

2005

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## Recommended Citation

Sheel, Atul and Zhong, Yi (2005) "Cash Dividend Announcements and Abnormal Returns in Lodging and Restaurant Sectors: An empirical examination," *Journal of Hospitality Financial Management*: Vol. 13 : Iss. 1 , Article 25.

Available at: <http://scholarworks.umass.edu/jhfm/vol13/iss1/25>

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# **CASH DIVIDEND ANNOUNCEMENTS AND ABNORMAL RETURNS IN LODGING AND RESTAURANT SECTORS: AN EMPIRICAL EXAMINATION**

**Atul Sheel  
and  
Yi Zhong**

## **ABSTRACT**

Dividend relevance has been a subject of significant recent interest for academicians and researchers in the area of hospitality finance. The subject has attracted noticeable controversy, given the stringent or no-dividend payout policies observed in many hospitality firms. This study builds on existent dividend literature in hospitality finance by examining the relevance of cash dividends for public lodging and restaurant firms in US equity markets. It uses the event study approach to investigate abnormal returns for lodging and restaurant firms caused by cash dividend announcements during the period 1994 – 2002. Results are suggestive of the fact that at least during the test period, cash dividend increases were positively received by equity holders in both lodging and restaurant sectors. Results also suggest that dividend effect and abnormal returns were significantly different for the two sectors. As such the issue of dividend relevance in hospitality firms and the need for more prudent dividend policies in these firms is better understood.

## **Introduction**

The potential of a firm's dividend payout policy to influence its equity value has been a subject of interest for finance researchers since Modigliani and Miller (1961) demonstrated dividend policy irrelevance in perfect market conditions. Researchers have analyzed the relevance of dividend both theoretically and empirically (Ross, 1977; Bhattacharya, 1979; Litzenberger & Ramaswamy, 1979; Brennan & Thakor, 1990). In general, the empirical literature on dividends documents overwhelming evidence in support of a significant positive relationship between a firm's dividends and its equity returns (Friend & Puckett, 1964; Elton & Gruber, 1970; Pettit, 1972; Eades, Hess & Kim, 1984; Kothari & Shanken, 1992; DeAngelo, DeAngelo & Skinner, 2000; Docking & Koch, 2005). Within the existent empirical literature on dividends, cash dividend announcements and event studies have a special significance (Aharony & Swary, 1980; Eades, Hess & Kim, 1985; Conroy, Eades & Harris, 2000; Fair, 2002).

Although the issue of dividend relevance has been examined extensively from the general framework, dividend related research in the hospitality industry has been relatively ignored. Sheel (1998), Borde, Byrd & Atkinson (1999) and Canina, Advani, Greenman & Palimeri (2001) are some pioneering dividend studies that have documented a positive

relationship between firm value and dividend policy within the hospitality industry. The industry-specific uniqueness of dividend–value relationship for lodging and restaurant firms, however, has not been addressed by researchers till date. This research is an attempt to address such deficiency in the existent hospitality finance literature. It is expected that the results of this study should help researchers as well as practitioners by improving their understanding of unique dividend-value relationship within lodging and restaurant firms.

## **Research Purpose**

The main purpose of this research is to examine and compare the relationship between cash dividend announcements and cumulative abnormal returns (CARs) of equity in public US lodging and restaurant firms.

## **Research Methodology**

### **Hypotheses**

The research accomplishes its objective by testing three major hypotheses:

1. Dividend increase announcements do not influence the cumulative abnormal returns (CARs) of lodging and restaurant firms
2. There is no difference between the impact of dividend increase announcements on the cumulative abnormal returns (CARs) of lodging and restaurant firms
3. There is no difference between the impact of unchanged dividend announcements on the cumulative abnormal returns (CARs) of lodging and restaurant firms

### **Data Collection**

Data were retrieved from Standard and Poor's Net Advantage, Moody's Handbook of Dividend Achievers, Moody's Annual Dividend Records, and Financial Information Services (FIS). The data set covered a period between 1994 and 2002. SIC codes 7011, 7021, 7032, 7033 and 7041 were used for the lodging industry. SIC code 5812 was used for restaurant firms. Initially, 199 firms (55 lodging and 144 restaurant firms) were retrieved from Financial Information Services (FIS). However, a final comparison with Moody's Handbook of Dividend Achievers, Moody's Annual Dividend Records and Standard and Poor's Net Advantage yielded 22 (7 lodging and 15 restaurant) firms with 347 cash dividend announcements (47 dividend increase, 14 dividend decreases and 286 unchanged dividend announcements) for the period 1994 – 2002.

### **Event Window**

In event studies, an event window is the period when information about an event becomes available to the market and potentially influences the relevant firm's equity prices. Matching specific events to specific changes in equity prices is not easy. The longer the event window, the more likely the window includes the period in which the new event information is released. The tradeoff, however, is that long event windows may include noise and information from other events. Consequently, it may become difficult to isolate the impact of the relevant event and the abnormal equity returns relevant to a particular event may become biased. Based on the event windows in existent cash dividend literature the event window examined in this research spans 5 days prior to the announcement date (AD -5) to four days after the announcement date (AD+4). Such a choice of event window length is also in line with the market efficiency hypothesis.

## Analysis

Brown and Warner (1985) event study methodology was used to test the three research hypotheses.

### *Measurement of Abnormal Performance for a Hospitality Security*

As explained by Brown and Warner (1985) a security's abnormal price performance can only be measured relative to a benchmark. Hence it is necessary to specify a model generating 'normal' returns before abnormal returns can be measured. For a given security, the abnormal return in any time period, 't', is measured as the difference between its actual 'ex post' return and the expected return predicted under an assumed return generating process. Thereafter, cumulative abnormal returns (CARs) are computed as the sum of the average abnormal returns. Consistent with Brown and Warner (1985) the return generating process adopted in this study is the Market Model:

$$R_{it} = \alpha_i + \beta_i * R_{mt} + e_{it}$$

Or

$$E(R_{it}) = \alpha_i + \beta_i * R_{mt}$$

Where,

$R_{it}$  is the security's return at time t,  $R_{mt}$  is the return of the market portfolio, and  $\beta_i$  is the sensitivity of  $R_{it}$  to  $R_{mt}$  measured as  $Cov(R_{it}, R_{mt})/Var(R_{mt})$ .

The abnormal returns (AR) are therefore measured as:

$$AR_{it} = R_{it} - E(R_{it})$$

### *Measurement of Average Abnormal Returns (AARs) and Cumulative Abnormal Returns (CARs)*

The average abnormal returns ( $AAR_t$ ) are measured as:

$$AAR_t = \frac{1}{N} * \sum_{i=1}^N AR_{it}$$

Where,

N is the number of securities with abnormal returns on day t.

The cumulative abnormal returns (CARs) are measured as the sum of the  $AAR_t$  over the event period. That is, for a window AD to AD+4 (or day 0 to day 4), the CAR would be:

$$CAR = \sum_{t=0}^4 AAR_t$$

### *Normality of Security Returns and Hypotheses Test Statistics*

Shapiro-Wilk tests (W Tests) were used to test for normality of security returns. W - Statistics of 0.95, 0.85 and 0.90 for restaurants, hotels and a joint sample of restaurants and hotels suggested no evidence of non normality in the security return data sets used in the analyses. The three hypotheses tests were then constructed to determine whether security price movements during event windows were statistically significant. All tests were conducted at .05 to .01  $\alpha$  level. The t statistic to measure whether dividend increase announcements influenced the Cumulative Abnormal Returns (CARs) of hotels and restaurants (Hypothesis 1) was determined as:

$$t = \frac{CAR}{S / \sqrt{N}}$$

Where, CAR is the cumulative abnormal returns in the event window for all hotels and restaurant firms, S is the standard deviation of  $\beta$  - adjusted security returns over the estimation period, and N is the total number of securities.

To measure whether the dividend increase announcement effect is different across lodging and restaurant firms (Hypothesis 2), and also to determine whether the unchanged dividend announcement effect is different across lodging and restaurant firms (Hypothesis 3), the t statistic was determined as:

$$t = \frac{CAR_1 - CAR_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

where, CARs are the cumulative abnormal returns in the event window; 1 represents lodging firms and 2 represents restaurant firms; S is the standard deviation of  $\beta$  - adjusted security returns over the estimation period, and N is the total number of securities.

## Findings and Discussion

### Descriptive Trends

#### *Should Payout Policies Differ Across Lodging and Restaurant Firms?*

Dividend payout behavior of firms is often related to their financial health. In addition to a firm's earnings, one such health related measure is the firm's financial leverage. From the agency perspective, it is often suggested that firms shouldn't stretch out to pay their dividends out of borrowed funds (Brealy & Myers, 2000). In line with such rationale and as a preliminary step, this study researched financial leverage related data for 199 firms (55 lodging and 144 restaurant firms) at the onset. Table 1 summarizes the results of this analysis.

<b>Table 1</b>					
<b>Comparison of Debt Ratios Across Lodging and Restaurant Firms for the Period 1994 – 2002.</b>					
	Mean		Standard Deviation		t-score for Difference in Mean
	Restaurant Firms	Lodging Firms	Restaurant Firms	Lodging Firms	
N	144	55	144	55	
Long Term Debt to Equity	0.6091	4.1905	10.7118	12.2096	1.9124*
Total Debt to Equity	1.0878	4.4424	13.8069	12.9667	1.6027**
Solvency	2.368	2.478	4.091	4.494	0.158
Note: Long Term Debt to Total Equity = Long Term Liabilities/Total Owners' Equity Total Debt to Equity = Total Liabilities/Total Owners' Equity Solvency Ratio = Total Assets/Total Liabilities * Significant at $\alpha = .05$ ** Significant at $\alpha = .10$					

As shown in Table 1 at least for the test period, the debt ratios of lodging firms were significantly higher relative to those of restaurant firms (\$4.1905 long term debt and \$4.4424 total debt for every equity dollar, relative to \$0.6091 and \$1.0878 for restaurant firms). Such differences were significant at 0.05  $\alpha$  level (long term debt to total equity) and at 0.10  $\alpha$  level (total debt to equity). As mentioned earlier, dividend payout using borrowed funds is often perceived adversely by lenders and market alike. Consistent with this rationale, payout restricting debt covenants are more common in the lodging industry vis a vis the restaurant sector. It could be hypothesized, therefore, that a more restrictive payout policy in the lodging sector could, in turn, imply stronger security price reactions to dividend change announcements in lodging firms relative to those in restaurant firms.

*Distribution of Dividend Change and Unchanged Dividend Announcements  
- Are Dividends Sticky in the Hospitality Industry?*

A more conservative payout in lodging firms via a vis restaurants becomes more evident at least for the 1994 – 2002 period upon subsequent analysis of the data set. A final comparison of the 199 hospitality firms with dividend related databases yielded 22 firms (7 lodging and 15 restaurant) with 347 cash dividend announcements (47 dividend increase, 14 dividend decreases and 286 unchanged dividend announcements) for the period 1994 – 2002. Table 2 summarizes the distribution of these dividend announcements.

Company Name	Increases	Decreases	No Change
American Restaurant Partners, L.P.	1	3	19
Applebee's International Inc.	5	2	0
Avado Brands Inc.	1	0	3
Bob Evans Farms, Inc.	3	0	12
CKE Restaurants, Inc.	0	0	8
Cooker Restaurants, Inc.	3	0	2
Darden Restaurant	0	0	6
Fast Food Operators, Inc.	2	0	0
Frisch's Restaurants, Inc.	2	0	23
Hilton Hotels Corp.	0	0	22
Luby's Cafeterias, Inc.	4	0	22
Marcus Corp.	3	0	11
Marriott International, Inc.	4	1	23
McDonald's Corporation	7	1	18
Meristar Hotels & Resorts, Inc.	1	1	3
Million Dollar Saloon	2	4	4
Piccadilly Cafeterias, Inc.	0	0	20
Portsmouth Square, Inc.	2	1	12
Ruby Tuesday, Inc.	2	1	8
Sonesta International Hotels Corp.	0	0	37
Starwood Hotels and Resorts	5	0	10
Wendy's International, Inc.	0	0	23
Subtotal by Sector:			
Lodging	15	3	118
Restaurant	32	11	229

Lodging and Restaurant	47	14	286
Total Announcements	347		

As expected, only 31.8% out of the 22 dividend announcement firms for 1994 – 2002 were lodging firms, the remaining 68.2% being restaurants (Table 2). The lodging sector announcements included 15 dividend increases, 3 dividend decreases and 118 unchanged dividends. In contrast, the restaurant sector announcements included 32 dividend increases, 11 dividend decreases and 229 unchanged dividends. Such a trend is consistent with the rationale hypothesized in the previous section. Another trend is noteworthy in Table 2 – the significantly large number of unchanged dividend announcements (286 unchanged, 61 changed in all hospitality firms; 118 unchanged, 18 changed in lodging firms; 229 unchanged, 43 changed in restaurants). Such a trend supports the contention that dividend policies tend to be sticky and is consistent with the results of past dividend research (DeAngelo, DeAngelo & Skinner, 1992).

### **Announcement Effects and Dividend Relevance for Hospitality Firms**

The main purpose of this study was to examine and compare the relationship between of cash dividend announcements and cumulative abnormal returns (CARs) of equity in public US lodging and restaurant firms. As discussed earlier, the study used event study methodology to determine the abnormal returns (ARs), average abnormal returns (AARs) and the cumulative abnormal returns (CARs). The market model was used as the return generating process. Table 4 summarizes the results relevant to the three hypotheses tested.

<b>Table 4</b>				
<b>Cumulative Abnormal Returns Around Dividend Change Related Announcements – Lodging and Restaurant Firms for the Period 1994-2002.</b>				
	N	CAR	t-Score	p-value
Hypothesis 1	22	0.0118	3.3921	p<0.01
Hypothesis 2	22	0.0176*	2.4264	0.02<p<0.05
Hypothesis 3	22	0.03177*	9.4517	p<0.001
Note: N = Number of firms examined * $CAR =  CAR_1 - CAR_2 $ where 1 represents the lodging sector and 2 represents the restaurant sector.				

### *Do Dividend Increase Announcements Influence the Cumulative Abnormal Returns (CARs) of Lodging and Restaurant Firms? – Results Relevant to Hypothesis One*

The first hypothesis tested whether dividend increase announcements influence the Cumulative Abnormal Returns (CARs) of lodging and restaurant firms. As shown in



Table 4, the t-value of 3.3921 is significant and rejects the null at 99% confidence level. Such a result suggests that at least for 1994-2002, dividend increase announcements did influence the Cumulative Abnormal Returns (CARs) of both lodging and restaurant firms in the US equity markets. Such a result is also consistent with past research on dividend relevance within the hospitality industry (Sheel, 1998; Canina, Advani, Greenman & Palimeri, 2001). In turn, such a result also implies that hospitality CEOs and CFOs could use their dividend policy strategically to influence the equity value of their firms in a positive direction.

*Cross Sectional Differences between the Impact of Dividend Increase Announcements on Cumulative Abnormal Returns (CARs) of Lodging and Restaurant Firms – Results Relevant to Hypothesis Two*

Although the issue of dividend relevance has been adequately addressed by researchers earlier, the sector specific uniqueness of dividend-value relevance has been relatively ignored in the existent hospitality finance literature. In an attempt to address such deficiency, and in line with the rationale emerging from Table 1, the second hypothesis tests whether cross sectional differences exist between the impact of dividend increase announcements on the cumulative abnormal returns (CARs) of lodging and restaurant firms. As shown in Table 4, the test statistic here is the difference between the Cumulative Abnormal Return (CAR) for lodging and restaurant firms. The significant t-value of 2.4264 rejects the null at 95-98% confidence level, suggesting that at least for 1994-2002, cross sectional differences did exist between the impacts of dividend increase announcements on the cumulative abnormal returns (CARs) of lodging and restaurant firms. The non-absolute test statistic yielded a positive CAR difference suggesting a potentially stronger impact of dividend increase announcements on equity value of lodging firms relative to restaurants. Such a finding is intuitively logical and also consistent with the descriptive trends discussed earlier. It is consistent with the rationale that a more restrictive payout policy in the lodging sector could, in turn, imply stronger security price reactions to dividend change announcements in lodging firms relative to those in restaurant firms.

*Cross Sectional Differences between the Impact of Unchanged Dividend Announcements on the Cumulative Abnormal Returns (CARs) of Lodging and Restaurant Firm. – Results Relevant to Hypothesis Three*

The third and final hypothesis tests for differences between the impact of unchanged dividend announcements on the cumulative abnormal returns (CARs) of lodging and restaurant firms. The test statistic here is, once again, the difference between the Cumulative Abnormal Return (CAR) for lodging and restaurant firms. As shown in Table 4, the t-value of 9.4517 is statistically significant and rejects the null at 99.9% confidence level. Such a result suggests that at least for 1994-2002, cross sectional differences did exist between the impacts of unchanged dividend announcements on the cumulative abnormal returns (CARs) of lodging and restaurant firms. Such a result further supports the findings of the second test. As such, it is suggestive of a potential dominance of the announcement effect in lodging firms over the announcement effect in restaurants driven

by relatively more stringent and restricted payouts in lodging firms (Table 1).

## **Implications for Hospitality Finance Educators and Professionals**

This study builds on existent dividend literature in hospitality finance by examining the relevance of cash dividends for public lodging and restaurant firms in US equity markets. It uses the event study approach to investigate abnormal returns for lodging and restaurant firms caused by cash dividend announcements during the period 1994 – 2002. Despite its small sample limitations consequent to a limited number of dividend announcements in the hospitality industry during the test period this study produced results that should interest both hospitality finance educators and professionals

Descriptive analysis of the initial data showed that the dividend payout in lodging firms were significantly more conservative than payout in the restaurant sector, mainly because of restrictions emerging from their significantly high financial leverage relative to restaurants. Further examination of preliminary distribution of dividend announcements in hospitality firms yielded results consistent with the results of past dividend research (DeAngelo, DeAngelo & Skinner, 1992) and also supported the contention that dividend policies tend to be sticky. At the onset, this study tested whether dividend increase announcements influence the Cumulative Abnormal Returns (CARs) of lodging and restaurant firms (Hypothesis One). Results from this test suggested that at least for the test period, dividend increase announcements did influence the Cumulative Abnormal Returns (CARs) of both lodging and restaurant firms in the US equity markets. Such results endorsed the findings of earlier dividend studies in hospitality finance and also implied that CEOs and CFOs of hospitality firms could use their dividend policy strategically to influence their equity value in a positive direction. The second and third hypotheses addressed industry-related uniqueness of dividend–value relationship in the lodging and restaurant sectors. They examined cross sectional differences between the impact of dividend increase and unchanged dividend announcements on cumulative abnormal returns (CARs) of lodging and restaurant firms. Both tests rejected their null hypotheses, supporting significant differences between the dividend announcement effects on cumulative abnormal returns of lodging and restaurant firms. Further, these results suggested a stronger impact of dividend related announcements on equity value of lodging firms relative to firms in the restaurant sector. If nothing else, the results relevant to these tests should help researchers as well as practitioners by improving their understanding of unique dividend-value relationship within lodging and restaurant firms.

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