Valuation Effects of Capital Structure and Earnings Quality

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Introduction

Interdisciplinary Research in Hospitality Finance and Accounting

Considerable research has been conducted in management accounting topics since the mid-1990s (Foster & Young, 1997; Otley, 2016; Vailatti, Da Silva Rosa, & Vicente, 2017). In particular, the past two decades have witnessed a growing interest from researchers in interdisciplinary studies on hospitality management accounting (Hesford, Lee, Van der Stede, & Young, 2006). Several authors (Kwangmin Park & Jang, 2014; Potter & Schmidgall, 1999; Tsai, Pan, & Lee, 2011) extensively review hospitality finance and accounting (HFA) research and outline key topics, issues, methodologies, and findings.

The hospitality industry is a service industry with a broad category of fields including hotel/lodging, restaurant/dining, event planning, theme parks, transportation, cruise line, and additional fields within the tourism industry (Bureau of Labor Statistics, 2019). The current study utilizes data from the hotel industry to examine the valuation effects of capital structure and earnings quality as measured by U.S. hotels' firm value. Furthermore, this study provides a unique perspective on how the 2008 financial crisis affected these metrics. Since hotels' revenues are dependent on discretionary consumer spending, the crisis provides a unique opportunity for researchers to study how financial constraints impact corporate behavior (Harrison & Wisnu Widjaja, 2014).

The importance of interdisciplinary research is articulated in Kuhn's (1962)'s study regarding scientific revolutions. He claims that many researchers tend to adopt a single paradigm to generate solutions to problems, but leveraging alternative competing paradigms can induce a revolution of normal science that involves "traditional-shattering complements to the tradition-bound activity" (Kuhn, 1962). When scholarly improvement seems necessary, shift emerges from traditional to new approaches in research agendas and practices. Thus, interdisciplinary research expands a creative understanding of one research problem by integrating unique insights of scholars from varied disciplines and practitioners with different functional experiences in the related research domain (Van De Ven & Johnson, 2006).

In view of the interdisciplinary nature of the hospitality industry, research that spans diverse academic disciplines may be especially beneficial to hospitality managers. For instance, an efficient and profitable operation in hospitality firms requires knowledge from finance and accounting, marketing, food safety and nutrition, customer service management, and human resource management. Various efforts have been made to apply finance and accounting concepts in general management to enhance understanding of marketing outcomes. Ngobo, Casta, and Ramond (2012) argue that customer satisfaction reduces earnings forecast errors. To illustrate, customer satisfaction reduces negative deviations more than positive deviations of the analysts' forecasts from actual earnings. Schulze, Skiera, and Wiesel (2012) develop a new theoretical framework for customer-based valuation and conclude that a 10% increase in customer satisfaction is amplified to a 15.5% increase in shareholder value. Terpstra and Verbeeten (2014) investigate the relationship between customer satisfaction, customer servicing costs, and customer value in a financial services firm and find that higher customer satisfaction relates to a higher return for the most profitable customer segments.

Despite the importance of HFA research, some authors suggest that there is a lack of studies in the corresponding arena. Harris and Brown (1998) indicate in their review of research and development in hospitality accounting and financial management that some of this work has tended to be inward-looking, with inadequate methodologies and superficial results. Likewise, Atkinson and Jones (2008) also state in their review that not much progress has been observed in areas highlighted as "innovative", and little evidence exists in the development of new theories. While the hospitality industry does share some commonalities with other service industries, some unique operating characteristics necessitate separate examination of particular topics. Considering the limited number of interdisciplinary studies in the field of hospitality finance and accounting (HFA) and its increasing importance, meta-analysis and review papers have synthesized contemporary research from the recent two decades to provide future research directions. It is indicated that the most common topics that still need further exploration are capital structure and earnings quality (Kwangmin Park & Jang, 2014; Tsai et al., 2011).

Jang, Park and Lee (2011) use a cashflow-at-risk (CFaR) approach to investigate how the cash flow risk of restaurants mitigates the probability of financial distress and improves the financial health of firms. They assert that risk management is especially critical due to economic uncertainty in the hospitality industry. Accordingly, decreasing cash flows, profits and values in the hospitality industry warrant further investigation. In addition, the hospitality industry is capital-intensive (Karadeniz, Yilmaz Kandir, Balcilar, & Beyazit Onal, 2009; Lee, 2007), which requires effective and prudent financial management (Andrew, Damitio, &

Schmidgall, 2007). To be more specific, in the hospitality industry, managers at the property level are charged with using owners' invested assets to enhance revenues and reduce expenses to achieve desired net profits. On the other hand, managers at the corporate level are more involved in issues related to cost structure such as investing excess cash and raising debt and equity capital (Tsai et al., 2011). Given increasingly complicated operating environments and more sophisticated and educated customers and stakeholders, good financial management has become more important in coping with contingent operating situations.

The importance of Capital Structure Decision

Beginning with Modigliani and Miller (1958)'s seminal paper, optimal capital structures, or a firm's appropriate mix of debt and equity financing, have been extensively investigated and debated in the finance literature (Modigliani & Miller, 1958). Additional studies on the determinants of capital structure and how its choice affects firm value and performance are included in Weston and Brigham (1981)'s book. According to the findings of those authors, the firm value is correlated to the choice of capital structure and the ratio of debt. In addition, equity financing is influenced by a range of industrial, institutional, and macroeconomic characteristics. Weston is the first to discuss Modigliani and Miller's contribution to the cost of capital and he expands the episodic areas, such as forms of organization, long-term finance, mergers and acquisitions, and bankruptcy. Later, Barton and Gordon (1987) maintain that since financial scholars are unable to agree on the desirable mix of debt and equity, greater input from managers should be warranted. Likewise, other scholars (Fazzari, Hubbard, Petersen, Blinder, & Poterba, 1988; Kester, 1986; Titman & Wessels, 1988) have called for insights from functional areas such as finance and accounting. Hence, it's been acknowledged that the adoption of a corporate strategy perspective on managerial choice would facilitate a better understanding of the capital structure and its effects.

What has been agreed upon in the literature is the idea that an important issue facing financial managers and researchers today is the significant relationships between a firm's capital structure, cost of capital, and value (Atul, 1994). Several finance experts have analyzed this relationship (Brealey & Myers, 1984; Higgins, 1977; Miller, 1977). Others have suggested that a firm's capital structure can influence its overall cost of capital as well as the value of its stocks. When the cost of debt is not equal to the cost of equity capital, the weighted average of cost capital (WACC) is altered by a change in capital structure. Since the cost of equity is typically higher than the cost of debt due to the tax shield feature stemming from debt interest deduction, increasing equity financing usually increases WACC. Risk factors such as high leverage levels and an unbalanced structure, can generate negative market perceptions and discourage investments, which affects the stock

value (Myers, 1984; Myers & Majluf, 1984). Moreover, a general idea of possible determinants that can influence leverage choices in firms has been provided by Bradley, Jarrell, and Kim (1984) who establish a model that synthesizes the modern balancing theories of optimal capital structure. They find that optimal firm leverage is related inversely to expected costs of financial distress. A simulation analysis documents that if financial distress costs are significant, optimal firm leverage is related inversely to the variability of firm earnings. Their empirical results also show that the volatility of firm earnings is inversely related to firm leverage. Friend and Lang (1988) further confirm that capital structure decisions are at least in part motivated by managerial self-interest and the level of debt decreases as the level of management investment (shareholding) in the firm increases.

Harris and Raviv's (1991) paper surveys capital structure theories based on agency costs, asymmetric information, product/input market interactions, and corporate control considerations. They explain that leverage increases the manager's equity ownership share, which results in greater sensitivity between the manager's payoffs and firm value. Lastly, Titman and Wessels (1988) apply a factor-analytic technique for estimating the impact of unobservable attributes on the choice of corporate debt ratios and conclude that debt levels are negatively related to the "uniqueness" of a firm's line of business. Their results also indicate that transaction costs may be an important determinant of capital structure choice. Short-term debt ratios are proven to be negatively related to firm size, possibly reflecting the relatively high transaction costs small firms face when issuing long-term financial instruments.

While most prior empirical studies on the determinants of capital structure, diversification, and firm performance investigate large manufacturing firms, these relations could differ within other industries. For example, Atul (1994) conducts a comparative analysis of capital structures in two specific industry groups: the hotel industry and the manufacturing sector. His findings reveal some important distinctions between short and long-term debt behavior in hotel and manufacturing firms. More specifically, the ratio of short-term debt to total assets in hotels is influenced more by past profitability trends and the collateral value of assets. On the other hand, the ratio of long-term debt to total assets in hotels is influenced more by the tax shields associated with debt. Additionally, the author finds that earnings volatility negatively influences both short-term and long-term debt behavior in hotel firms. He further rationalizes that a firm's business and the operating risk increases with its operating leverage. Operating risk increases faster if the firm already has high operating leverage. The larger negative influence of earnings volatility on the long-term debt levels in hotels is therefore logical because of the higher financial and operating leverage in hotel firms.

Similarly, Park and Jang (2013) provide two illustrations that differentiate the service and manufacturing industries. First, in service industries, capital investments in machinery and equipment are relatively small. If service firms lease their facilities, the total capital invested is working capital (Gill, Biger, & Bhutani, 2008). Second, the association between capital structure and strategic choice might produce different outcomes within service industries. This is because the benefits of diversification derived from scale economies could differ between manufacturing and service industries due to differences in investments. Considering these industry characteristics differences, the current study focuses on one service industry to analyze the potential effects of capital structure and earnings management on firm value. Due to the lack of firm-level diversification data and limited research in the hotel industry, I specifically investigate the hotel industry as a representative sample of service industries in this study.

The importance of Earnings Management

Although earnings management has been extensively studied in the accounting literature, it may be argued that the importance and prominence of this research topic have increased significantly since the accounting scandals of 2000 and the 2008 financial crisis (Ronen & Yaari, 2008). Regarding 2000, one of the first scandals involved the highly regarded Xerox corporation when the company reported that it had overstated profits by $1.4 billion during the prior 4 years. Subsequently, approximately twenty large and highly publicized scandals followed between October 2001 and the enactment of the Sarbanes-Oxley Act of 2002 (Forbes, 2002). In late 2001, Enron's failure to make proper disclosures concerning various related-party transactions and to account for off-balance-sheet transactions resulted in its now infamous bankruptcy filing. Arthur Andersen LLP, which was the fifth-largest accounting firm in the world, collapsed because the company's Dallas office shredded documents pertinent to the Congressional investigation of Enron's bankruptcy. The various governance failures that followed Enron include the widely publicized cases of Global Crossing's and Adelphia Communications Corporation's dubious financial reporting as well as Tyco International Limited's sweetheart loans to executives. The largest collapse was that of WorldCom 2002, with the market value of the company's common stock plunging from about $150 billion in January 2000 to less than $150 million as of July 1, 2002 (Cohen, Dey, & Lys, 2005). These multi-billion-dollar financial failures created losses for millions of ordinary investors and shook their faith on the integrity of the capital market and the reliability of financial reporting.

It is within the context of these periods of accounting scandals and financial crisis that a renewed demand for a better understanding of factors related to earnings management arose.   According to Erickson, Hanlon, and Maydew (2006), comprehending the underlying forces and process of earnings management can assist us in identifying its effects. They state that understanding the causes of alleged frauds is a necessary step towards effectively preventing their future occurrences.

Although earnings management is a major research topic in the accounting field, this stream of research has directed only limited attention to accounting behavior in the hotel industry (Jang &Park, 2011; Park & Jang, 2014). Given that tourism has been growing and became a key industry in the world economy over the last decades, this would seem to be a major omission. More specifically, international tourism revenue has increased from about 2 billion dollars in 1950 to 1.34 trillion U.S. dollars in 2017 with North America being the third highest tourist destination (UNWTO World Tourism Barometer, 2018). Representing more than one-third of the world exports of services, this industry is an important driver of economic growth and prosperity. Policymakers are concerned with the economic aspects of tourism development. A positive economic impact is necessary to generate income, job opportunities, business turnover, government taxes, and foreign exchange earnings. As an important sub-sector under the tourism industry, the hotel industry has unique characters that include higher sales volatility, higher incidence of losses, and lower earnings quality (L. Esteban & Ferrer García, 2014). They suggest that hotel companies do not fully utilize accounting information to assess the value of mergers and acquisitions, which is increasing to improve international competitiveness. The neglect of accounting information in merger and acquisition leads to an inappropriate evaluation of its value in markets (Jeon et al., 2004).

In the hospitality field, researchers have focused on financial reporting and its quality. For example, based on Ohlson (1995)'s model of abnormal earnings, Jeon, Kang, and Lee (2004) measure the persistence of abnormal earnings during 1993-2000 period for hotels and manufacturing companies to examine whether persistence of abnormal earnings affects book value of equity. They find that the persistence of abnormal earnings is higher for hotels than manufacturing companies and these abnormal earnings increase for first-class hotels. Turner and Guilding (2011)'s empirical study explains managers' motivations to use accounting choices (through the selective capitalization or expensing of asset related expenditures) to alter earnings. They imply that a primary motivation for hotel owners and managers to engage in earnings management stems from the desire to affect the size of the incentive management fee that is paid to hotel managers. The data also support that managers have a greater tendency to seek to capitalize on asset related expenditures, relative to owners. L. P. Esteban and Devesa (2011) analyze more than 1,990

Spanish hotel firms over a period of five years. They confirm that managers have at least some ability to manipulate profit and earnings figures. As a solution, they emphasize the importance to reach certain earnings benchmarks (small profits against small losses). While these studies have used earnings quality measures to demonstrate their hypotheses, little research exists on the effect of earnings quality on hotel's firm value. The purpose of the current study is to fill this gap in the literature, by analyzing the level and impact of earnings management in the hotel industry.

Financial Crisis and Firm value

The 2007–2009 financial crisis had a devastating effect on the U.S. economy and plunged the country into a long and deep recession beginning in December 2007 and ending in June 2009 as determined by The Business Cycle Dating Committee of National Bureau of Economic Research (NBER, 2010). The 18-month recession was the longest of any recession since World War II. This period of overall economic contraction corresponds with the S & P 500 which hit a low of 676.53 in 2009, approximately 50% decline from the previous peak (Gold, 2018). The disastrous effects of this crisis included serious and long-lasting unemployment and huge declines in gross domestic product. The sharp rise in unemployment, which began in early 2008 and lasted in late 2009, remained at 7.8 % or higher for 46 consecutive months. On average, the economy lost 46,000 jobs per month in the first quarter of 2008, 651,000 jobs over the last quarter, and 780,000 jobs in the first quarter of 2009. Employment reached the May 2005 levels in 2010 and 2011, making job growth equal to zero over a period of more than 7 years (Bureau of Labor Statistics, 2009).

Additionally, GDP declined 4.7 % during 2008 and the first half of 2009, the worst decline since the 1930s (The World Bank, 2009). The sharp rise in unemployment and decline in GDP triggered other distresses. From 2007 to the first quarter of 2009, households lost $17 trillion in net worth, and homeownership shrank from its peak of 69.2 % in 2004 to 66.9 % in the fall of 2010 (FCI Report 2011, pp. 391–392). Consumer spending, which normally makes up two-thirds of GDP fell at an annual rate of roughly 3.5 % in the second half of 2008 and fell again in the first half of 2009 (FCI Report 2011, pp. 394). Business financing also dried up and U.S. business bankruptcies tripled to nearly 61,000 in 2009 compared with 20,000 in 2006 (FCI Report 2011, pp. 394).

In light of the depth and breadth of the financial crisis, this period provides an opportunity to investigate the effects of financial shocks on both capital structure and earnings management. We place the study focus on the hotel industry due to the consideration that the dramatically decreased consumer spending during a financial

crisis may constrain customers' spending on leisure activities and cause a revenue decline in the hotel industry. The downswing in the financial performance of the hotels then restricts their borrowing power and may lead to a change of the capital structure. In addition, Bhamra, Kuehn, and Strebulaev (2010) find that firms are more conservative in their financial reporting during the contraction periods due to the increased possibility of rare and random economic crises.

Ariff, Taufiq, and Shamsher (2008) conjecture that the speed of capital structure adjustment is significantly slower for financially distressed firms. Jensen and Meckling (1976), Johnson, Boone, Breach, and Friedman (2000), Mitton (2002) and others, contend that a systematic crisis causes more companies to fall into financial distress. Hence, managers are more likely to engage in aggressive earnings manipulations using private information for their private benefits (Baek, Kang, & Suh Park, 2004; Kim & Yi, 2006). In contrast, Chintrakarn, Jiraporn, and Kim (2018)'s investigation reveal that firms managed earnings less aggressively during the crisis due to the declined firm value and profitability. They declaim that no earnings management would have been sufficient to reverse the poor performance during the crisis. Managers could also use the crisis as an excuse to justify the decreased earnings figures.

In view of the aforementioned decline in consumer spending and the discretionary nature of a hotel's revenue source, investigating the relations between hotel firms' financial performance, capital structure, and earnings quality within the context of the 2008 financial crisis seems relevant.

Research Questions

Considering the lack of discipline-specific research on the hotel industry, this current study adds to the literature by providing empirical evidence to test the valuation effect of the capital structure and earnings quality on hotels. The hotel industry is unique in several ways. While hotel operations vary in size, they typically require substantial capital investments into buildings and related infrastructure. Hence, empirically investigating operating performance relative to hotels' substantial long-lived assets should be particularly relevant for hotel industry analysts, investors, and managers. Furthermore, to finance these substantial real property investments, hotel firms are heavy issuers of debt. For example, the mean level of debt as a percentage of total assets for the sample firms in this study is approximately 40%. Hence empirically evaluating the industry-specific debt to firm value relation should also be especially relevant. In addition, since hotel sales levels are particularly sensitive to consumers' discretionary spending abilities, declining sales during periods of economic contraction may induce incentives for hotels to

manage earnings higher thereby reducing earnings quality. Last, a top-down approach to evaluate a firm's performance ratio within one industry is helpful due to the unique characters of those firms. Due to the big proportion of fixed assets in the hotel firms, their assets utilization efficiency to generate sales reflects directly on the net income and firm's performance.

This study provides new information for the impact of the financial crisis on the testing variables. To the best of my knowledge, none of the financial crisis papers (Ariff et al., 2008; Baek et al., 2004; Blinder, 2013; Curado, Guedes, & Bontis, 2014; Curran & Zignago, 2011; B. Francis, Wu, & Hasan, 2013; Gonenc & Aybar, 2006; Harrison & Wisnu Widjaja, 2014; Ivashina & Scharfstein, 2010; Johnson et al., 2000; Kim & Yi, 2006; Lemmon & Lins, 2003; Mitton, 2002) assumes the unique perspective of the hotel industry to investigate the valuation effects of leverage, and earnings quality.

Based on the aforementioned literature gaps and study motivations, I investigate both the individual and collective effects of capital structure and earnings quality on a hotel's firm value in the current study. I proxy for these constructs by using leverage, accruals, and Tobin's Q as proxies respectively. This study also examines the impact of the financial crisis on these relations.

Research questions for this study are as follows:

Q1: How do capital structure choice and earnings quality affect a hotel firm's value?

Q2: How did the financial crisis of 2008 influence the relations between capital structure, earnings quality, and a hotel's firm value?

Purpose and Contribution of the Study

The purpose of this study is to examine the valuation effect of capital structure and earnings quality on a hotel's firm value. There are a number of previous studies conducted which investigate capital structure and earnings management on firm performance and value (Barton & Gordon, 1987; Cohen et al., 2005; Cohen, Dey, & Lys, 2008; DeAngelo, 1986; Easton & Harris, 1990; Erickson et al., 2006; L. Esteban & Ferrer García, 2014; Fairfield & Yohn, 2001; Friend & Lang, 1988; Healy & Wahlen, 1999; Houmes, Jun, Capriotti, & Wang, 2018; Hwang & Kim, 2012; Jansen, Ramnath, & Yohn, 2012; Jones, 1991; Lee, 2007; Myers, 1984; Myers & Majluf, 1984; P. Bauman, 2014; Prowse, 1990; Stickney, 1999; Titman & Wessels, 1988). However, most of the papers focus on other industries (e.g. manufacturing, sales and finance industries) rather than service industries.

In conclusion, my work contributes to the existing literature in several ways. First, I focus on the hotel industry, a sub-sector of the hospitality industry, to conduct my analysis. In view of the magnitude of the impact of the hotel industry on the global economy and a limited number of papers in the hospitality finance and accounting (HFA) field, this study fills the important interdisciplinary gap. Second, this study investigates both the valuation effects of two well-known finance and accounting constructs, namely capital structure and earnings quality. Since there is a lack of research on their combined impact on hotels' firm value, this study fills in the literature void. Finally, I utilize a special perspective from the financial crisis period and analyze its impact on the relations between all three constructs (capital structure and earnings quality) and hotels' firm value. The aim is to further explore the changes in each relation when hotel firms facing financial distress.

Structure of the Paper

The remaining sections of this paper are organized as follows. First, existing literature and key research milestones are reviewed on firm value, capital structure choice, and earnings quality. Four hypotheses are provided with rationales to explain the estimated relations, and how the relations change under the impact of the financial crisis. Then, we describe the data sources, variables, summary statistics, research design, and methodology. Next, we analyze the data and provide a comprehensive explanation of results. Last, a conclusion is given with summarized research results, implications, limitations of the study, and recommendations for future study.

LITERATURE REVIEW AND HYPOTHESES

Research of Firm Value and its Determinants in HFA Studies

Firm value has been a popular variable in contemporary finance and accounting research. Firm value can be measured from different perspectives including human resources management, accounting (e.g. ROA), finance (e.g. stock returns), or a combination of both (e.g. Tobin's Q). In hospitality finance and accounting (HFA) research, scholars often investigate what attributes lead to better firm performance or improved firms' values. From the accounting and finance perspective, Youn and Gu (2010) investigate the factors that affect Korean lodging firms' performance measured in terms of return on assets (ROA) and find that Korean firms tend to have distinctly higher leverage, higher operating costs and lower profit margins, negatively affecting ROA.

Using Tobin's Q as a valuation proxy, Tsai and Gu (2007a, 2007b) conduct two studies examining the impact of institutional ownership on firm performance in two

industries (the restaurant and casino industries) from 1999 to 2003 and they derive consistent findings that institutional shareholding and firm size are significant and positive determinants of firm performance. Debt is only found to be positively related to firm performance in the casino industry. A similar relation between debt leverage and firm performance (using Tobin's Q as a proxy) is also investigated empirically in Mao and Gu (2008)'s study in the restaurant industry from 2000 to 2004 using panel data. They conclude that firm size, liquidity, asset turnover, profitability, and growth rate are significant financial factors that positively influence firm value. However, in contrast to Tsai and Gu (2007a, 2007b)'s results, financial leverage is found to be negatively correlated to restaurant firm performance suggesting that firms with heavy indebtedness tend to have reduced value in the capital market.

Capital Structure Theories

From a financial perspective, capital structure is one of the most important determinants of a firm's sustainable growth and overall value because it relates to the cost of capital and rate of return for the firm (Tsai et al., 2011). Investigations into capital structure have produced ambiguous results. Modigliani and Miller (1958) first claim there is no significant relationship between capital structure and firm value. They assert that the cost of capital to the owners of a firm is simply the rate of interest on bonds and derive the familiar proposition that the firm acting rationally tends to push investment to achieve the optimal balance of marginal yields on physical assets with market rates of interest. It is assumed that only a relatively small but important group of firms can have easy access to the capital markets with a state of atomistic competition (Modigliani & Miller, 1958). The same evidence of small association of costs and benefits with capital structure decision is proposed by Miller (1977), Titman and Wessels (1988).

However, Modigliani and Miller (1963) present correction in their later study and proclaim that corporate value is maximized when being financed entirely with debt. This relevancy between capital structure and firm performance is then confirmed by Castanias (1983) and the contemporary study done by Jang, Tang and Chen (2008), exploring financing behaviors in the hotel industry. Due to the complexity of the relation between capital structure and firm value, it is suggested that relevant theories should be reviewed so to gain a better understanding of the rationale behind the relation (Bradley et al., 1984; M. Harris & Raviv, 1991; K. Park & Jang, 2013).

There are three main theories explaining the relation between capital structure and firm performance, namely the trade-off theory, pecking-order theory, and

agency theory. First, the trade-off theory propounds that there is an optimal level of capital structure that can be achieved to maximize firm value. At the optimal point, the marginal benefits of debt and the marginal costs of debt are equal, generating maximized firm performance (Kraus & Litzenberger, 1973). Due to its tax-deductible feature, debt is less costly compared with equity financing. However, excessive use of debt can lead to a higher risk of bankruptcy. Hence, the trade-off theory posits that firms should set an optimal target debt ratio depending on the trade-off between the benefits (tax deductions) and costs of debt (likelihood of bankruptcy) (SooCheong Jang et al., 2008; Tang & Jang, 2007).

There are several empirical studies adopting the trade-off theory to investigate the determinants of capital structure. For instance, Ferri and Jones (1979) employ the trade-off theory to test the possible connections between a firm's financial structure and its industrial class, size, variability of income, and operating leverage, and find that a firm's use of debt is negatively related to its size and the operating leverage negatively influences the percentage of debt in a firm's financial structure. The empirical results reported by Castanias (1983) indicate that firms with "high" failure rates also tend to have less debt in their capital structures. The results align with the trade-off theory and support that firms hold an optimum mix of debt and equity when the ex-ante default costs are large enough. Bradley et al. (1984) put together a review of the theory and evidence of the trade-off hypothesis and develop a model that synthesizes the modern balancing theory of optimal capital structure. It is demonstrated that optimal firm leverage is related inversely to the variability of firm earnings if the costs of financial distress are significant.

Under the trade-off framework, a negative relation between leverage and firm value is being emphasized. The negative relationship does not differ between U.S. and Japanese manufacturing firms after controlling for characteristics such as growth, profitability, risk, size and industry classification (Kester, 1986). Titman and Wessels (1988) analyze the explanatory power of optimal capital structure theories. They conclude that a negative relation exists between past profitability and current debt levels. Rajan and Zingales (1995) uncover a similar result in the G-7 countries (the United States, Japan, Germany, France, Italy, the United Kingdom, and Canada), that profitability is negatively correlated with leverage, and the negative influence of leverage on profitability becomes stronger as firm size increases. Large profitable firms with fewer investment opportunities tend to reduce equity issuances dramatically. These firms have a more positive correlation between leverage and profitability. By contrast, an increase in profitability in small firms with more investment opportunities may lead to greater equity issuances, which in turn, reduces the correlation between profitability and leverage.

Second, Myers (1984) postulates that the costs of issuing risky debt or equity outweigh the forces to determine optimal leverage in the trade-off theory. This is referred to as the pecking order theory. This theory suggests that the cost of financing increases with asymmetric information. The theory is popularized by Myers and Majluf (1984) when they present a model of the issue-invest decision based on the assumption that the firm's managers have superior information on the true condition of the firm, which poses an asymmetric information problem between managers and investors. Investors think that managers know the firm is overvalued and managers are taking advantage of this over-valuation when issuing new equity. Therefore, managers prefer internal financial resources (e.g. retained earnings) to external financial sources (debt and equity).

According to the pecking-order model, firms should follow the order of retained earnings, safe debt (newly issued debt), risky debt and then equity when financing investments to alleviate the asymmetric information issue and minimize other financing costs. It is argued that the growth of debt increases when investments exceed retained earnings and decreases when investments are less than retained earnings. As a result, the simple pecking-order model suggests that leverage is lower for more profitable firms with fixed investment and higher for firms with more investment when profitability is fixed (SooCheong Jang, 2011). On the other hand, the complex version of the pecking-order theory takes into consideration both current and future financing costs. Myers (1984) argues that firms with more potential investment opportunities can still maintain a low-risk debt capacity to avoid financing them with risk new securities or future investments, with a view to balance current and future costs. In other words, having other attributes under control, firms with larger potential investments tend to have less current leverage.

Taking the asymmetric information theory a step further, Ross (1977) introduces the incentive- signaling model and contends that high levels of debt provide a signal to the market participants that indicate future increases of high-quality cash flows to the firm. It is perceived that firms with less value cannot handle larger debt levels due to the higher probability of bankruptcy (Barclay, Smith, & Watts, 1995). Consequently, firms' access to equity markets can be restricted because new equity issuance is interpreted as a negative signal to the market participants.

Finally, more recent models explaining capital structure decisions are agency models. Jensen and Meckling (1976) and Jensen (1986) believe that there is an interest conflict between stockholders and their agents, the corporate managers. There are times when the interests of managers are not aligned with those of investors. For example, to gain more power by increasing the resources under their control, corporate managers have the incentives to sacrifice the short-term

profitability of the company for prospective growth and higher earnings in the future. This action also increases the managers' compensation because changes in compensation are positively related to the growth in sales (Murphy, 1985). However, shareholders that desire high current capital growth may be unaware of these plans.

As Jensen (1986) points out, a manager's ability to promote their interests is constrained by the availability of free cash flows. This constraint can be tightened even further through debt financing. If a firm has excessive free cash flows, managers tend to invest the extra cash in new projects, even if a negative net present value (NPV) is anticipated. The greater the discretionary funds available to a manager, the greater the likelihood that the manager will use the funds for perquisites. Managers have a propensity to expand the scale of their firms, even if that behavior means undertaking poor projects or reducing firm value. This is referred to as an over-investment problem. Such an over-investment of free cash flows deteriorates firm value (Park & Jang, 2013).

Empirical studies document that firms with excessive investments earn inferior future stock returns (Fairfield & Whisenant, 2003). Similarly, Titman, Wei, and Xie (2004)'s paper demonstrates a negative relation between abnormal capital investments and future stock return. More specifically, firms that increase their level of capital investment the most tend to achieve lower stock returns for five subsequent years. Patricia M. Dechow, Richardson, and Sloan (2008) also declare that firms retaining excessive cash flows have lower future performances, and investors are likely to be overly optimistic about the investment opportunities of firms that are building their asset bases and retaining capital. Moreover, Brush, Bromiley, and Hendrickx (2000) find that firms with free cash flow gain less from sales growth than firms without free cash flow. Even though cash flow itself has a positive effect on firm growth, free cash flow has a negative influence on firm growth.

Since excessive cash flow (free cash flow) lowers firm value, reducing managerial discretion (free cash flow) reduces agency costs and, in turn, increases firm value. Thus, debt financing can further restrain overinvestment behavior. It implies that agency problems might be optimally solved through a capital structure decision, such as increasing debt leverage. Issuing large amounts of debt to buy back stock not only offers the required incentives to motivate managers but also helps them overcome normal resistance to retrenchment which requires free cash flow payout. Hence, the agency model assumes a positive relationship between leverage and firm performance.

Related Research on Capital Structure Choice

Most prior research on capital structure choice focuses on its determinants. Titman and Wessels (1988) introduce a factor-analytic technique for estimating the impact of unobservable attributes on the choice of corporate debt ratios. The study uses six measures of financial leverage including long-term, short-term, and convertible debt divided by market and by book values of equity. The results show that short-term debt ratios are negatively related to firm size, possibly reflecting the relatively high transaction costs small firms face when issuing long-term financial instruments.

Impressive evidence that industrial class influences financial structure has been marshaled by Scott (1972) and Scott and Martin (1975). They claim that various industries, subject to various degrees of business risk, have developed financial structures with different characters. A wide variety of equity ratios should be found within each industry if the financial structure were of minimal importance in the ultimate valuation of the firm (Scott, 1972). Additionally, financial structures are not identical across a wide array of industries (Scott & Martin, 1975). On the contrary, dissenting evidence has been presented, most notably by Remmers, Stonehill, Wright, and Beekhuisen (1974) who argue that neither size nor industry is clearly a determinant of the firm's use of debt. Their international study of financial structure indicates that business risk may very well be one determinant of debt ratios. Certain institutional variables, earnings rate, and growth rate seem to be more important as determinants of debt ratios internationally. To further investigate the relationships between a firm's financial structure and its industrial class, size, variability of income, and operating leverage, Ferri and Jones (1979) develop a taxonomy of firms that avoid methodological and conceptual difficulties associated with schemes based solely on SIC codes or on firms' relative rankings in a sample. They conclude that both industry class and a firm's size are indirectly linked to a firm's leverage. Variation in income is not shown to be related to leverage. Operating leverage negatively influences the percentage of debt in a firm's financial structure.

In view of the prior research of the impact of industry on capital structure decision, this study places the focal point on the hotel industry and examines the impact of capital structure choice on firm performance in the hotel industry specifically. By investigating the determinants of the decision to hedge in a sample of lodging firms over a 5-year period from 2000 to 2004, Singh and Upneja (2008) maintain that hospitality firms are heavy users of long-term debt to support their asset investment and growth opportunities (Singh, 2009). To illustrate, the mean debt ratio of casinos and hotels in the USA during 1999 to 2003 is 52.6 percent (Tsai & Gu, 2007b), and 41.9 percent (Tsai & Gu, 2005) respectively, and 26.6 percent for restaurants (Tsai & Gu, 2007a).

When considering the possibility for debt financing, four factors should be considered by hotel firms (Elgonemy, 2002): business risk, owner's risk aversion, the need for flexibility, and taxes. The hotel business has a higher level of business risk because the industry is highly influenced by seasonality, economy, and management capability, among other factors, and the operating results of hotels can, therefore, fluctuate considerably. One way to compensate for the higher risk is to employ a relatively conservative capital structure (i.e. high equity vs low debt). Second, owners who are more risk averse tend to adopt a more conservative debt strategy, while aggressive owners may be willing to take the greater risk inherent in using more debt. Third, it is normally cheaper to acquire debt financing than equity capital. A higher marginal tax rate often encourages the use of debt, but only to a certain level before costly financial distress emerges. If the cost of debt becomes too high, or debt capital becomes more difficult to find (e.g. during the 2007-2009 financial crisis), firms may resort to selling common stock or even lodging assets to raise funds. A good example can be found when Las Vegas Sands offered US$525 million worth of common stocks, preferred shares, and warrants to avoid defaulting on its loans in late 2008 (New York Times, 2008).

Facing high financial risk and volatile operating environments, it is important for hotel firms to determine the composition of their capital structure and consider the factors affecting leverage decisions and debt ratios (Karadeniz et al., 2009). In comparing the determinants of capital structure choices and empirics on leverage behavior between hotel and manufacturing firms, Atul (1994) finds that leverage in hotel firms is positively influenced by the firm's size, its collateral value of assets, tax benefits, and vitality of a firm's earnings, but negatively influenced by a firm's past profitability (also supported by Myers and Majluf's pecking-order theory, 1984), a firm's bankruptcy costs, and agency costs. The study encourages further capital structure research specific to the hotel industry to provide a better understanding of unique leverage explaining variables in hotels firms and the optimal capital structures in the hotel industry.

In 2007, Tang and Jang further identify lodging firms' unique leverage behavior through a comparison to US software firms. They argue that the hotel firms' leverage behavior does not react significantly to earnings volatility, firm size, free cash flow, or profitability. However, fixed assets, growth opportunities, and the joint effect of these two variables are the significant long-term debt determinants of the lodging industry. SooCheong Jang and Tang (2009) find that a firm's financial leverage has a direct inverted U-shaped relationship with profitability and argued that neither strategic nor financial decisions can be mutually isolated to improve financial performance. However, financial, rather than business, strategies are a more direct and efficient way to achieve higher profitability.

Results of capital structure options are further investigated using differing countries contexts. Sharma (2010) states that very small hotels (about 25 rooms) in Tanzania obtain most of their funds through personal sources or commercial banks. Due to the lack of professionalism and collateral to obtain credit, the hotels' financing options are limited. Özer and Yamak (2000) examine the financial source preferences of small businesses (less than 100 rooms) in Istanbul. They find that such firms use internal funds and debt in their investment stage and retained earnings at the operating stage. External debt appears to be negligible; owners do not even consider bank loans due to the difficulty of finding credit and the high costs of doing so. Karadeniz et al. (2009) contend that neither the trade-off nor the pecking order theories seem to explain the capital structure of Turkish lodging firms. Free cash flow, non-debt tax shields, growth opportunities, net commercial credit position, and firm size have no relationship with debt ratio, while effective tax rates, the tangibility of assets, and ROA are negatively related to the debt ratio.

Jang and Tang (2009) emphasize the importance of achieving an optimal level of a firm's financial leverage. In theory, although an optimal capital structure might be reached by establishing a balance between the advantages (e.g. tax breaks) and disadvantages (i.e. financial distress and bankruptcy-associated costs) of debt usage, there are few empirical studies on how capital structure choice influences hotels' firm value.

Building upon the aforementioned studies, we assert the following hypothesis based on three main reasons. First, debt financing is cheaper compared with equity financing because of the tax benefits to the debt which is not available to equity. To illustrate, interest on debt capital is tax deductible, but dividends to suppliers of preferred or common equity capital are not. The incentive to use debt financing increases with the rise of the marginal tax rate. When the deductible tax dominates up to a certain level of debt ratio with a hotel firm, it leads to a higher return on equity, and in turn, augments the hotel firm value. This assertation aligns with the trade-off theory which targets for an optimal level of capital structure to achieve maximized firm value. Second, debt reduces the company's weighted average cost of capital (WACC). The pecking-order theory suggests firms prefer debt before equity when financing their investments externally. This is because debt is less costly than equity, which results in a lower overall cost of capital. The lower cost of WACC then increases the net present value (NPV) of the project with other factors held constant. In this case, hotel firms with more positive NPV projects tend to be valued more. Further, leverage magnifies the effect of increases in company sales on income. Also, relative to equity, debt does not dilute the shareholders' earnings. High levels of debt also send a positive signal to market participants that the hotel firm is able to manage large amounts of debt and expects increases of high-quality

cash flows in the future. When this signal attracts more potential investments, the firm value is escalated. Last, debt-financing can restrain overinvestment behavior which is caused by increased discretionary power entitled to hotel managers working as agents of the shareholders. When the excess cash flow is reduced with less over-invested projects, and the agency costs are lessened with controlled managerial discretion, the hotel firm value is increased as a result. I test these assertions with the following hypothesis.

H1: A hotel's firm value increases with the magnitude of its leverage.

Firm Value, Earnings Management, and Accruals

Earnings are the summary measure of firm value produced under the accrual basis of accounting (Patricia M. Dechow, 1994). Many prior studies in earnings management including Teoh, Wong, and Rao (1998), Bartov, Gul, and Tsui (2000), Patricia M. Dechow and Dichev (2002), Butler, Leone, and Willenborg (2004), Cohen et al. (2005), Ye (2007) and Hwang and Kim (2012) have adopted discretionary accruals as a proxy for earnings quality. The nature of accounting accruals gives managers a great deal of flexibility and discretion in determining the actual earnings that a firm reports in any given period (Sánchez-Ballesta & García-Meca, 2007). In light of the discretion that is accorded to managers when they report earnings and the asymmetric nature of the information that is known and available to internal managers and external shareholders, managers have the knowledge and ability to compose financial reports that maximize their own interests or signal their private information, thus influencing the informativeness of earnings (Gul, Chen, & Tsui, 2003; Healy, 1985; Holthausen, Larcker, & Sloan, 1995).

Accruals are the difference between a firm's net income and cash flows and occurs as a result of the discrepancy between the timing of the cash flows and the timing of the accounting recognition of the transaction. Studies on accruals management attempt to distinguish between accruals resulting from managed earnings and normal accruals. Ronen and Yaari (2008) offer the following definitions to clarify the differences between non-discretionary accruals and discretionary accruals, and between normal transactions and accounting treatments and abnormal transactions and accounting treatments involved in earnings management:

"Non-discretionary accruals are accruals that arise from transactions made in the current period that are normal for the firm given its performance level and business strategy, industry conventions, macro-economic events, and other economic factors.

Discretionary accruals are accruals that arise from transactions made or accounting treatments chosen in order to manage earnings." (Ronen & Yaari, 2008, p. 372)

Discretionary accruals may be considerable amounts in some cases. Beneish (1997) presents a model to detect earnings management among firms experiencing extreme financial performance and compares the model's performance to that of discretionary accrual models. His model provides timely assessments of the likelihood of manipulation, and he finds that model-based trading strategies earn significant abnormal returns. In his sample of 43 firms that are subject to enforcement actions by the SEC between 1987 and 1994, the mean overestimation of earnings is 42.5% of retained earnings and 11.5% of total assets. This figure is abnormally high considering that McNichols (2000) claims that an average earnings management of even 1% of total assets would be material to most firms' earnings. Her research reports that the median net income before extraordinary items for Compustat firms for the 1988–1998 period is 3.8% of the beginning of the period total assets.

Both scholars and standard setters are very likely to be interested in evidence on which specific accruals or accounting methods are used for earnings management. Banking and insurance industries have provided a fertile ground for research on specific accruals used to manage earnings. This is due to the nature of banking and insurance businesses. Loan loss reserves of banks and claim loss reserves of insurers which are typically very large relative to net income and equity book values and are, therefore, directly and significantly related to their most material assets and liabilities, rely heavily on management's judgment (Healy & Wahlen, 1999). Studies of bank loan loss provisions (W. Beaver, Eger, Ryan, & Wolfson, 1989; William H. Beaver & Engel, 1996; Chi-Chun, Ryan, & Wahlen, 1997; Scholes, Wilson, & Wolfson, 1990; Wahlen, 1994) have revealed compelling evidence of earnings management among banks, presumably for stock market purposes. Similarly, studies of property-casualty insurance claim loss reserves (W. H. Beaver & McNichols, 1998; Peñalva, 1998; K. R. Petroni, 1992; Kathy R. Petroni, Ryan, & Wahlen, 2000) also have uncovered evidence of earnings management among insurers, though the motivation (stock market incentives or regulatory concerns) is not clear.

In addition, Teoh et al. (1998) examine the hypothesis that managers select accruals at the time of an initial public offering (IPO) to report high earnings and find evidence consistent with opportunistic accruals management. They assert that relative to a matched sample of non-IPO firms, sample firms are more likely to have income-increasing depreciation policies and bad debt allowances in the IPO year and for several subsequent years. They also report that approximately 62 percent of firms making initial public offerings have higher unexpected accruals than a matched

sample of control firms. The study reports an unconditional frequency of 50 percent, which implies that roughly 12 percent of the issuing firms manage earnings (Healy & Wahlen, 1999; Teoh et al., 1998).

Dechow (1995) investigates circumstances under which accruals are predicted to improve earnings' ability to measure firm performance, as reflected in stock returns. The empirical results confirm that earnings are more strongly associated with stock returns than are realized cash flows over short measurement intervals, and earnings have a higher association with stock returns that are realized cash flows in firms experiencing large changes in their working capital requirements and their investment and financing activities. Based on the empirical evidence, the author concludes accruals play an important role in improving the ability of earnings to reflect firm performance.

A significant body of work has provided a number of accruals models. Healy (1985) analyzes the incentives of management to manage earnings downward when its marginal bonus is "out of the money." Using data from a population of the 250 largest U.S. industrial corporations listed in the 1980 Fortune directory, which results in a sample of 1,527 firm-year observations, Healy compares the frequency of firms with negative discretionary accruals to the frequency of firms with positive discretionary accruals. Her test is based on total accruals, TA. One interpretation is that all accruals are discretionary—that is, TA = DA, and NDA = 0. DeAngelo (1986 & 1988) further investigates accruals in two studies. In the 1986 study, she analyzes the accounting decisions made by managers of 64 public firms who attempted a management buyout between 1973 and 1982. In the 1988a study, she examines the earnings behavior of 42 firms engaged in 43 proxy contests from 1971 to 1982. DeAngelo's model calculates normal accruals as the previous period's accruals deflated by lagged assets. Hence, expected accruals of the current year are equal to those of last year, so that all changes in accruals are discretionary.

Patricia M. Dechow and Sloan (1991) design their research on the assumption that the variation in the determinants of non-discretionary accruals is common across all firms in the same industry. Using an event study approach, their tests consider the difference in TA between firms with incentives to manage earnings and those that lack these incentives. The most frequently adopted model is the Jones (1995) model which estimates accruals by U.S. firms during import relief investigations by the U.S. International Trade Commission (ITC). This approach consists of two stages. The first is an estimation stage, wherein the coefficients of the normal accruals are determined, and the second is the event period, wherein the abnormal accruals are isolated in order to test for earnings management. Later, P. M. Dechow, Sloan, and Sweeney (1995) modified the Jones model by taking into consideration

the explicit effects of accounts receivables. Other related models include a forward-looking model (Patricia M. Dechow, Richardson, & Tuna, 2003), performance-adjusted models (P. M. Dechow et al., 1995; McNichols, 2000), a performance-matching model (Kothari, Leone, & Wasley, 2005) and the business model (Ye, 2007). The current study uses discretionary accruals estimated from the modified Jones model as a proxy for earnings quality. A more detailed explanation of the model is included in chapter 3.

Currently, few studies exist that investigate the valuation effect of hotel firms' earnings quality. Hoerger (1991) and Leone and Van Horn (2005) find consistent evidence showing the adjustment to manage earnings in hospitals, which has many aspects in common with hotels (Hinkin & Tracey, 2010). Using 3,977 hospital-year observations, Leone and Van Horn (2005) find that hospital CEOs use accruals to smooth earnings, accelerate losses, and avoid losses to coincide with a CEO change.

Using a sample of more than 1,990 large and small Spanish hotel firms over a period of five years, L. P. Esteban and Devesa (2011) analyze earnings management around financial benchmarks. The two methodologies (frequency histograms and accruals models) they employ to detect earnings management show that managers are not indifferent when facing earnings figures, and they have at least some ability to manipulate profit figures. Their study further suggests that possible change in stock values is one likely motivation for earnings manipulation in the tested Spanish hotel firms.

Most recently, Sousa Paiva and Costa Lourenço (2016) take an international perspective and analyze the determinants of the level of earnings management in a wide sample of listed firms from the hotel industry in 15 countries. Taking discretionary accruals as an indication of earnings management, the authors examine the firm and country characteristics that are potentially associated with those discretionary accruals. According to the results, firm characteristics, including financial leverage, cash flow from operations, investment opportunities and the frequency of losses, are major determinants of earnings management in the hotel industry around the world. Additionally, relative to lower quality hotels, five-star hotels have different incentives to manipulate earnings. With five-star hotels, cash flow from operation and frequency of negative earnings are positively associated with the level of earnings management, while with lower quality hotels, only investment opportunities affect the level of earnings management.

To the best of my knowledge, the literature to date has not covered the relation between U.S. hotels' firm value and earnings quality using discretionary accruals as a proxy. In the current study, I adopt a perspective from the agency model and assumes that the hotel managers have incentives to manage earnings through

manipulating the discretionary accruals to maximize their compensation interests. This is because most of the hotel firms in the tested sample are publicly traded companies that have to go through the IPO process. In the IPO and subsequent years, the managers may adopt the opportunistic accruals management strategy to report high earnings in order to attract more investments. The increased use of discretionary accruals deteriorates accruals and earnings quality, which consequently reduces the firm value. This impact is amplified with hotel firms due to the considerable amount of depreciation in its asset composition, which enables hotel managers to manage the discretionary accruals with higher amounts to smooth the firm's income. Thus, I propose the following hypothesis:

H2: A hotel's firm value increases with its earnings quality.

Capital Structure Choice and Earnings Quality in Financial Crisis

It has been widely recognized that macroeconomic risk has a profound impact on corporate financing decisions (Bhamra et al., 2010). Shleifer and Vishny (1992) focus on asset buyers to explain variations in debt capacity across industries and over the business cycle, as well as the rise in U.S. corporate leverage in the 1980s. They indicate that when a firm in financial distress needs to sell assets, its industry peers are likely to be experiencing similar problems, leading to asset sales at prices below fair value. Hence, the decline of asset values results in an increase in these firms' ex ante private cost of leverage. Thus, the optimal leverage of a firm depends on the leverage of other firms in its industry. Industry might have an optimal debt capacity even when its individual firms do not.

Korajczyk and Levy (2003) examine the determinants of time variation in firms' leverage ratios and security issuance choices between 1984 and 1998. Their paper provides evidence of how macroeconomic conditions affect capital structure choice. By dividing the sample according to the financial constraints faced by the firms, they find that the leverage of firms in their financially unconstrained sample varies counter-cyclically with macroeconomic conditions, while firms in the financially constrained sample have pro-cyclical leverage. They further document, that macroeconomic conditions are significant for security issuance decisions for unconstrained firms but less so for constrained firms.

Hackbarth, Miao, and Morellec (2006) develop a framework that analyzes the impact of macroeconomic conditions on credit risk and dynamic capital structure choice. By characterizing the macroeconomic conditions on the pace and size of capital structure changes and debt capacity, they come up with a few new predictions. Their main affirmations include that market leverage should be countercyclical; a

firm's debt capacity depends on current economic conditions, and firms typically will be able to borrow more funds in a boom. When the firms can adjust their capital structure dynamically, both the pace and size of the adjustments depend on the current economic conditions. It is advisable for firms to adjust their capital structure more often by small amounts in booms rather than in recessions.

From the aforementioned theoretical and empirical results, aggregate leverage in the economy has been shown to be counter-cyclical while firm-level leverage is pro-cyclical. Bhamra et al. (2010) study how the optimal financial structure of firms, at both the individual and aggregate levels, is affected by time-varying macroeconomic conditions. They build a structural-equilibrium framework to model macroeconomic conditions, together with agents' preferences, and investigate how dynamic optimal capital structure depends on both current and historical macroeconomic conditions. They find that optimal financing decisions are more conservative in bad times when firms refinance their obligations. Capital structure is pro-cyclical, but turns counter-cyclical in aggregate dynamics, consistent with empirical evidence.

A recent study (Bartiloro and Iasio, 2012) provides insight into how recent events in the financial system have impacted firms' capital structure. They argue that in the US, financial innovations in recent years have particularly benefited financial intermediaries. Financial firms' balance sheets reflect interconnectedness among financial intermediaries, potentially resulting in a hard to contain domino effect within one small group of financial intermediaries. The authors further profess that the balance sheet of financial intermediaries has been financed by short-term market instruments, for instance, repurchase agreements in the US. They conclude that this makes it difficult for financial intermediaries to adjust their debt offerings when adverse shocks occur.

A few studies have explored the possibility of whether the financial crisis can trigger substantial changes in firms' capital structure choices. Kayo and Kimura (2011) analyze the influence of time-, firm-, industry- and country-level determinants of capital structure and find that firm-level characteristics still influence firms' capital structure choices in 40 countries. Hence, while there may have been significant changes in the financial system since the financial crisis, the impact of those changes and the crisis itself need to be further investigated before definitive judgments can be reached.

The severe financial crisis may cause firms to be financially constrained. Consequently, most financially constrained firms would experience credit rationing in the capital market, higher costs of borrowing, and difficulties in opening or renewing a credit line. These financially constrained firms would forego investment opportunities because of difficulties in raising internal or external capital, even if the

investments have a positive net present value. In addition, those firms may sell their assets to obtain cash in order to support their operations (Campello, Graham, & Harvey, 2010). Since asset reductions might impair the ability of firms to raise debt, firms might be compelled to adjust their capital structure to overcome these adverse circumstances during a financial crisis (Harrison & Wisnu Widjaja, 2014).

Another reason for firms in the financial crisis to decrease leverage ratios to modify capital structure is that capital market conditions prior to a financial crisis are generally more favorable than during and after the financial crisis. Doukas, Guo, and Zhou (2011) investigate the motives of debt issuance during hot-debt market periods and its impact on capital structure over the period 1970–2006. They find that debt-financing intensifies when debt market conditions are more favorable and adverse selection costs of equity at the firm level have a significant impact on capital structure choice as firms tend to engage in debt-financing when equity is out of favor. Furthermore, they find that the effect of this debt-financing activity on the capital structure of the debt issuers persists for more than five years after the issue year.

In 2014, Harrison and Wisnu Widjaja compare the determinants of the capital structure before and after a financial crisis and indicate that the pecking order theory has more explanatory power than trade-off and market timing theory during the 2008 financial crisis. They examine five determinants widely used in capital structure studies (tangibility, firm size, profitability, liquidity, and market-to-book ratio) by employing leverage as a proxy for capital structure. Results show that the coefficients of tangibility and market to book ratio exert a stronger influence on capital structure choices during the 2008 financial crisis than prior to 2008. On the other hand, profitability exerts less influence on capital structure choice than before the crisis (Harrison & Wisnu Widjaja, 2014).

Leverage magnifies the effect that a change in sales has on earnings. Hence, sales increase improves earnings and a decrease in sales brings down earnings. Also, the hotel industry has earned a reputation as a high-risk business for lenders and investors (Elgonemy, 2002), which makes it harder for hotel managers and owners to obtain loans and mortgages during financial distress periods. Also, increasing interest rates during financial recessions increase the debt cost which may exacerbate financial performance. In light of the adverse effects from hotels' debt loads during periods of the financial crisis, I assert that the positive relation between leverage and a hotel firm's value decreases during the financial crisis and test this assertion with the following hypothesis.

H3: The positive effect that leverage has on a hotel's firm value declines during the 2008 financial crisis.

Francis et al. (2013) investigate whether and to what extent conservative accounting affects shareholder value using the 2008 financial crisis as a natural experiment. They find strong evidence to support a positive association between conservatism and firm value during the current crisis. In particular, they document that firms with more conservative accounting practices prior to the crisis experience significantly smaller firm value losses than firms with less conservative accounting practices prior to the crisis.

From the agency-theory perspective, manipulation and expropriation by managers become more serious during the crisis period for several reasons. First, when the expected return on investment falls during a financial crisis, managers are more likely to manipulate accounting numbers in opportunistic ways using private information for their private benefits (Johnson et al., 2000; Mitton, 2002). Corresponding evidence can be found from Kim and Yi (2006)'s paper where they use a large sample of both publicly traded and privately held firms in South Korea to investigate whether, and how, the deviation of controlling shareholders' control from ownership, business group affiliation, and listing status differentially affect the extent of earnings management. They contend that firms are more likely to engage in aggressive earnings management during the crisis period. As the control-ownership disparity becomes larger, controlling shareholders tend to engage more in opportunistic earnings management to hide their behavior and avoid adverse consequences such as disciplinary action. Besides, stock markets create incentives for public firms to manage reported earnings to satisfy the expectations of various market participants that are often expressed in earnings numbers. Thus, during the crisis period, a greater earnings manipulation likelihood imposed an increased risk on shareholders, which could lead to more negative returns and subsequent firm value losses (Francis et al., 2013).

Second, investors tend to pay less attention to the quality of earnings because there are plentiful investment opportunities in favorable economic conditions (Mitton, 2002). However, Ivashina and Scharfstein (2010), Campello et al. (2010), and others contend that firms lack investment opportunities during crisis periods. Investors are then compelled to recognize the weakness in earnings quality that existed all along when experiencing a crisis. This recognition could lead to a flight to quality, thereby depressing stock prices (B. B. Francis, Hasan, & Wu, 2012). For instance, Allen and Carletti (2008), Goh, Li, Ng, and Ow Yong (2015) both provide empirical evidence that shows managers use fair-value accounting to manipulate asset values which induces excessive and artificial volatility that does not reflect the true value of the underlying assets. Consequently, investors tend to revise downward the valuation of such kinds of assets.

The issue of intensified earnings manipulation during the financial crisis becomes especially obvious in the hotel industry due to the principal – agent relationship between hotel shareholders and managers. Presumably, more earnings management incidents occur during the financial crisis years, which is motivated by hotel managers' intention to maintain their compensation and bonus package at the same level as of the prior-financial crisis time. Since hotel sales levels are particularly sensitive to consumers' discretionary spending abilities, declining sales during periods of economic contraction may induce incentives for hotels to manage earnings higher, thereby reducing earnings quality. When the growing earnings management exacerbates to affect the firm's returns, the hotel firm value shrinks subsequently.

H4: The positive effect that earnings quality has on a hotel's firm value decreases during the 2008 financial crisis.

DATA AND METHODOLOGY
Sample
The sample consists of panel data obtained from the files of CompStat's North American database from the years 1991 to 2017. First, the Standard Industrial Classification (SIC) code 7011 is used to filter data to focus on the hotel industry. All continuously measured variables are winsorized at one and ninety-nine percent levels and all models use robust standard errors clustered around firm ID to reduce inter-firm correlations. Ultimately, after deleting firms with missing data for the models, 496 firm-year observation remains, representing 72 hotel firms. Appendix A presents variable definitions for the models.

Variables
Dependent Variable: Tobin's Q
Many studies have employed Tobin's Q as a proxy to measure firm value (Brush et al., 2000; Patricia M. Dechow, 1994; Gonenc & Aybar, 2006; Koh, Lee, & Boo, 2009; Mao & Gu, 2008; K. Park & Jang, 2013; Tsai & Gu, 2007b). Following Himmelberg, Hubbard, and Palia (1999) and others, I calculate Tobin's Q (lnQ_{it}) as the ratio of the firm's market value scaled by the replacement value of assets. The market value of the firm is calculated as the sum of market capitalization (the end of the fiscal year market price of the stock multiplied by common shares outstanding) and total liability. Replacement value of assets is used as a proxy for the book value of total assets which is calculated for the same period as the book value per share

multiplied by common shares outstanding. Tobin's Q is logarithmically transformed due to the varying size of some of the hotel firms.

Control Variables

To control for additional factors that may affect our dependent variable and variables of interest the following controls are included. Khurana and Raman (2004) find that a BIG 4 audit (firm audited by the four largest international auditing firms: Deloitte, Ernst & Young (EY), KPMG and PricewaterhouseCoopers (PwC)) is associated with a lower ex ante cost of equity capital for auditees in the U.S. The findings show that firms that hire BIGN auditors result in lower costs of capital than non-BIGN firms. The results align with what Fernando, Abdel-Meguid, and Elder (2010) contend that a BIGN auditor can improve audit quality and information asymmetries, and in turn, enhance the reporting quality. Similarly, DeFond and Zhang (2014) provide a framework for systematically evaluating unique strengths and weaknesses of various proxies for audit quality and find evidence that BIGN auditors have greater competency in delivering high audit quality, due to advantages such as their ability to attract higher quality inputs. We include the variable $BIGN_{i,t}$ to control for the effects of high-quality audits on results. It is measured as a dummy variable that equals to one if the firm i is audited by a Big four, five, or six auditors according to audit fees in fiscal year t depending on the timing period and zero otherwise ($BIGN_{i,t}$). The expected sign for $BIGN_{i,t}$ is positive.

Prior studies use stock returns as an indicator of financial outcomes. Navarro, Bromiley, and Sottile (2010) assert that business cycles strongly influence corporate sales and profits. Their exploratory study examines the association of firm performance with business cycle management behaviors and the empirical analysis uses a matched sample of 35 pairs of high vs low performers from the S&P 500. Using the same control variable, Bace (2016) analyzes firm performance and valuation (total equity market returns to shareholders, and market values, on an annual basis) of S&P 500 companies over a recent ten year period (2006-2015), versus valuations implied by price to book ratios and WACC based on firm leverage. We include $Ret_{i,t}$ to control for the changes of the overall market because Tobin's Q (based on the equity value of the company) fluctuates according to other many and numerous stock market factors that our model variables do not capture. It is measured by the dividends returns of firm i for the S&P500 in fiscal year t ($Ret_{i,t}$). The expected sign for $Ret_{i,t}$ is positive.

It is natural that hotels with increasing earnings are more likely to report higher accruals. Prior research documents that growth firms report higher accruals (McNichols, 2000). To control for the possibility that hotel firms with greater total

accruals may also have larger discretionary accruals that our accrual model does not capture, we include total accruals in our multivariate tests measured as the difference between firm i's year t earnings before extraordinary items and operating cash flow (OCF) scaled by the beginning of the year t assets (TA_{it}). The expected sign for TA_{it} is positive suggesting that a hotel's firm value increases with greater total accruals.

Prior studies suggest that large firms receive greater scrutiny and have more sophisticated and more developed financial reporting quality (Chari, Chen, Dominguez, & National Bureau of Economic, 2009; Smyth, Boyes, & Peseau, 1975a, 1975b; Teuta, 2013). In addition, smaller firms tend to earn higher stock returns than larger firms do (Wakil, 2012). Variable $InAT_{i,t}$ is included in the model to control for the potential effect of a firm's size on our results. It is measured as the log of the size of firm i in total assets for fiscal year t to reduce heteroscedasticity ($InAT_{i,t}$). The expected sign for $InAT_{i,t}$ is positive.

Hribar and Nichols (2007) assert that firms generating negative operating cash flow (OCF) are more likely to have larger residuals in the estimation of the earnings management models. Also, we suspect Tobin's Q will fluctuate with a company's OCF. Furthermore, OCF is a component of earnings and its level varies inversely with accruals. Hence, a firm's level of cash may affect its perceived need to report accruals (i.e., firms with high OCF have lower accruals). To control for these potential factors, we include the variable $OCF_{i,t}$ and measure it as operating cash flow (OCF) scaled by the total assets of firm i in fiscal year t ($OCF_{i,t}$). The expected sign for $OCF_{i,t}$ is positive.

Tsai and Gu (2007b) document a positive relationship between return on assets (ROA) and institutional ownership and rationalize their finding by asserting that there is a tendency for financial institutions to invest in highly profitable firms so as to fulfill their fiduciary duty to their investors. Hyewon and Zheng (2010) investigate the factors that affect Korean lodging firms' performance measured in terms of ROA and confirm the positive correlation. Moreover, many studies document a positive relation between ROA and stock returns (Houmes et al. 2018; Fairfield & Yuhn 2002). Following the prior literature, I include a control variable for operational performance and measure it by firm i's income before extraordinary income divided by the total assets in fiscal year t ($ROA_{i,t}$). The expected sign for $ROA_{i,t}$ is positive.

It is stated by prior studies that dividend payment policy has an impact on the firm's performance (Bhattacharya, 1989; Black, 1996; Mehran, 1995; Pettit, 1972). Mehran (1995) examines the executive compensation structure of 153 randomly-selected manufacturing firms in 1979–1980 and finds evidence supporting advocates of incentive compensation. He suggests that the form of compensation is what motivates managers to increase firm value. Firm value is positively related to the

percentage of equity held by managers. Both Fazzari et al. (1988) and Servaes (1996) use dividend payment as a dummy variable to control for its effect on the variables of interest. In the spirit of these prior studies, we include a dummy variable, dividend payment that equals to one if firm i pays a dividend to its common shareholders in year t and zero otherwise ($DP_{i,t}$). The expected sign on $DP_{i,t}$ is positive.

Variables of Interest
Leverage

A considerable number of prior studies have examined the relation between a firm value and its leverage (Barclay et al., 1995; M. Harris & Raviv, 1991; Higgins, 1977; SooCheong Jang, 2011; Karadeniz et al., 2009; Lee, 2007; Myers, 1984; Scott, 1972). Ross (1977) asserts that high levels of debt are interpreted as a signal of high-quality future cash flows for the firm. Jensen (1986) agrees with the concept by stating that increasing debt leverage in a capital structure may solve agency problems and enhance firm performance. Houmes and Chira (2015) include $LEV_{i,t}$ in their analysis since financial leverage magnifies the effect that changes in sales have on earnings. Increased debt also may affect monitoring actions by equity holding managers.

In view of the unique financing features of the capital intensive hotel industry highlighted by SooCheong Jang et al. (2008), we presume that a hotel firm financed by a high level of leverage can enjoy tax-deductible benefit of debt interest and achieve lower WACC. Its capacity to manage large amounts of debt also sends a positive signal to the stock market participants and attracts more investments. The agency issue of over-investment and excessive cash flow resulted from asymmetric information between hotel managers and shareholders can be restrained by leverage financing. Ultimately, the hotel firm value is enhanced. Therefore, we propose a positive relation between leverage ($LEV_{i,t}$) and a hotel's firm value ($lnQ_{i,t}$). $LEV_{i,t}$ in the model refers to firm i's leverage measured as firm i's total debt divided by total assets in fiscal year t.

Earnings Quality: Discretionary Accruals
Dechow and Dichev (2002) derive an empirical measure of accrual quality as the residuals from firm-specific regressions of changes in working capital on past, present, and future operating cash and find the accrual quality is positively related to earnings. Hribar and Nichols (2007) examine the implications of using the absolute value of discretionary accruals when testing for earnings management and

find a reverse relation between discretionary accruals and earnings quality. L. P. Esteban and Devesa (2011) identify a negative relation between firm performance and earnings management by using accruals as a proxy. Numerous prior studies use the Modified Jones model to proxy for earnings management (Houmes et al. 2013). $AAC_{i,t}$ refers to a firm's earnings quality using the proxy of firm i's discretionary accruals in fiscal year t measured by the modified Jones model. Principal-owner agency conflicts intensify due to the common practice of brand franchising in the hotel industry. The incentive to maximize their compensation benefits drives the hotel executives to manage earnings with income increasing discretionary accruals. Hence, this study hypothesizes a positive relation between a hotel firm value and earnings quality, and a negative relation between a hotel firm value and accruals based on earnings management (H2).

The variable of interest, earnings quality, uses a proxy of discretionary accruals which is examined by using the Jones (1991) model (other studies following this approach include Xie (2001), Yu (2008) and Hwang and Kim (2012)). At first, the total accruals are calculated as the difference between net income and net operating cash flow. The total accruals are truncated at the 99th percentile to remove outliers that have the leverage to refit the following discretionary accruals model. In the first stage, we estimate the following firm-level regression for firm i in year t:

$$\frac{TA_{it}}{AT_{it-1}} = \alpha_1 \left(\frac{1}{AT_{it-1}}\right) + \alpha_2 \left(\frac{\Delta REVit}{AT_{it-1}}\right) + \alpha_3 \left(\frac{PPEit}{AT_{it-1}}\right) + \varepsilon_{it} \qquad (2)$$

where TA is the total accruals (calculated by net income minus net cash flow); AT is total assets; REV is the sales revenues; PPE is the gross property, plant, and equipment; ε is an error term; i is the index for firm (i=1,2,…,N);T is the index for the period (year) in the estimation period (t=1,2,…,T); Δ is the change in a given variable.

Dechow et al. (1995) assert if the firm does not manage earnings in the estimation period and manages accounts receivable in the event period, then accruals of credit sales are normal in the estimation period and abnormal in the event period. Thus, the modified model recognizes this difference in time-series analysis by making some adjustments in the second estimation stage (the event period), when normal accruals, NDA, are computed by multiplying the estimated coefficient of the change in sales from equation (1) by the change in cash sales (the change in revenues minus the change in accounts receivable) instead of the change in sales. The NDA of firm i in the event period t are computed as follows:

$$NDA_{it} = \hat{\alpha}_1\left(\frac{1}{AT_{it-1}}\right) + \hat{\alpha}_2 \left(\frac{\Delta REV_{it} - \Delta AR_{it}}{AT_{it-1}}\right) + \hat{\alpha}_3 \left(\frac{PPE_{it}}{AT_{it-1}}\right) \qquad (3)$$

where NDA$_{it}$ represents the normal, non-discretionary accruals of firm i in period t; AT$_{it-1}$ refers to the lagged total assets of firm i; REV is sales revenues; AR stands for accounts receivable; PPE is PP&E; Δ is change; $\hat{\beta}_{1i}$ is the coefficient of total revenues in the estimation period. It is estimated from the regression of accruals on ΔREV_i and PPE$_i$.

The estimator, then, for the abnormal (discretionary) accrual component is calculated as the difference between total accruals and non-discretionary accruals:

$$AAC_{it} = \frac{TA_{it}}{AT_{it-1}} - NDA_{it} \tag{4}$$

The use of discretionary-accruals to measure earnings management and earnings quality is motivated by numerous studies providing evidence that they are helpful in capturing creative accounting practices (Bartov et al., 2000; William H. Beaver & Engel, 1996; P. M. Dechow et al., 1995; Gul et al., 2003). Meanwhile, the literature also warns that discretionary-accruals estimates should be interpreted with extreme caution. In the last chapter, we will discuss potential shortcomings surrounding discretionary-accruals as an indicator of earnings quality in our attempt to address the issue.

Financial Crisis

Prior studies (Campello et al., 2010; Gonenc & Aybar, 2006; Harrison & Wisnu Widjaja, 2014; Korajczyk & Levy, 2003) have detected changes on firm's capital structure, earnings management and their impact on firm performance during a financial crisis and economic recessions. FINCRIS$_t$ is a dummy variable indicating the financial crisis period of 2008. It is measured as an indicator variable that equals to one if the fiscal year is 2008 and zero otherwise (FINCRIS$_t$). It is used to test the effect of the interaction of financial crisis with the variable of interest on firm value during financial distress years.

Leverage and the Financial Crisis

Leverage magnifies the effect that changes in sales has on earnings. Hence, sales increase improves earnings. Considering the adverse effects from hotels' debt loads during periods of financial crisis, the positive relation between leverage and a hotel' firm value should decline. In addition, prior studies (Hackbarth et al., 2006; Korajczyk & Levy, 2003; Shleifer & Vishny, 1992) indicate that the macroeconomic conditions hamper a firm's ability to borrow funds and affect its capital structure choice. Firms tend to be more conservative in selecting their financing sources and resort to equity-financing even selling assets to avoid the risk of bankruptcy during

economic recessions. To test our assertion regarding the effect that the financial crisis had on the relation of our dependent variable $InQ_{i,t}$ and variable of interest $LEV_{i,t}$, we include the interaction term $LEV_{i,t} \times FINCRIS_t$ and hypothesize a decline in the $InQ_{i,t}$ - $LEV_{i,t}$, relation during the financial crisis year of 2008.

Accruals and the Financial Crisis

Prior studies (Campello et al., 2010; Johnson et al., 2000; Kim & Yi, 2006; Mitton, 2002) imply that earnings management by managers worsened during the financial crisis years. Managers took advantage of private information and manipulate discretionary accruals and accounting numbers more aggressively for their own benefits. Declining sales during financial constrained years may induce hotel managers to include higher earnings in the annual reports, which reduces earnings quality consequently. To test our assertion regarding the effect that the financial crisis had on the relation of our dependent variable $InQ_{i,t}$ and variable of interest $AAC_{i,t}$, we include the interaction term $AAC_{i,t} \times FINCRIS_t$ and hypothesize an increase on the relation during the financial crisis year of 2008.

Methodology and Proposed Models

To estimate the relations between the dependent variable (hotel firm value) and variables of interest (capital structure and earnings quality), we adopt the ordinary least squares(OLS) regression method in this study. Ordinary least-squares (OLS) regression, which is also known as linear regression, is one of the most popular statistical techniques used in the social sciences. Two goals of OLS regression are prediction (predicting values of a continuous response variable using one or more explanatory variables) and explanation (identifying the strength of the relationships between variables) (Hutcheson, 1999).

The testing equations are formulated as follows:

H1: A hotel's firm value increases with the magnitude of its leverage.

$$InQ_{i,t} = \alpha_0 + \alpha_1 BIGN_{i,t} + \alpha_2 Ret_{i,t} + \alpha_3 TA_{i,t} + \alpha_4 InAT_{i,t} + \alpha_5 OCF_{i,t} + \alpha_6 ROA_{i,t} + \alpha_7 DP_{i,t} + \alpha_8 LEV_{i,t} + \varepsilon_{i,t} \tag{5}$$

H2: A hotel's firm value increases with its earnings quality.

$$InQ_{i,t} = \alpha_0 + \alpha_1 BIGN_{i,t} + \alpha_2 Ret_{i,t} + \alpha_3 TA_{i,t} + \alpha_4 InAT_{i,t} + \alpha_5 OCF_{i,t} + \alpha_6 ROA_{i,t} + \alpha_7 DP_{i,t} + \alpha_8 AAC_{i,t} + \varepsilon_{i,t} \tag{6}$$

To further investigate the impact of financial crisis on the tested relations, the following equations are formulated:

H3: The positive effect that leverage has on a hotel's firm value declines during the 2008 financial crisis.

$$InQ_{i,t} = \alpha_0 + \alpha_1 BIGN_{i,t} + \alpha_2 Ret_{i,t} + \alpha_3 TA_{i,t} + \alpha_4 InAT_{i,t} + \alpha_5 OCF_{i,t} + \alpha_6 ROA_{i,t} + \alpha_7 DP_{i,t} + \alpha_8 LEV_{i,t} + \alpha_9 FINCRIS_t + \alpha_{10} LEV_{i,t} \times FINCRIS_t + \varepsilon_{i,t} \qquad (7)$$

H4: The positive effect that earnings quality has on a hotel's firm value decreases during the 2008 financial crisis.

$$InQ_{i,t} = \alpha_0 + \alpha_1 BIGN_{i,t} + \alpha_2 Ret_{i,t} + \alpha_3 TA_{i,t} + \alpha_4 InAT_{i,t} + \alpha_5 OCF_{i,t} + \alpha_6 ROA_{i,t} + \alpha_7 DP_{i,t} + \alpha_8 AAC_{i,t} + \alpha_9 FINCRIS_t + \alpha_{10} AAC_{i,t} \times FINCRIS_t + \varepsilon_{i,t} \qquad (8)$$

To further confirm the validity of the inferences drawn from the ordinary least squares (OLS) model, we adopt two different methodologies (Generalized Least Squares (GLS) regression and Peterson (2009) Clustered Standard Error Model) to analyze the testing data. Generalized Least Squares (GLS) is advocated by Wiggins and Poi (2001) to test panel data for heteroscedasticity and autocorrelation. Hence, GLS is suitable for robustness test considering that this research uses panel data and that the residuals may be correlated. In addition, the clustered standard error model recommended by Petersen (2009) is also utilized as a robustness check in this study, as a way to moderate the firm-fixed and year-fixed effects so to correct the standard errors for clustering effects (King & Segal, 2009).

RESULTS AND DISCUSSION

Univariate Results

The univariate analyses provide initial evidence on this study's predictions on the effect of the variables of interest ($LEV_{i,t}$, $AAC_{i,t}$, and $InATR_{i,t}$) on our dependent variable, Tobin's Q ($InQ_{i,t}$). Table 1 presents a summary of the descriptive statistics including observation size, mean, standard deviation, median, minimum, and maximum values. According to Table 1, there are 496 firm-year observations. The average value (mean) and middle value (median) of the dependent variable, Tobin's Q ($InQ_{i,t}$), are 1.36 and 1.19 respectively, with the minimum and maximum values ranging from -0.30 to 4.61. This indicates that hotel firms in the sample are valued at a premium to their book value (Tobin's Q >1) (Himmelberg et al., 1999).

The mean for $BIGN_{i,t}$ is 0.63, suggesting that 63% of the observed firms are audited by BIGN auditors. The mean for $DP_{i,t}$ is 0.44, implying that there are approximately 44% observed firms pay dividends. As expected, the mean and median of $AAC_{i,t}$ are -0.001 and 0.00 respectively, indicating the ethics of the

study's discretionary accruals. Additionally, the mean and median of asset turnover ratio's log transformation value are both negative, indicating the ratio of sales over total assets is less than 1. This suggests that the asset in the hotel industry is dominating, unlike other industries. Finally, the means and medians of all model variables are similar in value. Hence, the observations are evenly distributed around the mean, suggesting the absence of outliers.

Insert Table 1 Here

H1 and H2 are supported by the preliminary results of the univariate analysis in Table 2 which demonstrates the Pearson correlations for model variables. The results show that Tobin's Q (InQ$_{i,t}$) is positively related to leverage (LEV$_{i,t}$) at a significance level of 0.1%, and positively related to asset turnover ratio (InATR$_{i,t}$) at a significance level of 1%. In addition, Tobin's Q (InQ$_{i,t}$) decreases with the increase of discretionary accruals (AAC$_{i,t}$) at a significance level of 1%. The observation conforms to our predictions. The results imply that there is a high probability that a hotel's firm value increases with the magnitude of its leverage and earnings quality.

Insert Table 2 Here

To gain an initial understanding on how the financial crisis impacted our dependent variable (InQ$_{i,t}$) and variables of interest (LEV$_{i,t}$ and AAC$_{i,t}$), we conduct another univariate analysis to show the mean value of descriptive statistics by fiscal year in Table 3. As determined by the Business Cycle Dating Committee of the National Bureau of Economic Research (NBER, 2010), the latest financial crisis began in December 2007 and ended in June 2009. In general, comparing with other fiscal years, we can see a decline in Tobin's Q (InQ$_{i,t}$) and leverage (LEV$_{i,t}$), but an increase in discretionary accruals (AAC$_{i,t}$) during the three fiscal years of 2007, 2008 and 2009. The observed trends align with our predictions that hotels' firm value, leverage magnitude, and earnings quality were negatively influenced during the financial crisis year of 2008.

Insert Table 3 Here

Regression Results
Control Variables
    The results of our control variables are displayed across Table 4 to Table 7. The same control variables are used in all models so to maintain consistent control over the effect of our variables of interest having on the dependent variable. Therefore, the results vary depending on the testing models. In general, findings show that $RET_{i,t}$ is positive, corresponding with the predicted sign, implying that there is a positive association between stock market returns and firm value. Similarly, $lnAT_{i,t}$ is positive, in accordance with the predicted sign, suggesting that more sophisticated larger firms with developed financial reporting tend to be valued more.

    Moreover, $TA_{i,t}$ is positive and statistically significant, consistent with the predicted direction suggesting that hotel firms reporting higher total accruals are more likely to have higher values. This result corresponds with the (McNichols, 2000)'s assertion that growth firms report higher accruals. Finally, $DP_{i,t}$ turns out to be positive and statistically significant ($p < 0.05$), consistent with the predicted symbol, suggesting that the dividend payment policy of hotel firms has an impact on the firm value. This finding supports the prior literature, which implies that dividend payment as a form of compensation motivates managers to improve firm performance (Bhattacharya, 1989; Black, 1996; Mehran, 1995; Pettit, 1972).

Hotel's Firm Value, Leverage, and Earnings Quality
    The ordinary least squares (OLS) regression is run for the 72 hotel firms used in the sample from 1991 to 2017. Table 4 presents the estimation results of testing if the magnitude of leverage is positively related to a hotel's firm value by using the first proxy $LEV_{i,t}$. The results are in line with the univariate results reported in Table 2. Consistent with our study's predictions on H1, we find that with controls, the coefficient on $LEV_{i,t}$ is positive and statistically significant (coefficient = 0.431, $p < 0.01$). This suggests that the higher the magnitude of leverage a hotel firm has in its capital structure, the higher its firm value is. A hotel's firm value is improved when its magnitude of leverage increases.

Insert Table 4 Here

Results of robustness tests from Model 2 (GLS) and Model 3 (Peterson Model) shown in Table 4 confirm the earlier results of testing the increased hotels' value firm with the magnitude of leverage from the ordinary least squares (OLS) model. The significance levels hold similar to earlier OLS results at (p <0.01) for both models.

Table 5 displays the estimation results of testing if earnings quality is positively related to a hotel's firm value by using the second proxy $AAC_{i,t}$. Consistent with our study's predictions on H2, we find that the coefficient on $AAC_{i,t}$ is negative and statistically significant (coefficient = -0.165, $p < 0.01$). This implies that the lower the discretionary accruals a hotel firm has, the higher its earnings quality is and thus, the higher its firm value is. A hotel's firm value is improved when its earnings quality increases with decreased discretionary accruals.

Insert Table 5 Here

Results of robustness tests from Model 2 and Model 3 shown in Table 5 corroborate earlier results on the positive effect of earnings quality on hotels' firm value, at the same significance level of 1% (p <0.01) for both models.

Financial Crisis, Leverage and Earnings Quality

To investigate the impact of the financial crisis on a firm's capital structure, we include a dummy variable $FINCRIS_t$ and the interaction term ($LEV_{i,t} \times FINCRIS_t$) in the testing model in Table 7. Table 7 reports the estimation results of testing if the positive effect that leverage has on a hotel's firm value declines during the financial crisis. Consistent with our study's predictions on H3, we find that the coefficient on the interaction term ($LEV_{i,t} \times FINCRIS_t$) is negative and statistically significant (coefficient = -0.211, $p < 0.05$), while the coefficient on $LEV_{i,t}$ remains to be positive and statistically significant (coefficient = 0.442, $p < 0.01$). This implies that under the influence of financial crisis of 2008, the positive effect that leverage has on a hotel's firm value declines.

Results of robustness tests from the 2007&2008 Model shown in Table 7 confirm earlier OLS results of testing the impact of financial crisis on the positive effect that leverage has on a hotel's firm value. Given that the latest financial crisis is determined by National Bureau of Economic Research (NBER, 2010) to be from December 2007 to June 2009, we add one more year (2007) into the dummy variable FINCRIS to test the robustness of results on the interaction term ($LEV_{i,t} \times FINCRIS_t$).

Findings are consistent with the original Model of 2008, showing a negative coefficient at a significance level of 10%. This further verifies the positive effect that leverage has on a hotel's firm value declines during the financial crisis.

Insert Table 7 Here

To investigate the impact of the financial crisis on a hotel firm's earnings quality, we include a dummy variable $FINCRIS_t$ and the interaction term ($AAC_{i,t} \times FINCRIS_t$) in the testing model in Table 8. Table 8 displays the estimation results of testing if the positive effect that earnings quality has on a hotel's firm value declines during the 2008 financial crisis. Consistent with our study's predictions on H4, we find that the coefficient on the interaction term ($AAC_{i,t} \times FINCRIS_t$) is positive and statistically significant (coefficient = 0.097, $p < 0.01$), while the coefficient on $AAC_{i,t}$ remains to be negative and statistically significant (coefficient = -0.17, $p < 0.01$). This implies that under the influence of the financial crisis of 2008, the negative effect that discretionary accruals have on a hotel's firm value increases, and the positive effect that earnings quality has on a hotel's firm value declines.

The same 2007&2008 Model is used in Table 8 to confirm earlier results of testing the impact of financial crisis on the positive effect that earnings quality has on a hotel's firm value. Again, findings are consistent with the original Model of 2008, showing a positive coefficient on the interaction term ($AAC_{i,t} \times FINCRIS_t$) at a significance level of 1%. This further affirms the positive effect that earnings quality has on a hotel's firm value decreases during the financial crisis.

Insert Table 8 Here

CONCLUSION

This study examines the effects of leverage and earnings quality on a hotel's firm value. From both our univariate and multivariate analyses, we find strong evidence supporting our assertion that a hotel's magnitude of leverage in its capital structure increases its firm value. Similarly, results also provide evidence that the increased

discretionary accruals bring down earnings quality, and in turn, decrease a hotel's firm value.

To further investigate the impact of the financial crisis on our testing constructs, we include a dummy variable (FINCRIS) and explore its interaction effect with leverage and earnings quality. Results reinforce the notion that the financial crisis has a negative influence on the positive effect that leverage has on a hotel's firm value. Likewise, the financial crisis may lead to more intensified earnings management with increased discretionary accruals, which decreases the positive effect that earnings quality has on a hotel's firm value.

This study provides new information regarding the effects of leverage and earnings quality on a hotel's firm value. Since the hotel industry is unique in its sensitivity to business cycles and investments into long-lived assets, we believe the current study adds value to the existing body of research on hotels.

Implications
Practical implications can be inferred from the results of this study. First, hotel managers should pay attention to the magnifying effect of leverage on firm performance. While increasing the ratio of debt-financing in the hotel firm's capital structure may improve firm value, the same practice may lead to a higher risk of bankruptcy during the financially constrained years. Therefore, it is potentially advisable for the hotel managers to reduce leverage in view of the negative effect of financial crisis on the positive effect of leverage on the hotel's firm value during financial distress years. Decision makers of hotel firms should adopt a contingent strategy when facing different macroeconomic situations. They should set an optimal target debt ratio depending on the trade-off between the benefits and costs of debt.

Second, the current study also provides new insight to the market participants on how to invest appropriately. Based on the findings, there is a high probability of hotel managers engaging in earnings management during the financial distress period. Hotel managers may take advantage of the asymmetric information on the over-valued equity for their private benefits. Hence, market participants should be more cautious in choosing the right firms to invest during the financial crisis years.

Last, our findings can assist regulators to set audit requirements and ethics standards. Results from this study reveal a negative effect of discretionary accruals on hotels' firm value, which intensifies during the financial crisis. This provides incentives and justification to regulators to set the appropriate audit requirements for hotel firms, especially during financial crisis, to avoid similar financial failures and accounting scandals like Enron and WorldCom.

Limitations

This study is limited to the size of observed firms and the reliance on data collected solely from Compustat database. Although Compusat contains a substantive database on hotels' firm value and other related variables of interest in the North America region, other resources such as Bloomberg and STR (Smith Travel Research) can be used to enlarge the sample size and enhance the generalizability of our findings.

Recommendation for Future Research

Future research may extend our analysis by including one more industry (e.g. manufacturing industry) and compare the valuation effect of leverage on firm value. As contended by Atul (1994), the determinants of leverage vary between the two industries (hotel and manufacturing). Therefore, differences in the valuation effect of leverage on firm value may also be detected by using the models in our study. Moreover, instead of using the North American data source alone, the future study may extend the testing sample into the global source to add an international perspective in the research. One more country (e.g. China) with distinctive macroeconomic features can be included to conduct a comparative analysis by adopting our testing models on the valuation effect. Last, one more possibility of future study is to include some industry-specific variables (e.g. seasonality, hotel occupancy rate, and average daily rate) in the current models, which may shed light on the effect of industry-specific variables on hotel's firm value and the corresponding changes during the financial crisis.

TABLES

Table 1
Summary Statistics N=496

Variable	Mean	Std. Dev.	Median	Min	Max
$InQ_{i,t}$	1.36	0.93	1.19	-0.30	4.61
$BIGN_{i,t}$	0.63	0.48	1.00	0.00	1.00
$Ret_{i,t}$	12.74	17.69	15.06	-37.00	37.58
$TA_{i,t}$	-0.06	0.14	-0.04	-1.00	0.31
$InAT_{i,t}$	5.90	2.27	6.12	-0.27	9.71
$OCF_{i,t}$	0.05	0.10	0.06	-0.50	0.30
$ROA_{i,t}$	-0.04	0.56	0.02	-6.27	0.31
$DP_{i,t}$	0.44	0.50	0.00	0.00	1.00
$LEV_{i,t}$	0.34	0.25	0.32	0.00	1.65
$AAC_{i,t}$	-0.01	0.11	0.00	-0.54	0.45
$FINCRIS_t$	0.03	0.16	0.00	0.00	1.00
$LEV_{i,t} \times FINCRIS_t$	0.01	0.06	0.00	0.00	0.65
$AAC_{i,t} \times FINCRIS_t$	0.00	0.01	0.00	-0.08	0.18
$InATR_{i,t}$	-0.69	0.68	-0.73	-3.71	1.37

The descriptive statistics draws on data from Compustat from years 1991 to 2017.

See Appendix for variable definitions.

Variables	$InQ_{i,t}$	$BIGN_{i,t}$	$Ret_{i,t}$	$TA_{i,t}$	$InAT_{i,t}$	$OCF_{i,t}$	$ROA_{i,t}$	$DP_{i,t}$	$LEV_{i,t}$	$AAC_{i,t}$	$ATR_{i,t}$
$InQ_{i,t}$	1										
$BIGN_{i,t}$	-0.148**	1									
$Ret_{i,t}$	0.0503	-0.106*	1								
$TA_{i,t}$	-0.0150	-0.0864	0.0295	1							
$InAT_{i,t}$	0.0711	0.175***	-0.101*	0.0536	1						
$OCF_{i,t}$	-0.0795	0.0661	0.0633	-0.378***	0.0533	1					
$ROA_{i,t}$	-0.107*	-0.0179	0.0678	0.478***	0.0912*	0.524***	1				
$DP_{i,t}$	0.161***	0.120**	-0.0306	0.0552	0.243***	0.130**	0.174***	1			
$LEV_{i,t}$	0.457***	-0.112*	-0.0339	-0.00231	0.149***	-0.171***	-0.189***	0.0493	1		
$AAC_{i,t}$	-0.127**	-0.0701	-0.0570	0.491***	-0.0182	-0.245***	0.306***	0.0331	-0.0223	1	
$InATR_{i,t}$	0.133**	-0.0438	0.0459	0.0424	-0.0920*	0.227***	0.241***	0.0343	-0.217***	-0.0669	1

This table reports results from Pearson Correlation Matix. *,**,*** Denote significance levels of 5 percent, 1 percent and 0.1 percent, respectively.

See Appendix for variable definitions.

Table 3
Descriptive Statistics -
mean by(fyear)

Year	InQ$_{i,t}$	LEV$_{i,t}$	AAC$_{i,t}$
1991	1.382	0.227	-0.015
1992	1.115	0.339	-0.008
1993	1.154	0.299	0.007
1994	1.298	0.273	-0.007
1995	1.284	0.325	0.018
1996	1.39	0.355	-0.004
1997	1.408	0.338	-0.002
1998	1.443	0.368	-0.008
1999	1.406	0.357	0.007
2000	1.283	0.378	-0.006
2001	1.164	0.396	0.002
2002	1.223	0.365	0.01
2003	1.253	0.373	-0.03
2004	1.487	0.388	-0.003
2005	1.341	0.327	0.005
2006	1.632	0.264	-0.007
2007	1.654	0.371	0.002
2008	1.257	0.327	0.008
2009	1.338	0.285	0.003
2010	1.394	0.241	-0.166
2011	1.124	0.234	0
2012	1.164	0.235	-0.009
2013	1.288	0.346	-0.009
2014	1.366	0.426	0.005
2015	1.621	0.377	-0.007
2016	1.707	0.432	-0.007
2017	2.907	0.455	-0.002

This table shows the means of main descriptive statistics
arranged by fiscal year 1991 to 2017.

See Appendix for variable definitions.

Table 4
Hotels' Firm Value and Leverage

Variables	Predicted Sign	Model 1 OLS	Robustness Check	
			Model 2 GLS	Model 3 Peterson
BIGN$_{i,t}$	+	-0.118	-0.102	-0.228
		(-1.482)	(-2.178)**	(-1.467)
Ret$_{i,t}$	+	0.056	0.002	0.003
		(1.112)	(2.937)***	(1.529)
TA$_{i,t}$	+	0.052	0.493	0.453
		(1.050)	(1.844)*	(1.063)
InAT$_{i,t}$	+	0.002	-0.036	0.001
		(0.022)	(-2.500)**	(0.023)
OCF$_{i,t}$	+	0.086	1.418	0.991
		(0.741)	(2.633)***	(0.889)
ROA$_{i,t}$	+	-0.186	-1.715	-1.502
		(-1.849)*	(-4.080)***	(-2.320)**
DP$_{i,t}$	+	0.165	0.210	0.308
		(2.182)**	(4.448)***	(2.195)**
LEV$_{i,t}$	+	0.431	1.417	1.815
		(4.145)***	(13.083)***	(4.294)***
Constant		.	0.995	0.723
		(2.352)**	(9.991)***	(2.500)**
Observations		496	486	496
Adjusted R-squared		0.250		0.262
F		5.279***		17.750
Wald chi2			238.100***	
Firm-fixed Effect				Yes
Year-fixed Effect				Yes

*,**,*** Denote significance levels of 10 percent, 5 percent and 1 percent, respectively.
This table reports the results on the relation between hotels' value firm and magnitude of leverage under 3 different models (Ordinary Least Squares (OLS) regression, Generalized Least Squares (GLS) regression, and Peterson (2009) Clustered Standard Error Model).
Testing equation: $InQ_{i,t} = \alpha 0 + \alpha 1 BIGN_{i,t} + \alpha 2 Ret_{i,t} + \alpha 3 TA_{i,t} + \alpha 4 InAT_{i,t} + \alpha 5 OCF_{i,t} + \alpha 6 ROA_{i,t} + \alpha 7 DP_{i,t} + \alpha 8 LEV_{i,t} + \varepsilon_{i,t}$ (5)

See Appendix for variable definitions.

Table 5
Hotels' Firm Value and Earnings Quality

Variables	Predicted Sign	Model 1 OLS	Robustness Check Model 2 GLS	Robustness Check Model 3 Peterson
BIGN$_{i,t}$	+	-0.186	-0.131	-0.358
		(-1.928)*	(-2.663)***	(-1.935)*
Ret$_{i,t}$	+	0.037	0.002	0.002
		(0.677)	(2.486)**	(1.097)
TA$_{i,t}$	+	0.126	0.520	1.093
		(2.116)**	(1.086)	(2.018)**
InAT$_{i,t}$	+	0.075	0.014	0.032
		(0.796)	(0.948)	(0.851)
OCF$_{i,t}$	+	0.022	0.697	0.259
		(0.167)	(0.992)	(0.208)
ROA$_{i,t}$	+	-0.226	-1.501	-1.824
		(-2.096)**	(-2.651)***	(-2.887)***
DP$_{i,t}$	+	0.19	0.193	0.356
		(2.433)**	(4.211)***	(2.388)**
AAC$_{i,t}$	-	-0.165	-0.423	-1.382
		(-3.096)***	(-2.757)***	(-3.416)***
Constant		.	1.192	1.262
		(3.761)***	(12.311)***	(4.052)***
Observations		496	486	496
Adjusted R-squared		0.095		0.110
F		4.583***		8.954
Wald chi2			102.400***	
Firm-fixed Effect				Yes
Year-fixed Effect				Yes

*,**,*** Denote significance levels of 10 percent, 5 percent and 1 percent, respectively.
This table reports the results on the relation between hotels' value firm and earnings quality using discretionary accruals as a proxy, under 3 different models (Ordinary Least Squares (OLS) regression, Generalized Least Squares (GLS) regression, and Peterson (2009) Clustered Standard Error Model).
Testing equation: $InQi,t = \alpha0 + \alpha1BIGNi,t + \alpha2Reti,t + \alpha3TAi,t + \alpha4InATi,t + \alpha5OCFi,t + \alpha6ROAi,t +$

$\alpha7DPi,t + \alpha8AACi,t + \varepsilon i,t$ (6)

See Appendix for variable definitions.

Table 7
Impact of Financial Crisis on the Relation of
Hotels' Firm Value and Leverage

Variables	Predicted Sign	2008	Robustness Check 2007&2008
$BIGN_{i,t}$	+	-0.116	-0.110
		(-1.472)	(-1.434)
$Ret_{i,t}$	+	0.057	0.076
		(1.112)	(1.572)
$TA_{i,t}$	+	0.051	0.048
		(1.028)	(0.996)
$InAT_{i,t}$	+	-0.001	-0.001
		(-0.010)	(-0.013)
$OCF_{i,t}$	+	0.088	0.092
		(0.766)	(0.826)
$ROA_{i,t}$	+	-0.186	-0.187
		(-1.868)*	(-1.948)*
$DP_{i,t}$	+	0.171	0.173
		(2.307)**	(2.392)**
$LEV_{i,t}$	+	0.442	0.448
		(4.252)***	(4.292)***
$FINCRIS_t$	-	0.193	0.281
		(1.721)*	(1.820)*
$LEV_{i,t} \times FINCRIS_t$	-	-0.211	-0.261
		(-2.172)**	(-1.849)*
Constant		.	.
		(2.347)**	(2.239)**
Observations		496	496
Adjusted R-squared		0.255	0.259
F		5.301***	5.443***

*,**,*** Denote significance levels of 10 percent, 5 percent and 1 percent, respectively.
This table reports the results on the change of effect that leverage has on a hotel firm's value during financial crisis of 2008, under Ordinary Least Squares (OLS) regression. The combined years of 2007 and 2008 are used as a robustness test.

Test equation: $InQ_{i,t} = \alpha_0 + \alpha_1 BIGN_{i,t} + \alpha_2 Ret_{i,t} + \alpha_3 TA_{i,t} + \alpha_4 InAT_{i,t} + \alpha_5 OCF_{i,t} + \alpha_6 ROA_{i,t} + \alpha_7 DP_{i,t} + \alpha_8 LEV_{i,t} + \alpha_9 FINCRIS_t + \alpha_{10} LEV_{i,t} \times FINCRIS_t + \varepsilon_{i,t}$ (7)

See Appendix for variable definitions.

Table 8
Impact of Financial Crisis on the Relation of
Hotels' Firm Value and Earnings Quality

Variables	Predicted Sign	2008	Robustness Check 2007&2008
$BIGN_{i,t}$	+	-0.192	-0.190
		(-1.992)*	(-1.981)*
$Ret_{i,t}$	+	0.036	0.059
		(0.605)	(1.056)
$TA_{i,t}$	+	0.125	0.122
		(2.235)**	(2.212)**
$InAT_{i,t}$	+	0.079	0.080
		(0.851)	(0.866)
$OCF_{i,t}$	+	0.031	0.034
		(0.240)	(0.265)
$ROA_{i,t}$	+	-0.23	-0.231
		(-2.247)**	(-2.297)**
$DP_{i,t}$	+	0.187	0.187
		(2.415)**	(2.435)**
$AAC_{i,t}$	-	-0.17	-0.172
		(-3.168)***	(-3.161)***
$FINCRIS_t$	-	-0.022	0.042
		(-0.470)	(0.669)
$AAC_{i,t} \times FINCRIS_t$	+	0.097	0.090
		(4.411)***	(2.928)***
		.	.
Constant		(3.743)***	(3.669)***
Observations		496	496
Adjusted R-squared		0.100	0.102
F		6.555***	5.009***

*,**,*** Denote significance levels of 10 percent, 5 percent and 1 percent, respectively.

This table reports the results on the change of effect that leverage has on a hotel firm's value during financial crisis of 2008, under Ordinary Least Squares (OLS) regression. The combined years of 2007 and 2008 are used as a robustness test.

Test equation: $InQ_{i,t} = \alpha_0 + \alpha_1 BIGN_{i,t} + \alpha_2 Ret_{i,t} + \alpha_3 TA_{i,t} + \alpha_4 InAT_{i,t} + \alpha_5 OCF_{i,t} + \alpha_6 ROA_{i,t} + \alpha_7 DP_{i,t} + \alpha_8 AAC_{i,t} + \alpha_9 FINCRIS_t + \alpha_{10} AAC_{i,t} \times FINCRIS_t + \varepsilon_{i,t}$ (8)

See Appendix for variable definitions.

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Appendix. Variable Definition

Variable	Definition
$InQ_{i,t}$	Logarithmic transformed Tobin's Q, which is calculated as the ratio of market value of firm i divided by the replacement value of assets in fiscal year t. Market value of the firm is calculated as the sum of market capitalization (current market price of the stock multiplied by common shares outstanding) and total liability. Replacement value of assets is the proxy of book value of total assets. It is calculated by book value per share multiplied by common shares outstanding.
$BIGN_{i,t}$	A dummy variable equal to 1 if firm i is audited by one of the largest 4, 5, or 6 audit firms in fiscal year t, equals to 0 otherwise.
$Ret_{i,t}$	A variable indicating the end of fiscal year stock returns with dividends returns of firm i in fiscal year t, using the S&P 500 annual total return as a proxy.
$TA_{i,t}$	A variable indicating the total accruals of firm i in fiscal year t, measured as the difference between firm i's earnings before extraordinary items and net operating cash flow in year t scaled by the beginning of the year t assets.
$InAT_{i,t}$	A variable indicating the log of size of firm i in total assets for fiscal year t.
$OCF_{i,t}$	A variable indicating operating cash flow measured as firm i's operating cash flow in period t divided by firm i's total assets in fiscal year t.
$ROA_{i,t}$	A variable indicating return on assets measured as firm i's net income in period t divided by firm i's total assets also in fiscal year t.
$DP_{i,t}$	A dummy variable equal to 1 for firm i that made a dividend payment during fiscal year t and 0 otherwise.
$LEV_{i,t}$	A variable indicating leverage measured as firm i's total debt divided by total assets in fiscal year t.
$AAC_{i,t}$	A variable indicating firm i's earnings quality using the proxy of firm i's discretionary accruals in fiscal year t measured by the modified Jones model.
$FINCRIS_t$	A dummy variable indicating financial crisis period. It equals to 1 if the fiscal year is 2008 and equals to 0 otherwise.
$LEV_{i,t} \times FINCRIS_t$	Interaction term to the effect that the financial crisis in 2008 had on the relation of the dependent variable $InQ_{i,t}$ and variable of interest $LEV_{i,t.}$
$AAC_{i,t} \times FINCRIS_t$	Interaction term to the effect that the financial crisis in 2008 had on the relation of the dependent variable $InQ_{i,t}$ and variable of interest $AAC_{i,t.}$