to the value of stock between these retailers. Finally, a specific comparison was presented for the Maximum Earning Market Share (MEMS) for Walmart and Costco, and possible implications.

Gross Margin Comparison

Based on the selected financial data from Wharton (WRDS), for these companies in this strategic group, the average gross margin for each company were as follows: Costco has the lowest gross margin of 14.0%, followed by Walmart with 26.0% and then Sears slightly higher with 27.9% and finally Target with 33.5%. As a warehouse-type operation, Costco displays a substantial price advantage over Walmart of almost half the gross margin, and even larger compared with the other two rivals.

Performance

Table 2: Performance Data for the Four Major Retailers

Company	Share of Value % SOV	Share of Revenue SOR	Value-Sales Differential VSD	Risk-Adjusted Differential RAD
Sears Holdings	6.70	9.03	(2.18)	(1.45)
Target	15.86	11.10	4.77	2.33
Walmart	68.19	67.29	0.90	0.23
COSTCO	8.99	12.39	(3.40)	(1.75)

Source: Financial data retrieved from WRDS (Wharton Research Data Services) from 12/3 thru 12/19 2008 from http://wrds.wharton.upenn.edu/ds/compq/fundq/ Compustat North America. *Table 2 above shows the comparison of Share of Value (SOV), which is calculated based on the value of the company in the stock market (total stoke outstanding multiplied by the average value) as a percentage of the total for all companies, in percentage. Therefore, the numbers indicate that Walmart has 68% of the market value for all those companies, and Costco less than 9%, i.e. six times Walmart's size. Share of Revenue (SOR) indicates the market share in terms of revenue for all four companies, in average for the number of years, where again Walmart dominates with almost 70% of the market, whereby Costco only 12%. It is important to note that, while Walmart has almost the same SOV and SOR, Costco has 12% of the market with only 9% of the value, which is very significant. The nest column is Value-sales differential (VSD) which reflects the previous concept between the difference of SOV and SOR. We can see that Costco has a negative value of 3.40 whereas Walmart has a positive of 0.9. This means that Costco is able to get higher revenue with a lower company value, compared to Walmart. Risk-Adjusted Differential (RAD) is the last factor in this table, which is the VSD adjusted by a sigma value for each company based on the formula, during the period under review.*

From this table we can see that Costco is doing very poorly with a negative VSD of 3.40, which means its stock is traded at a lower value in relation to its sales, versus Walmart with a positive VSD of 0.90 reflecting the willingness of its shareholders to pay a premium for the stock versus its sales revenue. From a different viewpoint, Costco has 11.67% of total sales in that group, but only 8.60% of the market value, which implies is doing better in terms of sales revenue than is reflected in the financial markets.

In the case of Walmart, investors are willing to pay 18% more for its stock compared with actual sales revenue, based on the expectation that the stock will increase its value. Sears is also negative and Target is the champion of the group with a positive VSD of 4.61 value-sales differential, which could be translated as the investors willing to reward Target and expect market price gains in the future. It is interesting to note than on March 31, 2003, Walmart had a SOR of 62.12% for this same strategic group of companies (Cook, 2006), compared with 67.29% for the period under examination, with a net gain in share of revenue of 5.17 points in five years.

It is reasonable to assume that this is due in part to the closing of K-Mart stores and the shifting of customers to Walmart, or the improvement in Walmart's positioning strategy, or a combination of both. On the downside, value sales differential in 2003 for Walmart was a positive 19.87, compared with only 0.90 for this period, reflecting perhaps an over-priced value of its stock at that time, or a higher expectation from investors as a result of intense competition.

Figure 1: Walmart Value Sales Differential (VSD)

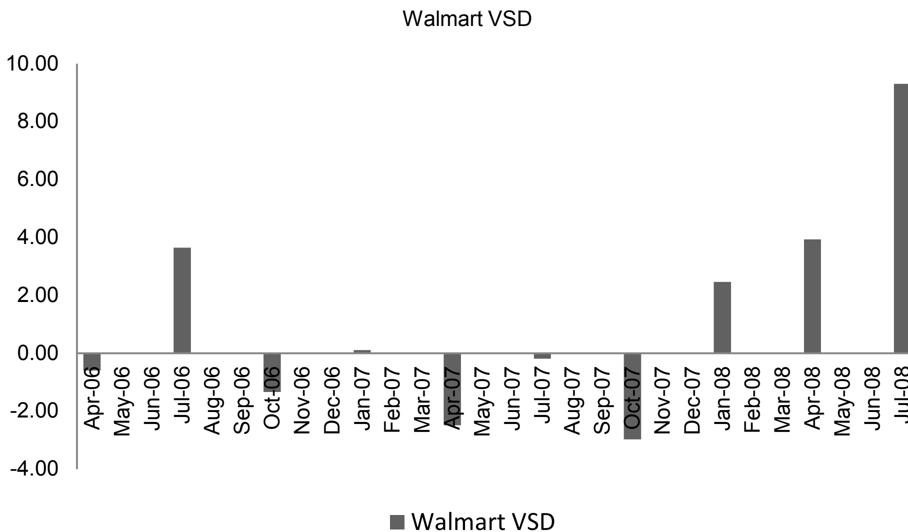


Figure 1 above illustrates the value-sales differential (VSD) of Walmart, from May 2010 until May 2012, to show the fluctuations of the Share of value mentioned above (SOV), and the Share of revenue (SOR) based on the formulas explained before. We can see the fluctuations from negative factors to positive ones, in big proportions, from more than a negative 2.98 to a positive 9.30. This complemented the table before, since this shows the fluctuations by quarter of this factor, and the other one reflects the average. It is also interesting to observe that in February and August of 2011, the VSD or Walmart was almost zero, which means the value of the stock was truly reflecting the share of revenue.

Walmart has positive and negative results in the period under examination, and an average of a positive of 0.9 for VSD, with a negative peak on October of 2007 (-2.98), and a positive one for June of 2008 (+9.30).

Figure 2: Costco Value Sales Differential (VSD)

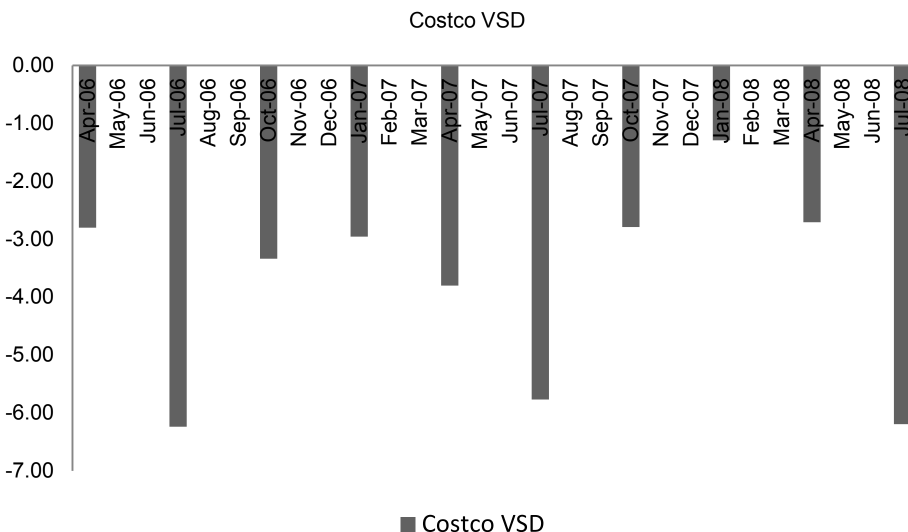


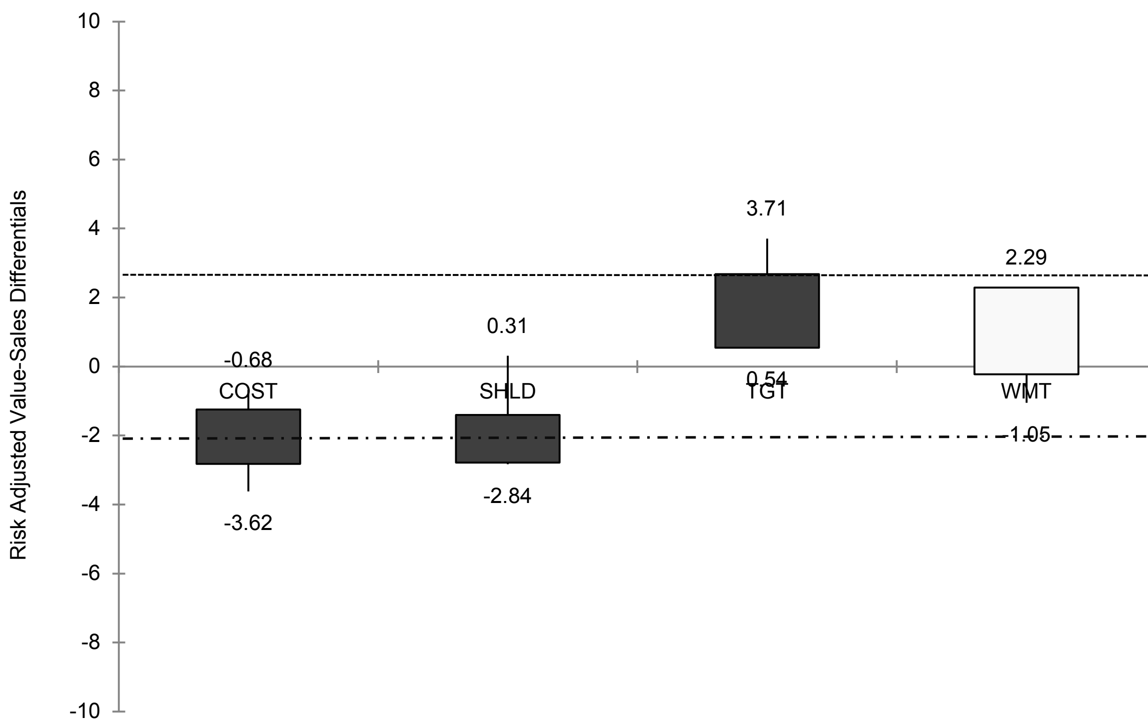
Figure 2 above also shows the Value Sales Differential (VSD) for Costco for the same period analyzed, with a negative peak of June of 2008 (-6.19), corresponding to the highest possible for Walmart, as shown before. The values are also calculated taking the Share of Value (SOV) minus the Share of Revenue (SOR) at the end of each quarter and during the period analyzed. First, it is interesting to note that all VSD for Costco are negative, which means that the perceived value of their stock in the marketplace does not correspond to the share of revenue amongst the four retailers.

Costco has been on the negative side for the same period. This explains a clear trend for Walmart having a higher market value based on investor's perceptions and expectations, than Costco. VSD can be interpreted

as the "price/revenue" ratio of the firm (Cook, 2006) in which the positive (or negative) results of sales is rewarded (or discounted) by investors, similarly to the "price/earnings" ratio in the financial markets. Furthermore, VSD is more meaningful, for it not only relates the price of the stock to the actual sales revenue, but also is linked to similar data of the other companies in the same strategic group. In other words, from Table 1 we can infer that Walmart had a very comparable SOV and SOR, instead Costco had a much higher SOR (12.39%) compared with the corresponding SOV of only 8.99%. On the other hand, VSD is very sensitive to the number of common stocks outstanding; Walmart had 4,167 million common stocks back in April of 2006, and has 3,399 million in June 2008, which is not a significant variation, whereas Costco had 475 million in April 2006, and 434 million by the last period under examination.

Risk-Adjusted Differentials (RAD)

Figure 3: Risk-Adjusted Value Differentials for the Strategic Group



The figure 3 above exhibits the Risk-Adjusted Differentials (RADs) for all four companies in this strategic group (minimum, average and maximum values), based on the calculations from the formula mentioned before. The above zero area shows "value premiums" and the lower one represent the "value discounts" for the companies analyzed. "Value premiums" means the stock is traded at a higher value than the corresponding Enterprise Marketing Efficiency (EME), while the 'value discounts" mean the opposite, i.e. the value of the stock is lower than their EME.

Target (TGT) and Walmart (WMT) have positive RADs (value premiums), while both SHLD and COST are negative (value discounts). This means that TGT and WMT are traded at a higher value than their EME, whereas COST and SHLD are traded at a lower value in the stock market. As explained in *Competing for Customers and Capita*l, page 45, "the interpretation of risk-adjusted differentials is based on three factors: the size of the differential, its arithmetic sign, and the enterprise marketing risk". In our comparison of Costco and Walmart, the first one has a negative 3.62 and the latter a positive 3.71. The Enterprise Marketing Efficiency is analyzed in the next section for both companies.

Enterprise Marketing Efficiency

In order to determine how efficient these companies are in generating sales as a result of these enterprise marketing expenses, we calculate Sales per Dollar (SPD) as a first measure of enterprise marketing efficiency (Cook et al., 2007)

Figure 4: Sales per Dollar (SPD) of Costco and Walmart

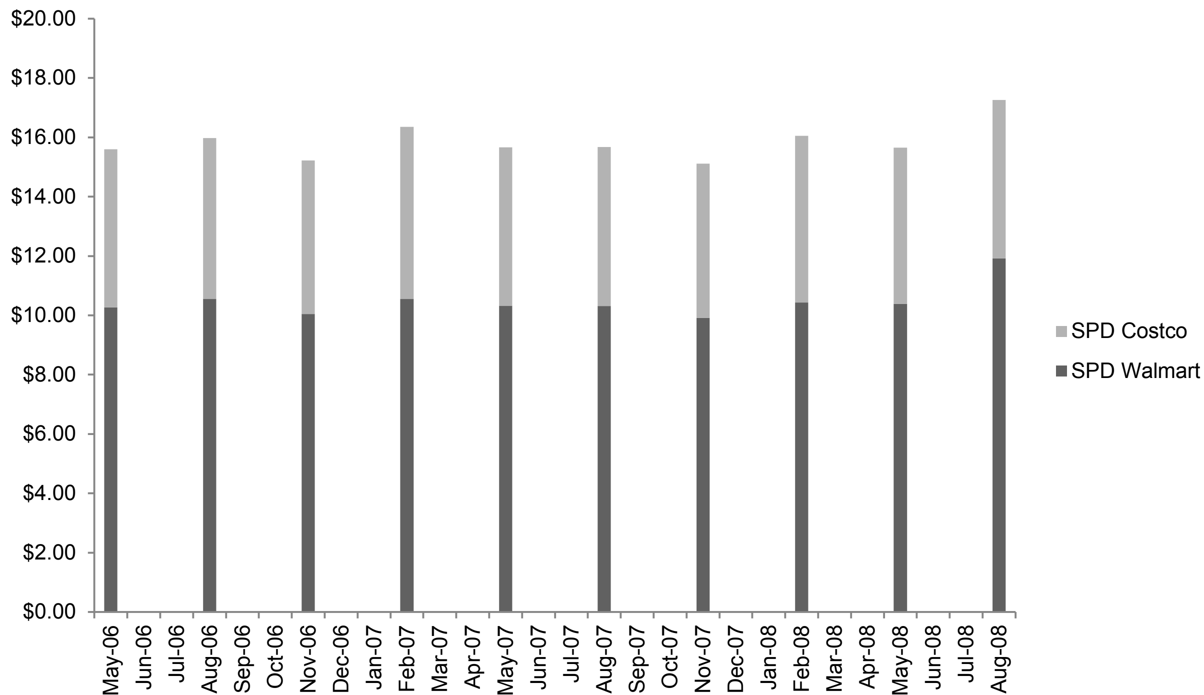


Figure 4 above shows the Sales per Dollar (SPD) of Costco and Walmart for the period under examination, in which the lighter bar represents the sales per dollar for Costco, and the darker bar for Walmart. These results indicate that Costco is far more efficient in investing its Selling, general and Administrative expenses to generate sales, than Walmart. In average Costco generates $10.32 of sales for every dollar spent, whereas Walmart generates only $5.44 in average. Although both companies have extensive promotional programs, neither uses traditional direct advertising (tv, radio, newspapers, etc.) for promotion, that is generally a sizable investment for the other two retailers.

This figure above displays that Costco generates an average of $10.32 dollars of sale for every dollar spent in SG&A on average, whereas Walmart generates only $5.44. In other words, Costco generates twice as much sales volume for every dollar spent in SG&A expenses; therefore, Costco is 47.28% more efficient than Walmart in using enterprise marketing expenses. Again, sales per dollar (SPD) is based on the assumption that sales have a positive correlation with SG&A expenses. SPDs for Sears and Target are $4.41 and $4.61 per dollar of sales generated, respectively. Costco is the clear leader in this category based in part on its business model of no-advertising and using word-of-mouth promotion (viral marketing). Sinegal says: "Advertising becomes like a drug, once you start doing it, it is very hard to stop. We feel that the most successful type of advertising is word-of-mouth. When people are saying good things about you, it is much more important than when you say them about yourself" (Davis, 2008).

The results from this table show that Walmart is spending more in enterprise marketing expenses (positive MER), and Costco is by far more efficient with a MER of only 0.49, as shown on Figure 5 below. This means that Costco spends less than half in SG&A expenses to keep its current average of 12.39% share of this market. Walmart on the other hand, spends on average 5% more than required to keep its current 67.29% of the market. Through analyzing these facts we can imply that, despite the disproportion in sales volume and market share, Costco is by far more efficient in this category than Walmart; that is to say,

Walmart could have spent less in EME and would have been more efficient and earned more revenue. We can also interpret this as Walmart having to spend $1.05 for enterprise marketing assets that would cost $1.00 to a strategic competitor; also, Costco spent only 49 cents for enterprise marketing assets that would cost $1.00 for another strategic competitor.

Table 3: Enterprise Marketing Expenses for Last 10 Quarters

Company	Marketing Efficiency Ratio (MER)	Cost Per Point average CPP $	Profit Per Point Average PPP $	Maximum Earnings Market share MEMS	Share of Revenue SOR	Under (-) or Over (+) spending
Sears Holdings	1.27	3.45	3.84	4.9	9.03	+4.13
Target	1.27	3.49	4.60	11.42	11.10	- 0.32
Walmart	1.05	7.81	3.57	15.7	67.29	+ 51.59
Costco	0.49	1.50	1.94	9.6	12.39	- 2.79

Source: Financial data retrieved from WRDS (Wharton Research Data Services) from 12/3 thru 12/19 2008 from http://wrds.wharton.upenn.edu/ds/compq/fundq/ Compustat North America. Table 3 above shows the results for Marketing Efficiency Ratio (MER), the Cost per Point Average (CPP), the Profit per point Average (PPP), the Maximum Earnings Market Share (MEMS), complemented by the Share of revenue for each company, and the corresponding under or over spending. MER is the method to assess the efficiency of the way GS&A expenses are invested based on a theoretical model assuming a correlation between the investments and the market share of the company. We noticed that Costco has a MER of only 0.49, which means they only have to spend less than half of its average SG&A expenses to maintain its market share, whereas Walmart has to spend more. Sears and Target have to spend much more to even keep their existing market share. The table also shows the Cost Per Point Average for each company during the period under review, that is the amount of money required to buy the first market share point, as well as the Profit Per point, the profit derived form each market share. The results show that Walmart needs $7.81 to buy a point of market share, and Costco only $1.50, i.e. more than five times more. On the other hand, Walmart gets a much higher profit per point than Costco, $3.57 vs only $1.94. Finally the table also chows the different Maximum Earning market Share (MEMS) for each company during this period, which is the market share where companies would maximize their earnings.

Interestingly, Walmart had a very good MER of 0.83 in 2003 and dropped (i.e. became less efficient) to 1.05 in the last ten quarters under examination in this paper. Costco on the other hand, remained the same with a consistent MER of 0.49. Furthermore, for the same period of time, Costco was two times more efficient than its closest competitor in this group and spent only 9.51% of sales on enterprise marketing resources, compared with 18.55 for Walmart, 22.72 for Target, and 22.62 for Sears. The data on Table 3 indicates that the cost per point of market share for COST is $1.50 to make $1.94 of profit (PPP), which is slightly more than the cost so it would make sense to invest more in EME to reach the peak level when CPP = PPP. On the contrary, WMT has a CPP of $7.81 to make only $3.57 of profit, which means its incremental cost for each point of markets share is too costly. In comparing these two companies, Costco is significantly more efficient in managing its enterprise marketing expenses than Walmart.

Maximum Earning Market Share

The average differential or gap in market share for Costco during the period under examination is an average of 9.2 percentage points and translated into lost earnings (EBITDA) would be equal to $3,660 million. Similarly, Walmart had more market share than needed to maximize profits, consequently it could have saved (or increased EBITDA) in the amount of $26,833 million during the same period. Figure 6 highlights below show these gaps in actual versus maximum earnings market share for Walmart.

From this figure we can see how Walmart has had more market share than required for their corresponding earnings, which means they spend too much in Enterprise Marketing Expenses to acquire a higher market share, but without the corresponding earnings required.

CONCLUDING COMMENTS

This analysis shows that Walmart has the largest market share of this strategic group of retailers, and a better (positive) Value-Sales Differential (VSD) compared with Costco, which indicates that investors are willing to pay a premium for WMT stock in relationship to its share of revenue.

Figure 5: Costco's Maximum Earnings Market Share (MEMS)

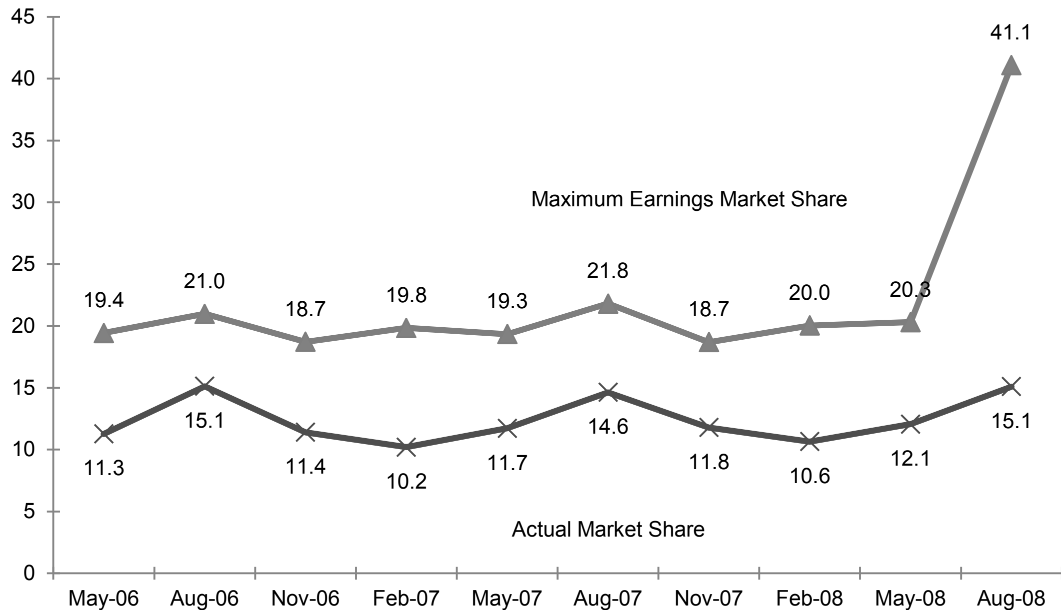


Figure 5 above highlights the gaps between Costco's actual market share and its maximum earning market share (MEMS) during the period in study, and notably the peak in potential earnings for a market share of 41.1% of revenues in August 2008. The Maximum Earnings Market Share is the percentage of market share where companies would reach its maximum earnings, based on the formula explained before. From this graph, we can see that Costco has been consistently below the market share to maximize its earnings, and thus, missing potential earnings. There is a consistent gap of approximately ten market share points throughout the period under review.

Figure 6: Walmart's Maximum Earnings Market Share (MEMS)

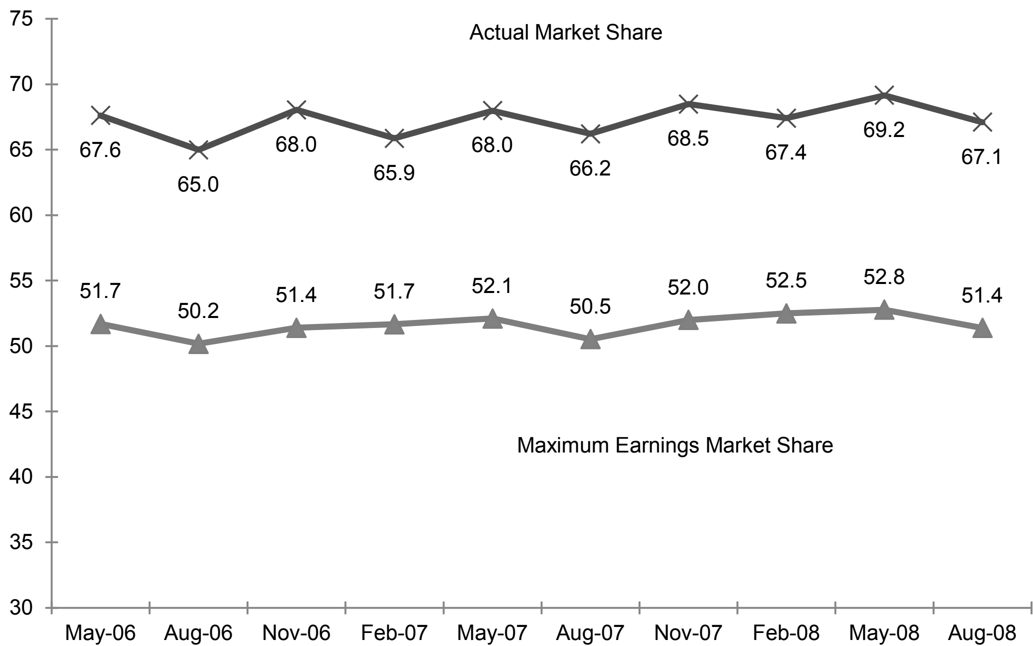


Figure 6 reflects the same situation but for Walmart, comparing the actual market share and the maximum earnings market share or MEMS, a point where they would maximize their earnings based on the dollars invested and the corresponding market share. The Maximum Earnings Market Share is the percentage of market share where companies would reach its maximum earnings, based on the formula explained before. From this graph, we can see that Walmart has been consistently above the market share to maximize its earnings, and thus, investing excessively to keep that market share. There is a consistent gap of approximately 10-15% market share points throughout the period under review.

Costco on the other hand, has the opposite situation with a negative VSD, which implies that investors discount the price of its stock in relation to its share of sales. Interestingly, Walmart's VSD has gone down from a positive 19.87 in 2003, to a positive of 0.90 in 2008, which suggests that perhaps it was more dominant in the financial market than today, but further investigation is necessary to ascertain possible causes. The Risk-Adjusted Differentials corroborate these trends for both companies. Comparing the sales generated by investing in enterprise marketing expenses, the data demonstrates that Costco generates on average $10.32 of sales per dollar invested, whereas Walmart only generates $5.44, which means that Costco is twice more efficient than Walmart in using its resources, despite their differences in business model and merchandising and promotional strategies. Costco's Marketing Efficiency Ratio (MER) of only 0.49 clearly demonstrates its high efficiency in utilizing resources to maintain current market share, by spending less than half of the required amount , whereas Walmart's MER of 1.05 demonstrates that is spending more than needed to keep its current share of the market. Finally, following the Maximum Earnings Market Share (MEMS) calculations, the results show that Costco is under-spending (minus 2.79) which is a good sign, but given its CPP lower than its PPP also indicates that it is missing potential earning of $3.6 billion. Its Maximum Earnings Market Share (MEMS) was at a level of 12.39% share of revenue (SOR) and it had only 9.6% during the period under examination.

Walmart, on the other hand, had a positive 51.59 MEMS ratio, which reflects a 26.3 billion in money it could have saved if it had reduced its market share (SOR) from 67.69% to 15.7% during the same period of time. Arguably, it can be very controversial to convince a company or a CEO to actually reduce market share in order to become more efficient and increase earnings, unless these metrics are well calculated and understood. The purpose of this research was to analyze and compare the major retailers in the US for the period from May of 2006 until August of 2008 in relationship to their Enterprise Marketing Efficiency ratios to determine their performance and find out if they could have done better in terms of net earnings using this marketing approach. The data was obtained from the Wharton Research Data Services and other public financial sources, and the calculations were made using the reported numbers in their public financial statements. The use of figures and table was included, to highlight the results and make the comparison easier to comprehend. The basic proposition was that there should be a relationship between the market share and the maximization of earnings, based on Enterprise Marketing Efficiency.

Although the financial information is publicly accessible, the calculations are based on formulas developed in previous researches and/or books that may contain points of views or assumptions not necessarily agreed or understood by the industry or the investors, and therefore have not impacted the value of the stock so far, but the goal is to try to prove that they should be linked, and a more strategic marketing approach should determine the value of the stock. Future research should include more updated financial information to determine if the market recognizes these marketing ratios or not, and to what extent. Walmart's stock was traded at $78.67 and Costco was at $117.42 on January 3rd, 2014 (finance.yahoo.com, 2014), a 53 % and 153 % increase from 2009, respectively, and therefore future research should explore the financial data from 2008 until 2013, and compare the results obtained in this paper.

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