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THE EFFECT OF BRAND DIVERSIFICATION AND SYSTEMATIC RISK ON FIRM SHAREHOLDER WEALTH: THE CASE OF BRINKER INTERNATIONAL, INC.

by

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ABSTRACT

Divestiture activity within the restaurant industry has increased in the last twenty years, however there is a dearth of research investigating the subsequent effects of the phenomenon. In particular none of the studies in the literature, have specifically examined the effects of restaurant firms’ brand diversification strategies and systematic risk on shareholder wealth when controlling for divestiture completions. This research extends the knowledge from previous work on corporate unbundling and brand diversification strategies to the unique restaurant industry. Drawing on agency theory, the long- and short-term effects of the resulting brand diversification levels on firm shareholder wealth following a divestiture is examined. In addition, the effect of systematic risk on shareholder wealth following a divestiture is investigated.

The study is applied to one of the leading U.S. restaurant firms, Brinker International, Inc., since the company has completed a number of divestitures that have resulted in a reduction of its brand diversification. Time series data from 1994 to 2013 is used in the study. The Wharton Research Data Services database and Brinker International, Inc.’s Securities and Exchange Commission annual and quarterly filings are utilized in acquiring the data for the study. Data analysis for the study consists of a cointegration error correction model. Specifically, the study’s methodology includes unit root tests, cointegration, vector error correction, and causality tests for the proposed hypotheses. The results indicate that there is a long-run equilibrium relationship between shareholder wealth, brand diversification, and systematic risk. In addition, a short-term positive relationship exists between Brinker’s level of systematic risk and divestiture completion. In addition, a negative short-term relationship is found between Brinker’s brand diversification and shareholder wealth with divestiture completion. However, no
statistically significant relationships are found between brand diversification, systematic risk, and shareholder wealth for Brinker in the short term. Overall, the study’s model for the short-term explains 23.63% of the variance in Brinker’s shareholder wealth. This study provides various theoretical and managerial implications for the restaurant literature, as well as, provides a catalyst for future studies to expand on the relationships between brand diversification, systematic risk, and shareholder wealth for restaurant firms when considering divestitures.
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CHAPTER ONE: INTRODUCTION

Introduction

The aim of this study is to examine the relationships of brand diversification and systematic risk on shareholder’s wealth subsequent to a divestiture completion. There are conflicting results in the literature on whether greater diversification benefits or harms a firm and its shareholders (Martin & Sayrak, 2003). For example, within the restaurant industry corporate executives have publicly justified corporate divestitures with the view that greater diversification is a disadvantage for the firm and shareholders. However, studies have shown that firm acquisitions that result in increased diversification create value for the firm and shareholders (Markides & Ittner, 1994). In addition, greater diversification is seen to reduce risk for firms through the diversification effect, however this effect has not been found to hold for shareholders (Amihud & Lev, 1981). The questions of inquiry are then (1) what impact do divestitures have on a restaurant firm’s brand diversification, systematic risk, and shareholder wealth and (2) do the resulting brand diversification and systematic risk levels positively or negatively affect shareholder wealth when controlling for a divestiture completion within the restaurant industry? There are substantially few theoretical works about divestitures within the hospitality industry and none that have evaluated whether divestitures that result in less brand diversification benefit shareholders.

This chapter will provide a broad overview of the causes and consequences of corporate divestitures, brand diversification strategies, and systematic risk on shareholder wealth. Agency theory provides a theoretical perspective for this investigation and guides the problem statement and purpose of the study. In addition, the study’s research questions and the proposed research
model are provided. Next, a brief overview of the methods to be utilized in the study is discussed and the rationale for the sample employed is presented. This chapter will conclude with a discussion of the significance and limitations of the study.

Background

Within the corporate realm there is a pervasiveness in the utilization of various diversification strategies, including within the restaurant industry. In general, firms may choose to adopt a multitude of diversification strategies simultaneously. For instance, many firms operate under a range of brands or provide a multitude of products within various markets in order to gain greater market share (Barwise & Robertson, 1992). Specifically, brand diversification refers to the magnitude to which a firm serves markets or operates businesses under different brands (Bahadır, Bharadwaj, & Srivastava, 2008). The utilization of diversification strategies have been found to have varying effects on firm financial performance, risk, and shareholder wealth (Bettis & Mahajan, 1985; Choi, Kang, Lee, & Lee, 2011; Kang & Lee, 2014; Thompson, 1984). However, a survey of the literature confirms a lack of empirical or theoretical consensus in regards to the effects of diversification strategies (Martin & Sayrak, 2003). Instead, research has developed in waves of conflicting results with some studies showing negative consequences of diversification for the firm and shareholders, including trading with a diversification discount whereas specialized companies trade at a premium (Martin & Sayrak, 2003). While other studies have found support for beneficial outcomes from diversification, including creating barriers of entry and enabling economies of scale or scope (Bordley, 2003; Martin & Sayrak, 2003; Park, Jaworski, & Maclnnis, 1986). The sparse research conducted
within the hospitality industry, including the restaurant industry, has found the effects of the different types of diversification to vary by segment (Choi et al, 2011; Kang & Lee, 2014).

In addition, corporate diversification strategies have been found to have an influential effect on a firm’s systematic risk (Manrai, Rameshwar, & Nangia, 2014). A security’s total risk can be differentiated into two parts, systematic and unsystematic risk, where systematic risk refers to a stock’s volatility due to the market (Barber, Ghiselli, & Kim, 2008). In other words, systematic risk is defined as the sensitivity or volatility of a firm’s returns to market risks and is denoted as beta (β) (Kim, Ryan, & Ceschini, 2007). Systematic risk cannot be reduced or voided through diversification and affects all stocks (Kim et al, 2007). A basic tenet within finance is that higher risk is associated with higher shareholder returns, however mismanaged risk can lead to a reduction in shareholder wealth (Barber et al, 2008). Moreover, Montgomery and Singh (1984) found that diversification strategies involving related lines of business reduce firm systematic risk and increase return. However, it has also been suggested that while increased diversification has the effect of reducing operating risk and systematic risk for firms, it also is simultaneously associated with increasing leverage which has the opposite effect of increasing systematic risk (Manrai et al, 2014). Krapl (2015) suggests that whether the relationship between diversification and systematic risk is positive or negative depends on which effect is dominant. Moreover, the impacts of brand diversification and systematic risk on shareholder wealth may vary following a divestiture.

Divestitures are a parent company’s disposal or sale of product lines, subsidiaries, divisions, or business units (Moschieri & Mair, 2008). There are various modes of divestitures, including sell-offs, spin-offs, spin-outs, and carve-outs, performed for diverse reasons and in pursuit of varying objectives (Kaiser & Stouraitis, 1995). A sell-off is a business unit, division,
or subsidiary of a company that is purchased by another firm (Woo, Willard, & Daellenbach, 1992). In a spin-off the divested unit becomes an independent company and its shares are distributed to the shareholders of the parent company, therefore retaining control of the new company (Moschieri & Mair, 2005). Spin-outs involve an entrepreneurial employee from the parent firm departing and forming a competing independent company that operates within the same industry (Moschieri & Mair, 2005). Carve-outs consist of the creation of an independent company through the detachment of a business unit and the sale of its shares in a public offering with, in general, the parent retaining ownership of a substantial fraction of the shares (Moschieri & Mair, 2005). Carve-outs are usually seen as a temporary form of restructuring that allows the parent to raise funds in the capital market; therefore the parent will tend to reacquire the carved-out company (Moschieri & Mair, 2005).

The assortment of underline causes or triggers behind corporate divestitures that have been proposed, include legal, strategic, and market motivations (Moschieri & Mair, 2005). Regulatory difficulties are a typical legal motivation for divestitures (Moschieri & Mair, 2005). Market motivations include the proposition that divestitures are an efficient response to economic cycles or industry shocks (Mulherin & Boone, 2000). Strategic motivations include employing divestitures as a reaction to management and owner inconsistencies in corporate strategy under agency theory (Lee, Nor & Alias, 2013) or as a correction to managerial mistakes (Markides & Singh, 1997). However, despite the underlying motivation for the divestiture, studies in the finance and strategic management fields have generally shown that the announcement of a divestiture has a positive effect on the divesting firm’s stock price on the announcement date and sometimes before and after the date (Kaiser & Stouraitis, 1995; Moschieri & Mair, 2005; Owen & Yawson, 2008). The post-divestment operating performance
of divesting firms has also been found to statistically and economically improve (Gadad, Stark, & Thomas, 2009). However the literature has also claimed that divestitures have neutral or negative outcomes (Woo et al, 1992).

Research has also indicated that the positive returns or wealth effects from divestitures seem to depend on certain characteristics (Moschieri & Mair, 2008), including industry characteristics (Powell & Yawson, 2005) and firm qualities (Cao, Owen & Yawson, 2008). Within the corporate finance and management literature, some studies’ samples have included publicly traded hospitality firms listed on the New York Stock Exchange or the London Stock Exchange (Cao et al, 2008; Moschieri & Mair, 2012; Powell & Yawson, 2005), however there is a lack of comprehensive research specifically concentrating on the effects of completed divestiture activities on brand diversification, systematic risk, and shareholder wealth particularly within the restaurant industry. Within the financial and economics literature, shareholder wealth is seen to be the present value of the expected future returns for shareholders and is represented by the market value of a firm’s common stock (Brigham & Daves, 2010). Specifically, the gap in the hospitality literature is an understanding of the effect of a firm’s resulting brand diversification levels and systematic risk on shareholder wealth when controlling for a divestiture completion.

**Agency Theory**

Agency theory’s origins are rooted in the context of the Anglo-American development of modern corporations and the economics literature covering risk sharing (Dalton, Hitt, Certo, & Dalton, 2007). Berle and Means’ (1932) provided the basic proposition underlying agency theory that the separation of ownership and control in corporations results in the potential for mischief
Agency theory addresses two main concerns that emanate from the separation of ownership and control, where the agents are delegated some decision making authority on behalf of the principals (Jensen & Meckling, 1976). The first concern involves the issue of conflicting goals between the principal and agent, where oversight of the agent’s actions by the principal is too difficult or expensive (Eisenhardt, 1989). The second concern addressed by agency theory is the differentiation of risk preferences between principals and agents, where each party may be inclined to take different actions (Eisenhardt, 1989). In other words, under agency theory the interests of managers and shareholders are considered to be misaligned (Boyd, Haynes, & Zona, 2011). Information asymmetry, different risk preferences, and agents’ inability to diversify their risk are seen as fostering self-interested actions of agents or managerial opportunism (Boyd et al, 2011).

Under agency theory, the separation of ownership and control and the lack of oversight that are characteristic of the modern corporation are seen to result in an increased likelihood that managers will participate in managerial opportunism (Jensen & Meckling, 1976). In participating in managerial opportunism, managers may undertake diversification measures to entrench their positions (Shleifer & Vishny, 1989) or diversify their employment risk (Amihud & Lev, 1981). It has been proposed under agency theory that increased diversification benefits managers at the expense of shareholders (Amihud & Lev, 1981; Shleifer & Vishny, 1989). Therefore, under agency theory corporate divestitures are seen as mechanisms that realign manager and shareholder interests by reducing diversification (Markides, 1992; Moschieri, 2011). Specifically, the misalignment of interests between managers, owners, and board of directors is seen to cause divestitures to be undertaken as a means to correct prior inefficient growth and diversification strategies pursued by managers, such as over-diversification and unprofitable
capital investments (Jensen, 1989; Markides & Singh, 1997; Moschieri & Mair, 2008). In other words, divestitures are seen as a proactive strategic option to re-adjust the company’s business focus in order to increase competitiveness (Moschieri & Mair, 2008), or as a last resort correction to honest managerial mistakes that were discovered ex-post facto to create sub-optimal performance (Markides & Singh, 1997).

Moreover, studies have shown that agency problems are more prominent with higher levels of diversification due to the higher discretionary power as a result of less oversight (Farooqi, Harris, & Ngo, 2014). Therefore, a strategic motive for divestitures includes reducing excessive diversification (Hoskisson, Johnson, & Moesel, 1994; Markides, 1992; Moschieri & Mair, 2005) and refocusing on core businesses (Markides, 1992; Moschieri & Mair, 2005). This is one of the most common reasons espoused for the value creation effects of divestitures, resulting in the conservation of the parent or divesting firm’s management resources and more efficient allocation of the resources to focus on the company’s core operations (Afshar et al, 1992; John & Ofek, 1995; Moschieri, 2011; Moschieri & Mair, 2005). The divested unit is seen as having a better fit and worth more to the buyer’s organization than the divesting parent’s, allowing for greater organizational focus (John & Ofek, 1995). These leaner companies, as compared to the traditional conglomerates that operated in diverse businesses, are perceived as superior in creating stockholder wealth due to their higher efficiency in the core business operations (John & Ofek, 1995; Markides & Berg, 1992).

Therefore, agency theory has become a prominent theory utilized in studies examining corporate restructuring, including divestitures. Overall, agency theory views excessive diversification within a company as value reducing and companies are forced to divest units to return to a more profitable and manageable structure through divestitures (Cao et al, 2008).
Demirer and Yuan (2013) indicate that service industries, including the restaurant industry, are not immune to the issues suggested by agency theory. Furthermore, the central tenets of agency theory have been shown to be applicable to various aspects of hospitality firm governance (Demirer & Yuan, 2013; Kim & Gu, 2005) and development (Dimou, Archer, & Chen, 2003). Consequently, this study utilizes agency theory to examine the effects of brand diversification and systematic risk levels on shareholder wealth following a divestiture.

Statement of the Problem

Many studies have attributed a firm’s diversification strategies as an attempt to overcome unique industry characteristics and accomplish increased competitiveness and financial stability (Montgomery, 1994; Rugman, 1976; Sundaram & Black, 1992). The restaurant industry is no exception to the employment of extensive diversification strategies, including brand diversification, in order to diversify business. Instead, brand diversification strategies are commonly utilized in the restaurant industry and entail firms serving markets with a variety of brands (Bahadir et al, 2008). For example, as of May 31, 2015, Darden Restaurants, Inc. operated seven brands within the fifty U.S. states, District of Columbia, and the Canadian market (Darden Restaurants, Inc., 2015). In 2002, AFC Enterprises, Inc., had operations under the brands Popeyes®, Church’s®, Cinnabon®, Seattle’s Best Coffee®, and Torrefazione Italia Coffee® (AFC Enterprises, Inc., 2002). In addition, over the years McDonald’s Corporation completed a number of brand acquisitions or majority ownership positions in order to diversify its operations, including Boston Market® and Chipotle® (Farzad, 2013; Hernandez, 1999).

However, a widely debated topic in the finance and strategic management literature, is the effect of diversification strategies on firm performance, risk, and shareholder wealth (Bettis
The empirical findings and viewpoints reported in the vast literature over the effects of diversification strategies are varied and inconclusive. For instance, diversification has been found to provide various benefits to firms from a variety of sources, including facilitating demand interaction (Siggelkow, 2003). However, diversification has also been found to simultaneously result in disadvantages for firms. The literature has proposed numerous disadvantages to firms from diversification including, increased coordination and control costs (Hoskisson & Hitt, 1988), as well as, the exacerbation of managerial agency problems (Martin & Sayrak, 2003). According to agency theory, firms with a higher degree of diversification are more prone to agency problems that conflict with shareholders’ interests (Farooqi et al, 2014). Therefore under agency theory, diversification strategies pursued by managers are associated with unprofitable capital investments that are not in the interests of shareholders (Jensen, 1989; Markides & Singh, 1997; Moschieri & Mair, 2008).

More specifically, the literature concerning brand diversification’s effect on the firm and shareholders is inconclusive. Some studies have proclaimed that brand diversification has positive effects due to the construction of a market entry barrier and greater market share (Bordley, 2003; Kekre & Srinivasan, 1990). In addition, Madden, Fehle, Fournier (2006) report that firms with strong brand equity create value for shareholders by yielding returns that are greater than the market benchmark. However other research has concluded that brand diversification has negative effects from lower consumer brand loyalty and higher switching behavior through increased competition (Quelch & Kenny, 1994). In addition, in terms of restaurant firm financial performance, Choi et al (2011) report a significant and negative effect from the degree of brand diversification.
Furthermore, research has found that highly diversified firms perform more poorly than their focused counterparts whether measured as accounting returns, shareholder returns, market share, or survival rates (Franko, 2004). Research has shown that the share price of firms that are more diversified sell at a “diversification discount” and therefore destroy shareholder wealth (Franko, 2004; Martin & Sayrak, 2003). The effect of mergers and acquisitions that result in greater diversification and less corporate focus have also been linked to a reduction in shareholder wealth (Morgan, Nail, & Megginson, 2000). Within the lodging industry, Tang and Jang (2010) found that on average diversification is associated with a valuation discount. However, the notion of a “diversification discount” has also been criticized in the literature as a result of methodological or data issues (Villalonga, 2004) or a lack of consideration in other attributable factors besides firm diversification, such as the endogeneity of a firm’s diversification decision (Campa & Kedia, 2002). Thus, there is a lack of consensus in regards to the effect of diversification on shareholder wealth. Due to the extensive utilization of brand diversification strategies and the proliferation of divestitures in the restaurant industry a deeper examination and assessment is warranted.

Through the years various corporate restructuring activities, including acquisitions and divestitures, have become very useful and popular. Moschieri and Mair (2012) indicated that between 1998 and 2005, 15 percent of the Fortune 500 companies engaged in more than one divestiture. Divestitures within the restaurant industry have been particularly frequent including Yum! Brands, Inc.’s 2011 divestiture of Long John Silver’s® and A&W All-American Restaurants® (Zacks.com, 2013). McDonalds Corporation announced its divestiture of Donato’s Pizza® in 2003 (Chicago Tribune, 2003), divested Chipotle Mexican Grill® in 2006 through an initial public offering (Farzad, 2013), and announced its divestiture of Boston Market® in 2007
In 2011, The Wendy’s Company divested all of its holdings in the Arby’s® Restaurant Group subsidiary (The Wendy’s Company, 2012). In addition, Popeye’s Louisiana Kitchen, Inc., formerly AFC Enterprises, Inc., divested its Cinnabon® subsidiary to Focus Brands, Inc. in November 2004 (AFC Enterprises, Inc., 2004). Furthermore, Brinker International, Inc. has also undertaken a number of brand divestitures over the years.

Moreover, the perspective that diversification negatively impacts the firm has been popularly utilized by restaurant industry corporate executives and analysts in rationalizing divestiture activities. For example, recently the divestiture of Red Lobster® has been attributed to the belief that the Darden Restaurants, Inc. conglomerate has too many brands to efficiently manage and that the Red Lobster® brand was hindering the parent firm’s competitive responsiveness (Chen, 2013). In addition, the divestitures of Chipotle and Boston Market were described as a means for McDonald’s Corporation to focus its management and financial resources on the core brand, as management predicted opportunities for growth remained significant (McDonald’s Corp., 2007). Moreover, AFC Enterprises, Inc., announced the sale of the Cinnabon® brand as a continued effort to sharpen the company’s strategic focus and maximize shareholder value (AFC Enterprises, Inc., 2004).

Furthermore, divestitures are not a novel concept within the corporate finance and strategic management literature (Moschieri & Mair, 2005). Instead, divestitures have been extensively examined and have been found to be prevalent in industries that demonstrate certain characteristics, including rapidly changing and highly competitive markets, as well as, in industries with multiple market segments, information and start-up advantages, and transferable technologies and where the parent has a vast market share (Garvin, 1983; Markides, 1992; Moschieri & Mair, 2008). The restaurant industry exhibits many of these characteristics. The
restaurant industry also displays several unique attributes including strong seasonality and is subject to cyclical patterns that arise from changes in political, social, and economic conditions (Hua, Xiao & Yost, 2013). The industry has been classified as a “monopolistic competition” industry, in which a significant number of large firms operate with differentiated products and low barriers to entry and exit (Hua et al, 2013). Due to these industry characteristics and the competitive nature of the industry, restaurant firms must develop strategies that enhance their competitiveness and financial success while increasing their ability to adapt to the dynamic environment (Hua et al, 2013).

Additionally, the role of systematic risk or non-diversifiable risk, which has been linked to reduced shareholder wealth (Barber et al, 2008), has not been studied in terms of brand diversification and shareholder wealth following restaurant divestitures. The restaurant industry is subject to many unique operating and financial risks. For instance, some of the risks the restaurant industry confronts include, changes in consumer tastes and spending patterns, cost of food products, and governmental regulations (Barber et al, 2008). These industry characteristic risks may influence a firm’s systematic risk (Barber et al, 2008). In addition, the literature has found inconclusive results on whether diversification strategies have risk reducing or risk increasing effects on firms (Krapl, 2015). Moreover, the break-up of conglomerates or divestiture of subsidiaries has been found to result in an improvement in returns but with an increase in risk (Desai & Savickas, 2010). Since the restaurant industry is inherently subject to certain financial and operating risks an examination of the effect of systematic risk and the level of brand diversification on shareholder wealth when controlling for a divestiture warrants greater attention.
For divestitures, unlike acquisitions, it is more difficult to determine performance consequences since there is greater ambiguity in the source of value creation and lack of transparency in the financial aspects that underline corporate strategy (Brauer & Wiersema, 2012). The total economic effect of divestitures is considered to be captured by changes in stock market prices and operative profit for the company (Moschieri & Mair, 2005). Within the literature it has been found that the stock market on average regards the announcement of voluntary divestitures favorably and rewards divesting companies with higher stock prices (Boone & Mulherin, 2001; Markides & Berg, 1992; Peel, 1995). However, Boone and Mulherin (2001) found that although positive price reactions to the initial announcement of a divestiture are observed, upon the announcement of the completion of the divestiture there was no observable wealth changes. This result is however attributed to the sample design in defining the completion date as the end of the process (Boone & Mulherin, 2001). Whereas, Afshar et al (1992) report that divestiture completion results in higher significant event day abnormal returns than the announcement of an intent to divest. The inconclusive empirical findings in regards to the effect of divestiture completions on shareholder wealth warrants a more comprehensive examination of its influence on the relationships between brand diversification, systematic risk, and shareholder wealth.

In addition, empirical research on divestitures have indicated that typically a divestiture has a positive impact on the parent company’s share price on the date of announcement and sometimes before or after the announcement (Montgomery, Thomas, & Kamath, 1984; Moschieri & Mair, 2008; Mulherin & Boone, 2000). Nevertheless the effect of a firm’s subsequent diversification and systematic risk on shareholder wealth as a consequence of a divestiture completion has not been empirically addressed in the literature. In addition,
Divestiture studies have typically pooled data containing firms from a variety of industries (Cao, Owen & Yawson, 2008; Moschieri & Mair, 2012; Powell & Yawson, 2005), instead of considering the unique nature of each specific industry. Considering the frequent occurrence of divestitures and the unique characteristics of the restaurant industry an examination of the relationships between brand diversification, systematic risk, and shareholder wealth controlling for a divestiture completion specifically within the industry is a meaningful research problem.

The sparse literature concerning the relationship between brand diversification and shareholder wealth has mainly focused on a uni-directional relationship. One of the main goals of corporate executives is to consider the business-wide implications, including shareholder repercussions, of corporate brand management (Petromilli, Morrison, & Million, 2002). Morgan and Rego (2009) found that brand portfolios that include greater diversification result in an increased relative stock value for firms. However, shareholders have also been seen to consider the circumstance that larger brand portfolios can be more complex and costly to manage (Wiles, Morgan & Rego, 2012). Therefore, it is important to consider the effect shareholder wealth may have on a firm’s diversification level through a bi-directional relationship.

Similarly, the literature has suggested that the value of brands is related to their ability to reduce consumers’ and firms’ risk (Aaker & Keller, 1990; Rego, Billett, & Morgan, 2009). However, the bi-directional relationship between systematic risk and brand diversification is non-existent in the literature. Rego et al (2009) found that consumer based brand equity has a stronger role in predicting unsystematic risk versus systematic risk. Furthermore, studies have mostly examined the uni-directional relationship between the market-related or systematic risk of a firm and its corporate behavior or financial performance, which may ultimately impact shareholder wealth (Barber et al, 2008).
Additionally, within the finance and strategic management literature the studies that have been conducted in regards to divestitures and shareholder wealth have focused on uni-directional relationships. However, since many divestitures are undertaken to correct inconsistencies between managers and owners (Lee et al, 2013), there may be a bi-directional effect between shareholder wealth and divestitures. The positive effect of divestitures that is advocated in the literature and corporate realm (Kaiser & Stouraitis, 1995) may be an incitement for management and shareholders to initiate a divestiture. Therefore, this study will examine the potential non-linear or bi-directional relationships between the variables.

Purpose of the Study

Motivated by the inconclusive empirical findings in the literature and the idiosyncratic elements of the restaurant industry, this study has three main objectives. Drawing on agency theory, the first objective of this study is to examine the short- and long-term effect of brand diversification levels on systematic risk and shareholders’ wealth following a divestiture. A review of the literature reveals a gap in regards to the completion of restaurant divestitures and the effect of the resulting level of brand diversification on systematic risk and shareholder wealth. In addition, although the literature has shown that the level of diversification has an effect on a firm’s systematic risk and shareholder wealth, whether the effect is positive or negative is inconclusive in the literature (Bettis & Mahajan, 1985; Choi et al, 2011; Kang & Lee, 2014; Thompson, 1984). Consequentially, there is a demand for a more in-depth examination of the short- and long-term effects on shareholder wealth and systematic risk from restaurant firms’ brand diversification strategies through the examination of completed divestiture activities.
Moreover, previous studies that have investigated the effect of diversification have mainly focused on firm financial performance and have utilized a variety of theories and frameworks, including internalization theory (Kogut, 1985) and transaction cost theory (Hitt, Hoskisson, & Ireland, 1994). However the focus or unit of analysis for this study is on the shareholders of the firm. Therefore, this study draws on the theoretical perspective of agency theory in regards to the misalignment of owner and agent interests.

The second objective of the study is to investigate the short- and long-term effect of systematic risk on shareholder wealth subsequent to a divestiture completion. Barber et al (2008) have indicated that a firm’s mismanaged risk can lead to a reduction in shareholder returns, in contravention of the financial notion that higher risk is associated with higher shareholder returns. In addition, various studies within the literature have examined the various financial and operating determinants of a firm’s systematic risk (Barber et al, 2008). However, there is a lack of understanding in terms of the effect of a restaurant firm’s systematic risk on shareholder wealth subsequent to a divestiture. Due to the unique nature of the restaurant industry and the proliferation of divestitures, a greater discernment of the effects from systematic risk levels on shareholder wealth subsequent to a divestiture will be beneficial to a firm’s ability to render better informed decisions in regards to corporate strategy.

The third objective of the study is to investigate the short- and long-term impacts of a restaurant firm’s divestiture completion on the firms’ level of brand diversification, systematic risk, and shareholder wealth. There has been extensive studies conducted within the literature in regards to divestitures, however none of the studies have specifically focused on the effects of divestiture completions within the distinctive restaurant industry. As previously mentioned, publicly traded hospitality firms, including restaurant firms, have been included in some research
studies (Cao, Owen & Yawson, 2008; Moschieri & Mair, 2012; Powell & Yawson, 2005); however due to the unique characteristics exhibited by the industry this study focuses solely on the restaurant industry.

This study focuses on the restaurant industry for many reasons. For instance, brand diversification is a unique dimension to the restaurant industry, which has experienced a prevalent growth in brand utilization with dynamic changes to brand portfolios (Kang & Lee, 2015). Firms within the restaurant industry focus on brand diversification, versus product diversification, to maximize firm value by serving multiple markets with diverse brands (Muller, 1998). Moreover, various unique aspects of restaurant firms have been found to impact systematic risk (Barber et al, 2008). In addition, there has been a proliferation of divestitures among firms in the restaurant industry. A firm’s divestiture includes the implementation of many modifications to the firm’s operational and financial structure (Moncarz, 1986). These transformations to restaurant firms raises the concern of the effects on shareholders, which has not been specifically addressed in the literature.

The study focuses on divestiture completion since initial divestiture announcements have been found to underestimate the full wealth effects of divestitures (Boone & Mulherin, 2001). Specifically, Boone and Mulherin (2001) indicate that not all divestitures that are initially announced are actually completed, resulting in an initial announcement effect that does not represent the full effect of the divestiture. Furthermore, Afshar, Taffler, and Sudarsanam (1992) found in their study that the announcement of a divestiture completion resulted in higher significant event day abnormal returns than the announcement of an intent to divest.

Overall, the purpose of this study is to contribute to future hospitality research efforts and acquire an in-depth understanding on the effects of brand diversification and systematic risk on
shareholder wealth when controlling for divestiture completion within the restaurant industry, as shown in the research model in Figure 1.

![Research Model](image)

**Research Questions**

Based on the existing literature and drawing on agency theory this study aims to address the following research questions:

**Q1:** What relationship and in what form is there between a restaurant firm’s brand diversification and shareholder wealth when controlling for divestitures in the short- and long-term?
Q2: What relationship and in what form is there between a restaurant firm’s brand diversification and systematic risk when controlling for divestitures in the short- and long-term?

Q3: What relationship and in what form is there between a restaurant firm’s systematic risk and shareholder wealth when controlling for divestitures in the short- and long-term?

Q4: What impact do divestiture completions have on a restaurant firm’s shareholder wealth, brand diversification, and systematic risk in the short- and long-term?

Methodology

In order to examine the above research questions this study draws on agency theory and performs a cointegration analysis. Since the primary purpose of the study is to develop a deeper understanding of the purposed relationships, the research questions will be tested using Brinker International, Inc. as a case study. The scenarios in which case study research design are considered appropriate include when little is known about a phenomenon or current perspectives seem inadequate or conflicting (Eisenhardt, 1989). In terms of the relationships under investigation the current literature, as previously mentioned, is inconclusive. Moreover, case study research designs provide a valuable tool for researchers to expand knowledge over new topic areas, test theory, or generate novel theory in areas of interest (Eisenhardt, 1989). Easton (2010) suggests that by developing an overall comprehensive perception of the phenomenon through case studies, researchers will become more adapted to developing theories in regards to the various aspects of the phenomenon. Therefore, a case study approach is appropriate for this study since it will allow for a focalization on discerning the dynamics present within a single setting, Brinker International, Inc., in terms of the effects of brand diversification and systematic...
risk on shareholder wealth following a divestiture. In addition, the proposed short- and long-term relationships will be estimated with quarterly and annually time series data, respectively, for all the variables from 1994 to 2013.

The variable measures were chosen following an extensive literature and are shown in Table 1. The Berry-Herfindahl index has been popularly utilized in the literature to measure diversification, including brand diversification (Choi et al, 2011; Kang & Lee, 2014; Kang & Lee, 2015) and was chosen for this study. The Berry-Herfindahl index is calculated as $(1 - \sum S_i^2)$, where $S_i$ is the number of properties a firm has within each brand it operates divided by the total properties for the firm (Kang & Lee, 2015). A rolling window beta estimation, as commonly utilized in the literature, was applied in this study to compute systematic risk (Fama & MacBeth, 1973). In this study shareholder wealth was measured through the computation of the natural log of the Brinker stock price for the sample time period.

Table 1. Study Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
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<tbody>
<tr>
<td>Brand Diversification</td>
<td>Berry-Herfindahl Index</td>
</tr>
<tr>
<td>Systematic Risk</td>
<td>Rolling Window Beta</td>
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<tr>
<td>Shareholder Wealth</td>
<td>Natural Log</td>
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This study utilizes a cointegration analysis and therefore the first phase in the analysis involves the examination of the time series data properties. In order to detect any trend or non-stationary variables in the data the following diagnostic tests are utilized: Augmented Dickey-Fuller (“ADF”) test, the Phillips-Perron (“PP”) test, and the Kwiatkowski-Phillips-Schmidt-Shin (“KPSS”) (Pfaff, 2008). In the case of non-stationarity, the resolution is first differencing or second differencing (Pfaff, 2008). The two-stage approach developed by Engle and Granger
(1987) is utilized in the study. First, cointegration is tested for and then an error correction model is estimated, as proposed by Mukherjee, White, and Wuyts (1998), which is useful in estimating the short- and long-term effects of explanatory variables in time series data. The Granger (1969) test is utilized to validate the direction of causality between the variables. However, based on the literature the study hypothesizes the bidirectional model shown in Figure 1.

Case Study

Incorporated in 1983 and headquartered in Dallas, Texas, Brinker International, Inc. (“Brinker”) is a leading casual dining restaurant corporation (Brinker International, n.d.). Brinker is publicly traded on the New York Stock Exchange under the ticker symbol “EAT” and as of March 2, 2016 had a market capitalization of approximately $2.8 billion (YahooFinance, n.d.). Brinker’s roots can be traced to the first Chili’s® Grill & Bar restaurant opened by Mr. Larry Lavine in Dallas, Texas on March 13, 1975 (Brinker International, n.d.). In 1983, Mr. Norman Brinker acquired the Chili’s brand of restaurants, which consisted of twenty-three restaurants scattered across six states (Brinker International, n.d.). The initial public offering of Chili’s, Inc. was completed in 1983 and due to a growing restaurant portfolio the company’s name was changed to Brinker International, Inc. in 1991 (Brinker International, n.d.).

Over the years Brinker’s restaurant brand portfolio has transformed significantly. Today, Brinker only operates and franchises the Chili’s® Grill & Bar (“Chili’s”) and Maggiano’s® Little Italy (“Maggiano’s”) restaurant brands (Brinker International, Inc., 2015). The Chili’s® brand has been in operation for over 40 years and is a leader in the casual dining segment of the restaurant industry (Brinker International, Inc., 2015). The Chili’s® all-day menu features a variety of cuisine, including the signature items of baby back ribs and hand-crafted big mouth
burgers (Brinker International, Inc., 2015). As of June 24, 2015, there were 1,580 Chili’s® locations throughout the United States and in 30 countries, including Canada, Ecuador, Germany, Japan, Lebanon, and Singapore (Brinker International, Inc., 2015).

Brinker’s acquired the Maggiano’s® brand in August 1995 and as of June 24, 2015, there were 49 Maggiano’s® locations in 21 states (Brinker International, Inc., 2015). Maggiano’s® is a full-service casual dining Italian restaurant with an interior that reflects classic Italian-American restaurants of New York’s Little Italy from the 1940s (Brinker International, Inc., 2015). Maggiano’s® restaurants have a full lunch and dinner menu that offer a variety of pasta, chicken, seafood, and prime steaks in individual and family-style (Brinker International, Inc., 2015).

In February 1989, Brinker completed the acquisition of Grady’s® American Grill (“Grady’s”) (Brinker International, Inc., 1994). Grady’s® was a casual, upscale dinner house restaurant that featured “made from scratch” recipes and a broad menu of seafood, prime rib, chicken and pasta entrees (Brinker International, Inc., 1994). The target customer for Grady’s® was a slightly more sophisticated customer (Brinker International, Inc., 1994). In addition, Spageddies® Italian Kitchen (“Spageddies”) was acquired by Brinker in June 1993 (Brinker International, Inc., 1994). The Spageddies® line of restaurants were casual, full-service, family oriented Italian restaurants that featured a variety of rotisserie chicken, steak, pizza, and pasta entrees (Brinker International, Inc., 1994). In addition, the Spageddies® restaurants also featured exhibition kitchens with wood-burning pizza ovens (Brinker International, Inc., 1994). However, the Grady’s® and Spageddies® restaurant brands were divested by Brinker in the second quarter of its 1996 fiscal year (Brinker International, Inc., 1997). Brinker rationalized the divestitures of the brands under its strategic plan targeted to support long-term growth objectives and an
emphasis on the continued development of the restaurant concepts with the greatest return potential (Brinker International, Inc., 1997).


Moreover, the On The Border® Café (“On the Border”) brand of restaurants was acquired by Brinker in May 1994 (Brinker International, Inc., 1994). The On the Border® brand consists of full-service, casual Tex-Mex theme restaurants that feature southwest mesquite-grilled specialties, traditional Tex-Mex entrees, and “Texas-sized” non-alcoholic beverages (Brinker International, Inc., 1994). The restaurants under the brand are characterized by outdoor patios, booth and table seating, and brick and wood walls that showcase southwest décor (Brinker International, Inc., 1994). At the end of fiscal year 2010, Brinker completed the divestment of the On the Border® brand to OTB Acquisition LLC, an affiliate of Golden Gate Capital (Brinker International, Inc., 2010).

Brinker acquired the Cozymel’s® Coastal Mexican Grill (“Cozymel’s”) restaurant brand in July 1995 (Brinker International, Inc., 1995). The Cozymel’s® brand consists of casual, upscale, authentic Yucatan restaurants that offer a variety of fish, chicken, beef, and pork entrees (Brinker International, Inc., 1995). The Cozymel’s® restaurants provide an authentic “Yucatan vacation” atmosphere including a souvenir shop and outdoor patio area (Brinker International,

The acquisition of the Corner Bakery® brand was completed by Brinker in August 1995 (Brinker International, Inc., 1996). The Corner Bakery® concept is designed as a retail bakery in the traditional, old world bread bakery style and offers homemade hearth-cooked menu items (Brinker International, Inc., 1996). The food items offered at the Corner Bakery® include, loaves, rolls, muffins, brownies, baguettes, and other specialty breads, as well as, pizzas, sandwiches, soups and salads (Brinker International, Inc., 1996). In February 2006, Brinker’s completed the sale of the Corner Bakery® brand for $72.5 million (Brinker International, Inc., 2005b).


Additionally, Brinker introduced the Big Bowl® and Wildfire® restaurant brand concepts into its portfolio in 1998 (Brinker International, Inc., 1998). The Big Bowl® brand features contemporary Asian cuisine with fresh ingredients that are served in a casual, vibrant atmosphere (Brinker International, Inc., 1998). The brand is distinguished by the authentic, full-flavored menu featuring five kinds of fresh noodles, chicken pot stickers and dumplings, hand-
rolled summer rolls, seasonal stir-fry dishes with local produce, and wok-seared fish (Brinker International, Inc., 1998). Big Bowl® restaurants feature an interactive stir-fry bar that allows guests to help themselves to an array of vegetables to be wok-cooked with their choice of sauces, meats, noodles, and rice (Brinker International, Inc., 1998). In the third quarter of fiscal year 2005, Brinker divested the Big Bowl® brand and received proceeds totaling $6 million (Brinker International, Inc., 2005).


Significance of the Study

Due to the magnitude of brand diversification strategies utilized in the restaurant industry it is critical to determine the effect of the resulting levels of diversification strategies on shareholder wealth following a divestiture. This dissertation provides in-depth insights and contributes to the theoretical body of knowledge in the hospitality field in several aspects. First, this study’s analytical framework provides a greater understanding of the consequences to shareholders in terms of the effects of the resulting brand diversification and systematic risk levels subsequent to divestiture completion. Divestiture activity and its effect on the relationships between restaurant firm brand diversification, systematic risk, and shareholder wealth is an important consideration, given the extent and strategic importance of this type of corporate phenomena. Additionally, this study aims to determine whether within the restaurant industry divestitures operate as a tool to realign agent and owner interests, as recognized under agency theory.

Second, this study simultaneously examines the effect of brand diversification and systematic risk following a divestiture from the shareholders perspective. There are mixed viewpoints within the literature on the effect of diversification in terms of shareholder wealth. The current studies in the literature addressing hospitality industry diversification have not examined the effects of brand diversification and systematic risk concurrently. Furthermore, the studies that have been conducted in the hospitality industry regarding diversification have focused on the effects towards firm financial performance and not shareholder wealth (Kang & Lee, 2014; Kang et al, 2011).

Third, this study recognizes the idiosyncratic characteristics of the restaurant industry and the inadequate current state of research. The use of a single restaurant firm that has completed
numerous divestitures over the years provides for greater in-depth analysis. Furthermore, a greater understanding of the effects from divestitures within the restaurant industry will be beneficial to a firm’s ability to strategically decide on whether to divest, based on the subsequent effects of brand diversification and systematic risk on shareholder wealth. Overall, this study will contribute important building blocks and is expected to be a catalyst for future theoretical and empirical research on hospitality industry divestitures.

**Limitations of the Study**

Although this study will provide useful insights into the effects of the resulting brand diversification and systematic risk levels on shareholder wealth following a divestiture completion within the restaurant industry, there are certain limitations that should be addressed in future research. For instance, the utilization of an individual case study allows for an in-depth analysis, however the results cannot be generalized to other firms. In addition, the effects of the resulting brand diversification and systematic risk levels on a firms’ shareholder wealth following a divestiture may vary based on the unique characteristics of the economies in different countries. Moreover, the utilization of time series data in this study also presents some limitations, including the lack of mutually independent observations since a future data point may be impacted by a previous data point.
CHAPTER TWO: LITERATURE REVIEW

Introduction

Chapter two provides a comprehensive discussion of the theoretical foundation and the proposed relationships between the constructs within the research model under the agency theory perspective. An in-depth literature review of previous empirical studies is provided to present the conceptual framework supporting the proposed research model provided in the first chapter. First, each of the variables within the research model are explained and defined as acknowledged in the contemporary finance and strategic management literature. The variable definitions are followed with a discussion of the current empirical research status and important gaps that will be addressed through this study in regards to each of the relationships proposed in the research model. Diversification, specifically brand diversification, is delineated and the effects of brand diversification on systematic risk and shareholder wealth are examined. Next, systematic risk is demarcated and the impact of systematic risk on shareholder wealth is developed. Then, a depiction of divestitures within the corporate realm is provided and the previous empirical findings of the impacts of divestitures on shareholder wealth, brand diversification, and systematic risk are discussed. Finally, the hypotheses proposed in this study are outlined.

Brand Diversification

Brands have been defined by some researchers as “consisting of the visual and verbal representations associated with firms and their services” (Stern, 2006, p. 216). Brands are a powerful tool for firms that provide a competitive advantage (Aaker, 1996). Brands are seen to streamline consumer decision making by providing a sense of security or consistency and carry a symbolic meaning or social value (Barwise & Robertson, 1992). Within the literature, it is
widely accepted that brands are essential intangible assets that can considerably influence a firm’s performance through the support of premium prices and the propensity towards consumer long-term brand loyalty (Ailawadi, Lehmann, & Neslin, 2001; Barwise & Robertson, 1992). Well managed brands are seen to be powerful in positioning a firm to outperform its peers by impacting whether consumers will purchase the brand products through increased familiarity and favorability (Tenet Partners, 2015). Moreover, strong or high-quality brands have been found to produce stock returns for a firm’s shareholders that are greater in magnitude than a relevant benchmark and do so with less risk (Madden et al, 2006). In particular, within the hospitality industry, brands especially perform a crucial role as core assets and a leading driver for firm growth due to their substantial power in identifying and influencing customers’ perceptions (Jiang et al, 2002; Kim & Kim, 2005).

Considering the importance of brands, corporate marketers have increasingly focused on branding strategies or brand-building efforts for the organization (Bhat & Burg, 2011). One of these corporate level strategic decisions is to develop a brand portfolio whereby the firm markets more than one brand (Morgan & Rego, 2009). Therefore, a key dimension to a firm’s brand portfolio strategy is the level of brand diversification or the number of brands the firm owns and markets (Morgan & Rego, 2009). Within the literature, numerous taxonomies have been proposed for classifying the distinctive types of brand portfolio strategies. One of the more prominent taxonomies is Laforet and Saunders’ (1994) three-category taxonomy scheme – corporate branding, house of brands, and mixed branding (Rao, Agarwal, & Dahlhoff, 2004). Under the corporate branding strategy the firm’s corporate name is dominant and is endorsed in all or part of the firm’s products or service brands (Rao et al, 2004). The house of brands strategy consists of the firm utilizing individual brand names to market its products or services instead of
the corporate name (Rao et al, 2004). In a mixed branding strategy the corporate name in addition to the individual brand names are utilized (Rao et al, 204). For service firms a popularly utilized corporate strategy is to employ higher levels of brand diversification, which entails the firm employing separate brands to serve its markets (Bahadir et al, 2008).

The service industry, specifically, is seen to require extensive customization for target markets owing to the intangible nature of services (Knight, 1999). In particular, the restaurant industry over the past couple of decades has experienced an influx of brand proliferation due to persistent growth (Choi et al, 2011; Kang & Lee, 2015). As Choi et al (2011) point out brand diversification within the restaurant industry is a unique mixture between related diversification into different segments and a strategy of brand proliferation to market various brands for similar products. Within the restaurant industry, in order to gain competitive advantage, firms focus on developing an optimal operation of their brand portfolio (Muller, 1998; Choi et al, 2011). However, since the restaurant industry can be characterized as a saturated, low-profit margin industry (Kang & Lee, 2015), the levels of brand diversification may have an alternative impact on firms’ levels of systematic risk and shareholders wealth than other industries.

**Systematic Risk**

A firm’s risk can be characterized as the uncertainty of its prospects for success or the vulnerability of future cash flows and can vary due to various idiosyncratic characteristics of the firm (Borde, 1998). Corporate executives are concerned with “providing shareholders with the greatest return for a given amount of risk” (Montgomery & Singh, 1984). Specifically a firm’s systematic risk is derived from a common source of factors that affect most firms in the economy, such as inflation, recessions, or interest rates, and cannot be eliminated through
diversification (Bodie, Kane, & Marcus, 2009). Systematic risk is seen to be inherent in the overall market (CFA Institute, 2012). In other words, systematic risk is a firm’s stock volatility that is due to changes in market-level economic factors or its covariance with the market’s oscillations (Barber et al, 2008).

Systematic risk has been designated as a stock’s beta, measured as the sensitivity of a firm’s stock price to the market (Kim, Ryan, & Ceschini, 2007). In other words, the systematic risk of a firm is understood to be the result of “investors’ expectations about the future volatility of a firm’s total return relative to that of the market as a whole” (Barton, 1988, p. 167). A stock’s beta measures its sensitivity to the market and captures its level of systematic risk (CFA Institute, 2012). A positive beta indicates the stock’s returns follow the market, whereas a negative beta denotes the stock’s returns are opposite to the market (CFA Institute). Betas that are greater than one denote the stock will move in the same trend as the market but with a greater magnitude, thereby demonstrating greater sensitivity to systematic risk (Bodie et al, 2009). In addition, the risk measure corporate executives are most concerned with when aiming to maximize firm value is beta (Kinney, 1972). Therefore, showing that the systematic risk levels of a firm are an important consideration to a firm’s cash flows and financial well-being. Hence, a firm’s level of systematic risk can be linked to its shareholders wealth.

**Shareholder Wealth**

Shareholder wealth for a firm reflects the discounted value of the expected future cash flows for shareholders and is represented by the market value of a firm’s common stock (Brigham & Daves, 2010). In other words, the worth of a company’s stock to a shareholder is determined by the degree and certainty of the cash flow the stock will generate for the
shareholder in the future (Brigham & Daves, 2010). For example, a firm with cash flows that are viewed to be less risky and more reliable will be seen to be more valuable and generate greater wealth for a shareholder. Therefore, the market value of a firm’s stock or the price the stock can be purchased at is seen to be reflective of the market’s perspective of the firm’s ability to reliably generate cash flows. This assessment is developed within the finance and economics fields through the efficient market hypothesis.

The efficient market hypothesis states that in an efficient market asset prices, including firm share prices, reflect all past and present information (CFA Institute, 2011). In other words, under the efficient market hypothesis stock prices consistently reflect all current knowledge and therefore only change in response to new unpredictable information (Bodie et al, 2009). Under this reasoning, stock prices follow a random walk that is unpredictable since prices only change to unpredictable information (Bodie et al, 2009). Under the efficient market hypothesis, it is suggested that higher shareholder wealth or value is seen to represent that a firm’s capital is allocated in a way that generates more value (Morck, 2014). In other words, shareholders’ valuation of a firm’s stock reflect the underlying value per share of the firm’s usage of its capital (Morck, 2014). Considering this notion, a firm’s stock price will increase when its usage of capital is seen to be more valuable. Support for the efficient market hypothesis has been shown through event studies that show changes in stock returns due to the dissemination of information concerning certain events that ought to impact firms (MacKinlay, 1997). One type of event that has been investigated in the literature as impacting share prices and shareholder wealth is firm divestitures.
**Divestitures**

A divestiture is a form of corporate restructuring and is defined as the disposal by a parent company of a product line, subsidiary, division, or business unit (Moschieri & Mair, 2008). Divestitures result in a parent firm’s adjustment of its ownership and business portfolio organization (Brauer, 2006). Due to the nature of divestitures they are seen to “affect the long-term evolution of the firm” (Moschieri & Mair, 2008, p. 2). An assortment of causes for corporate divestitures have been proposed, including legal, strategic, and market motivations (Moschieri & Mair, 2005). Within the rich stream of literature analyzing divestitures various determinants have been proposed, including industry and firm characteristics (Brauer, 2006). Overall, divestitures have been found to be relevant for all firms regardless of the firm’s size, scope, age, or industry (Hoskisson & Johnson, 1992). However, there are several different forms of divestitures, including sell-offs, spin-offs, and carve-outs, each having distinct consequences for the parent and divested firms (Kaiser & Stouraitis, 1995).

A sell-off is a form of divestiture that consists of a business unit, division, or subsidiary of a parent company being sold to a separate third-party firm (Woo et al, 1992). Rose and Ito (2005) suggested that parent firms will opt to commence a sell-off when they do not intend to maintain a trading relationship with the divested unit. In a spin-off, another form of divestiture, the divested unit becomes an independent company, however the parent company maintains control of the divested unit since its shares are distributed to the shareholders of the parent company (Moschieri & Mair, 2005). A spin-off, regardless of the corporate motivation, entails the formation of a new brand (Bhat & Burg, 2011). Spin-offs are seen to be undertaken in order to stimulate corporate innovativeness in the divested subsidiary or to eliminate negative synergies in the corporate structure (Garvin, 1983). Rose and Ito (2005) suggest that parent firms
perform a spin-off when the resources or competencies of the divested unit are valuable but the management of these resources or competencies is more effective under less than full ownership. Furthermore, spin-offs are commonly undertaken by parent firms that operate in a rapidly changing and competitive setting (Ito, 1995).

A carve-out form of divestiture will result in the creation of an independent company through the detachment of a business unit and the sale of its shares in an initial public offering (Moschieri & Mair, 2005). In general, the parent company in a carve-out will retain a majority ownership of the divested unit’s shares (Moschieri & Mair, 2008). Allen and McConnell (1998) proposed that carve-outs are typically pursued when the parent company has poor operating performance, high leverage, and constrained capital. However, carve-outs are usually seen as a temporary form of restructuring aimed at allowing the parent firm to raise funds in the capital market (Moschieri & Mair, 2005). Therefore, it is suggested that parent firms undertake a carve-out in order to retain operating synergies with the intention of re-acquiring the divested unit’s public shares (Schipper & Smith, 1986). The various forms of divestitures have been popularly utilized in many industries, including the restaurant industry.

Many firms within the restaurant industry have undertaken divestitures through the different forms. For instance, in 2003 McDonalds Corporation completed a sell-off of its Donato’s Pizza® brand to an undisclosed third-party (McDonald’s Corporation, 2003). In addition, Popeye’s Louisiana Kitchen, Inc., performed a sell-off of its Cinnabon® subsidiary to Focus Brands, Inc. in November 2004 (AFC Enterprises, Inc., 2004). Similarly, in January 2011, The Wendy’s Company completed a sell-off where it sold 100 percent of its interest in the Arby’s® Restaurant Group subsidiary to ARG IH Corporation (The Wendy’s Company, 2012). In 2012, Carrols Restaurant Group, Inc. completed a spin-off of its Fiesta Restaurant Group
through the distribution of common stock to its shareholders (Carrols Restaurant Group, Inc, 2012). In addition, McDonalds Corporation divested Chipotle Mexican Grill® in 2006 through a carve-out form of divestiture (McDonalds Corporation, 2006). The reshaping of restaurant firms through the corporate transformation tool of divestitures may impact the relationships between the firms’ level of brand diversification, systematic risk, and shareholder wealth.

**Brand Diversification and Shareholder Wealth**

Shareholder wealth is seen to be affected by market-based marketing investments, such as brands, that particularly have an influence on a firm’s cash flows (Gruca & Rego, 2005). In particular, brands are associated with increasing a firm’s cash flows (Srivastava, Shervani, & Fahey, 1998). It has been suggested that shareholders recognize brands as assets with value and reflect changes to a firm’s brand portfolio strategy in the firm’s stock price, which can make brands a critical mechanism to generate shareholder value (Rego, Billett, & Morgan, 2009). The burgeoning effect of brands can be seen through the Tenet Partners’ (2015) report of the ‘Top 100 Most Powerful Brands’, which indicated that the firms with the Top 10 brands stock performance grew twice the rate of the market since 2009. The strategic planning in terms of corporate brand portfolio architecture and the critical evaluation of the contribution that brands offer in the creation of shareholder value has proliferated due to changing market dynamics (Petromilli, et al, 2002). It is advocated that corporate brand management take a strategic role that considers business-wide implications of brand oriented decisions and focuses on the optimization of business performance (Petromilli et al, 2002). However, within the literature the focus has been mainly on the effects of brand diversification in terms of firm financial performance instead of on shareholder wealth.
It has been suggested that a multi-brand portfolio allows firms to achieve broad market coverage by addressing multiple market segments or heterogeneous consumer needs (Lancaster, 1990). Greater brand diversification has also been linked to potential economies of scale and scope in distribution, sales, advertising, and merchandising (Barwise & Robertson, 1992). Furthermore, greater brand diversification tends to be associated with higher revenues due to better targeting and positioning (Bahadir et al, 2008). Lower competition and price premiums from the construction of entry barriers are also associated with greater brand diversification (Bordley, 2003). Brand portfolios that are more diversified are also associated with enabling a firm to achieve specialized management capabilities and synergy creation (Aaker, 2004). Furthermore, larger brand portfolios have been found to result in reduced cash flow variability and increased relative stock value for firms (Morgan & Rego, 2009).

Within the hospitality literature there have been no studies examining the effects of brand diversification on shareholder wealth. However, brand diversification has been found to have a negative effect on restaurant firms’ financial performance through the Tobin q’s measure (Choi et al, 2011). In addition, Kang and Lee (2015) also found that brand diversification negatively impacts a restaurant firms’ financial performance. It was suggested that the negative effect was a result of the adverse impacts of increased brand diversification outweighing the benefits, as well as, the relatively small size of the restaurant firms limiting their ability to exploit the benefits to diversification (Kang & Lee, 2015). However these studies focused on firm performance, while this study seeks to determine the role of brand diversification on shareholder wealth within the restaurant industry, which has not been addressed in the literature.

In terms of other forms of diversification (i.e. corporate or market diversification), research has evolved in waves of conflicting results in terms of the impact of diversification
levels on shareholder wealth (Martin & Sayrak, 2003). Traditionally, studies have shown that the share price of firms that are more diversified sell at a discount and therefore equate diversification to the destruction of shareholder wealth (Franko, 2004; Martin & Sayrak, 2003). For instance, Megginson, Morgan & Nail (2000) found that mergers resulting in increased corporate diversification caused a relative loss in shareholder wealth. However, other studies in the literature have countered the traditional viewpoint and have found that acquisitions resulting in greater diversification caused the acquiring firm to realize a positive abnormal stock return or a diversification premium (Matsusaka, 1993; Villalonga, 2004b). Moreover, a number of studies in the literature have challenged that the stock discount associated with more diversified firms is attributable to other factors instead of diversification, such as the pre-diversification characteristics of the firm (Graham, Lemmon, & Wolf, 1999; Lang & Stulz, 1994).

In terms of the direct effects of brand portfolios on shareholder wealth, empirical studies within the literature is scarce. A rare study, conducted by Wiles, Morgan and Rego (2012) found that following an acquisition of multiple brands the acquiring firm’s abnormal stock returns were lower, which was attributed to shareholders negatively viewing the increased brand portfolio complexity. Similarly, it was found that firms disposing or divesting of multiple and larger brands experienced greater positive abnormal returns, indicating investors’ preference for a more focused brand portfolio (Wiles et al, 2012). However, a notable point to emphasize in regards to Wiles et al’s (2012) study is the lack of concentration on the industries the sample firms operate within, instead the study utilized a pooled sample of 322 firms operating in 31 business-to-consumer industries. Due to the idiosyncratic prominence of brands and the unique characteristics of the restaurant industry that may confound the findings of Wiles et al’s (2012) study, a deeper examination of the effects of brand diversification on shareholder wealth
specifically within the restaurant industry is warranted. In addition, the Wiles et al (2012) study focused on the short-term effect of brand disposal announcements instead of completions and only considered the number of brands disposed (i.e. binary variable) (Wiles et al, 2012). Whereas, this study focuses on the short- and long-term effect of a restaurant firm’s brand diversification on shareholder wealth when controlling for a divestiture.

The negative influence of increased brand diversification on the financial performance of a restaurant firm (Choi et al, 2011; Kang & Lee, 2015) and the positive effect of disposing multiple brands on a firm’s stock returns (Wiles et al, 2012) that have been recorded in the literature, seem to support the viewpoint that greater brand diversification results in a diversification discount (Wernerfelt & Montgomery, 1988). However, as previously mentioned, the diversification discount finding could be a result of methodological or data issues present in the prior studies (Villalonga, 2004). In addition, as outlined above, numerous studies have found positive influences from increased diversification. Moreover, studies in the literature have focused on examining the effects of brand equity (De Mortanges & Van Riel, 2003) or brand value (Kerin & Sethuraman, 1998) on shareholder wealth, instead of the level of brand diversification. Furthermore, bidirectional relationships between brand diversification and shareholder wealth have not been examined. As previously mentioned, brands are seen to influence a firm’s cash flows and shareholder wealth is greater for firms with a more reliable cash flow. Therefore, it is argued that the level of brand diversification may be impacted by shareholder wealth. Also, due to the seasonality, cyclical, and highly competitive nature of the restaurant industry the relationship between brand diversification and shareholder wealth may vary in the short- and long-term. Furthermore, the lack of consensus in the literature may be also be a result from a non-linear relationship between diversification and shareholder wealth. In
other words, as the level of brand diversification varies the effects on shareholder wealth may also change. Thus, the lack of consensus in the literature and differentiation between industry characteristics in regards to the effect of brand diversification on shareholder wealth demands a deeper examination and assessment. This study aims to examine the potential relationship between a restaurant firm’s level of brand diversification post-divestiture on the firm’s shareholder wealth, including the functional form of the relationship (i.e. unidirectional, bi-directional, linear, or non-linear). Thus, the following research questions will be examined:

**Q1:** What relationship and in what form is there between a restaurant firm’s brand diversification and shareholder wealth when controlling for divestitures in the short- and long-term?

**Brand Diversification and Systematic Risk**

Within the literature, various studies have been conducted with the aim of examining the effects of diversification strategies, such as market or corporate diversification, on the market value of firms (Barton, 1988). Some studies have shown that a firm’s systematic risk is impacted by the level of the firm’s diversification (Manrai, Rameshwar, & Nangia, 2014). There is a general understanding within the financial economics literature that increased diversification into unrelated lines of business leads to better performing firms (Michel & Shaked, 1984). The reasoning behind the pursuit of greater diversification or conglomeration as a means of risk reduction is that the result is the pooling of imperfectly correlated income streams (Thompson, 1984).

Early research has indicated that firms with a higher degree of diversification have lower risk (Hughes, Logue, & Sweeney, 1975). In particular, it has been suggested that higher
diversification into unrelated lines of business reduces a firm’s operating risk and consequently systematic risk (Manrai et al, 2014). In addition, international diversification for multinational firms has been found to offer risk reduction advantages (Rugman, 1976). Furthermore, manager controlled firms have been found to engage in mergers and acquisitions that increase a firm’s diversification in order to decrease the manager’s employment risk, which is reinforced by agency theory (Amihud & Lev, 1981). However, in regards to shareholders, low systematic risk for a firm is valuable only when not accompanied by a corresponding low return (Lubatkin & Rogers, 1989).

There is an argument within the literature that suggests the type of diversification strategy a firm utilizes may affect shareholders’ perceptions of the firm’s systematic or market risk (Barton, 1988). Historically a widely acknowledged belief in the strategic management field is that a firm can best achieve a competitive advantage and facilitate its performance with related diversification (Rumelt, 1974). In support of this assessment, Lubatkin and Rogers (1989) found that only firms with constrained diversification or firms with business units linked by core technologies, exhibited lower levels of systematic risk and as a result higher levels of shareholder wealth. Moreover, it was found that firms with an unrelated diversification strategy exhibited the highest levels of systematic risk (Lubatkin & Rogers, 1989).

Montgomery and Singh (1984) also found that single business or related diversifiers betas did not differ significantly and were lower than the unrelated diversifiers. It was argued that the unrelated diversifiers or conglomerates had higher than average systematic risk levels due to their characteristically higher debt levels, lower market power, and lower capital intensity (Montgomery & Singh, 1984). Furthermore, in their study Bettis and Mahajan (1985) found that unrelated diversification has a negative correlation with corporate performance. Similarly,
Chatterjee and Lubatkin (1994) advocated that firms could minimize risk through the diversification into similar, not identical, lines of business. Therefore, a firm that diversifies into unrelated businesses is seen to demonstrate fundamentally higher levels of systematic risk (Barton, 1988). It has been suggested that these findings support the notion that constrained or related diversification can assist firms in managing away a portion of their systematic risk, which cannot be achieved by shareholders on their own (Lubatkin & Rogers, 1989). However, according to Bettis and Mahajan (1985), a firm’s related diversification does not guarantee a favorable risk or return performance for the firm.

Other studies in the literature have shown a risk-increasing effect of greater diversification or conglomerate from the exposure to complex and costly operating environments (Michel & Shaked, 1986; Reeb, Kwok, & Baek, 1998). Greater diversification for firms has been associated with an increase in firm leverage and as a result an escalation in the firm’s systematic risk (Manrai et al., 2014). Conglomerate mergers and acquisitions have been found to result in greater market variability or systematic risk for firms (Joehnk & Nielsen, 1974). In addition, Krapl (2015) found that market diversification increases a firm’s systematic risk. Moreover, in regards to the banking industry, it has been found that as a consequence of mergers, acquiring firms’ common stock experience higher systematic risk with greater co-movement with the market (Bozos, Koutmos, & Song, 2013). Thereby creating greater exposure for shareholders to market shocks instead of diversifying their risk (Bozos et al., 2013). The post-merger firms are seen to be too large, consequently making their operating cash flows less resilient against shocks, resulting in greater risk, and intensifying vulnerability for shareholders to unfavorable movements in the aggregate market (Bozos et al., 2013). Empirical studies have
found the risk increasing effect of diversification to apply when using accounting and market based data (Thompson, 1984).

The empirical examination of the direct effect of a firm’s level of brand diversification on its systematic risk is non-existent within the literature. Instead, the literature is full of studies examining the impact of the various branding strategies or the characteristics of brands on firm value (Baha
dir et al, 2008). One such study, concluded that firms utilizing a branded house or a unifying corporate brand diversification strategy experienced the highest values of Tobin’s q (Rao et al, 2004). The lack of value attributed to the house of brands diversification strategy was rationalized as investors underappreciating the distribution of risk to a multitude of brands (Rao et al, 2004). Within the marketing literature, it has been suggested that the value of brands is related to their ability to reduce consumers’ risks, where high quality brands are seen to provide the greatest risk reduction value (Aaker & Keller, 1990). Unanticipated changes in a brand’s quality have been found to have a positive association with a firm’s systematic risk, thus any increase in the brand quality that shareholders did not anticipate may cause the firm’s stock to be more sensitive to market movements (Bharadwaj, Tuli, & Bonfrer, 2011). Therefore, the unanticipated changes in brand quality may allow for the diminishment of shareholder wealth (Bharadwaj et al, 2011).

Theoretically, it has been suggested that superior brands enable a firm to increase returns while simultaneously decrease risk associated with the returns, thereby adding to the firm’s value (Fornell, Mithas, Morgenson, & Krishnan, 2006). In their study Rego, Billett, and Morgan (2009) found that consumer-based brand equity significantly reduces a firm’s systematic risk. This effect is considered to be a result from a brand’s ability to increase consumer loyalty thereby decreasing the firm’s cash flow sensitivity to market-level shocks and consequently
lowering its systematic risk (Rego et al, 2009). Conversely, it has been suggested that brands, especially high-quality brands, are associated with higher prices which can increase a firm’s sensitivity to market changes, particularly in economic downturns when consumers are more price conscious (Bharadwaj et al, 2011). However, Madden et al’s (2006) research findings showed that a stock portfolio consisting of companies with high value brands experienced less systematic risk than a portfolio of similar companies with no high value brands. Although the marketing and strategic management literature has produced various studies with the aim of examining the effects of diversification strategies on systematic risk, there are still gaps in the literature.

For instance, a gap in the literature, specifically the hospitality literature, is the examination of the impact of a firm’s level of brand diversification on systematic risk controlling for a divestiture. The distinctive risk characteristics of the restaurant industry including the competitive and cyclical nature of the industry, the proliferation of brand diversification, and the frequency of divestitures demand a greater discernment of the effects from resulting brand diversification levels on systematic risk. In addition, the form of the relationship between brand diversification and systematic risk is an important issue that has yet to be examined. As discussed above, studies have shown that a firm’s diversification impacts its systematic risk, however the level of systematic risk may also affect the firm’s brand diversification. A bidirectional relationship may be a solution to the inconsistent findings in the literature in regards to whether greater brand diversification has a systematic risk increasing or decreasing effect. In addition, the conflicting results as to diversification’s risk increasing or decreasing effect may be due to a non-linear relationship. In other words, the extent and type of effect brand diversification has on systematic risk may alter as the levels of diversification change. Due to the
competitive and seasonal nature of the restaurant industry the relationship between brand diversification and systematic risk may also alter in the short- and long-term. Thus, this study aims to examine the short- and long-term relationships between a restaurant firm’s level of brand diversification post-divestiture on the firm’s systematic risk, including the functional form of the relationship (i.e. unidirectional, bi-directional, linear, or non-linear). Therefore, the following research question will be examined:

Q2: What relationship and in what form is there between a restaurant firm’s brand diversification and systematic risk when controlling for divestitures in the short- and long-term?

Systematic Risk and Shareholder Wealth

A critical business performance metric within the finance literature is firm risk (Rego et al, 2009). The ultimate impact of mismanaged risk on a firm is seen to be a greater chance of financial distress or even insolvency (Borde, 1998). For instance, higher firm risk has been found to increase a firm’s cost of raising capital from the stock market (Srinivasan & Hanssens, 2009). In addition, higher firm risk has been associated with corporate defaults on debt (Triantis, 2000) or low dividends for shareholders (Durnev, Yeung, & Zarowin, 2003). A firm’s strategic acquisitions and divestitures have also been found to be inhibited by higher risk due to a higher degree of uncertainty of future cash flows (Clayton, Hartzell, & Joshua, 2005). In addition, shareholders will require higher rates of return as compensation for holding stock that is deemed to have lower predictability or high risk (Gruca & Rego, 2005). Consequently, due to the potential effects on a firm’s cost of capital, market value, and investment opportunities corporate executives must monitor the risk levels for the firm (Barber et al, 2008; Borde, 1998).
The restaurant industry is consistently exposed to numerous external risks that impact a firm's operations and financial stability, including alterations in discretionary spending patterns, health epidemics, variations in the economic environment, and governmental regulations (Barber et al, 2008). Within the literature, researchers have extensively investigated the relationships between a firm’s stock beta or systematic risk and various financial characteristics of the firms and industries (Kim et al, 2007). This rich stream of literature has shown that various finance, accounting, and marketing characteristics of firms explain the variation of systematic risk levels across firms (Kim et al, 2013). In particular, within the hospitality segments various firm characteristics have been found to influence the firm’s level of systematic risk, including liquidity, leverage, dividend-payout ratio, return on assets, firm size, and growth in earnings before interest and taxes (Borde, 1998). Within the restaurant industry specifically, a firm’s systematic risk has been found to be negatively correlated with its asset turnover, profitability, and liquidity (Barber et al, 2008; Gu & Kim, 2002; Kim et al, 2007). In addition, systematic risk for a restaurant firm has been found to be positively related to its leverage (Kim et al, 2007). Therefore, many external and internal influences affect restaurant firms’ level of systematic risk.

Since the maximization of shareholder wealth is a fundamental objective for firms, corporate executives execute policies and strategies to reduce firm risk in order to maximize returns and shareholder wealth (Brenner & Smidt, 1978). For instance, within the economics literature it has been suggested that firms achieve a competitive advantage or market power in their markets in order to lower their systematic risk (Moyer & Chatfield, 1983; Lubatkin & Rogers, 1989). Each corporate decision in regards to operations, investments, and financing has a multitude of risk and return properties that must be considered due to their impact on a firm’s systematic risk and eventually share price (Barber et al, 2008; Gu & Kim, 2002). This is
particularly important since an increase in a firm’s systematic risk will result in a decrease in firm value (Gu & Kim, 2002). In other words, a firm’s market value is seen to be a function of its financial return considering the level of its systematic risk (Fruhan, 1979).

However, under agency theory, the information asymmetry between managers and shareholders is seen to lead to managerial risk-taking that will increase the firm’s risk (Kim & Mathur, 2008). In addition, a rudimentary tenet in the finance field is that in order for shareholders to hold a stock perceived to be more risky they must be enticed with the expectation of higher returns to offset bearing the risk (Brigham & Daves, 2010). Therefore, the higher systematic risk for a firm’s stock the greater return a shareholder will expect to receive. Within the hospitality literature, the level of systematic risk has been linked to restaurant firm’s financial performance and ultimately shareholder wealth (Barber et al, 2008). However, in their study, Lakonishok and Shapiro (1986) observed that a firm’s beta or systematic risk did not explain the cross-sectional variation in stock returns for smaller firms.

Although modern financial theory posits that greater risk equates to greater returns, a firm’s mismanaged risk is seen to lead to a reduction in shareholder returns (Barber et al, 2008). Moreover, agency theory postulates that information asymmetry between managers and shareholders results in increased managerial risk-taking (Kim & Mathur, 2008). In terms of the restaurant industry, there is an absence of discernment in terms of the effect of a firm’s systematic risk on shareholder wealth when controlling for a divestiture. In particular, the form of the relationship has not been addressed. A bidirectional relationship can be rationalized since shareholders demand a higher stock return for higher levels of systematic risk, however higher risks for the firm result in a greater chance of financial distress or even insolvency. In other words, a bidirectional relationship could exist between systematic risk and shareholder wealth. In
addition, a non-linear relationship between a restaurant firm’s systematic risk and shareholder wealth should be explored, since risk levels may increase shareholder wealth up to a certain point. The distinctive internal and external risk characteristics, including leverage levels, discretionary spending patterns, health epidemics, variations in the economic environment, and governmental regulations, of the restaurant industry and the abundance of divestitures demand a greater discernment of the effects from divestitures and the resulting systematic risk levels on shareholder wealth. The unique characteristics of the industry may also alter the relationship between systematic risk and shareholder wealth in the short- and long-term differently. Thus, this study aims to examine the relationship between a restaurant firm’s systematic risk post-divestiture on the firm’s shareholder wealth, including the functional form of the relationship (i.e. unidirectional or bi-directional).

**Q3:** What relationship and in what form is there between a restaurant firm’s systematic risk and shareholder wealth when controlling for divestitures in the short- and long-term?

**Impact of Divestitures**

*Shareholder Wealth*

As an unpredictable event to the market at large, divestiture announcements have been found to have a positive effect on the divesting firm’s stock price on the announcement date and sometimes before and after the date (Kaiser & Stouraitis, 1995; Moschieri & Mair, 2005; Owen & Yawson, 2008). Research indicates that a divestiture can have positive wealth effects on the divesting parent firm’s shareholder wealth in the short-term (Moschieri & Mair, 2008). For instance, Cao et al (2008) indicate that divestiture announcements effect shareholder’s wealth positively and significantly greater than zero. However, Afshar et al (1992) report that divestiture...
completion results in higher significant event day abnormal returns than the initial announcement of an intent to divest.

Nonetheless within the literature divestitures have also been found to have neutral or no significant improvement in performance outcomes (Woo et al, 1992). However, Woo et al (1992) utilized a sample that did not consider any restaurant divestitures. This is significant since the idiosyncratic characteristics of the restaurant industry may impact the market reactions to divestiture completions. Moreover, negative reactions to a divestiture at the market level are suggested to be explained by the “information conveyed with the divestiture’s announcement and its credibility” (Moschieri & Mair, 2008, p. 6). In addition, the neutral results to a divestiture announcement have been rationalized under the notion that shareholders anticipated the divestiture and the firm’s stock prices already reflect the divestiture (Bowman & Singh, 1993). Furthermore, studies analyzing the long-term value creation effect of divestitures have been found to be lacking in the literature (Moschieri & Mair, 2008). In a rare study, Desai and Jain (1999) found in the long-run a positive but insignificant impact of divestitures on the divesting firm’s stock. However, Desai and Jain’s (1999) study utilized buy-hold abnormal returns, considered spin-offs only, and did not consider the distinctive characteristics of separate industries. Overall, when analyzing the impact of divestitures scholars have predominantly built on the frameworks of transaction cost economics, the resource based view, and agency theory (Moschieri & Mair, 2008).

The transaction cost economics framework suggests that firms continue to expand through acquisitions so long as the benefits gained from the new business are greater than the marginal cost of managing the new business (Bergh & Lawless, 1998). In other words, the benefits from acquisitions, including shared resources or reduced governance costs, must
outweigh the transaction costs of market exchanges between the parent and acquired firm (Bergh & Lawless, 1998). Therefore, under the transaction cost economics perspective divestitures are seen to result in wealth gains by allowing parent firms to reduce the cost of internal administrative exchanges and differing governance schemes, thereby generating growth through a focus on the parent’s core competencies (Ito, 1995). Under the resource based view firms are seen to maintain a variety of resources through which it can achieve economic benefits (Bergh, 1995). In other words, the resource based view suggests that a firm’s competitive advantage is a result of its assets and resources. Therefore divestitures result in wealth gains due to the elimination of redundant assets and the redeployment of core resources more efficiently (Capron, Mitchell, & Swaminathan, 2001). In terms of the present study, major flaws in the predictions of the transaction cost economics and the resource based view include the focus on the firm and the assumption of a consistent interest between corporate executives and shareholders. In other words, the transaction cost economics and resource based view theories provide predictions under the supposition that a divestiture positive for both executives and shareholders, which is supported through the assumption that both parties share the same interests. Instead, empirical evidence suggests that there is an inconsistency between the interests of corporate executives and shareholders (Jensen, 1989; Markides & Singh, 1997; Moschieri & Mair, 2008). Therefore, the results from divestitures may have a negative impact on executives or shareholders. One framework that is more suitable in explaining this inconsistency in interests, and is therefore utilized in this study, is agency theory.

Under agency theory the explanation for the value creation effects of divestitures is that of a decrease in the diversification of the parent firm (Afshar et al, 1992; John & Ofek, 1995; Moschieri, 2011; Moschieri & Mair, 2005) and the realignment of agent and owners interests
The value creation from divestitures is therefore seen to be a result of the disposal of a loss generating operation that has created negative synergy, and therefore the divestiture eliminates the source of share value diminution (Afshar et al, 1992). In addition, researchers have proposed under agency theory that the value creation from divestitures result from the parent firms’ readjustment of the business focus, resulting in an increase in economic value and competitive position (Khoroshilov, 2002).

Overall, agency theorists posit that the motivation for divestitures involves a misalignment in interests between corporate executives and shareholders (Moschieri & Mair, 2008). Executives’ personal wealth is seen to be linked to a firm’s size and bankruptcy risks, and are therefore incentivized to increase the firm’s diversification (Amihud & Lev, 1981). However, executives are portrayed as participating in managerial opportunism by seeking exaggerated diversification in order to accomplish a variety of self-interests (Shleifer & Vishny, 1989). Therefore, in regards to the interests of shareholders’ greater diversification or conglomeration are perceived to impel firms to undertake divestitures as a correction to its strategic choices (Moschieri & Mair, 2008).

Thus, the inconclusive results in the literature and lack of consideration in regards to the idiosyncratic restaurant industry characteristics, including a rapidly changing and highly competitive market with multiple market segments, strong seasonality, and cyclical patterns, on the effect of divestitures and shareholder wealth demands a deeper examination and assessment. This is an important research gap, which has not been addressed. Instead studies within the hospitality field have focused on providing an overview of the causes or motivations of divestitures with a focus on the firm and increases in firm value (Moncarz, 1986) or on specific cases of divestitures within the lodging industry (Canina & Klein, 1998; Muller, 1990; Parrino,
A deeper examination is worthy since the industry’s characteristics may impact the short- and long-term value creation of divestitures in terms of shareholder wealth differently.

In addition, under agency theory it is posited that corporate executives may undertake a divestiture to correct previous managerial decisions and realign to the interests of shareholders. However, executives typically do not decide to undertake a divestiture until they anticipate a threat of an acquisition or are compelled by shareholders of the firm to divest (Bethel & Liebeskind, 1993). Conversely, executives may perform a divestiture despite the admonitions of shareholders. For instance, in the wake of the Red Lobster® divestment announcement, Starboard Value, LP a 6.2 percent shareholder of Darden Restaurants, Inc. publicly criticized the company’s divestment plan as inadequate for investors, undervaluing Red Lobster’s® assets, and resulting in an underperforming stock that would deprive the company of approximately half of its real estate (Jinks, 2014). Under this perspective a unidirectional impact of divestitures on shareholder wealth may not provide a complete understanding. Instead, the level of shareholder wealth may also cause executives to undertake a divestiture, thereby supporting a bi-directional relationship. In addition, the conflicting findings in the literature could be a result from a non-linear impact of divestitures on shareholder wealth. In other words, the effect of divestitures may alter over time. Furthermore, divestitures may impact a firm’s level of brand diversification.

*Brand Diversification*

Under agency theory, as a consequence of greater diversification corporate executives or managers are endowed with large cash flows and higher discretionary powers, which may result in inefficient overinvestment to the detriment of shareholders (Amihud & Lev, 1981; Kang & Lee, 2015; Scharfstein & Stein, 2000). Corporate executives are seen to participate in managerial
opportunism by seeking greater diversification in order to accomplish a variety of self-interests, including to secure their positions with the firm by making investments that require their particular skills (Shleifer & Vishny, 1989). Therefore, under agency theory the reduction of diversification through divestitures is suggested to realign the interests of executives and shareholders (Markides, 1992; Moschieri, 2011).

Research has shown that the streamline of corporate brand portfolios through the elimination of weak or non-strategic brands can be beneficial by providing an opportunity for increased efficient allocation of resources, including financial and infrastructure (Varadarajan, DeFanti, & Busch, 2006). In a similar vein, divestitures must be accompanied with a corporate long-term performance plan that utilizes the divestiture as a means to achieve the goal of value creation in order to be successful in increasing shareholder value (Markides & Berg, 1992). It has been suggested that a small percentage of brands within a firm’s multi-brand portfolio have a “disproportionately large favorable impact on the firm’s image and reputation” and therefore, firms should be strategically mindful of brand additions and deletions (Varadarajan et al, 2006, p 203). However, following a divestiture or brand deletion a company’s profit may undergo a contraction from which it may take several years to recover (Pandey, Dahiya, Kumar, 2010). Nevertheless, Pandey et al (2010) indicate that a firm can boost profits in the long-term through the deletion of loss making brands as a result of the reduction of hidden costs and diseconomies of scale, even though short-term revenues may fall in the process.

In addition, Rao et al’s (2004) study found that firms with less brand diversification, synonymous to the corporate branding strategy, experienced a higher positive effect on their financial performance than firms following a house-of-brands strategy with greater brand diversification. Moreover, firms with more diverse brand portfolios have been seen to suffer
from redundancy due to the overlap of brands targeting consumer segments within the same industry, which is seen to result in the cannibalization of sales and cash flows (Bahadir et al, 2008). Greater brand diversification within similar customer segments may limit economies of scope (Palich, Cardinal, & Miller, 2000). Furthermore, greater brand diversification within portfolios has been suggested to result in lower brand loyalty by stimulating consumers’ brand switching behavior, as well as, increase price competition (Bawa, Landwehr, & Krishna, 1989; Quelch & Kenny, 1994). Organizational complexities that result in higher transaction costs have also been associated with greater brand diversification, and are seen to be less for firms with fewer brands (Schwandt, 2009). Portfolios with fewer brands are also negatively associated with market share and higher relative advertising costs (Morgan & Rego, 2009).

However, the strategic decision of completing a brand divestiture can have multiple implications, including the risk of losing market share and revenues from the divested brand (Dung, 2012). Tenet Partners (2015) indicate that some of the fastest-rising brands in the Top 100 list were a result of strategic acquisitions, resulting in increased brand diversification. As Barwise and Roberston (1992) indicate some brands may be more valuable as part of a larger portfolio of brands instead of stand-alone brands. Bahadir et al (2008) specify that acquirers may leverage a target brand successfully by “better withstanding the competitive pressures from other brands, leading to a lower volatility/vulnerability of expected cash flow and thus lower discount rates” (p. 51). In addition, Morgan and Rego’s (2009) study found that greater brand diversification or a larger brand portfolio size has a positive relationship with a firm’s financial performance, consumer loyalty performance, and lower contemporaneous cash flow variability. Thus, the inconclusive results in the literature and lack of consideration in regards to the idiosyncratic restaurant industry characteristics, including a highly competitive market with
multiple market segments, on the effect of divestitures and brand diversification demands a deeper examination and assessment. In particular, a deeper examination is worthy since the industry’s characteristics may differently impact the short- and long-term influence of divestitures on brand diversification. In addition, a bi-directional relationship between the variables should be investigated since the perceived positive or negative impact of greater brand diversification could also arguably provoke the completion of divestitures. A non-linear relationship is also a possibility that should be examined since the streamline of brand diversification through divestitures could have an effect up to a certain point. Furthermore, a nexus can be found between divestitures and a firm’s level of systematic risk.

**Systematic Risk**

Within the literature, it has been found that the likelihood of divestitures increases during times associated with high levels of environmental uncertainty and turbulence (Chatterjee, Harrison, & Bergh, 2003). However, research investigating the direct relationship between divestitures and risk is scarce in the finance and strategic management literature and non-existent in the hospitality management literature. In a singular study, Madura and Murdock (2012) found that, in general, following a divestiture the divesting parent firm experienced an increase in its shareholder risk. However, the amount of risk increase is conditioned on not only the type of divestiture performed but also on the proxy utilized to measure risk (Madura & Murdock, 2012). Within the study the authors examined the impact of different types of divestitures on the divesting parent firm’s systematic risk, which was broken down into the proxies of equity beta and asset beta (Madura & Murdock, 2012). For instance, following a spin-off it was found that the parent firm’s systematic risk measured as equity beta had no statistically significant change,
however the asset beta measure of systematic risk showed a statistically significant increase (Madura & Murdock, 2012). In addition, following a carve-out type of divestiture the change in the parent firm’s equity and asset beta measures of systematic risk were positive and significant (Madura & Murdock, 2012). Furthermore, it was found that the divesting parent firm’s risk increased more when the divestiture involved the elimination of assets related to the firm’s core business versus unrelated assets (Madura & Murdock, 2012). These findings on the effects to a divesting parent firm’s level of risk are rationalized under the perception that divestitures affect the corporate strategies that executives implement and consequently also the scope of operations (Madura & Murdock, 2012).

Moreover, prior research has shown that increased diversification leads to a reduction in a firm’s cash flow volatility and subsequently the risk of the firm’s stock (Amihud & Lev, 1981). In addition, Amit and Livnat (1988) found in their study that firms experience a trade-off between lower operating risk and higher financial leverage associated with greater diversification and therefore systematic risk is not affected. Lubatkin and O’Neill (1987) suggest that risk reduction is a valid rationale for firms to undertake a merger and acquisition, thereby increasing the firm’s diversification. Specifically, it was found that mergers with firms related to the acquiring parent’s core business resulted in the parent firm experiencing a decline in its levels of systematic risk. These studies seem to support the findings of Madura & Murdock (2012) that lowering diversification through a divestiture would subsequently increase the firm’s systematic risk.

There is an absence of understanding of the effect of a firm’s divestiture on its systematic risk within the restaurant industry. The distinctive characteristics of the restaurant industry, including a rapidly changing and highly competitive market with multiple market segments,
strong seasonality, cyclical patterns, and the abundance of divestitures, demand a greater
discernment of the effects from divestitures and systematic risk levels. For instance, the literature
discussed above does not consider a bidirectional relationship between divestitures and
systematic risk. This is an important gap, since increased diversification has been associated with
increased firm leverage and therefore heightened systematic risk for firms (Manrai et al, 2014).
In particular, within the hospitality industry various firm characteristics have been found to
influence the firm’s level of risk, including leverage (Borde, 1998). Therefore, restaurant firm
divestitures may be undertaken due to the systematic risk levels of the firm. Also a non-linear
impact may exist between divestitures and systematic risk, where systematic risk may be
impacted positively by divestitures up to a certain point. In addition, the industry characteristics
may impact the relationship differently in the short- and long-term. Thus, this study aims to
examine the relationship between a restaurant firm’s completion of a divestiture and the firm’s
systematic risk levels, including the functional form of the relationship (i.e. unidirectional or bi-
directional). This study seeks to address the following research question:

Q4: What impact do restaurant divestiture completions have on a restaurant firm’s
shareholder wealth, brand diversification, and systematic risk in the short- and long-term?

Research Hypotheses Development

Overall, the main purpose for this study is to examine the relationships between a
restaurant firm’s brand diversification, systematic risk, and shareholder wealth when controlling
for a divestiture completion. In addition, the individual impact divestiture completions have on a
restaurant firm’s brand diversification, systematic risk, and shareholder wealth will be
investigated. These research objectives will assist in determining whether there is a relationship
between brand diversification, systematic risk, divestiture completions, and gains in shareholder wealth within the restaurant industry. The relevancy of this research pursuit is justified due to the noticeably increased utilization of divestitures in the industry, as well as, a continued high failure rate. In other words, this study aims at ascertaining whether there is a connection between a restaurant firm’s brand diversification and systematic risk and the resulting interpretation of the market on the firm’s shareholder wealth, after the managerial choice to complete a divestiture.

As elaborated above, a firm’s level of brand diversification and systematic risk have been found to have conflicting effects on shareholder wealth. In addition, a bidirectional or non-linear relationships between the variables can be rationalized but have not been investigated. Therefore, based on the existing literature and drawing on agency theory this study aims to address the research questions presented below in Table 2.

<table>
<thead>
<tr>
<th>Q1</th>
<th>What relationship and in what form is there between a restaurant firm’s brand diversification and shareholder wealth when controlling for divestitures in the short- and long-term?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2</td>
<td>What relationship and in what form is there between a restaurant firm’s brand diversification and systematic risk when controlling for divestitures in the short- and long-term?</td>
</tr>
<tr>
<td>Q3</td>
<td>What relationship and in what form is there between a restaurant firm’s systematic risk and shareholder wealth when controlling for divestitures in the short- and long-term?</td>
</tr>
<tr>
<td>Q4</td>
<td>What impact do divestiture completions have on a restaurant firm’s shareholder wealth, brand diversification, and systematic risk in the short- and long-term?</td>
</tr>
</tbody>
</table>

The finance and strategic management literature suggests a nexus between brand diversification, systematic risk, and shareholder wealth. In analyzing the impact of divestitures on shareholder wealth, various theoretical frameworks have been utilized, including the
transaction cost economics and the resource based view frameworks. In regards to the present study, major flaws in the predictions of the transaction cost economics and the resource based view include the focus on the firm and the assumption of a harmonious pursuit of interests between corporate executives and shareholders. Instead, due to the empirical evidence of the inconsistency between the interests of corporate executives and shareholders (Jensen, 1989; Markides & Singh, 1997; Moschieri & Mair, 2008), the framework that is more suitable for this study is the agency theory. Therefore, the analysis of this study is grounded in the agency theory framework, which suggests that the separation of ownership and control in firms results in an increased likelihood that managers will participate in managerial opportunism (Jensen & Meckling, 1976). In participating in managerial opportunism, managers may undertake increased diversification that benefits their own positions at the expense of shareholders (Amihud & Lev, 1981; Shleifer & Vishny, 1989). Therefore, the following is hypothesized:

**H1**: Brand diversification has a negative bi-directional relationship with shareholder wealth when controlling for divestiture completions in the short- and long-term.

In addition, the propositions of agency theory suggest that executives engage in mergers and acquisitions to increase a firm’s diversification in order to decrease their employment risk, thereby conflicting with shareholders’ interests (Amihud & Lev, 1981). As mentioned above, studies in the literature have shown a risk-increasing effect of greater diversification due to the exposure to costly operating environments (Michel & Shaked, 1986; Reeb, Kwok, & Baek, 1998). As a consequence of mergers, acquiring firms’ common stock have been found to experience higher systematic risk with greater co-movement with the market (Bozos, Koutmos, & Song, 2013). Therefore, greater diversification is suggested to result in firms with operating cash flows that are less resilient, thereby intensifying shareholders’ vulnerability to unfavorable
movements in the market (Bozos et al, 2013). Furthermore, Rao et al (2004) concluded that firms with less brand diversification experienced the highest values of Tobin’s q (Rao et al, 2004). Therefore, this study hypothesizes the following:

**H2:** Brand diversification has a positive bi-directional relationship with systematic risk when controlling for divestiture completions in the short- and long-term.

Moreover, under agency theory the information asymmetry between executives and shareholders results in increased managerial risk-taking (Kim & Mathur, 2008). The impact of mismanaged risk is seen to be a greater chance of financial distress for firms (Borde, 1998). The restaurant industry is uniquely exposed to numerous external risks that impact a firm’s operations and financial stability, including alterations in discretionary spending patterns and governmental regulations (Barber et al, 2008). According to modern financial theory greater risk equates to greater returns, however a firm’s mismanaged risk is seen to lead to a reduction in shareholder returns (Barber et al, 2008). Furthermore, corporate executives are advised to execute strategies to reduce firm risk in order to maximize shareholder wealth (Brenner & Smidt, 1978). Therefore, the following is hypothesized:

**H3:** Systematic risk has a negative bi-directional relationship with shareholder wealth when controlling for divestiture completions in the short- and long-term.

Agency theorists also posit that the motivation for divestitures is to correct the misalignment in interests between corporate executives and shareholders (Moschieri & Mair, 2008). Within the finance and strategic management literature, divestiture announcements have been found to have a positive wealth effects on the divesting parent firm’s shareholder wealth in the short-term (Moschieri & Mair, 2008). However, executives are seen to delay divestitures
until they are compelled by shareholders of the firm to divest, thereby suggesting a bi-directional relationship (Bethel & Liebeskind, 1993). Therefore, the following is hypothesized:

**H4:** Divestiture completion has a positive bi-directional relationship with shareholder wealth in the short- and long-term.

As a consequence of the conflict of interests between executives and shareholders agency theory views greater diversification within firms as endowing corporate executives with large cash flows and higher discretionary powers, resulting in inefficient overinvestment to the detriment of shareholders (Amihud & Lev, 1981; Kang & Lee, 2015; Scharfstein & Stein, 2000). Therefore, corporate divestitures are considered to realign manager and shareholder interests by reducing diversification (Markides, 1992; Moschieri, 2011). The elimination of brands from brand portfolios can be beneficial by providing an opportunity for increased efficient allocation of resources (Varadarajan, DeFanti, & Busch, 2006). Moreover, firms with more diverse brand portfolios have been seen to suffer from redundancy resulting from the overlap of brands targeting consumer segments within the same industry (Bahadir et al, 2008). Therefore, the following is hypothesized:

**H5:** Divestiture completion has a negative bi-directional relationship with brand diversification in the short- and long-term.

Furthermore, Madura and Murdock (2012) found that a divesting parent firm experienced an increase in its shareholder risk after a divestiture. The findings are rationalized under the perception that divestitures affect the corporate strategies that executives implement and consequently also the scope of operations (Madura & Murdock, 2012). For a spin-off it was found that the parent firm’s systematic risk asset beta measure showed a statistically significant increase (Madura & Murdock, 2012). In addition, for a carve-out the parent firm’s measures of
systematic risk were positive and significant (Madura & Murdock, 2012). This seems to suggest that a divestiture would subsequently increase the firm’s systematic risk. Therefore, the following is hypothesized:

**H6:** Divestiture completion has a positive bi-directional relationship with systematic risk in the short- and long-term.

However, it is also arguable that the relationships between brand diversification, systematic risk and shareholder wealth when controlling for a divestiture are non-linear. In other words, the impact of brand diversification on systematic risk or shareholder wealth can vary based on the level of diversification. The restaurant industry in particular requires extensive brand customization for target markets and has experienced an increase in brand proliferation (Choi et al, 2011). The conflicting results that has been indicated in the literature may be a result of a non-linear relationship, where different levels of brand diversification have varying impacts on systematic risk and shareholder wealth. Similarly, a restaurant firm’s systematic risk may impact its shareholder wealth but up to a certain point, thereby suggesting a non-linear relationship. The individual impact that divestitures has on brand diversification, systematic risk, and shareholder wealth may also vary in a non-linear fashion. Therefore the following hypotheses are proposed:

**H7:** Brand diversification has a non-linear relationship with shareholder wealth.

**H8:** Brand diversification has a non-linear relationship with systematic risk.

**H9:** Systematic risk has a non-linear relationship with shareholder wealth.

**H10:** Divestiture completion has a non-linear relationship with brand diversification, systematic risk, and shareholder wealth.

In Table 3 below the corresponding research questions and hypotheses are provided.
<table>
<thead>
<tr>
<th>Q1</th>
<th>What relationship and in what form is there between a restaurant firm’s brand diversification and shareholder wealth when controlling for divestitures in the short- and long-term?</th>
<th>H1</th>
<th>Brand diversification has a negative bi-directional relationship with shareholder wealth when controlling for divestiture completions in the short- and long-term.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>H7</td>
<td>Brand diversification has a non-linear relationship with shareholder wealth.</td>
</tr>
<tr>
<td>Q2</td>
<td>What relationship and in what form is there between a restaurant firm’s brand diversification and systematic risk when controlling for divestitures in the short- and long-term?</td>
<td>H2</td>
<td>Brand diversification has a positive bi-directional relationship with systematic risk when controlling for divestiture completions in the short- and long-term.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H8</td>
<td>Brand diversification has a non-linear relationship with systematic risk.</td>
</tr>
<tr>
<td>Q3</td>
<td>What relationship and in what form is there between a restaurant firm’s systematic risk and shareholder wealth when controlling for divestitures in the short- and long-term?</td>
<td>H3</td>
<td>Systematic risk has a negative bi-directional relationship with shareholder wealth when controlling for divestiture completions in the short- and long-term.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H9</td>
<td>Systematic risk has a non-linear relationship with shareholder wealth.</td>
</tr>
<tr>
<td>Q4</td>
<td>What impact do divestiture completions have on a restaurant firm’s shareholder wealth, brand diversification, and systematic risk in the short- and long-term?</td>
<td>H4</td>
<td>Divestiture completion has a positive bi-directional relationship with shareholder wealth in the short- and long-term.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H5</td>
<td>Divestiture completion has a negative bi-directional relationship with brand diversification in the short- and long-term.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H6</td>
<td>Divestiture completion has a positive bi-directional relationship with systematic risk in the short- and long-term.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H10</td>
<td>Divestiture completion has a non-linear relationship with brand diversification, systematic risk, and shareholder wealth.</td>
</tr>
</tbody>
</table>
Conclusion

This chapter provided a comprehensive investigation of the previous theoretical work in regards to brand diversification, systematic risk, shareholder wealth, and divestitures and the proposed relationships between the constructs. In particular, an examination of the literature under the agency theory perspective was elaborated on. First, the constructs were defined as conceptualized in the contemporary finance and strategic management literature. Then current empirical research findings over each of the proposed construct relationships was specified. In addition, the conflicting results over the effects of a firm’s level of brand diversification and systematic risk on shareholder wealth and important gaps that will be addressed through this study were divulged. Specifically, brand diversification is delineated and the effects of brand diversification on systematic risk and shareholder wealth were examined. Systematic risk and its impact on shareholder wealth was developed. The discussion drew attention to the noticeably increased utilization of divestitures in the restaurant industry and the lack of empirical studies investigating the connection between a restaurant firm’s brand diversification, systematic risk, and shareholder wealth, after the managerial choice to complete a divestiture. Finally, the research questions and corresponding hypotheses were developed.

In the following chapter, the methodology that will be utilized in the study will be specified. In particular, the research design, appropriateness of a case study, and data analysis technique are elaborated. In addition, the analytical framework, data collection and construct measures are provided.
CHAPTER THREE: METHODOLOGY

Introduction

The methodology that is utilized to examine the relationships between a firm’s level of brand diversification, systematic risk, and shareholder wealth when controlling for a divestiture is outlined in this chapter. The chapter begins with specifying in detail the research design and providing the arguments for the appropriateness of the design. The motivation for utilizing a case study sample and a description of the firm utilized in the study is elaborated on. In addition, the analytical framework for the study is explained and the method for data collection is specified. Finally, the chapter concludes with a discussion of the data analysis employed in the study.

Research Design

In order to examine the proposed relationships in this study a quantitative causal cointegration research design is utilized. Quantitative research methods tend to be more structured, entail empirical observation and measurement, examine relationships among numeric data, objectively test theory through narrow hypotheses, and utilize statistical interpretation (Gliner, Morgan, & Leech, 2009). Quantitative research supports a deductive form of inquiry that builds upon theory and strives to be replicated (Creswell, 2009). In addition, casual relationships can be credibly discovered with many quantitative research methods. Quantitative research methods seek a parsimonious reduction of complex problems to a limited number of variables (Creswell, 2009). Validity and reliability scores on instruments utilized in quantitative research methods allow for meaningful interpretation of the data (Creswell, 2009). Also, the findings from quantitative research methods can be replicated for verification.
A quantitative research design is appropriate for this study due to the causal relationships that have been proposed and will be examined between brand diversification, systematic risk and shareholder wealth when controlling for a divestiture. In addition, the utilization of quantifiable secondary time series data from 1994 to 2013 renders a quantitative research design more appropriate for this study. Specifically, this study utilizes a cointegration analysis that investigates the causal relationships based on correlations between the variables. This method is appropriate due to nature of the short- and long-term multivariate time series financial data and casual relationships under examination.

The primary purpose of the study is to develop a more profound understanding of the purposed relationships. In order to accomplish this purpose, the research design includes applying a case study approach with Brinker International, Inc. as the sample firm. Case studies are commonly employed in business research (Zikmund, Babin, Carr, & Griffin, 2013). Case study research designs are appropriate when current perspectives of a phenomenon seem inadequate or conflicting (Eisenhardt, 1989). In addition, case study research designs allow researchers to magnify their understanding over new research areas (Eisenhardt, 1989). Furthermore, it has been suggested that the comprehensive discernment of the various aspects of phenomenon provided through case studies allow researchers to develop theories in regards to the phenomenon (Easton, 2010).

Consequently, a case study approach is appropriate for this study since it will allow for an in-depth and real-life understanding of the proposed relationships, due to the highly focused setting under examination. Specifically, Brinker International, Inc., a leading restaurant firm, was purposively selected as the sample restaurant firm for the study due to the number of divestitures the firm has completed in its history and the range of brands it operates under. In
addition, as previously outlined in chapter two the current finance and strategic management literature is inconclusive in terms of the relationships under investigation in the study. Furthermore, the proposed relationships have not been examined in the restaurant industry. Due to the conflicting results highlighted in chapter two and the unique characteristics of the restaurant industry, including a highly competitive environment with multiple market segments, seasonality, and cyclicality, a case study will assist in providing a greater discernment of the relationships within the industry.

**Case Study**

Due to the structure of a case study research design the complexity of a single case is fully explored and represented (Stake, 1995). Case study research designs are noted as allowing for more insights into a phenomenon that may not be achieved with other approaches (Rowley, 2002). Therefore, the rationalization for undertaking a case study research is the “desire to derive a close or otherwise in-depth understanding of a single or small number of cases, set in their real-world contexts” (Yin, 2012). Through the limited sample focus and the examination of the context or conditions related to the case being studied, a deeper and insightful understanding of a phenomenon in the real-world is acquired (Yin, 2012). In other words, through a case study analysis the objective is to uncover the essence of the phenomenon under study (Baxter & Jack, 2008).

According to Yin (2003) case studies should be utilized to answer ‘how’ and ‘why’ questions of inquiry since it supports a deeper and more detailed investigation. Yin (2003) classifies the types of case studies as explanatory, exploratory, or descriptive. Explanatory case studies are utilized when the researcher seeks to explain the presumed casual links in real-life
phenomenon that are too complex for other strategies (Yin, 2003). Whereas exploratory case studies are used to explore situations in which the phenomenon under investigation has no clear outcome (Yin, 2003). When seeking to describe a phenomenon in its real-life context researchers utilized a descriptive type of case study (Yin, 2003).

A popularly cited virtue for case study research designs is theoretical generation (Feagin, Orum, & Sjoberg, 1991). As Eisenhardt (1989) indicated, case study research can provide for novel and empirically valid theories for novel research topic areas. The reasoning behind case study research lending itself to theoretical generation is the careful analysis of a case that allows researchers to view new relationships and question the theoretical views in the current literature (Dyer & Wilkins, 1991). In addition, the theory that is generated through the deep insights acquired via case study analysis is considered to be more accurate due to the researcher’s consideration of the intricacies of the particular case context (Van Maanen, 1979).

Due to the inconclusive findings in the finance and strategic management literature and the lack of research within the hospitality literature, this study utilizes a case study approach to develop a holistic understanding of the proposed relationships between the study’s constructs. The case study approach will allow for a multifaceted investigation that will assist in theoretical generation in regards to the study’s proposed relationships and constructs. The case study approach is appropriate for this study since it is a new research topic of inquiry within the hospitality literature, specifically the literature aimed at the restaurant industry. The focus of analysis for the study is the restaurant industry due to the numerous distinctive characteristics of the industry and upsurge of divestitures.

Sales within the restaurant industry are anticipated to reach $782.7 billion in 2016, which is projected to be equivalent to approximately 4 percent of the U.S. gross domestic product.
In addition, the restaurant industry employment for 2016 is projected to be approximately 14.4 million and reach 16.1 million by the year 2026 (National Restaurant Association, 2016). These projections demonstrate the economic importance of the restaurant industry. In addition, brand diversification is a unique element to the restaurant industry, which has experienced an influx over the past few decades due to persistent growth (Choi et al, 2011; Kang & Lee, 2015). Moreover, the restaurant industry is exposed to many external risks that impact the operations and financial stability of firms, including discretionary spending patterns, volatile commodity costs, health epidemics, the economic environment, and governmental regulations (Barber et al, 2008). Furthermore, the restaurant industry exhibits many of the industry characteristics that have been found to facilitate divestitures, including a rapidly changing and highly competitive market with multiple market segments (Garvin, 1983; Markides, 1992; Moschieri & Mair, 2008). However, the proliferation of divestitures among firms in the restaurant industry and the relationships between brand diversification, systematic risk, and shareholder wealth have not been assessed in the hospitality literature. Therefore, this study focuses on the restaurant industry in examining the relationships between brand diversification, systematic risk, and shareholder wealth when controlling for a divestiture. In particular, this study focuses on the casual dining segment of the restaurant industry.

The casual dining segment of the restaurant industry consists of national and regional chains, franchises, and independent operators that provide food services in a casual environment to patrons who are seated and served by wait staff and pay after eating (Hoovers, n.d.). The competitive landscape for the casual dining restaurant segment is driven by personal income, consumer tastes, and demographics (Hoovers, n.d.). The major U.S. competitors within the
casual dining segment are Bloomin Brands, Inc., Darden Restaurants, Inc., and Brinker International, Inc. (“Brinker”). The specific sample firm for this study is the leading casual dining restaurant firm Brinker, a Delaware corporation. Headquartered in Dallas, Texas, Brinker is a multinational restaurant firm that is publicly traded on the New York Stock Exchange under the ticker symbol “EAT” (Brinker International, n.d.). As of April 25, 2016, Brinker had a market capitalization of approximately $2.57 billion (YahooFinance, n.d.). In addition, Brinker’s corporate debt is rated investment grade by the three major rating agencies, Standard and Poor’s Financial Services, LLC, Moody’s Investors Service, Inc., and Fitch Ratings, Inc. As of June 24, 2015, Brinker had total revenues of $3.0 billion and a net income of $196 million (Brinker International, Inc., 2015). In addition, as of June 24, 2015, Brinker had approximately 53,000 employees worldwide (Brinker International, Inc., 2015).

Over the years Brinker’s restaurant brand portfolio has transformed organically and through strategic mergers and acquisitions. Today, Brinker operates and franchises the Chili’s® Grill & Bar (“Chili’s”) restaurant brand globally and the Maggiano’s® Little Italy (“Maggiano’s”) restaurant brand nationally (Brinker International, Inc., 2015). As of June 24, 2015, there were a total of 1,580 Chili’s® locations throughout the United States and in 30 countries, including Canada, Ecuador, Germany, Japan, Lebanon, and Singapore (Brinker International, Inc., 2015). The Maggiano’s® brand was acquired by Brinker in August 1995 and as of June 24, 2015, there were 49 locations in 21 states (Brinker International, Inc., 2015).

Brinker completed the acquisition of Grady’s® American Grill (“Grady’s”) in February 1989 (Brinker International, Inc., 1994). In addition, in 1993 Brinker acquired the Spageddies® Italian Kitchen (“Spageddies”) restaurant brand (Brinker International, Inc., 1994). However, the Grady’s® and Spageddies® brands were divested by Brinker in the second quarter of its 1996
fiscal year (Brinker International, Inc., 1997). The divestitures were rationalized by Brinker as being a part of its strategic plan to support long-term growth objectives and emphasize on the continued development of the restaurant concepts with the greatest return potential (Brinker International, Inc., 1997).


Additionally, the Big Bowl® and Wildfire® restaurant concepts were introduced by Brinker in 1998 (Brinker International, Inc., 1998). However in the third quarter of 2005, the Big Bowl® brand was divested (Brinker International, Inc., 2005). The Wildfire® brand was sold by Brinker on February 1, 2001 (Brinker International, Inc., 2001). Finally, in July 2001, Brinker acquired
the Rockfish® Seafood Grill (“Rockfish”) restaurant brand, which was then divested in 2006 (Brinker International, Inc., 2001; Brinker International, Inc., 2006).

**Analytical Framework**

The proposed analytical framework, as shown in Figure 2, was conceptualized through the specification of the research objectives and an extensive literature review. While drawing on agency theory, the objectives of this study include the examination of the short- and long-term relationships between restaurant firm brand diversification, systematic risk, and shareholder wealth when controlling for a divestiture completion. In addition, the short- and long-term impact of divestiture completions on these variables individually will be investigated. Although it has been shown that the level of diversification has an effect on a firm’s systematic risk and shareholder wealth, whether the effect is positive or negative is inconclusive in the literature (Bettis & Mahajan, 1985; Choi et al, 2011; Kang & Lee, 2014; Thompson, 1984). It has been found that firms divesting of multiple brands experience greater positive abnormal returns, which is attributed to investors’ preference for a more focused brand portfolio (Wiles et al, 2012). In addition, a negative influence of increased brand diversification on restaurant firm financial performance has been recorded (Choi et al, 2011; Kang & Lee, 2015). These findings seem to support the viewpoint that greater brand diversification results in a diversification discount, however the diversification discount could be a result of methodological or data issues present (Villalonga, 2004). In addition, brands influence a firm’s cash flows which subsequently manipulates shareholder wealth. Therefore, due to the idiosyncratic prominence of brands and the unique characteristics of the restaurant industry a bidirectional relationship between brand
diversification and shareholder wealth is suggested in this study which may vary in the short- and long-term.

In addition, the risk characteristics of the restaurant industry, the proliferation of brand diversification, and the frequency of divestitures demand a greater discernment of the effects from brand diversification levels on systematic risk, including the form of the relationship. Studies have shown that a firm’s diversification impacts its systematic risk, however the level of systematic risk may also affect the firm’s brand diversification. Therefore, a bidirectional relationship may be a solution to the inconsistent findings in the literature in regards to whether greater brand diversification has a systematic risk increasing or decreasing effect, which may vary in the short- and long-term.

Furthermore, the study investigates the effect of systematic risk on shareholder wealth when controlling for a divestiture completion. Under, agency theory information asymmetry between managers and shareholders is seen to cause increased managerial risk-taking (Kim & Mathur, 2008). In terms of the restaurant industry, a bidirectional relationship can be rationalized between systematic risk and shareholder wealth, since shareholders demand a higher stock return for higher levels of systematic risk. However higher risks for the firm result in a greater chance of financial distress or even insolvency. In addition, the distinctive internal and external risk characteristics, including leverage levels, discretionary spending patterns, health epidemics, variations in the economic environment, and governmental regulations, of the restaurant industry and the abundance of divestitures may also alter the relationship between systematic risk and shareholder wealth in the short- and long-term differently.

Within the finance and strategic management literature, it has been found that a divestiture can have positive wealth effects on the divesting parent firm’s shareholder wealth in
the short-term (Moschieri & Mair, 2008). Though, it has been noted that there is a lack of studies analyzing the long-term value creation effect of divestitures (Moschieri & Mair, 2008). In addition, under agency theory the motivation for divestitures is to realign the interests between corporate executives and shareholders (Moschieri & Mair, 2008). However, it has been noted that executives usually do not decide to perform a divestiture until they are compelled by shareholders of the firm to divest (Bethel & Liebeskind, 1993). This perspective suggests a bidirectional relationship between divestitures and shareholder wealth.

Moreover, under agency theory divestitures are seen to realign manager and shareholder interests by reducing diversification (Markides, 1992; Moschieri, 2011). However, the inconclusive results in the literature and lack of consideration in regards to the idiosyncratic restaurant industry characteristics, including multiple market segments, on the relationship between divestitures and brand diversification demands a deeper examination and assessment. Research has suggested that the elimination of brands from brand portfolios can be beneficial by providing an opportunity for increased efficient allocation of resources (Varadarajan, DeFanti, & Busch, 2006). However, the industry’s characteristics may impact the short- and long-term influence of divestitures on brand diversification and a bi-directional relationship between the variables.

In regards to divestitures and systematic risk, research investigating the direct relationship between the two variables is scarce in the finance and strategic management literature and non-existent in the hospitality management literature. Madura and Murdock (2012) found that following a divestiture the divesting parent firm experienced an increase in its shareholder risk. However, the literature has not considered a bidirectional relationship between divestitures and systematic risk. This is an important gap, since greater diversification has been
connected to increased firm leverage and consequently greater systematic risk for firms (Manrai et al, 2014). Within the hospitality industry leverage has been found to influence the firm’s level of risk (Borde, 1998). Therefore, the potential for a bidirectional relationship should be examined. In addition, the unique characteristics of the restaurant may impact the any relationship between divestitures and systematic risk differently in the short- and long-term.

Furthermore, non-linear relationships between brand diversification, systematic risk, and shareholder wealth are arguable and should be examined to provide a deeper understanding of the relationships. There is also reasoning for a non-linear impact of divestitures on the study’s constructs. Non-linear relationships between the constructs may resolve the inconclusive findings in the literature. For instance, the findings of negative and positive impacts of diversification on shareholder wealth may be explained as a variance due to the level of diversification. Brand diversification levels may also result in varying effects on a restaurant firm’s systematic risk, such that diversification may have a positive impact on risk up to a certain level. In addition, the systematic risk levels may impact shareholder wealth, where lower risk may benefit shareholders up to a certain point. Furthermore, the impact of divestitures on brand diversification, systematic risk, and shareholder wealth may be non-linear, where the benefits or adverse effects may be vary.
Data Collection

The financial and stock data for the study was acquired from the Wharton Research Data Services database, specifically the Center for Research in Security Prices and the Compustat-Capital IQ databases were utilized. In addition, the divestiture and diversification data was acquired from Brinker International, Inc.’s Securities and Exchange Commission annual and quarterly filings for the study. The measures for the study’s variables were chosen from the literature and are shown in Table 4.
Table 4. Study Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Diversification</td>
<td>Berry-Herfindahl</td>
<td>( (1 - \sum S_i^2) )</td>
</tr>
<tr>
<td></td>
<td>Index</td>
<td>( S_i ) is the number of properties a firm has within each brand it operates divided by the total properties for the firm</td>
</tr>
<tr>
<td>Systematic Risk</td>
<td>Rolling Window Beta</td>
<td>( \beta_i = \frac{cov(R_i, R_m)}{\sigma^2(R_m)} )</td>
</tr>
<tr>
<td>Shareholder Wealth</td>
<td>Natural Log</td>
<td>Ln (Brinker Stock Price)</td>
</tr>
</tbody>
</table>

Brand diversification is a key dimension to a firm’s brand portfolio strategy and is defined as the number of separate brands a firm owns and markets (Morgan & Rego, 2009). The Berry-Herfindahl index was chosen as the measurement method for brand diversification, since this index has been popularly identified in the literature as an appropriate measure of diversification (Choi et al., 2011; Kang & Lee, 2014; Kang & Lee, 2015). The Berry-Herfindahl index is calculated as \( (1 - \sum S_i^2) \), where \( S_i \) is the number of properties a firm has within each brand it operates divided by the total properties for the firm (Kang & Lee, 2015). Therefore, the Berry-Herfindahl index incorporates both the number of brands and the weight or relative importance of each brand. For the purposes of this study, brands were operationalized as the trademarks Brinker operates restaurants under as explicitly identified in its annual and quarter reports filed on forms 10-K and 10-Q with the Securities and Exchange Commission.

Systematic risk is defined as a firm’s stock volatility due to changes in market factors or (Barber et al., 2008). Systematic risk has been designated as a stock’s beta, which measures its sensitivity to the market and captures its level of systematic risk (CFA Institute, 2012). In regards to a stock’s systematic risk, Sharpe (1964) endorsed the notion of a consistent
relationship with expected returns, such that the magnitude of a stock’s systematic risk is directly related to its expected return. Similarly, Litner’s (1965) work elaborated on the relationship between stock prices and the effects of risk. Building on prior studies, Mossin (1966) provided a more restrictive discussion of the properties of a market for risky stocks on the basis of a model of general equilibrium of exchange, where investors seek to maximize returns over expected returns and variance of yield on their portfolios. To measure systematic risk a rolling window beta estimation is calculated utilizing the most recent 36 months of returns for the Brinker stock and the market, which is represented by the returns on the S&P 500, as has been done in previous restaurant industry studies (Kim, Zhong, Chen, & Karadag, 2009).

Shareholder wealth is defined as the discounted value of the expected future cash flows for shareholders and is exemplified by the market value of a firm’s common stock (Brigham & Daves, 2010). Hence, the worth of a company’s stock to a shareholder is influenced by the degree and certainty of the cash flow the stock will generate in the future (Brigham & Daves, 2010). In order to measure shareholder wealth this study calculates the natural log of the Brinker stock price. In addition, a divestiture is defined as the disposal of a product line, subsidiary, division, or business unit by Brinker and is measured as a binary variable in this study (Moschieri & Mair, 2008).

**Data Analysis**

The study utilizes the URCA, T-Series, and VARS packages in the R language platform to perform the data analysis (Pfaff, 2008; Trapletti & Hornik, 2016). The study utilizes the associations between the variables to test the proposed hypotheses. For each variable a summary will be provided for descriptive purposes. Linearity will be examined by using the correlation
between the variables when controlling for the serial correlation that results from the autoregressive process. The data analysis steps will follow the outline provided in Figure 3 below. First any trend or non-stationary variables in the data will be tested for with the following diagnostic tests: Augmented Dickey-Fuller test, the Phillips-Perron test, and the Kwiatkowski-Phillips-Schmidt-Shin (Pfaff, 2008). Then the two-stage approach developed by Engle and Granger (1987) is utilized in the study. First, cointegration is tested for and then an error correction model is estimated, as proposed by Mukherjee, White, and Wuyts (1998). Finally, the Granger (1969) test is utilized to validate the direction of causality between the variables.
Figure 3. Outline of Data Analysis (adapted from Cromwell, Hannan, Labys, & Terraza [1994])
**Unit Root Tests**

Time series data analysis quantifies the main features of the data, the random variation in the data, and has improved computing power (Cowpertwait & Metcalfe, 2009). However, time series data is seen to consist of a deterministic trend and a stochastic component (Pfaff, 2008). The stochastic component can be further decomposed into a cyclical component or a mean-stationary process and a stochastic trend (Pfaff, 2008). When utilizing time series data any trend or seasonal component must be extracted. In order to detect any trend or non-stationary variables in the series the following unit root diagnostic tests are utilized: Augmented Dickey-Fuller test, the Phillips-Perron test, and the Kwiatkowski-Phillips-Schmidt-Shin (Pfaff, 2008). The unit root tests are designed to indicate whether the data converge to stationarity and in what order. Utilizing the combination of these three unit root tests will ensure a confident conclusion on the existence and order of unit root for the variables in the study.

Although many time series data are non-stationary due to seasonal effects or trends, the data can be transformed into a stationary series by differencing (Cowpertwait & Metcalfe, 2009). Differencing is seen to allow for the removal of a variety of trends, including stochastic as in a random walk or deterministic as in a linear trend (Cowpertwait & Metcalfe, 2009). Therefore, in the case of non-stationarity, the resolution in this study is first differencing or second differencing (Pfaff, 2008). The flowchart provided in Figure 4 displays the unit root process steps followed in this study.
Figure 4. Unit Root Process (adapted from Pfaff [2008])
The Augmented Dickey-Fuller ("ADF") test is a more general version of the Dickey-Fuller test and is one of the most popularly utilized unit root tests (Cowpertwait & Metcalfe, 2009). The Dickey Fuller test assesses the null hypothesis "\( \alpha = 1 \) against an alternative hypothesis that \( \alpha < 1 \) for the model \( x_t = \alpha x_{t-1} + u_t \) in which \( u_t \) is white noise" (Cowpertwait & Metcalfe, 2009, p. 214). Whereas, the ADF test approximates the stationary process with an AR model, thereby allowing the differenced series \( u_t \) to be other stationary processes other than white noise (Cowpertwait & Metcalfe, 2009). Therefore, the ADF test accommodates general ARMA \((p,q)\) models. Under the ADF test, if the null hypothesis is not rejected then there is an implication that the times series data is non-stationary, which must be addressed through differencing to establish stationarity. Utilizing the ADF test, three regression equations will be tested for each variable. The first regression will be with a constant and a trend to test if the variable contains a unit root. The second regression will test whether the variable is a random walk with or without a drift. Finally the third regression tests whether stationarity will be achieved by differencing the series. Therefore, the following equations will be tested for shareholder wealth (ShW), brand diversification (BrndDiv), and Systematic Risk (SysRsk):

\[
\Delta ShW_t = \beta_1 + \beta_2 t + \pi ShW_{t-1} + \sum_{j=1}^{k} \gamma_j \Delta ShW_{t-1} + u_{1t}, \\
\Delta ShW_t = \beta_1 + \pi ShW_{t-1} + \sum_{j=1}^{k} \gamma_j \Delta ShW_{t-1} + u_{2t}, \\
\Delta ShW_t = \pi ShW_{t-1} + \sum_{j=1}^{k} \gamma_j \Delta ShW_{t-1} + u_{3t}, \\
\Delta BrndDiv_t = \beta_1 + \beta_2 t + \pi BrndDiv_{t-1} + \sum_{j=1}^{k} \gamma_j \Delta BrndDiv_{t-1} + u_{1t}, \\
\Delta BrndDiv_t = \beta_1 + \pi BrndDiv_{t-1} + \sum_{j=1}^{k} \gamma_j \Delta BrndDiv_{t-1} + u_{2t}, \\
\Delta BrndDiv_t = \pi BrndDiv_{t-1} + \sum_{j=1}^{k} \gamma_j \Delta BrndDiv_{t-1} + u_{3t}, \\
\Delta SysRsk_t = \beta_1 + \beta_2 t + \pi SysRsk_{t-1} + \sum_{j=1}^{k} \gamma_j \Delta SysRsk_{t-1} + u_{1t},
\]
The second unit root test that will be performed is the Phillips-Perron (“PP”) test, which is popularly utilized in the examination of financial time series data. The PP test has an advantage over the ADF since it utilizes non-parametric test statistics for the null hypothesis of a unit root and allows for weak dependence and heterogeneity of the error process (Pfaff, 2008). In the PP test the nuisance parameters present in the Dickey-Fuller statistic are eliminated (Pfaff, 2008). Similar to the ADF test, under the PP test if the null hypothesis is not rejected then there is an implication that the time series is non-stationary and differencing must be done to establish stationarity. Under the PP test, two test regressions for each variable will be examined. The first regression includes a constant and the second includes a constant and trend or time effect. Therefore, the below equations will be tested for shareholder wealth (ShW), brand diversification (BrndDiv), and systematic risk (SysRsk):

\[
\Delta ShW_t = \mu + \alpha ShW_{t-1} + \varepsilon_t,
\]

\[
\Delta ShW_t = \mu + \beta \left( t - \frac{1}{2} T \right) + \alpha ShW_{t-1} + \varepsilon_t,
\]

\[
\Delta BrndDiv_t = \mu + \alpha BrndDiv_{t-1} + \varepsilon_t,
\]

\[
\Delta BrndDiv_t = \mu + \beta \left( t - \frac{1}{2} T \right) + \alpha BrndDiv_{t-1} + \varepsilon_t,
\]

\[
\Delta SysRsk_t = \mu + \alpha SysRsk_{t-1} + \varepsilon_t,
\]

\[
\Delta SysRsk_t = \mu + \beta \left( t - \frac{1}{2} T \right) + \alpha SysRsk_{t-1} + \varepsilon_t,
\]

The third unit root test to assess trend or level of stationarity that will be performed in this study is the Kwiatkowski-Phillips-Schmidt-Shin (“KPSS”) test. In comparison to the ADF or
PP tests, the KPSS test switches the null and alternative hypotheses and is therefore considered
to be in accordance with a conservative testing strategy (Pfaff, 2008). In other words, under the
KPSS test the null hypothesis is a stationary process instead of a unit root process as in the ADF
and PP tests. Therefore, if the null hypothesis is rejected under the KPSS test the researcher can
be confident that the series has a unit root (Pfaff, 2008). For the KPSS test, the following
regression equations will be tested for shareholder wealth (Shw), brand diversification
(BrndDiv), and systematic risk (SysRsk):

\[
\Delta S_{\text{hw}}_t = \xi t + r_t + \varepsilon_t, \text{ in which, } r_t = r_{t-1} + u_t, \text{ where } r_t \text{ is a random walk and the error process is assumed to be independently and identically distributed.}
\]

\[
\Delta \text{BrndDiv}_t = \xi t + r_t + \varepsilon_t, \text{ in which, } r_t = r_{t-1} + u_t, \text{ where } r_t \text{ is a random walk and the error process is assumed to be independently and identically distributed.}
\]

\[
\Delta \text{SysRsk}_t = \xi t + r_t + \varepsilon_t, \text{ in which, } r_t = r_{t-1} + u_t, \text{ where } r_t \text{ is a random walk and the error process is assumed to be independently and identically distributed.}
\]

Engle and Granger Two Step Procedure and Error Correction

In the case of difference-stationary data the error term can be highly correlated and the t
and F statistics can be distorted such that the null hypothesis is too often rejected, thereby
running the risk of spurious regression (Pfaff, 2008). The concept of cointegration was
introduced by Granger (1981) as a new approach to deal with trending variables in the context of
regression analysis (Pfaff, 2008). Cointegration is defined as the “components of the vector \(x_t\) are
said to be cointegrated of order \(d, b\), denoted \(x_t \sim \text{CI}(d, b)\), if (a) all components of \(x_t\) are I(d) and
(b) a vector \(\alpha(\neq 0)\) exists so that \(z_t = \alpha x_t \sim I(d - b), b > 0\). The vector \(\alpha\) is called the
cointegrating vector” (Pfaff, 2008, p. 75). In other words, the purpose of cointegration is to
uncover the presence of an equilibrium relationship between two variables through time. Therefore, cointegration is considered to be a solution to spurious regression found in time series analysis.

Through cointegration researchers can distinguish stable long-run connections between non-stationary variables. Time series variables are seen to be cointegrated if they have the “same order of integration and the error process from the regression performed on the untransformed variables is stationary (Cromwell et al, 1994). The approach utilized in this study to test for cointegration or causality is the Engle and Granger (1987) two step estimation technique, which first involves running a regression of the study variables in the set of I(1) and then specifying an error-correction model. If two variables are cointegrated I(1)-variables, then Granger causality is seen to exist in at least one direction. In other words, at least one variable can forecast or predict the other variable. In addition, if two time series are cointegrated then an error-correction mechanism is seen to exist.

In this study the analysis will involve multivariate equations and therefore a system of cointegrated variables, which demands the utilization of a vector error-correction model. Under this method cointegration is defined in more broad terms:

An \((n \times 1)\) vector of variables \(y_t\) is said to be cointegrated if at least one nonzero \(n\)-element vector \(\beta_i\) exists such that \(\beta' y_t\) is trend-stationary. \(\beta_i\) is called a cointegrating vector. If \(r\) such linearly independent vectors \(\beta_i(i = 1, \ldots, r)\) exist, we say that \(\{y_t\}\) is cointegrated with cointegrating rank \(r\). We then define the \((n \times r)\) matrix of cointegrating vectors \(\beta = (\beta_1, \ldots, \beta_r)\). The \(r\) elements of the vector \(\beta' y_t\) are trend-stationary, and \(\beta\) is called the cointegrating matrix (Pfaff, 2008, p. 79).
In other words, under this approach each individual series is not required to be integrated of the same order, instead some of the series can be trend-stationary (Pfaff, 2008). If \( y_t \) contains a trend-stationary variable then it is considered to be trivially cointegrated (Pfaff, 2008).

In this study the following autoregression model will be investigated:

\[
y_t = \Pi_1 y_{t-1} + \cdots + \Pi_k y_{t-p} + \mu + \Phi D_t + \epsilon_t, \quad \text{for } t = 1994, \ldots, 2013, k = 3
\]

Where \( y_t \) is a \( 3 \times 1 \) (ShW, BrndDiv, SysRisk) vector of series at period \( t \), the matrices \( \Pi_k \) are \( 3 \times 3 \) coefficient matrices of the lagged (p) endogenous variables (ShW, BrndDiv, SysRisk), \( \mu \) is a \( 3 \times 1 \) vector of constants, and \( D_t \) is the dummy control variable for divestitures. The error term \( \epsilon_t \) is assumed to be independently and identically distributed (i.i.d.) as \( \epsilon_t \sim \mathcal{N}(0, \Sigma) \). From the autoregression model two versions of the vector error-correction model can be extracted, (1) long-term form and (2) transitory or short-term form:

**Long-term:**

\[
\Delta y_t = \Gamma_1 \Delta y_{t-1} + \cdots + \Gamma_{p-1} \Delta y_{t-p+1} + \Pi y_{t-p} + \mu + \Phi D_t + \epsilon_t
\]

\[
\Gamma_i = -(I - \Pi_1 - \cdots - \Pi_i), \quad \text{for } i = 1, \ldots, p - 1,
\]

\[
\Pi = -(I - \Pi_1 - \cdots - \Pi_p)
\]

**Transitory form:**

\[
\Delta y_t = \Gamma_1 \Delta y_{t-1} + \cdots + \Gamma_{p-1} \Delta y_{t-p+1} + \Pi y_{t-1} + \mu + \Phi D_t + \epsilon_t
\]

\[
\Gamma_i = -(\Pi_{i+1} + \cdots + \Pi_p), \quad \text{for } i = 1, \ldots, p - 1,
\]

\[
\Pi = -(I - \Pi_1 - \cdots - \Pi_p)
\]

In order to test the cointegration and find the optimum order of integration the Johansen and Juselius (1990) method will be utilized, which firsts determines the cointegration rank. In addition, the Structural Vector Autoregressive (“SVA”) model will be used to estimate
coefficients and identify shocks, which will be traced out by imposing restrictions on the matrices (Pfaff, 2008). Under the SVA model it is assumed that the structural errors are white noise and the “coefficient matrices are structural matrices that differ from their reduced-form counterparts” (Pfaff, 2008, p. 43). Finally, the Granger causality test will be carried out through the error correction mechanism to investigate all relationships in order to determine the most appropriate equation explaining the relationships. This will allow for the identification of the direction of causality and distinguish the short- and long-term causality differences.
CHAPTER FOUR: FINDINGS

Introduction

This chapter provides a comprehensive discussion of the results generated from the quantitative causal cointegration research design. Specifically, the findings from the unit root tests, cointegration, vector error correction, and causality tests for the proposed hypotheses are presented. The chapter begins with a statistical description of the study’s variables. Next, the results of the three unit root tests, Augmented Dickey-Fuller, Phillips-Perron, and Kwiatkowski-Phillips-Schmidt, are given. Then the findings for the optimal lag and diagnostic test analyses are presented followed by a discussion of the cointegration procedure results. The Granger causality findings are also presented for the proposed relationships. Finally, the results for the OLS regression models estimated in the study are given.

Data Description

A case study approach is utilized in order to develop a deeper and more holistic insight into the study’s proposed relationships that may not be achieved with other approaches (Rowley, 2002). The limited sample allows for a more insightful understanding of the phenomenon under study in a real-world setting (Yin, 2012). In addition, the case study research design promotes theoretical generation due to the careful analysis of a single case (Dyer & Wilkins, 1991). Due to the distinctive characteristics of the restaurant industry and the proliferation of divestitures in the industry the focus for the study’s analysis is the restaurant industry, specifically Brinker International, Inc. Brinker was selected for the study due to it being a leading casual dining restaurant firm, its brand portfolio undergoing numerous divestitures over the years, and its continued brand diversification.
In order to evaluate the proposed short- and long-term relationships, the data employed in the study consists of quarterly time series data for the three variables, brand diversification, systematic risk, and shareholder wealth, from 1994 to 2013. Following an extensive literature review, the measures for each of the variables were chosen. Brand diversification is operationalized in this study as the number of separate brands Brinker owns and markets (Morgan & Rego, 2009). The Berry-Herfindahl index was chosen as the measure for brand diversification in this study, since it is widely considered an appropriate measure for diversification due to its incorporation of items and the weight of each item (Choi et al, 2011; Kang & Lee, 2014; Kang & Lee, 2015). In other words, the Berry-Herfindahl index incorporates both the number of brands and the weight or relative importance of each brand for Brinker. The calculation for the Berry-Herfindahl index utilized in this study is \((1 - \sum S_i^2)\), with \(S_i\) representing the function of the number of properties Brinker has within each brand it operates divided by the total properties for Brinker (Kang & Lee, 2015). The range of the Berry-Herfindahl index is from zero to one, with the value of one representing a single brand portfolio and lower values signifying brand portfolios with greater diversification. For the purposes of this study, brands are identified as the trademarks Brinker operates restaurants under as provided in its 10-K and 10-Q forms filed with the Securities and Exchange Commission. The trademarks for Brinker were utilized in the study since the concept of a trademark is interchangeable to the definition of a brand, which enhances the functional value of a product (Farquhar, 1989).

Systematic risk is a firm’s stock volatility associated with changes in market factors and has been designated as a stock’s beta (CFA Institute, 2012). Stocks with a positive beta specify that the stock’s return trails the market, whereas a negative beta indicates the stock’s return are in contrast to the market (CFA Institute). In addition, a beta greater than one indicates the stock
moves in the same trend as the market but with greater magnitude, which suggests greater sensitivity (Bodie et al, 2009). Systematic risk for this study was measured utilizing a rolling window beta estimation calculated using the monthly returns of the Brinker stock and the market, represented by the S&P 500 index as has been done in previous restaurant industry studies (Kim et al, 2009).

Shareholder wealth is considered to be the discounted value of the expected future cash flows for shareholders and is represented by the market value of a firm’s common stock (Brigham & Daves, 2010). Therefore, the shareholder value of a company’s stock is influenced by the certainty of the cash flow the stock will generate in the future (Brigham & Daves, 2010). The shareholder wealth variable for the study was measured by calculating the natural log of the monthly Brinker stock price. In addition, a divestiture is measured as a binary variable in this study and is defined as the disposal of a product line, subsidiary, division, or business unit by Brinker (Moschieri & Mair, 2008).

In Table 5 below selected summary statistics are provided for the study’s variables. Based on the sample time period of 1994 to 2013, the average value for Brinker shareholder wealth was 2.575. This indicates that the Brinker’s stock on average experienced a positive return of 2.575% during the sample time period. The degree of brand diversification for Brinker during the sample time period ranged from a minimum Berry-Herfindahl index of 0.054 to a maximum of 0.553, with an average of 0.377. Therefore, over the sample time period on average the brand portfolio for Brinker displayed a greater degree of diversification. Furthermore, the average beta for Brinker during the study’s time period was 1.068, indicating the company’s stock was more risky than the market.
After a visual inspection of the series for each variable, as shown in Figure 5, it was determined that shareholder wealth, systematic risk, and brand diversification appear to be non-stationary time series. The divestiture variable is not a time series variable but rather an event or dummy variable. Therefore, the data for each of the study’s variables was transformed by taking a first difference in order to suitably transform the data to be stationary. As seen in Figure 6, the results of taking the first difference is to make all study variables stationary. As shown in Table 5 above, after applying the first difference the minimum and maximum values for Brinker stock became -0.510 and 0.422, respectively. The maximum degree of brand diversification became 0.029. In addition, the average beta for Brinker stock became -0.013, indicating a converse relationship with the market.

<table>
<thead>
<tr>
<th>Difference</th>
<th>Statistic</th>
<th>ShW</th>
<th>BrndDiv</th>
<th>SysRisk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ(0)</td>
<td>Min.</td>
<td>1.466</td>
<td>0.054</td>
<td>0.218</td>
</tr>
<tr>
<td></td>
<td>1st Qu.</td>
<td>2.180</td>
<td>0.305</td>
<td>0.547</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>2.708</td>
<td>0.422</td>
<td>0.963</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>2.575</td>
<td>0.377</td>
<td>1.068</td>
</tr>
<tr>
<td></td>
<td>3rd Qu.</td>
<td>2.942</td>
<td>0.526</td>
<td>1.566</td>
</tr>
<tr>
<td></td>
<td>Max.</td>
<td>3.601</td>
<td>0.553</td>
<td>2.525</td>
</tr>
<tr>
<td>Δ(1)</td>
<td>Min.</td>
<td>-0.510</td>
<td>-0.163</td>
<td>-0.874</td>
</tr>
<tr>
<td></td>
<td>1st Qu.</td>
<td>-0.088</td>
<td>-0.002</td>
<td>-0.151</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>0.017</td>
<td>0.000</td>
<td>-0.013</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>0.020</td>
<td>-0.004</td>
<td>-0.013</td>
</tr>
<tr>
<td></td>
<td>3rd Qu.</td>
<td>0.122</td>
<td>0.007</td>
<td>0.090</td>
</tr>
<tr>
<td></td>
<td>Max.</td>
<td>0.422</td>
<td>0.029</td>
<td>1.310</td>
</tr>
</tbody>
</table>

Note: ShW is shareholder wealth; BrndDiv is brand diversification; SysRisk is systematic risk; Divstr is divestiture; Δ stands for difference; Qu. Stands for quartile.
Figure 5. Variable Series before Transformation

Figure 6. Variable Series after Transformation (First Difference)
Unit Root Tests

The first step in the data analysis was to test the data to determine whether the data displayed stationary or non-stationary elements and if non-stationary whether a unit root or no unit root were exhibited. Time series data has been assumed to consist of a deterministic trend and a stochastic component (Pfaff, 2008). If all of the roots of an autoregressive polynomial are outside the unit circle then the time series is stationary around a deterministic trend or trend-stationary (Pfaff, 2008). However, if one root is on the unit circle then the time series is considered to be stationary around a constant mean and the series is difference-stationary (Pfaff, 2008). Therefore, a first difference filter must be applied to obtain a stationary process (Pfaff, 2008). When the data displays a random walk, then it is considered a non-stationary time series due to its variance growing with time and can display a unit root or no unit root (Pfaff, 2008).

Utilizing a combination of unit root tests to determine a variable’s unit root process is recommended in order to obtain robust results; since no individual test can provide a definite result. Therefore, the testing procedure for determining the presence of unit roots for this study included the three unit root tests of Augmented Dickey-Fuller, Phillips-Perron, and Kwiatkowski-Phillips-Schmidt-Shinn.

Augmented Dickey-Fuller

The Augmented Dickey-Fuller (ADF) test is the most commonly utilized unit root test in econometrics and applied research (Pfaff, 2008). Under the ADF test the null hypothesis $H_0$ is that a unit root is present ($\pi = 0$), the alternative hypothesis $H_1$ is that the variable series has a stationary process ($\pi < 0$). The ADF test consists of an autoregressive process of order or several regression equations in order to determine the presence of a unit root (Croes, 2014). In this
process each of the study’s variables is tested for the two deterministic elements of trend and drift (Croes, 2014; Pfaff, 2008). Specifically, three variates are tested for trend and two variates are tested for drift. In addition, under each element different variates are tested to determine if the series is “stationary around a zero mean; stationary around a non-zero mean; stationary around a linear trend; containing a unit root with zero drift; or containing a unit root with non-zero drift” (Pfaff, 2008, pg. 61). The lag order for the ADF test was empirically determined utilizing the Akaike Information Criterion (AIC) and is 4. Table 6 below shows the results of the ADF tests for each of the study’s variables.
As shown in Table 6, for the shareholder wealth variable the ADF test results for trend at \( \tau_3 \) (ADF (\( \tau_3 \)) = -1.7261, lag = 4, \( \rho > 0.10 \)), indicates that the null hypothesis is not rejected at any alpha level and the series does have a unit root process. The shareholder wealth ADF test results for drift at \( \tau_2 \) (ADF (\( \tau_2 \)) = -0.9097, lag = 4, \( \rho > 0.10 \)), also does not reject the null hypothesis. After taking the first difference for shareholder wealth, the ADF test results at \( \tau_3 \) (ADF (\( \tau_3 \)) = -
3.5653, lag = 4, ρ < 0.05), indicates the null hypothesis is rejected at the 5% alpha and the series does not have a unit root process. For the brand diversification variable, the ADF test results for trend at τ₃ (ADF (τ₃) = -0.9585, lag = 4, ρ > 0.10), indicates that the null hypothesis is not rejected at any alpha level and the series does have a unit root process. Similarly, the brand diversification ADF test results for drift at τ₂ (ADF (τ₂) = 0.4136, lag = 4, ρ > 0.10), shows the null hypothesis is not rejected. However, after taking the first difference for brand diversification, the ADF test results at τ₃ (ADF (τ₃) = -4.5493, lag = 4, ρ < 0.01), indicates the null hypothesis is rejected at the 1% alpha and the series does not have a unit root process. For the systematic risk variable the ADF test results for trend at τ₃ (ADF (τ₃) = -1.6247, lag = 4, ρ > 0.10), indicates that the null hypothesis is not rejected at any alpha level and the series does have a unit root process. The ADF test results for drift at τ₂ (ADF (τ₂) = -1.5556, lag = 4, ρ > 0.10), also does not reject the null hypothesis. However, after taking the first difference for systematic risk, the ADF test results at τ₃ (ADF (τ₃) = -3.9224, lag = 4, ρ < 0.05), indicates the null hypothesis is rejected at the 5% alpha and the series does not have a unit root process. The second unit root test performed is the Phillips-Perron (PP) test.

**Phillips-Perron**

The Phillips-Perron (PP) unit root test utilizes a non-parametric method that explicitly allows for weak dependence and heterogeneity of the error process (Pfaff, 2008). In contrast to the ADF test the PP test eliminates the nuisance parameters if the error process does not satisfy the assumptions (Pfaff, 2008). Similar to the ADF test, under the PP test the null hypothesis H₀ is that a unit root is present (π = 0), whereas the alternative hypothesis H₁ is that the variable series has a stationary process (π < 0). In addition, for each of the study’s variables three different
variates are tested for trend and two variates are tested for constant. However, in the PP test the lags to be included in the computation of the long-run variance can be chosen automatically between short and long based on the integer value (Pfaff, 2008). For this study the results for the short and long lag calculations are very similar, therefore only the long lags are provided. Table 7 below provides the PP unit root test results for each of the study’s variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type</th>
<th>Variate</th>
<th>PP</th>
<th>lags</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ShW</td>
<td>trend</td>
<td>$t_{\alpha}$</td>
<td>-2.9871</td>
<td>long</td>
<td>$\rho &gt; 0.10$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\mu}$</td>
<td>1.5189</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\beta}$</td>
<td>2.9208</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td>constant</td>
<td>$t_{\alpha}$</td>
<td>-0.6059</td>
<td>long</td>
<td>$\rho &gt; 0.10$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\mu}$</td>
<td>0.8242</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td>Δ(1)</td>
<td>$t_{\alpha}$</td>
<td>-11.2961</td>
<td>long</td>
<td>$\rho &lt; 0.01$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\mu}$</td>
<td>1.5308</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\beta}$</td>
<td>0.5157</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td>BrndDiv</td>
<td>trend</td>
<td>$t_{\alpha}$</td>
<td>-1.3535</td>
<td>long</td>
<td>$\rho &gt; 0.10$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\mu}$</td>
<td>1.1574</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\beta}$</td>
<td>-2.7482</td>
<td>long</td>
<td>long</td>
</tr>
<tr>
<td></td>
<td>constant</td>
<td>$t_{\alpha}$</td>
<td>-0.0087</td>
<td>long</td>
<td>$\rho &gt; 0.10$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\mu}$</td>
<td>-0.3648</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td>Δ(1)</td>
<td>$t_{\alpha}$</td>
<td>-8.8694</td>
<td>long</td>
<td>$\rho &lt; 0.01$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\mu}$</td>
<td>-1.4358</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\beta}$</td>
<td>-2.1198</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td>SysRisk</td>
<td>trend</td>
<td>$t_{\alpha}$</td>
<td>-2.1761</td>
<td>long</td>
<td>$\rho &gt; 0.10$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\mu}$</td>
<td>1.5860</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\beta}$</td>
<td>0.4128</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td>constant</td>
<td>$t_{\alpha}$</td>
<td>-2.2103</td>
<td>long</td>
<td>$\rho &gt; 0.10$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\mu}$</td>
<td>1.755</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td>Δ(1)</td>
<td>$t_{\alpha}$</td>
<td>-10.7452</td>
<td>long</td>
<td>$\rho &lt; 0.01$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\mu}$</td>
<td>-0.5753</td>
<td></td>
<td>long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t_{\beta}$</td>
<td>0.5796</td>
<td></td>
<td>long</td>
</tr>
</tbody>
</table>

Note: ShW is shareholder wealth; BrndDiv is brand diversification; SysRisk is systematic risk; Divstr is divestiture; Δ stands for difference.
As shown in Table 7, for the shareholder wealth variable the PP test results for trend at \( t_{d}\) (PP \( (t_{d}) = -2.9871, \ lag = \ long, \ \rho > 0.10 \)), indicates that the null hypothesis is not rejected at any alpha level and the series does have a unit root process. The shareholder wealth PP test results for constant at \( t_{d}\) (PP \( (t_{d}) = -0.6059, \ lag = \ long, \ \rho > 0.10 \)), also does not reject the null hypothesis. However, after taking the first difference for shareholder wealth, the PP test results at \( t_{d}\) (PP \( (t_{d}) = -11.2961, \ lag = \ long, \ \rho < 0.01 \)), indicates the null hypothesis is rejected at the 1% alpha and the series does not have a unit root process. For the brand diversification variable, the PP test results for trend at \( t_{d}\) (PP \( (t_{d}) = -1.3535, \ lag = \ long, \ \rho > 0.10 \)), indicates that the null hypothesis is not rejected at any alpha level and the series does have a unit root process. Similarly, the brand diversification PP test results for constant at \( t_{d}\) (PP \( (t_{d}) = -0.0087, \ lag = \ long, \ \rho > 0.10 \)), shows the null hypothesis is not rejected. However, after taking the first difference for brand diversification, the PP test results at \( t_{d}\) (PP \( (t_{d}) = -8.8694, \ lag = \ long, \ \rho < 0.01 \)), indicates the null hypothesis is rejected at the 1% alpha and the series does not have a unit root process. For the systematic risk variable the PP test results for trend at \( t_{d}\) (PP \( (t_{d}) = -2.1761, \ lag = \ long, \ \rho > 0.10 \)), indicates that the null hypothesis is not rejected at any alpha level and the series does have a unit root process. The systematic risk PP test results for constant at \( t_{d}\) (PP \( (t_{d}) = -2.2103, \ lag = \ long, \ \rho > 0.10 \)), also does not reject the null hypothesis. However, after taking the first difference for systematic risk, the PP test results at \( t_{d}\) (PP \( (t_{d}) = -10.7452, \ lag = \ long, \ \rho < 0.01 \)), indicates the null hypothesis is rejected at the 1% alpha and the series does not have a unit root process. The third unit root test performed in this study is the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test.
Kwiatkowski-Phillips-Schmidt-Shin

The Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test is a lagrange multiplier test for determining the level of stationarity (Pfaff, 2008). The KPSS has been commonly utilized in the literature to complement the results of the ADF and PP tests (Ridderstaat, Croes, & Nijkamp, 2016). The KPSS test is considered a more conservative unit root test in comparison to the ADF and PP tests, because it reverses the null and alternative hypothesis (Pfaff, 2008). In other words, under the KPSS test the null hypothesis, $H_0$, is that the variable series has a stationary process ($\pi < 0$), whereas the alternative hypothesis, $H_1$, is that a unit root is present ($\pi = 0$). Table 8 below displays the KPSS unit root test results for each of the study’s variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type</th>
<th>Variate</th>
<th>KPSS</th>
<th>lags</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ShW</td>
<td>Level</td>
<td>$\hat{\eta}_\mu$</td>
<td>0.6104</td>
<td>long</td>
<td>$\rho &lt; 0.05$</td>
</tr>
<tr>
<td></td>
<td>Trend</td>
<td>$\hat{\eta}_\tau$</td>
<td>0.1186</td>
<td>long</td>
<td>$\rho &gt; 0.10$</td>
</tr>
<tr>
<td>BrndDiv</td>
<td>Level</td>
<td>$\hat{\eta}_\mu$</td>
<td>0.4309</td>
<td>long</td>
<td>$\rho &lt; 0.10$</td>
</tr>
<tr>
<td></td>
<td>Trend</td>
<td>$\hat{\eta}_\tau$</td>
<td>0.1891</td>
<td>long</td>
<td>$\rho &lt; 0.05$</td>
</tr>
<tr>
<td>SysRisk</td>
<td>Level</td>
<td>$\hat{\eta}_\mu$</td>
<td>0.1487</td>
<td>long</td>
<td>$\rho &gt; 0.10$</td>
</tr>
<tr>
<td></td>
<td>Trend</td>
<td>$\hat{\eta}_\tau$</td>
<td>0.1429</td>
<td>long</td>
<td>$\rho &lt; 0.10$</td>
</tr>
</tbody>
</table>

*Note: ShW is shareholder wealth; BrndDiv is brand diversification; SysRisk is systematic risk; Divstr is divestiture.*

As shown in Table 8, for the shareholder wealth variable the KPSS test results at level $\eta_\mu$ (KPSS ($\eta_\mu$) = 0.6104, lag = long, $\rho < 0.05$), indicates that the null hypothesis is rejected at the 5% alpha level and the series does have a unit root process. However, the shareholder wealth KPSS test results for trend at $\eta_\tau$ (KPSS ($\eta_\tau$) = 0.1186, lag = long, $\rho > 0.10$), does not reject the null hypothesis thereby showing the series has a stationary process. For the brand diversification variable, the KPSS test results at level $\eta_\mu$ (KPSS ($\eta_\mu$) = 0.4309, lag = long, $\rho < 0.10$), indicates that the null hypothesis is rejected at the 10% alpha level and the series does have a unit root process.
process. Similarly, the brand diversification KPSS test results for trend at \( \hat{\eta}_\tau \) (KPSS \( \hat{\eta}_\tau \) = 0.1891, lag = long, \( \rho < 0.05 \)), shows the null hypothesis is rejected. For the systematic risk variable the KPSS test results at level \( \hat{\eta}_\mu \) (KPSS \( \hat{\eta}_\mu \) = 0.1487, lag = long, \( \rho > 0.10 \)), indicates that the null hypothesis is not rejected at any alpha and the series does not have a unit root process. The systematic risk KPSS test results for trend at \( \hat{\eta}_\tau \) (KPSS \( \hat{\eta}_\tau \) = 0.1429, lag = long, \( \rho < 0.10 \)), does reject the null hypothesis. Table 9 below displays a comparison of the three unit root test results for each of the three variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF</th>
<th>PP</th>
<th>KPSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ShW</td>
<td>Unit root present is not rejected</td>
<td>Unit root present is not rejected</td>
<td>Stationary process is rejected</td>
</tr>
<tr>
<td>BrndDiv</td>
<td>Unit root present is not rejected</td>
<td>Unit root present is not rejected</td>
<td>Stationary process is rejected</td>
</tr>
<tr>
<td>SysRisk</td>
<td>Unit root present is not rejected</td>
<td>Unit root present is not rejected</td>
<td>Stationary process is rejected</td>
</tr>
</tbody>
</table>

*Note:* ShW is shareholder wealth; BrndDiv is brand diversification; SysRisk is systematic risk; \( \Delta \) stands for difference.

As shown in Table 9, for shareholder wealth, brand diversification, and systematic all the tests resulted in a unit root, which was resolved by taking the first difference. Therefore, based on the visual inspection and the above results of the three unit root tests utilized to examine the stationarity of the variables, the variables are non-stationary at level. However, stationarity is attained for all of the study’s variables after the first difference transformation. Consequently, this study utilized the first differenced time series for all of the variables. First differencing all of the variables also ensured the lag order for all the variables was equivalent.
Lag Order and Diagnostic Tests

Before continuing the vector autoregressive analysis, an empirical determination of the appropriate lag order must be undertaken (Pfaff, 2008). Therefore, in order to determine the lag length this study utilizes the following lag length selection criteria: Akaike Information Criteria (AIC), Hannan and Quinn (HQ), Schwarz (SC), and the Final Prediction Error (FPE). The optimal lag length results for each of these indices is provided in Table 10 below.

Table 10. Lag Length Selection Criteria Results

<table>
<thead>
<tr>
<th>Lags</th>
<th>AIC(n)</th>
<th>HQ(n)</th>
<th>SC(n)</th>
<th>FPE(n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-13.449160</td>
<td>-13.253840</td>
<td>-12.955570</td>
<td>0.000001</td>
</tr>
<tr>
<td>2</td>
<td>-13.309130</td>
<td>-12.996630</td>
<td>-12.519390</td>
<td>0.000002</td>
</tr>
<tr>
<td>3</td>
<td>-13.190890</td>
<td>-12.761200</td>
<td>-12.105000</td>
<td>0.000002</td>
</tr>
<tr>
<td>4</td>
<td>-13.227810</td>
<td>-12.680930</td>
<td>-11.845760</td>
<td>0.000002</td>
</tr>
<tr>
<td>5</td>
<td>-13.050750</td>
<td>-12.386690</td>
<td>-11.372560</td>
<td>0.000002</td>
</tr>
<tr>
<td>6</td>
<td>-13.422990</td>
<td>-12.641740</td>
<td>-11.448640</td>
<td>0.000002</td>
</tr>
<tr>
<td>7</td>
<td>-13.244650</td>
<td>-12.346210</td>
<td>-10.974150</td>
<td>0.000002</td>
</tr>
<tr>
<td>8</td>
<td>-13.277640</td>
<td>-12.262010</td>
<td>-10.710980</td>
<td>0.000002</td>
</tr>
</tbody>
</table>

Optimal Lag 1 1 1 1

Note: AIC is the Akaike Information Criteria; HQ is Hannan and Quinn; SC is Schwarz; and FPE is Final Prediction Error.

As shown in Table 10, the four selection criteria resulted in the same optimal lag length of 1. The optimal lag model was tested for a variety of assumption checks to include the absence of serial correlation, heteroscedasticity, and normal distribution of the error process (Pfaff, 2008). In addition, non-linearity was tested for utilizing the NLS function in R. As Table 11 below displays all non-linear relationships were found to be not significant, indicating none of the proposed relationships were non-linear.
### Table 11. Non-Linearity Results

<table>
<thead>
<tr>
<th>Formula</th>
<th>$\beta$</th>
<th>Std. Error</th>
<th>t-value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>$SysRisk \rightarrow SHW$</td>
<td>$\alpha_0$ -3.18333</td>
<td>$\alpha_0$ 0.56133</td>
<td>$\alpha_0$ -5.671</td>
<td>$\alpha_0$ $p = 2.59$</td>
</tr>
<tr>
<td></td>
<td>$\alpha_1$ 0.03808</td>
<td>$\alpha_1$ 0.02909</td>
<td>$\alpha_1$ 1.309</td>
<td>$\alpha_1$ $p = 0.195$</td>
</tr>
<tr>
<td>$BrndDiv \rightarrow SHW$</td>
<td>$\alpha_0$ -2.8313</td>
<td>$\alpha_0$ 1.0359</td>
<td>$\alpha_0$ -2.733</td>
<td>$\alpha_0$ $p = 0.008$</td>
</tr>
<tr>
<td></td>
<td>$\alpha_1$ -0.8178</td>
<td>$\alpha_1$ 2.7642</td>
<td>$\alpha_1$ -0.296</td>
<td>$\alpha_1$ $p = 0.768$</td>
</tr>
<tr>
<td>$SysRisk \rightarrow BrndDiv$</td>
<td>$\alpha_0$ -0.9712</td>
<td>$\alpha_0$ 0.0527</td>
<td>$\alpha_0$ -18.429</td>
<td>$\alpha_0$ $p &lt; 0.001$</td>
</tr>
<tr>
<td></td>
<td>$\alpha_1$ -0.0051</td>
<td>$\alpha_1$ 0.006</td>
<td>$\alpha_1$ 0.752</td>
<td>$\alpha_1$ $p = 0.455$</td>
</tr>
</tbody>
</table>

*Note: ShW is shareholder wealth; BrndDiv is brand diversification; SysRisk is systematic risk.*

Furthermore, Table 12 below displays the results of the different diagnostic or assumption tests for the optimal lag model.

### Table 12. Lag Model Diagnostic Test Results

<table>
<thead>
<tr>
<th>Optimal Lag</th>
<th>Test</th>
<th>$\chi^2$</th>
<th>df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P = 1$</td>
<td>Portmanteau (Asymp)</td>
<td>148.36</td>
<td>135</td>
<td>$\rho = 0.2038$</td>
</tr>
<tr>
<td></td>
<td>Portmanteau (Adjst)</td>
<td>167.86</td>
<td>135</td>
<td>$\rho = 0.0289$</td>
</tr>
<tr>
<td></td>
<td>ARCH VAR</td>
<td>150.47</td>
<td>180</td>
<td>$\rho = 0.9468$</td>
</tr>
<tr>
<td></td>
<td>JB VAR</td>
<td>359.58</td>
<td>6</td>
<td>$\rho &lt; 0.01$</td>
</tr>
<tr>
<td></td>
<td>Kurtosis</td>
<td>279.05</td>
<td>3</td>
<td>$\rho &lt; 0.01$</td>
</tr>
<tr>
<td></td>
<td>Skewness</td>
<td>80.534</td>
<td>3</td>
<td>$\rho &lt; 0.01$</td>
</tr>
</tbody>
</table>

*Note: Portmanteau (Asymp) is the Portmanteau asymptotic statistic; Portmanteau (Adjst) is the Portmanteau adjusted statistic; ARCH VAR is the multivariate ARCH-LM test; JB VAR is the Jarque-Bera test for multivariate series.*

The Portmanteau test was utilized to test the lack of a serial correlation in the errors of the VAR(1) model (Pfaff, 2008). Specifically, two types of Portmanteau tests were utilized, the asymptotic and adjusted. The null hypothesis $H_0$ for the Portmanteau tests is that there is a lack of serial correlation among the VAR(1) model residuals (Pfaff, 2008). As shown in Table 12, at
an optimal lag order of 1 the Portmanteau asymptotic ($\chi^2 (135) = 148.36, \rho = 0.2038$) does not reject the null hypothesis. In addition the Portmanteau adjusted ($\chi^2 (135) = 167.86, \rho = 0.0289$) does not reject the null hypotheses at the 0.01% level, therefore the test results indicate that the null hypothesis is not rejected and the VAR(1) model does not violate the assumption.

In order to test the assumption of heteroscedasticity of the error variances the multivariate ARCH-LM test was utilized (Pfaff, 2008). According to the results shown in Table 12, at an optimal lag order of 1 the ARCH-LM ($\chi^2 (180) = 150.47, \rho = 0.9468$) indicates the assumption of heteroscedasticity is not violated. Therefore, in the case of each VAR(1) model, homoscedasticity is present. In other words, there is an equal variance of the dependent error terms across the range of the predictor variables.

To test the normality of the residual distributions, the Jarque-Bera multivariate normality test was implemented and applied to the residuals of the VAR(1) model (Pfaff, 2008). In addition, separate tests for multivariate skewness and kurtosis were utilized. As shown in Table 12, at an optimal lag order of 1 the JB VAR ($\chi^2 (6) = 359.58, \rho < 0.01$) indicates the null hypothesis is rejected and therefore the assumption of normality is violated. For the VAR(1) model the kurtosis ($\chi^2 (3) = 279.05, \rho < 0.01$) and the skewness ($\chi^2 (3) = 80.534, \rho < 0.01$) also indicate the lack of normality.

Based on the assumption checks the VAR(1) model passed the assumptions of lack of serial correlation and heteroscedasticity, however it failed to meet the normality assumption. Therefore, structural stability and fluctuations of the VAR(1) model is investigated. The OLS-CUSUM test was applied to the three VAR(1) model to investigate the structural stability of the series. The OLS-CUSUM graphical results for the VAR(1) model is provided in Figure 7.
A visual inspection of the OLS-CUSUM results for the VAR(1) model in the above figure, suggests that the model displays stability and the process is stationary. The next step involves developing a cointegration model for the VAR(1) model in order to make a determination on the rank order of integration for the study.

Cointegration

The concept of cointegration was introduced in 1981 by Granger (1981), and proposes to “find a linear combination between two $I(d)$ variables that yields a variable with a lower order of integration” (Pfaff, 2008, pg. 75). Therefore, the concept of cointegration allows for the detection of stable long-run relationships among non-stationary variables (Pfaff, 2008). In order to test the
study’s hypotheses the chosen VAR(1) model must be cointegrated. In order to test the cointegration of the series the Phillips-Ouliaris Cointegration test was utilized. The null hypothesis for the Phillips-Ouliaris Cointegration test is that the series is not cointegrated. According to Pfaff (2008) it is advised to employ the Phillips-Ouliaris Cointegration test due to its irrelevancy to normalization. The result of the Phillips-Ouliaris Cointegration test (Phillips-Ouliaris demeaned = -90.739, ρ = 0.01) indicates that the null hypothesis is rejected and therefore the series are cointegrated. In addition, the Johansen and Juselius procedure based on trace and max-eigenvalue tests was conducted to investigate the cointegration. Table 13 below provides a comparison of results of the rank order for cointegration for the lag order of 1.

<table>
<thead>
<tr>
<th></th>
<th>P = 1</th>
<th>10%</th>
<th>5%</th>
<th>1%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>eigen</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( r \leq 2 )</td>
<td>32.43</td>
<td>10.49</td>
<td>12.25</td>
<td>16.26</td>
</tr>
<tr>
<td>( r \leq 1 )</td>
<td>50.48</td>
<td>16.85</td>
<td>18.96</td>
<td>23.65</td>
</tr>
<tr>
<td>( r = 0 )</td>
<td>57.96</td>
<td>23.11</td>
<td>25.54</td>
<td>30.34</td>
</tr>
<tr>
<td><strong>P = 1 Eigenvalues (( \lambda ))</strong></td>
<td>0.54793</td>
<td>0.49920</td>
<td>0.35868</td>
<td>0.00000</td>
</tr>
<tr>
<td><strong>trace</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( r \leq 2 )</td>
<td>32.43</td>
<td>10.49</td>
<td>12.25</td>
<td>16.26</td>
</tr>
<tr>
<td>( r \leq 1 )</td>
<td>82.91</td>
<td>22.76</td>
<td>25.32</td>
<td>30.45</td>
</tr>
<tr>
<td>( r = 0 )</td>
<td>140.87</td>
<td>39.06</td>
<td>42.44</td>
<td>48.45</td>
</tr>
<tr>
<td><strong>P = 1 Eigenvalues (( \lambda ))</strong></td>
<td>0.54793</td>
<td>0.49920</td>
<td>0.35868</td>
<td>0.00000</td>
</tr>
</tbody>
</table>

As shown in Table 13, the results for the lag order of 1 is a cointegration rank of \( r = 1 \). For both eigen and trace, the rank of \( r \leq 1 \) is significant for \( P = 1 \) at the 1% \( \alpha \) error. Consequently, considering the results of the assumption checks and the results of the cointegration rank order the study utilizes the VAR(1) model to test the hypotheses. As previously mentioned the VAR(1) model passed the assumptions of lack of serial correlation and heteroscedasticity and displays stability.
In Table 14 below the cointegration relation matrix (β matrix) and the weights or loading matrix (α matrix) are displayed for the VAR(1) model. A review of the table shows the variables are cointegrated. The error correction term displays a long-run relationship between shareholder wealth, brand diversification, and systematic risk. Specifically, brand diversification achieves cointegration with shareholder wealth at (β = 5.8478). Whereas, brand diversification achieves cointegration with systematic risk at (β = -1.3767). Systematic risk and shareholder wealth are cointegrated at (β = 0.5544). Furthermore, systematic risk achieves cointegration with brand diversification at (β = 0.0559). The negative and large α in the error correction model for shareholder wealth implies that a change in shareholder wealth will be negative in time period t as a form of mean reversion in response to a disequilibria. The lower α for brand diversification suggests that brand diversification does not respond to an unusually large error correction term in time period t-1, since the decision to divest is complex and drives brand diversification. The negative α for systematic risk suggests that systematic risk falls in time period t if the error correction term is too large in time period t-1. This suggests that a high error correction term leads to lower risk, however the effect is small and may not be significant.

<table>
<thead>
<tr>
<th></th>
<th>ShW.I1</th>
<th>BrndDiv.I1</th>
<th>SysRisk.I1</th>
<th>trend.I1</th>
</tr>
</thead>
<tbody>
<tr>
<td>β (Cointegration Relations Matrix)</td>
<td>1.0000</td>
<td>1.0000</td>
<td>1.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>ShW.I1</td>
<td>5.8478</td>
<td>-4.4676</td>
<td>-1.3767</td>
<td>-3.1913</td>
</tr>
<tr>
<td>BrndDiv.I1</td>
<td>0.5544</td>
<td>0.0559</td>
<td>-2.2524</td>
<td>0.1524</td>
</tr>
<tr>
<td>SysRisk.I1</td>
<td>0.0017</td>
<td>-0.0018</td>
<td>0.0005</td>
<td>-0.0880</td>
</tr>
<tr>
<td>trend.I1</td>
<td>-0.7120</td>
<td>-0.6299</td>
<td>-0.1033</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ShW.d</th>
<th>BrndDiv.d</th>
<th>SysRisk.d</th>
</tr>
</thead>
<tbody>
<tr>
<td>α (Weights or Loading Matrix)</td>
<td>-0.0912</td>
<td>0.1316</td>
<td>-0.0146</td>
</tr>
<tr>
<td>ShW.I1</td>
<td>-0.1927</td>
<td>-0.4648</td>
<td>0.4640</td>
</tr>
<tr>
<td>BrndDiv.I1</td>
<td>-0.0146</td>
<td>0.0000</td>
<td></td>
</tr>
</tbody>
</table>

Note: ShW is shareholder wealth; BrndDiv is brand diversification; SysRisk is systematic risk.
Granger Causality

The Granger causality test is most commonly utilized in time-series analysis to detect causalities between variables (Pfaff, 2008). Granger causality implies that two variables follow a similar temporal ordering or predictability such that one variable can be utilized to help predict the other variable (Pfaff, 2008). In other words, Granger causality is defined as “if knowledge of past (variable) x reduces the variance of the errors in forecasting the (variable) y beyond the variance of the errors which would be made from knowledge of past y alone” (Schwert, 1977, pg. 56). Under instantaneous causality the current and the past values of the variable x are utilized to predict the variable y. In this study both Granger and instantaneous types of causality are tested for (Pfaff, 2008). The null hypotheses for the tests are $H_0^{Granger}$ that the variables do not granger-cause each other and $H_0^{Instantaneous}$ the variables do not display instantaneous causality.

Table 15 below provides the results for the Granger and instantaneous causality tests.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Test</th>
<th>$F$ or $\chi^2$</th>
<th>df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>$BrndDiv \rightarrow ShW, SysRisk$</td>
<td>Granger causality</td>
<td>0.70979</td>
<td>2, 198</td>
<td>$\rho = 0.493$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instantaneous causality</td>
<td>16.176</td>
<td>2</td>
<td>$\rho &lt; 0.001$</td>
<td></td>
</tr>
<tr>
<td>$SysRisk \rightarrow ShW, BrndDiv$</td>
<td>Granger causality</td>
<td>0.36273</td>
<td>2, 198</td>
<td>$\rho = 0.696$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instantaneous causality</td>
<td>11.841</td>
<td>2</td>
<td>$\rho &lt; 0.05$</td>
<td></td>
</tr>
<tr>
<td>$ShW \rightarrow SysRisk, BrndDiv$</td>
<td>Granger causality</td>
<td>0.21476</td>
<td>2, 198</td>
<td>$\rho = 0.8069$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instantaneous causality</td>
<td>9.6403</td>
<td>2</td>
<td>$\rho &lt; 0.05$</td>
<td></td>
</tr>
<tr>
<td>$SysRisk, BrndDiv \rightarrow ShW$</td>
<td>Granger causality</td>
<td>0.70934</td>
<td>2, 198</td>
<td>$\rho = 0.4932$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instantaneous causality</td>
<td>9.6403</td>
<td>2</td>
<td>$\rho &lt; 0.05$</td>
<td></td>
</tr>
</tbody>
</table>

Note: ShW is shareholder wealth; BrndDiv is brand diversification; SysRisk is systematic risk.

As shown in Table 15, for the proposed relationship in which brand diversification predicts shareholder wealth and systematic risk ($BrndDiv \rightarrow ShW, SysRisk$), the results of the Granger causality test ($F(2, 198) = 0.70979, \rho = 0.493$) did not reject the null hypothesis and therefore shows no granger causality. However, the results for the instantaneous causality for this
relationship ($\chi^2 (2) = 16.176, \rho < 0.001$) did reject the null hypothesis at $\alpha$ error level of 1%, indicating there is instantaneous causality among the variables. For the relationship in which systematic risk predicts shareholder wealth and brand diversification ($\text{SysRisk} \rightarrow \text{ShW, BrndDiv}$) the Granger causality results ($F (2, 198) = 0.36273, \rho = 0.696$) did not show granger causality. The results for the instantaneous causality for the ($\text{SysRisk} \rightarrow \text{ShW, BrndDiv}$) relationship ($\chi^2 (2) = 11.841, \rho < 0.05$) did reject the null hypothesis at an $\alpha$ error level of 5%, which indicates there is instantaneous causality. For the relationship in which shareholder wealth predicts systematic risk and brand diversification ($\text{ShW} \rightarrow \text{SysRisk, BrndDiv}$) the results for Granger causality ($F (2, 198) = 0.21476, \rho = 0.8069$) also did not show granger causality. In addition, the results for the instantaneous causality for this relationship ($\chi^2 (2) = 9.6403, \rho < 0.05$) indicates there is instantaneous causality among the variables. For the relationship in which systematic risk and brand diversification predict shareholder wealth ($\text{SysRisk, BrndDiv} \rightarrow \text{ShW}$) the results for Granger causality ($F (2, 198) = 0.70934, \rho = 0.4932$) did not dismiss the null hypothesis, therefore showing no granger causality. However, the results for the instantaneous causality for this relation ($\chi^2 (2) = 9.6403, \rho < 0.05$) rejects the null hypothesis at $\alpha$ error level of 5%, which indicates there is instantaneous causality among the variables. These results show there is no Granger causality among any of the study’s hypothesized relationships, implying the results are not significantly different from zero. The insignificance of the phi’s for the variables suggests that there are no short-run dynamic adjustments, which is in line with the efficient market hypothesis for shareholder wealth. In addition, this result corroborates the lack of autocorrelation among the decisions to commit a divestiture for Brinker. Furthermore, the hypothesized relationships show instantaneous causality or short-term effects. The next step in the analysis is to further investigate the short-term effects.
**OLS Regression**

In order to investigate the study’s hypothesized short-term relationships two VAR(1) models were estimated, one model with the divestiture event dummy variable and one without the variable. However, within both models a dummy variable was included for seasonal impacts due to the utilization of quarterly data, with the fourth season being the baseline. Each version of the VAR(1) model was run three times with each of the study’s variables, shareholder wealth, brand diversification, and systematic risk, as a dependent variable. Table 16 below outlines the results of the OLS regressions for each version of the VAR(1) model with systematic risk as the dependent variable.

<table>
<thead>
<tr>
<th>Dep: SysRisk</th>
<th>β</th>
<th>Std. Error</th>
<th>t-value</th>
<th>Probability</th>
<th>β</th>
<th>Std. Error</th>
<th>t-value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ShW.l1</td>
<td>-0.1292</td>
<td>0.2020</td>
<td>-0.640</td>
<td>ρ = 0.525</td>
<td>-0.1545</td>
<td>0.196</td>
<td>-0.774</td>
<td>ρ = 0.442</td>
</tr>
<tr>
<td>BrndDiv.l1</td>
<td>0.3436</td>
<td>1.1816</td>
<td>0.291</td>
<td>ρ = 0.772</td>
<td>0.3798</td>
<td>1.1642</td>
<td>0.326</td>
<td>ρ = 0.745</td>
</tr>
<tr>
<td>SysRisk.l1</td>
<td>-0.2309</td>
<td>0.1314</td>
<td>-1.756</td>
<td>ρ &lt; 0.10</td>
<td>-0.1989</td>
<td>0.1308</td>
<td>-1.522</td>
<td>ρ = 0.133</td>
</tr>
<tr>
<td>Trend</td>
<td>-0.0529</td>
<td>0.0647</td>
<td>-0.817</td>
<td>ρ = 0.417</td>
<td>-0.0712</td>
<td>0.0646</td>
<td>-1.102</td>
<td>ρ = 0.275</td>
</tr>
<tr>
<td>sd1</td>
<td>0.0010</td>
<td>0.0015</td>
<td>0.659</td>
<td>ρ = 0.512</td>
<td>0.0010</td>
<td>0.0015</td>
<td>0.675</td>
<td>ρ = 0.502</td>
</tr>
<tr>
<td>sd2</td>
<td>0.0266</td>
<td>0.0879</td>
<td>-0.303</td>
<td>ρ = 0.763</td>
<td>-0.0462</td>
<td>0.0874</td>
<td>-0.529</td>
<td>ρ = 0.599</td>
</tr>
<tr>
<td>sd3</td>
<td>0.0045</td>
<td>0.0892</td>
<td>0.051</td>
<td>ρ = 0.959</td>
<td>0.0094</td>
<td>0.0879</td>
<td>0.107</td>
<td>ρ = 0.915</td>
</tr>
<tr>
<td>Dum (Divstr)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.1749</td>
<td>0.1008</td>
<td>1.734</td>
<td>ρ &lt; 0.10</td>
</tr>
</tbody>
</table>

**Note:** ShW is shareholder wealth; BrndDiv is brand diversification; SysRisk is systematic risk; Divstr is divestiture, sd is the seasonal impact; l1 is the first lag; l2 is the second lag.

As shown in Table 16, the model without considering divestitures is not significant ($F (7, 66) = 0.9694, \rho = 0.4608$) and only explains 9.32% of the variations in systematic risk ($R^2 = 0.0932$). The only significant predictor is systematic risk ($\beta = -0.2309, \rho < 0.10$). The model with divestitures has a similar result ($F (8, 65) = 1.25, \rho = 0.2851$) but explains 13.33% of the
systematic risk variations. In this model the only significant predictor is divestitures (β = 0.1749, ρ < 0.10). Next, the two VAR(1) models were run with brand diversification as the dependent with the results shown in Table 17 below.

Table 17. OLS Regression Results for Brand Diversification as Dependent

<table>
<thead>
<tr>
<th>Dep: BrndDiv</th>
<th>β</th>
<th>Std. Error</th>
<th>t-value</th>
<th>Probability</th>
<th>β</th>
<th>Std. Error</th>
<th>t-value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ShW.l1</td>
<td>0.0036</td>
<td>0.0241</td>
<td>0.149</td>
<td>0.882</td>
<td>0.0135</td>
<td>0.0176</td>
<td>0.767</td>
<td>0.446</td>
</tr>
<tr>
<td>BrndDiv.l1</td>
<td>-0.0011</td>
<td>0.1407</td>
<td>-0.008</td>
<td>0.994</td>
<td>-0.0153</td>
<td>0.1026</td>
<td>-0.149</td>
<td>0.882</td>
</tr>
<tr>
<td>SysRisk.l1</td>
<td>0.0072</td>
<td>0.0157</td>
<td>0.460</td>
<td>0.647</td>
<td>-0.0053</td>
<td>0.0115</td>
<td>-0.457</td>
<td>0.649</td>
</tr>
<tr>
<td>(Constant)</td>
<td>0.0091</td>
<td>0.0077</td>
<td>1.185</td>
<td>0.240</td>
<td>0.0163</td>
<td>0.0057</td>
<td>2.864</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Trend</td>
<td>-0.0004</td>
<td>0.0002</td>
<td>-1.945</td>
<td>&lt; 0.10</td>
<td>-0.0004</td>
<td>0.0001</td>
<td>-2.698</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>sd1</td>
<td>-0.0156</td>
<td>0.0106</td>
<td>-1.462</td>
<td>0.148</td>
<td>-0.0080</td>
<td>0.0078</td>
<td>-1.030</td>
<td>0.307</td>
</tr>
<tr>
<td>sd2</td>
<td>-0.0083</td>
<td>0.0105</td>
<td>-0.795</td>
<td>0.429</td>
<td>-0.0007</td>
<td>0.0077</td>
<td>-0.086</td>
<td>0.932</td>
</tr>
<tr>
<td>sd3</td>
<td>-0.0108</td>
<td>0.0106</td>
<td>-1.018</td>
<td>0.312</td>
<td>-0.0127</td>
<td>0.0077</td>
<td>-1.645</td>
<td>0.105</td>
</tr>
<tr>
<td>Dum (Divstr)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.0684</td>
<td>0.0089</td>
<td>-7.700</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

F (7, 66) 0.9725 ρ = 0.459  F (8, 65) 9.014 ρ < 0.001

R² 0.0935  R² 0.5259

Note: ShW is shareholder wealth; BrndDiv is brand diversification; SysRisk is systematic risk; Divstr is divestiture, sd is the seasonal impact; l1 is the first lag; l2 is the second lag.

As seen in Table 17, the OLS regression model without divestitures is not significant (F (7, 66) = 0.9725, ρ = 0.459) and only explains 9.35% (R² = 0.0935) of the variations in brand diversification. However, the OLS regression model with divestitures is significant F (8, 65) = 9.014, ρ < 0.001) and explains 52.59% (R² = 0.5259) of the variations in brand diversification. A significant predictor of brand diversification is divestitures (β = -0.0684, ρ < 0.001). In addition, for the model without divestitures trend (β = -0.0004, ρ < 0.10) is found to be significant. When considering divestitures trend (β = -0.0004, ρ < 0.01) is also significant. Therefore, brand diversification is negatively impacted by the completion of a divestiture and time. The last OLS regression model utilizes shareholder wealth as the dependent as shown in Table 18 below.
As shown in Table 18, the model without considering divestitures is not significant (F (7, 66) = 1.592, ρ = 0.153) and explains 14.45% of the variations in shareholder wealth (R² = 0.1445). One of the only significant predictors is shareholder wealth (β = -0.2256, ρ < 0.10). In addition, the seasonal impact for the second quarter is found to be significant (β = 0.1002, ρ < 0.10). The model with divestitures is found to be significant (F (8, 65) = 2.514, ρ < 0.05) but explains 23.63% of the shareholder wealth variations. The significant predictors are shareholder wealth (β = -0.2017, ρ < 0.10), divestitures (β = -0.1646, ρ < 0.01), and the seasonal impact for the second quarter (β = 0.1186, ρ < 0.05).

Overall, the results show partial support for some of the study’s hypotheses, as Table 19 below indicates. The results of a cointegrating vector indicate that there is a long-run equilibrium relationship between the variables of brand diversification, systematic risk, and shareholder wealth. In addition, a linear, uni-directional, short-term effect is present for all of the proposed relationships. Moreover, divestitures are shown to impact the level of brand diversification, systematic risk, and shareholder wealth as predicted. Furthermore, trend is found to have an
influence on brand diversification and shareholder wealth. In regards to shareholder wealth seasonality is also found to have an influence. A more elaborate discussion of the study’s results in terms of each of the proposed hypotheses is provided in Chapter Five.
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H1</strong>: Brand diversification has a negative bi-directional relationship with shareholder wealth when controlling for divestiture completions in the short- and long-term.</td>
<td>Not Supported</td>
</tr>
<tr>
<td><strong>H2</strong>: Brand diversification has a positive bi-directional relationship with systematic risk when controlling for divestiture completions in the short- and long-term.</td>
<td>Not Supported</td>
</tr>
<tr>
<td><strong>H3</strong>: Systematic risk has a negative bi-directional relationship with shareholder wealth when controlling for divestiture completions in the short- and long-term.</td>
<td>Not Supported</td>
</tr>
<tr>
<td><strong>H4</strong>: Divestiture completion has a positive bi-directional relationship with shareholder wealth in the short- and long-term.</td>
<td>Not Supported, a negative linear relationship in the short-term was found</td>
</tr>
<tr>
<td><strong>H5</strong>: Divestiture completion has a negative bi-directional relationship with brand diversification in the short- and long-term.</td>
<td>Partial Support, negative linear relationship in short-term was found</td>
</tr>
<tr>
<td><strong>H6</strong>: Divestiture completion has a positive bi-directional relationship with systematic risk in the short- and long-term.</td>
<td>Partial Support, positive linear relationship in short-term was found</td>
</tr>
<tr>
<td><strong>H7</strong>: Brand diversification has a non-linear relationship with shareholder wealth.</td>
<td>Not Supported</td>
</tr>
<tr>
<td><strong>H8</strong>: Brand diversification has a non-linear relationship with systematic risk.</td>
<td>Not Supported</td>
</tr>
<tr>
<td><strong>H9</strong>: Systematic risk has a non-linear relationship with shareholder wealth.</td>
<td>Not Supported</td>
</tr>
<tr>
<td><strong>H10</strong>: Divestiture completion has a non-linear relationship with brand diversification, systematic risk, and shareholder wealth.</td>
<td>Not Supported, linear relationship with all variables</td>
</tr>
</tbody>
</table>
CHAPTER FIVE: CONCLUSION

Introduction

In this chapter the study’s research objectives is recapped and a summary of the results is provided. Specifically, a detailed interpretation of the research objectives in terms of the study’s findings is presented. In addition, the theoretical and practical implications of the main findings on the study’s sample and restaurant industry as a whole are expounded. Then, future research suggestions are discussed. Finally, the study concludes with an acknowledgment of the limitations.

Overview of the Study

The main objective of this study was to assess the relationships of brand diversification and systematic risk on shareholder’s wealth subsequent to a divestiture completion. Brand diversification has become a prominent strategy in the restaurant industry in order to serve markets with a variety of brands, thereby diversifying business (Bahadir et al, 2008). However, the proliferation of diversification strategies have been found in the literature to have varying effects on firm financial performance, risk, and shareholder wealth (Bettis & Mahajan, 1985; Choi, Kang, Lee, & Lee, 2011; Kang & Lee, 2014; Thompson, 1984). In regards to systematic risk, the effect of diversification strategies has been suggested to depend on whether the potential positive or negative impacts are dominant (Krapl, 2015). The impact of diversification strategies on shareholder wealth has also been exposed to have either positive or negative effects from various market consequences (Bordley, 2003; Quelch & Kenny, 1994). Moreover, the impact of systematic risk on shareholder wealth has traditionally been seen to suggest that higher risk is associated with higher shareholder returns, however mismanaged risk can have the opposite
effect on shareholder wealth (Barber et al, 2008). In addition, studies in the finance and strategic management literature have generally exhibited that the announcement of a divestiture has a positive effect on the divesting firm’s stock price, however these results have not been found to hold for divestiture completions (Kaiser & Stouraitis, 1995; Moschieri & Mair, 2005; Owen & Yawson, 2008). Therefore, the lack of empirical or theoretical consensus in the literature for the proposed relationships between brand diversification, systematic risk, and shareholder wealth and the lack of consideration of divestiture completions in terms of these relationships fueled the intention of this study.

In examining the proposed relationships, the study draws on agency theory as a framework that elaborates on the consequences that emanate from the separation of ownership and control with shareholders as the unit of analysis. Consequently, the purpose of the study was to (1) examine the short- and long-term effect of brand diversification levels on shareholder wealth following a divestiture, (2) examine the short- and long-term effect of brand diversification levels on systematic risk following a divestiture, (3) investigate the short- and long-term effect of systematic risk on shareholder wealth subsequent to a divestiture completion, and (4) investigate the short- and long-term impacts of a restaurant firm’s divestiture completion on the firms’ level of brand diversification, systematic risk, and shareholder wealth. The aim of the study was accomplished through the utilization of the case study approach that focused on a single firm within the restaurant industry. Specifically, utilizing Brinker International, Inc. (“Brinker”) as the study’s sample captured the idiosyncratic characteristics of the restaurant industry and the frequent occurrence of divestitures in the industry. In addition, the proposed relationships under investigation in the study were analyzed through the application of
quantitative causal cointegration research design. The following sections will present the study’s objectives, as previously listed, with the corresponding hypotheses.

**Objective One: Brand Diversification and Shareholder Wealth**

Examining the short- and long-term effect of brand diversification levels on shareholder wealth following a divestiture completion was the first objective for the study. Specifically, the research question this study aimed to address included an examination into what relationship, including its form, may be present between a restaurant firm’s brand diversification and shareholder wealth when controlling for divestitures in the short- and long-term. Within the marketing literature, shareholder wealth has been found to be impacted by market-based marketing investments, such as brands, due to the influence on a firm’s cash flows (Gruca & Rego, 2005). In addition, shareholders are seen to recognize brands as assets with changes to a firm’s brand portfolio strategy being reflected in the firm’s stock price (Rego, Billett, & Morgan, 2009). However, within the restaurant industry, brand diversification has been found to negatively impact a restaurant firms’ financial performance (Kang & Lee, 2015). Moreover, Wiles et al (2012) found lower abnormal stock returns for firms acquiring multiple brands due to shareholders’ negative views of a brand portfolio with greater complexity. Furthermore, the shares of more diversified firms are seen to sell at a discount, thereby equating diversification to the destruction of shareholder wealth (Franko, 2004; Martin & Sayrak, 2003). Consequently, the first hypothesis (H1) under the first objective stated that brand diversification has a negative bi-directional relationship with shareholder wealth when controlling for divestiture completions in the short- and long-term.
Based on the study’s results the first hypothesis under the first objective (H1) is rejected. Due to the existence of a cointegrating vector a long-run equilibrium relationship is found, however there are no short-run dynamic adjustments as indicated through the lack of significance for Granger causality ($F(2, 198) = 0.70979, \rho = 0.493$). This result corroborates the market efficient hypothesis and suggests that the price of Brinker stock efficiently considers brand diversification for the company without a lag. Although the results indicate that a short-term relationship is present, as shown through the presence of instantaneous causality ($\chi^2(2) = 16.176, \rho < 0.001$). After further examination of the short-term relationship between the variables it is discovered that brand diversification has a negative influence on shareholder wealth, indicating that greater brand diversification reduces shareholder wealth. However the association is not statistically significant. Interestingly, the short-term relationship between brand diversification and shareholder wealth is not impacted by the completion of a divestiture. In terms of the divestitures conducted by Brinker over the study’s sample period, divestiture completion was found to have a significant and negative impact on shareholder wealth, however it did not alter the insignificance of the brand diversification-shareholder wealth relationship for Brinker. These results imply that divestiture completions do not have the same positive impact on shareholder wealth as divestiture announcements have generally been found to have (Kaiser & Stouraitis, 1995; Moschieri & Mair, 2005; Owen & Yawson, 2008).

Therefore, the findings, in the case of Brinker, are inclined to support the results of previous studies and the traditional viewpoint that greater diversification equates to lower shareholder wealth and counters the literature that has concluded greater diversification has beneficial outcomes (Bordley, 2003; Franko, 2004; Martin & Sayrak, 2003; Park et al, 1986). During the sample time period Brinker on average had a high diversification level, as shown by
the average Berry-Herfindahl index of 0.377. The results of this study suggest that, in terms of Brinker’s shareholder wealth, a diverse brand portfolio and the proliferation of brands in the short-term could have a negative impact on the firm’s stock returns. The implication from this finding is that the brand oriented decisions executed by Brinker’s executives have not only business-wide implications, as suggested by Petromilli et al (2002), but also shareholder implications. This finding corroborates the findings of Choi et al (2011) and Kang and Lee (2015), who found that greater brand diversification negatively impacts a restaurant firm’s financial performance. The focus in this study was on shareholder wealth, instead of firm financial performance, and furthers the literature by suggesting that greater diversification is viewed negatively in the short-term by the market equating to the potential losses of shareholder wealth.

In addition, the findings of this study support an industry exclusive examination of brand diversification effects on shareholder wealth. As indicated in chapter two, Wiles et al’s (2012) study findings indicated that investors preferred more focused brand portfolios versus portfolios with greater diversification. This study’s results are inclined to support the negative impact of brand diversification for a restaurant firm, which may be attributed to the markets perception on the industry’s idiosyncratic prominence of brands or other unique characteristics. For instance, this study also found that seasonality has a significant impact on Brinker shareholder wealth. Specifically, Brinker’s second quarter consists of the time period of October 1 to December 31 and is found to positively influence shareholder wealth.

The second hypothesis under the first objective (H7) stated that brand diversification has a non-linear relationship with shareholder wealth. The hypothesis reasoning was based on the restaurant industry’s extensive brand customization for markets, increased brand proliferation,
and the conflicting results in the literature concerning a positive or negative impact of brand diversification (Martin & Sayrak, 2003). Therefore, a resolution to the conflicting results in the literature was hypothesized to be a non-linear relationship between brand diversification and shareholder wealth, where different levels of brand diversification have varying impacts on shareholder wealth. However, the results of the study indicate that a non-linear relationship between the variables is not present. Instead, there is only a linear relationship between brand diversification and shareholder wealth. Consequently, the second hypothesis under objective one (H7) was not supported and is rejected.

**Objective Two: Brand Diversification and Systematic Risk**

Investigating the short- and long-term effect of brand diversification levels on systematic risk following a divestiture completion was the second objective for this study. Specifically the research question this study sought to address was what relationship, including its form, is present between a restaurant firm’s brand diversification and systematic risk when controlling for divestitures in the short- and long-term. The level of diversification for a firm has been shown to impact the firm’s systematic risk (Manrai et al, 2014). It has been proposed that firms with greater diversification levels experience a reduction in their operating risk and systematic risk, however higher diversification levels have also been found to simultaneously increase leverage for firms thereby augmenting systematic risk (Manrai et al, 2014). A review of the literature examining the impact of diversification levels on systematic risk has provided inconclusive results on whether higher diversification has positive or negative influences on a firm’s systematic risk (Bettis & Mahajan, 1985; Choi et al, 2011; Kang & Lee, 2014; Thompson, 1984).
Earlier research indicated that higher degrees of diversification have the effect of lowering risk for firms (Hughes et al, 1975). However, later research has shown a risk increasing impact of higher levels of diversification on a firm’s systematic risk due to various repercussions of the diversification, including exposure to costly operating environments (Krapl, 2015; Michel & Shaked, 1986; Reeb et al, 1998; Thompson, 1984). In addition, under agency theory it is suggested that executives employ mergers and acquisitions to increase a firm’s diversification in order to decrease their employment risk, which may conflict with the shareholders’ interests (Amihud & Lev, 1981). Moreover, various characteristics that are unique to the restaurant industry, such as changes in consumer spending patterns, cost of food products, and governmental regulations, make the industry inherently risky (Barber et al, 2008). Consequently, the first hypothesis under the second objective (H2) stated that brand diversification has a positive bi-directional relationship with systematic risk when controlling for divestiture completions in the short- and long-term.

Based on the study results the first hypothesis under the second objective (H2) is not supported. The result of a cointegrating vector displays a long-run equilibrium relationship between the variables and the lack of significance for Granger causality ($F (2, 198) = 0.70979, \rho = 0.493$) suggests no short-term dynamic adjustments. Second, as previously stated the results indicate that an overall short-term relationship is present, as shown through the presence of instantaneous causality ($\chi^2 (2) = 16.176, \rho < 0.001$). However, after further investigation into the short-term relationships between the individual variables through OLS regressions it was discovered that brand diversification and systematic risk do not have a statistically significant short-term relationship. Although the association between the two variables is positive, indicating greater brand diversification increases systematic risk, it is not statistically significant.
Furthermore, the divestiture completions conducted by Brinker were found to have a positive and significant impact on systematic risk, however this did not alter the brand diversification-systematic risk relationship.

As previously noted, an empirical investigation of the direct effect of a firm’s level of brand diversification on its systematic risk is non-existent within the literature. Within the hospitality literature, various studies have shown that numerous firm specific characteristics, including liquidity, leverage, and firm size, have an impact on the firm’s systematic risk (Borde, 1998). However, this study’s results indicate that, in the case of Brinker, the firm’s level of brand diversification does not significantly impact its systematic risk. There may be various potential explanations for this outcome, including a differentiation between brand diversification and corporate or market diversification, which has been shown in the literature to significantly impact a firm’s risk (Manrai et al, 2014). In particular, corporate or market diversification entails firms entering into unrelated lines of business or markets that would result in imperfectly correlated streams of income. However, within the restaurant industry brand diversification is a unique combination between related diversification into different segments and a strategy of brand proliferation to market several brands for comparable products (Choi et al, 2011). Thus, the results of this study suggest that due to lack of sufficient alteration between lines of business or markets, brand diversification does not significantly impact the restaurant firm’s stock volatility that is due to changes in market-level economic factors.

Due to the conflicting results reported in the literature on whether a firm’s diversification levels have positive or negative impacts on its systematic risk, it was hypothesized that a non-linear relationship may exist. Therefore, the second hypothesis under the second objective (H8) stated that brand diversification has a non-linear relationship with systematic risk. This
hypothesis was considered a potential resolution to the conflicting literature results, where different levels of brand diversification have varying impacts on systematic risk. However, the results of the study indicate that a non-linear relationship between brand diversification and systematic risk is not present. Instead, there is only a linear relationship between the variables. Consequently, the second hypothesis under objective two (H8) was not supported and is rejected.

**Objective Three: Systematic Risk and Shareholder Wealth**

Investigating the short- and long-term effect of a restaurant firm’s systematic risk on shareholder wealth following a divestiture completion was the third objective for this study. Specifically the research question pursued by the study was what relationship, including its form, is present between a restaurant firm’s systematic risk and shareholder wealth when controlling for divestitures in the short- and long-term. Traditionally, the literature has linked systematic risk with a reduction in shareholder wealth (Barber et al, 2008). Therefore, corporate executives are advised to execute strategies that reduce firm risk in order to maximize shareholder wealth (Brenner & Smidt, 1978). Moreover, a disproportionateness in available information between firm executives and shareholders is seen, under agency theory, to occasion increased managerial risk-taking (Kim & Mathur, 2008). This is considered problematic due to mismanaged risk resulting in a greater chance of financial distress for firms and a reduction in shareholder returns (Borde, 1998). Furthermore, the restaurant industry has numerous characteristic risks that influence the operations and financial stability of firms, such as variations in consumer spending patterns and governmental regulations (Barber et al, 2008). Consequently, the first hypothesis under the third objective of the study (H3) stated that systematic risk has a negative bi-
directional relationship with shareholder wealth when controlling for divestiture completions in the short- and long-term.

Based on the study’s results the first hypothesis under the third objective (H3) is not supported. Again, a long-run equilibrium relationship was found with no short-run dynamic adjustments due to the existence of a cointegrating vector and through the lack of significance for Granger causality \( F(2, 198) = 0.36273, \rho = 0.696 \). In regards to systematic risk predicting shareholder wealth a short-term relationship is present, as shown through the presence of instantaneous causality \( \chi^2(2) = 11.841, \rho < 0.05 \). Although further investigation into the short-term relationship through the OLS regressions performed demonstrate the lack of a significant short-term relationship between systematic risk and shareholder wealth. Furthermore, the Brinker divestiture completions performed during the sample time period, although significantly impacting shareholder wealth, were found to not have an impact on the proposed systematic risk-shareholder wealth relationship.

Within the hospitality literature a firm’s systematic risk has been found to be negatively correlated with the firm’s asset turnover, profitability, and liquidity ((Barber et al, 2008; Gu & Kim, 2002; Kim et al, 2007). The results of this study, in terms of Brinker, show that the restaurant firm’s systematic risk does have a negative association with shareholder wealth during the sample time period, however it is not statistically significant. Therefore, the results are inclined to support the literature and suggests that higher levels of systematic risk are linked to a reduction in shareholder wealth (Barber et al, 2008). Over the sample time period Brinker had an average systematic risk that was more risky than the market, as indicated through the average beta of 1.068. This suggests that the Brinker stock during the time period moved with the market but with greater sensitivity. Since corporate executives are advised to execute policies and
strategies to reduce firm risk (Brenner & Smidt, 1978), the results suggest that during the sample time period some of the corporate decisions increased risk rather than alleviated it.

A non-linear relationship was rationalized and investigated in the study due to the potential impact of systematic risk influencing shareholder wealth up to a certain point. A non-linear relationship was examined since modern financial theory posits that greater risk is linked to greater shareholder returns, however it’s been suggested that a firm’s mismanaged risk can lead to a reduction in shareholder returns (Barber et al, 2008). Therefore, the second hypothesis under the third objective (H9) stated that systematic risk has a non-linear relationship with shareholder wealth. However, the results of the study indicate that a non-linear relationship between systematic risk and shareholder wealth does not exist. Consequently, the second hypothesis under objective three (H9) was not supported and is rejected.

**Objective Four: Divestiture Completions**

An investigation into the impact of divestitures on shareholder wealth, brand diversification, and systematic risk in the short- and long-term was the fourth study objective. Specifically the research question under this objective was aimed at determining what impact a divestiture completion has on a restaurant firm’s shareholder wealth, brand diversification, and systematic risk in the short- and long-term. Some studies within finance and strategic management literature have shown the announcement of a divestiture can have a positive effect on the divesting firm’s stock price on the announcement date, as well as before and after the date (Kaiser & Stouraitis, 1995; Moschieri & Mair, 2005; Owen & Yawson, 2008). In addition, under agency theory the rationalization for the value effects of divestitures is that a decrease in the diversification of the parent firm realigns the interests of the executives and shareholders (Afshar
et al, 1992; John & Ofek, 1995; Moschieri, 2011; Moschieri & Mair, 2005). However, it has been suggested that firm executives do not pursue a divestiture until they anticipate a threat of an acquisition or are compelled by shareholders of the firm to divest (Bethel & Liebeskind, 1993). Therefore, the first hypothesis under the fourth objective (H4) stated that divestiture completion has a positive bi-directional relationship with shareholder wealth in the short- and long-term.

Agency theory posits that corporate executives participate in managerial opportunism by seeking greater diversification in order to accomplish their self-interests, including securing their positions with the firm by making investments that require their particular skills (Shleifer & Vishny, 1989). The streamline of corporate brand portfolios from the elimination of non-strategic brands is suggested to benefit the firm by providing an opportunity for augmented efficiency in the allocation of financial and infrastructure resources (Varadarajan et al, 2006), reducing the cannibalization of sales and cash flows (Bahadir et al, 2008), and lower transaction and advertising costs (Morgan & Rego, 2009; Schwandt, 2009). Consequently, the second hypothesis under the fourth objective (H5) stated that divestiture completion has a negative bi-directional relationship with brand diversification in the short- and long-term.

In regards to the direct relationship between divestitures and risk the literature is scarce in the finance and strategic management fields and non-existent in the hospitality field. The studies that have been conducted in the literature suggest that lower diversification subsequent to a divestiture results in an increase to the firm’s systematic risk. For instance, Madura and Murdock (2012) found that generally subsequent to a divestiture the divesting parent firm suffered from an increase in its shareholder risk. Lubatkin and O’Neill’s (1987) study suggested that firms undertake mergers and acquisitions in order to reduce the firm’s risk. Specifically, mergers of firms related to the acquiring parent’s core business had the result of increasing the firm’s
diversification and reducing its levels of systematic risk (Lubatkin & O’Neill, 1987). Therefore, the third hypothesis under the fourth objective (H6) stated divestiture completion has a positive bi-directional relationship with systematic risk in the short- and long-term.

In terms of the divestitures conducted by Brinker over the study’s sample period, divestiture completion was not found to potentially be a resolution to management and owner inconsistencies in corporate strategy, as suggested under agency theory. Instead, divestitures were found to negatively and significantly impact shareholder wealth ($\beta = -0.1646$, $\rho < 0.01$). Moreover, although the Brinker stock experienced an average positive return of 2.575% over the sample time period, the short-term effect of divestiture completions was found to be negative in terms of shareholder wealth. These results imply that divestiture completions do not have the same impact on shareholder wealth as divestiture announcements have generally been found to have (Kaiser & Stouraitis, 1995; Moschieri & Mair, 2005; Owen & Yawson, 2008). Instead, divestiture completions negatively impact shareholder wealth, whereas announcements have been found to have a positive impact (Moschieri & Mair, 2008). In addition, this result suggests that divestiture completion does not realign the interests of corporate executives and shareholders as proposed under agency theory. The results of this study counter the findings of Afshar et al (1992) and finds that restaurant firm divestiture completion has a negative impact on a firm’s stock in the short-term, thereby rejecting hypothesis four (H4).

Moreover, the study’s results indicate that divestiture completion has a negative and significant impact on brand diversification. Specifically, the findings displayed a negative and significant short-term relationship between divestiture completion and brand diversification ($\beta = -0.0684$, $\rho < 0.001$). Therefore, hypothesis five (H5) is partially supported by the study’s findings. Moreover, the OLS regression model with brand diversification and divestitures
resulted in a significant and negative trend ($\beta = -0.0004$, $\rho < 0.01$). These results show that for Brinker, brand diversification is negatively impacted by divestitures and time.

Moreover, divestitures were found to have a positive and significant relationship with systematic risk ($\beta = 0.1749$, $\rho < 0.10$), suggesting that systematic risk increases after divestiture completion. These results corroborate the findings of Mandura and Murdock (2012) that following a divestiture the divesting parent firm experiences an increase in its shareholder risk. Moreover, divestitures were found to have a positive and significant relationship with systematic risk ($\beta = 0.1749$, $\rho < 0.10$), suggesting that systematic risk increases after divestiture completion. These results corroborate the findings of Mandura and Murdock (2012) that following a divestiture the divesting parent firm experiences an increase in its shareholder risk. In addition, the results of this study found that an equity beta measure of systematic risk does have a statistically significant impact, whereas Madura and Murdock (2012) found that only the asset beta measure of systematic risk had a statistically significant increase following a divestiture (Madura & Murdock, 2012). In regards to Brinker, this study displays that spin-off, carve-out, and sell-off types of divestitures have a negative impact on the restaurant firm’s systematic risk. The results suggest that greater diversification does have beneficial consequences for a firm and subsequently systematic risk, such as the reduction in a firm’s cash flow volatility as suggested by Amihud and Lev (1981). Consequently, hypothesis six (H6) is partially supported by the study’s results.

In addition, there has been conflicting reports in the literature in regards to the impact of divestitures on a firm’s shareholder wealth, brand diversification, and systematic risk. For instance, Woo et al (1992) found that divestitures result in a neutral or no significant improvement in the performance outcomes of firms. Moreover, the inconclusive results in the literature in regards to divestitures and brand diversification have shown that divestitures of brands can have multiple implications, with some studies indicating positive outcomes (Pandey et al, 2010; Rao et al, 2004) and others displaying negative results (Dung, 2012; Morgan & Rego, 2009) from the deletion of brands. Furthermore, in the literature there has been a lack of
consideration in regards to the idiosyncratic characteristics of the restaurant industry, including its highly competitive market with multiple segments. Due to these conflicting findings in the literature, it was hypothesized that a non-linear relationship may exist between divestiture completion and shareholder wealth, brand diversification, and systematic risk. Therefore, the last hypothesis under the fourth objective (H10) stated that divestiture completion has a non-linear relationship with shareholder wealth, brand diversification, and systematic risk. This hypothesis was considered a potential resolution to the conflicting literature results. However, the results of the study indicate that there is no non-linear relationship between divestiture completion and the other variables of shareholder wealth, brand diversification, and systematic risk. Consequently, the last hypothesis under objective four (H10) was not supported and is rejected.

**Overall Model**

This study sought to address a gap in the literature, specifically the hospitality literature, by developing an understanding of the effect of a firm’s resulting brand diversification levels and systematic risk on shareholder wealth when controlling for a divestiture completion. The restaurant industry has pervasively utilized brand diversification strategies due to persistent growth in the industry (Choi et al, 2011); however existing literature lacks a theoretical or empirical consensus on effects of diversification strategies on firm financial performance, risk, and shareholder wealth (Bettis & Mahajan, 1985; Choi, Kang, Lee, & Lee, 2011; Kang & Lee, 2014; Thompson, 1984). Figure 10 below provides the results of the short-term relationships between brand diversification, systematic risk, and shareholder wealth.
This study sought to establish whether within the restaurant industry divestitures operate as a realignment tool for executive and shareholders’ interests, as suggested under agency theory. The results of the study, as mentioned in Chapter Four, justify a greater investigation into the impact of divestiture completion on restaurant firm’s brand diversification, systematic risk, and shareholder wealth. A long-run equilibrium relationship between brand diversification, systematic risk, and shareholder wealth with no short-run dynamic adjustments is found as shown through the cointegrating vector and lack of significance for Granger causality. The overall short-term model, as shown in figure 10, with shareholder wealth as the dependent and controlling for divestiture completion, was found to be significant and explained 23.63% of the variance in Brinker’s shareholder wealth. Specifically, divestiture completion was found to have
a negative impact on brand diversification and shareholder wealth and a positive relationship with systematic risk in the short-term.

As previously mentioned in Chapter Two, in the literature a divestiture announcement has been found to effect shareholder’s wealth positively and significantly greater than zero (Cao et al, 2008). The results of this study, however, suggest that within the restaurant industry the market views divestiture completion as harmful to shareholders. In other words, divestiture completion impacts the worth of a company’s stock to a shareholder. Since shareholder wealth is seen to be determined by the degree and certainty of the cash flow the stock will generate for the shareholder in the future (Brigham & Daves, 2010), a divestiture completion for a firm is seen to reflect a lesser degree of cash flow generation. Therefore, divestiture completion was found in this study to be damaging for the stock of the casual dining restaurant firm, Brinker.

Furthermore, divestiture completion was found to have a negative and significant relationship with Brinker’s brand diversification in the short-term, which demonstrates that the occurrence of a divestiture reduced the firm’s level of diversification. However, divestiture completion was found to have a positive relationship with Brinker’s systematic risk in the short-term. Therefore, after a divestiture completion in the short-term Brinker’s systematic risk levels increased, meaning the firm was more sensitive to changes in the market. This corroborates the notion that divestitures affect the corporate strategies that executives implement and the scope of operations, which in turn impacts the firm’s level of risk (Madura & Murdock, 2012). Moreover the subsequent reduction in brand diversification may result in increased cash flow volatility, thereby increasing the firm’s risk (Amihud & Lev, 1981).

The proposed brand diversification relationship with shareholder wealth was found to be negative but not significant. This finding suggests that increased brand diversification will
negatively impact shareholder wealth, similar to the negative impact that has been found for restaurant firm financial performance (Choi et al, 2011). Therefore, as Wiles et al (2012) suggested, shareholders for Brinker may also negatively view a larger brand portfolio. Another potential explanation for this result is that shareholders view higher levels of diversification to result in greater agency problems from higher discretionary power and less oversight, as suggested by Farooqi et al (2014). In regards to the proposed relationship between brand diversification and systematic risk, this study found the association to be positive but not significant. Consequently, this study found no statistically significant relationship between Brinker’s level of brand diversification and systematic risk. On average Brinker had a higher systematic risk level of 1.068 during the study’s sample time period, indicating that Brinker’s stock moved in the same direction as the market but with more risk. However, the study results do not indicate that the systematic risk levels for Brinker were impacted by its brand diversification, unlike the findings of prior studies with other forms of diversification (Manrai et al, 2014). Although the association between the two variables is found to be negative, indicating greater diversification is not a means of risk reduction for Brinker. Moreover, the relationship proposed in the study between systematic risk and shareholder wealth was also rejected. Although systematic risk was found to have a negative association with shareholder wealth in the short-term, the findings were not statistically significant. This finding is inclined to support the notion that mismanaged risk increases the firm’s chance for financial distress. This can have greater repercussions for restaurant firms due to the unique industry characteristics, including the numerous external risks that impact firms’ stability.
Theoretical Implications

Through the utilization of a case study approach this study provided an in-depth examination of the proposed relationships between brand diversification, systematic risk, and shareholder wealth when considering divestiture completions for a restaurant firm. The insights provided by the study’s findings contribute to the theoretical body of knowledge within the hospitality field in several aspects. First, this study has provided a catalyst for future studies to further develop an understanding of the significant impact divestitures have on firms and shareholder wealth within the restaurant industry and overall hospitality industry. This study’s analytical framework delivers a greater understanding of the consequences to a restaurant firm’s shareholder wealth, brand diversification, and systematic in terms of the effects of divestiture completions. The findings show that a divestiture completion has a negative influence on a restaurant firm’s brand diversification and shareholder wealth, as well as, a positive influence on the firm’s systematic risk. However, the study results display that the impact of divestitures is solely within the short-term. Moreover, the relationships between divestiture completion and shareholder wealth, brand diversification, and systematic risk are linear and not bi-directional.

Second, this study simultaneously examined the effect of brand diversification and systematic risk following a divestiture from the shareholders perspective. Whereas the studies that have been performed in the hospitality industry regarding diversification have focused on the effects towards firm financial performance and not shareholder wealth (Kang & Lee, 2014; Kang et al, 2011). The results of this study demonstrate that due to the existence of a cointegrating vector a long-run equilibrium relationship is found between brand diversification, systematic risk, and shareholder wealth, however there are no short-run dynamic adjustments as indicated through the lack of significance for Granger causality. In the short-term, there are no
statistically significant relationships between the variables. The findings for these relationships hold even when considering a divestiture completion. However, the study results display a negative association between brand diversification and shareholder wealth, as well as, between systematic risk and shareholder wealth in the short-term. A positive association is displayed between brand diversification and systematic risk. Furthermore, the study results reveal that no non-linear nor bi-directional relationship exists between the variables.

Managerial Implications

This study recognized the idiosyncratic features of the restaurant industry and the inadequate state of current research in regards to the proposed relationships between brand diversification, systematic risk, and shareholder wealth when considering divestiture completions. The use of a single restaurant firm that has completed numerous divestitures over the years provided for a greater in-depth analysis. The study’s results provide restaurant firm corporate executives with an expanded understanding of the effects from divestiture completions. First, divestiture completions are shown to negatively impact shareholder wealth in the short-term, which indicates the utilization of divestitures will not align executive and shareholder interests as suggested under agency theory. Instead, the market views the completion of divestitures to result in the diminution of shareholder wealth, similar to the criticism Darden Restaurants, Inc. experienced when divesting its Red Lobster® brand. Therefore, a divestiture completion is not viewed as a means to correct inefficient diversification strategies undertaken by corporate executives, as suggested under agency theory.

Moreover, the completion of a divestiture increases the firm’s systematic risk in the short-term, meaning the firm is more sensitive to the risks inherent in the market. Therefore, the
results indicate that following a divestiture completion investors of the firm anticipate the total return relative to the market to be more volatile. Consequently, this study’s findings are beneficial for restaurant firm corporate executives to observe when strategically deciding whether a divestiture completion will be beneficial for the firm and its shareholders, due to the subsequent effects to brand diversification, systematic risk, and shareholder wealth.

Limitations

Although this study has provided useful insights into the effects of the resulting levels of brand diversification and degree of systematic risk on shareholder wealth following a divestiture completion within the restaurant industry, there are certain limitations that should be addressed in future research. For instance, the utilization of an individual case study has allowed for an in-depth investigation, however the results that were found in this study for Brinker cannot be generalized to other restaurant firms. Brinker is classified as a casual dining restaurant corporation which operates within the casual dining segment of the restaurant industry. The casual dining segment includes national and regional chains that provide food services in a casual environment to patrons who are seated and served by wait staff and pay after eating (Hoovers, n.d.). The results of the study should not be generalized to restaurant firms in the other industry segments, such as the quick service or fast casual segments.

In addition, the study’s findings on the lack of significance of the resulting brand diversification on Brinker’s shareholder wealth, lack of significance of brand diversification on Brinker’s systematic risk levels, and lack of significance of Brinker’s systematic risk on its shareholder wealth following a divestiture may vary based on the unique characteristics of the economies in different countries. As previously noted in Chapter Three, the restaurant industry in
the United States has a significant importance on the country’s economy. However the industry is exposed to a variety of external risks including discretionary spending patterns, volatile commodity costs, health epidemics, the economic environment, and governmental regulations (Barber et al, 2008). These risks may impact the study’s results if conducted on restaurant firms operating in other countries. Moreover, the deployment of time series data in this study also poses some limitations involving the lack of mutually independent observations given that a future data point may be impacted by a previous data point.

Future Research

This study has provided a catalyst for future studies to further develop an even more in-depth understanding of the associations between a restaurant firm’s brand diversification, systematic risk, and shareholder wealth, as well as, the impact of divestitures within the industry. Based on the study’s findings and limitations, future studies should utilize a sample that involves restaurant firms within the various industry segments to determine if the operations or risks associated with each segment alters the findings. In addition, future studies should examine the personal characteristics of the restaurant firms, such as size, to determine whether the results vary. For instance, firm size has been found to impact the relationship between a restaurant firm’s level of brand diversification and financial performance (Kang & Lee, 2015). Such that firms of a smaller size were not able to fully exploit the benefits of greater diversification and subsequently the negative effects of diversification outweighed the benefits (Kang & Lee, 2015). It would be beneficial for the restaurant industry to determine whether a firm’s size will determine whether the brand diversification-shareholder wealth relationship is significant or not.
Moreover, future studies should examine any potential relationships between brand diversification, systematic risk, and shareholder wealth when utilizing an asset beta measure instead of an equity or market based measure, as utilized in this study. As the study of Madura and Murdock (2012) demonstrates the measure utilized to quantify systematic risk has an impact on the statistical relationships found between systematic risk levels and divestitures. Therefore, this study should be replicated with an asset based systematic risk measure to examine any alterations in the findings. Furthermore, future studies should examine the study’s analytical framework in terms of the lodging industry. The restaurant and lodging industries face unique external and internal operational conditions and risks which may alter the findings.


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