STOCK BEHAVIOR OF ACQUIRER FIRMS IN HOSPITALITY SECTOR AROUND MERGER AND ACQUISITION (M&A) ANNOUNCEMENTS: EVIDENCE FROM INDIA

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Abstract

Purpose: On the basis of gaps in the existing literature on Mergers and Acquisitions in hospitality sector, present study aims to examine the stock behavior (return, volatility & liquidity) of acquirer firms after M&A announcement in the Indian hospitality sector from 1999-2018.

Design/Methodology: Market model of event study methodology has been used to examine the change in stock behavior across total sample size of 94 M&A deals (containing 18 mergers and 76 acquisitions) in Indian hospitality sector during sample period.

Findings: It is observed that shareholders of acquirer firms in India are able to generate average abnormal return two days before the announcement of M&A event, which indicates that efficient market hypothesis does not hold true in this sector. Whereas, results of stock volatility show that risk for shareholders increase in post-event window as returns are significantly volatile in post-announcement period. Liquidity analysis shows that average abnormal liquidity is significantly high during pre-announcement period.

Practical Implications: These findings may contribute to the literature investigating the behavior of stock prices of acquirer's performance in hospitality sector during

restructuring events and literature of behavioral finance. Various deal consultants, market regulators, shareholders, research scholars may find these results helpful in understanding the performance of stocks of acquirers in Indian hospitality sector through stock movements around M&A announcements and design their investment strategies accordingly.

Originality: The current study emphasized on the market reaction around M&A announcements by capturing stock behavior including stock volatility and liquidity in hospitality sector in India.

Keywords: *Merger & Acquisitions, Hospitality Sector, Event Study Methodology, Stock Return, Stock Volatility, Stock Liquidity*

Introduction

During the last three decades, Mergers and Acquisitions (M&A) have been adopted by many business organizations as a strategy for growth and expansion (Pandya, 2018), which assists the business firms to capitalize the possible market opportunities and to manage the unforeseen threats in the market (Sabri et al., 2019). Thus, strategic process of corporate restructuring through M&A has gained substantial importance in both developing as well as developed economies (Ghosh & Dutta, 2016) primarily after globalization, privatization, deregulation and liberalization in India (Mallikarjunappa & Nayak, 2013). Adopting M&A as strategy has fueled the growth of many industries in India and hospitality industry is one of the fastest growing industries among others (Welch & Tse 1990).

Past three decades have witnessed phenomenal growth with constant fluctuations in hospitality industry (IBEF Report, 2020). An upward trend in global M&A deals in hospitality industry has been noticed by Real Capital Analytics (2019), which is reflected in terms of the increase in deal values from USD 20 billion in 2009 to USD 70 billion in 2019 (Zhang et al., 2019). Apart from this, it is well established that tourism is a key source of economic growth of every country. According to world travel and tourism council (WTTC) report (2018), out of 185 countries, India got third rank in terms of contribution to GDP from travel and tourism, which is also presented through Fig. 1. Similarly, India got 34th rank in the Travel and Tourism Competitiveness Report (2019).

WTTC Report (2019)[1] has reported 9.2 percent contribution to GDP in the year 2017-18 and 6.8 percent in the year 2018-19. Furthermore, WTTC has forecasted the growth of this contribution to 9.2 percent by 2029, which indicates the future potential of Indian hospitality sector for Indian economy.
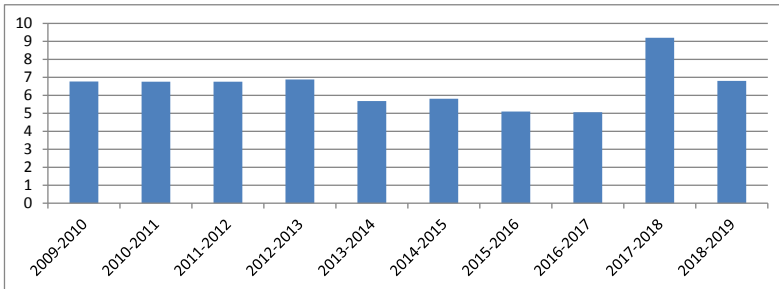
Source: Ministry of Tourism Report (2018).

World Travel and Tourism Council Report (2020).

Fig. 1: Contribution of Hospitality Sector to Indian GDP (%) from 2009-2019

In addition, Indian Brand Equity Foundation Report (2020) reveals that foreign tourist arrival in India has achieved an annual growth rate of 3.2 percent and stood at 10.89 million during 2019. Moreover, Indian tourism sector has created 42 million jobs during 2019 and contributes 8.1 percent of total employment in India. International hotel chains are increasing their presence in the country as it is expected to account for around 47 per cent share in the Tourism & Hospitality sector of India by the end of 2020. Furthermore, a report by Department for Promotion of Industry and Internal Trade (2019) states that Indian hotel and tourism sector has attracted FDI of USD 14.42 billion during 2000-2019.

Thus, economic contribution of Indian hospitality sector and increasing trend towards M&A deals in Indian hospitality sector indicates the future potential of hospitality sector in Indian economy. It is estimated in WTTC Report (2020) that tourism and hospitality sector will reach to the value of 488 billion US$ by 2029 and will account for 9.2% of total economy. Furthermore, it is estimated that 52.3 million jobs will be generated in Indian hospitality sector by 2028.

[1] Source: WTTC (2019) India Annual Research: Key Highlights, accessed online from https://ambassade-ethiopie.fr/onewebmedia/Tourism-WTTC-Global-Economic-Impact-Trends-2019.pdf

Expansion is the primary motivation to go for M&A in hospitality sector (Chatfield et al., 2011). Dogru and Turk (2017) states that M&A help the acquirers in restaurant industry to reach the economies of scale more rapidly than expansion through other capital investment plans. Thus, the acquirers go for expansion through M&A. Whereas, associated synergy benefits (Morck et al., 1990), removing financial constraints (Myers & Majluf, 1984) and empire building theory (Jensen, 1986) are some other drivers behind increasing number of M&As in hospitality sector. Gugler et al. (2012) and Olsen et al. (1998) states that strategic risk of uncertain change in economic, technological, competitive, political and market environment has enhanced the adoption of M&A as business strategy. Business firms use strategic alliances like M&A to tap the market opportunities by optimally using resources of combined form at lowest opportunity cost (Chathoth & Olsen, 2003).

Morck et al. (1990) states that big firms have the capacity to derive operating synergies from acquisition deals and hence, big firms more likely go for acquisitions. Apart from this, Weston et al. (1990) postulates that many M&As are induced by tax benefits associated in such deals. Chatfield et al. (2011) reported that acquirers in hospitality sector found it more appropriate to growth and increasing their market share through acquisition strategy than to develop new restaurants from the scratch. They also suggest that acquisitions help in managing competition.

Welch and Tse (1990) stated that acquisition activities in hospitality industry are mostly horizontal integration, forward integration and concentric diversifications. Whereas, Dogru et al. (2017) stated that M&A emerges in hospitality sector in the form of acquisitions and franchising. The research in hospitality sector at an early stage has been conceptual (Olsen & Bella, 1980; Reid & Olsen, 1981; Canas, 1982). Previous literature has focused on factors driving hospitality sector for strategic alliances (Olsen & Roper, 1998) and wealth effects of M&A are examined by very few researchers in hospitality industry particularly in the context of Indian economy. Hence, there is a gap in literature. Furthermore, the potential of hospitality firms and tendency of hospitality firms towards M&A motivates the researchers to explore the determinants of M&A in this sector and to understand the success of M&A events in Indian hospitality sector (Gugler et al., 2012). Thus, the aim of this study is to examine the wealth effects of M&A deals in Indian hospitality sector.

The current paper is organized in five sections. Second section explains the previous research work done in the area and identifies the research gap. Third section explains the sample characteristics and methodology used to

examine the underlying research issue. Fourth section presents the results of impact of M&A on stock returns, volatility and liquidity and fifth section discusses the conclusion and contribution of the study.

Literature Review

Despite of phenomenal growth in hospitality sector in India and increasing number of M&As, there is dearth of literature examining stock behavior in hospitality sector of India (Papathanassis, 2017). Dogru et al. (2020) found that franchising firms with higher cash flows experience lower stock returns from acquisitions in hospitality sector. Similarly, Mall and Gupta (2020), Jensen and Ruback (1983) and Asquith (1983) have found that M&A deals in hospitality sector bring little or no abnormal returns for acquirers. Loderer and Martin (1992) states that M&A deals prove beneficial in long-run and there are negative returns surrounding such announcements in short-run. On the contrary, Agarwal et al. (1992) have found that acquirers experience negative returns in long-run also.

Hsu and Jang (2007), Sheel and Nagpal (2000) and Dodd (1980) have reported negative returns during M&A in hospitality sector. Furthermore, Andrew (1988) observed that acquirers in hospitality sector lose value twenty days prior to the announcement of M&A event. Bloom (2010) and Oak and Andrew (2006) have found that there is no change in abnormal stock returns for hospitality firms engaged in M&A activity and those not engaged in such activities. These findings are contrary to findings by Yang et al. (2009).

On the other hand, Dodd and Ruback (1977) and Canina (2001) have reported that both target as well as acquirer firms in hospitality sector generate abnormal returns from M&A events. Yang et al. (2009) found that acquirers in hospitality sector starts generating supernormal returns after twelve months of completion of deal and method of payment used in M&A deal in this sector does not have any impact on these returns. In addition, Maksimovic et al. (2013) claimed that M&A deals are proved to be value added when these are part of M&A wave while deals not covered under M&A wave are value destructive or add only little value.

Kwansa (1994) observed that acquiring hospitality firms generates additional wealth two days before and after the announcement of consolidation deal. Whereas, Chatfield et al. (2011) reported that acquiring firms in hospitality sector generates positive but insignificant cumulative abnormal returns on the day of announcement of event and one day before the announcement of event. Park and Jang (2011) and Yang et al. (2009) shows that acquiring firms in

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hotel industry enjoys higher sales growth rate in comparison to the firms not engaged in M&A deals. Furthermore, Chatfield et al. (2012) have examined the relationship between method of payment and stock returns during M&A announcements. They found that cash financed M&A deals bring significantly positive abnormal returns for acquirer firm's shareholders as compared to stock and hybrid financed deals.

Although the phenomenon of M&A has been extensively studied by a plethora of studies but to the best of our knowledge no study has addressed the impact of M&A on stock volatility and liquidity of acquirers in hospitality industry. Bannette (2016) has defined stock volatility as occurrence of upward and downward variations in the stock prices during a definite period of time. Examination of stock volatility is essential because market expectation of shareholders change when any new information like M&A announcement come into the market and shareholders use such information to revise their portfolio, which eventually leads to high market activity and variations in stock prices (Malhotra et al., 2013). These variations determine the volatility or risk associated with the security. Hence, examination of volatility is also essential to understand the risk of shareholders during M&A announcements.

Furthermore, change in liquidity can be described as the magnitude to which shares can be bought and sold in the market (Kumar et al., 2013). Baker and Stein (2004) states that stock returns are related to temporal variations in liquidity and fluctuations in liquidity can predict stock returns. Thus, examination of stock liquidity during M&A announcements is essential to predict the returns to shareholders from M&A deal. Hence, there is a need to study change in volatility and liquidity, which are important elements of stock behavior as wealth of shareholders cannot be determined by considering only stock returns (Kumar et al., 2013) and this study attempts to examine stock volatility and liquidity as well as returns during M&A announcements in Indian hospitality sector.

Literature also suggests that contradiction in results may be possible due to factors like error in selection of benchmark data (Frank et al., 1991), method of payment used in M&A deal (Yang et al., 2009), selection of sample period (Kumar et al., 2011), type of deal (Saboo & Gopi, 2009) and sample period (Adnan & Hossain, 2016). Hence, from the above discussion it is observed that no conclusive findings on the subject are available and there is gap in literature regarding impact of M&A on stock returns, volatility and liquidity in long run as no consensus is drawn from the studies. Thus, present study is an attempt to fill this research gap.

Database and Research Methodology

In the light of above literature gap, the objective of this paper is to examine wealth effects of M&A deals for acquirers in Indian hospitality sector. To achieve this objective, data for M&A from year 1999 to 2018 is extracted from prowess$_{dx}$ database. On the basis of industry classification given by Ministry of Statistics and Programme Implementation of India as National Industry Classification (NIC[2]), M&A deals falling under Industry 'I' i.e. accommodation and food service activities were segregated as research sample for this study. Final sample contains 94 M&A deals out of which there are 76 acquisitions and 18 mergers in India. Data of stock closing, high and low prices as well as volume is collected from the website of National Stock Exchange of India for the sample period.

Market model of event study methodology has been applied to calculate the abnormal change in stock returns, volatility and liquidity during M&A announcements in hospitality sector. As per the requirement of the methodology, there is a need of some benchmark index with which the actual stock performance of acquirer firms can be compared. Hence, Nifty 50, which captures the market wide sentiments, is selected as benchmark index. Thus, Nifty closing, high, low prices and trading volume data for the respective sample period is extracted, from the website of NSE. Furthermore, an event window of twenty one days (-10 to 0 to +10) is considered in this study (Bradley et al., 1983).

Calculation of Average Abnormal Returns (AAR)

Stock returns of acquirer firms have been computed as a percentage difference of today's closing price from previous day's closing price. Abnormal returns has been calculated as the difference between the returns actually generated by the stock of acquirer firm and expected or benchmark return, which an acquirer would have been generated in the absence of restructuring events. For calculation of AAR for acquirer firms equation 1 has been used:

$$AAR_t = ASR_t - (\hat{\beta}*ANR_t) - (\hat{\alpha}) \dotfill \text{(Equation 1)}$$

Where; AAR_t = Average Abnormal Return on day 't'; ASR_t = Average

[2] Source: National Industrial classification (2008) retrieved online from Ministry of Statistics and Programme Implementation (www.mospi.nic.in).

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Return of Stock of acquirer firm on day 't'; ANR_t = Average Return on Nifty on day 't'

Value of (slope) and (intercept) have been calculated as parameters of model. These parameters are calculated by using ordinary least squares (OLS) over twenty one days event window. and are calculated as follows:

$\hat{\beta}$ = Covariance (R_{jt}, R_m) / Variance (R_m)	$\hat{\alpha}$ = Rjt – $\bar{\beta}$ * Rm
Where; $\hat{\beta}$ = Slope; R_{jt} = Actual returns generated by firm j at time t; R_m = Nifty return at time t	Where; $\hat{\alpha}$ = Intercept; R_{jt} = Expected rate of return for company j at time t; $\hat{\beta}$ = estimated beta coefficient; R_m = Nifty return at time t

Calculation of Average Abnormal Volatility (AAS)

Impact of M&A deals on volatility of acquirer firms have been examined by observing the intraday stock spreads. To determine the intraday stock volatility, stock spread from stock high and low prices were calculated (Rogers et al., 2006 and Floros, 2009). Day's high and low prices of Nifty 50 have been used to determine Nifty spread. Nifty spread has been calculated to control for the impact of other information on acquirer firm's stock in the absence of occurrence of M&A event.

$$AAS_t = ASS_t - (*ANS_t) - (\hat{\beta}) \quad .... \quad \text{(Equation 2)}$$

Where; AAS_t = Average abnormal spread on day 't'; ASS_t = Average stock spread of acquirer firm on day 't'; ANS_t = Average Nifty spread on day 't'

Value of $\hat{\beta}$ (slope) and (intercept) have been calculated as parameters of model. These are calculated as follows:

$\hat{\beta}$ = Covariance (S_{jt}, S_m) / Variance (S_m)	$\hat{\alpha}$ = S_{jt} – $\bar{\beta}$ * S_m
Where: $\hat{\beta}$ = Slope; S_{jt} = Spread of firm j at time t; S_m = Nifty spread at time t	Where; $\hat{\alpha}$ = Intercept; S_{jt} = Spread of firm j at time t; $\hat{\beta}$ = estimated beta coefficient; S_m = Nifty Spread at time t

Calculation of Average Abnormal Variations in Liquidity (AAL)

To determine the changes in liquidity of acquirer firms during M&A events, data of traded volume from NSE has been extracted. Similarly, data of Nifty traded volume for the corresponding period has been extracted to be used as benchmark. Equation (3) has been followed to compute the abnormal change in liquidity of bidder firms due to M&A:

$$AAL_{jt} = ASL_{jt} - (\hat{\beta}*ANL_{jt}) - (\hat{\alpha}) .... \qquad \text{(Equation 3)}$$

Where; AAL_t = Average Abnormal variation in liquidity on day 't'; ASL_t = Average change in Stock liquidity of acquirer firm on day 't'; ANL_t = Average change in Nifty liquidity on day 't'.

Value of $\hat{\beta}$ (slope) and $\hat{\alpha}$ (intercept) has been calculated as parameters of model. These are calculated as follows:

$\hat{\beta}$ = **Covariance (L_{jt}, L_m) / Variance (L_m)**	$\hat{\alpha} = \hat{L}_{jt} - \hat{\beta} * \hat{L}_m$
Where; $\hat{\beta}$ = Slope; L_{jt} = Change in liquidity of firm j at time t; $\hat{L}_m$ = Change in Nifty liquidity at time t	Where; α = Intercept; $\hat{L}_{jt}$ = Change in liquidity of firm j at time t; $\hat{\beta}$ = estimated beta coefficient; L_m = Change in Nifty liquidity at time t

Findings of the Study

Findings of the impact of M&A deals on the stock returns, volatility and liquidity of acquirers in hospitality sector are presented in Tables 1, 2 and 3. Table 1A, 2A and 3A discusses the results obtained by analyzing combined sample of 94 M&A deals. Table 1B, 2B & 3B and 1C, 2C and 3C discusses the results obtained by analyzing sample of 78 acquisitions and 18 mergers respectively. Furthermore, results are discussed separately for return, volatility and liquidity for better understanding.

M&A Announcements and Acquirer's Stock Return

Table 1: Calculations of AAR and CAAR for 94 M&A, 76 Acquisitions and 18 Mergers in Indian Hospitality Industry

Event Window	Table 1A Combined Returns				Table 1B Acquisition Returns				Table 1C Merger Returns			
	AAR	T Values	CAAR	T Values	AAR	T Values	CAAR	T Values	AAR	T Values	CAAR	T Values
-10	-0.0007	-0.1798	-0.0007	-0.1798	-0.0004	-0.1173	-0.0004	-0.1173	-0.0001	-0.0084	-0.0001	-0.0084
-9	-0.0009	-0.2431	-0.0016	-0.4230	-0.0007	-0.1905	-0.0012	-0.3078	-0.0014	-0.1153	-0.0015	-0.1237
-8	0.0008	0.2172	-0.0008	-0.2058	0.0002	0.0442	-0.0010	-0.2636	0.0049	0.4076	0.0034	0.2839
-7	-0.0012	-0.2988	-0.0020	-0.5046	0.0001	0.0263	-0.0009	-0.2373	-0.0094	-0.7865	-0.0060	-0.5026
-6	-0.0030	-0.7673	-0.0049	-1.2718	-0.0031	-0.8029	-0.0040	-1.0402	-0.0050	-0.4209	-0.0110	-0.9234
-5	0.0004	0.0998	-0.0045	-1.1721	0.0007	0.1795	-0.0033	-0.8607	-0.0028	-0.2376	-0.0138	-1.1611
-4	-0.0052	-1.3376	-0.0097	-2.5096**	-0.0052	-1.3715	-0.0085	-2.2322**	-0.0081	-0.6811	-0.0219	-1.8422***
-3	0.0001	0.0224	-0.0096	-2.4872**	-0.0009	-0.2280	-0.0094	-2.4602**	0.0035	0.2907	-0.0185	-1.5515
-2	0.0090	2.3244**	-0.0006	-0.1628	0.0071	1.8508***	-0.0023	-0.6094	0.0178	1.4967	-0.0007	-0.0547
-1	0.0003	0.0735	-0.0003	-0.0893	0.0022	0.5684	-0.0002	-0.0410	-0.0025	-0.2108	-0.0032	-0.2656
0	0.0077	2.0022**	0.0074	1.9129***	0.0103	2.7017*	0.0102	2.6607*	-0.0017	-0.1455	-0.0049	-0.4111
+1	-0.0069	-1.7745***	0.0005	0.1384	-0.0067	-1.7559***	0.0035	0.9048	-0.0052	-0.4385	-0.0101	-0.8495
+2	0.0008	0.2096	0.0013	0.3480	0.0002	0.0595	0.0037	0.9643	0.0011	0.0904	-0.0090	-0.7591
+3	0.0009	0.2220	0.0022	0.5700	-0.0023	-0.5973	0.0014	0.3670	0.0132	1.1095	0.0042	0.3504
+4	-0.0005	-0.1283	0.0017	0.4417	-0.0004	-0.1098	0.0010	0.2572	0.0071	0.5980	0.0113	0.9484
+5	0.0042	1.0731	0.0059	1.5148	0.0012	0.3233	0.0022	0.5805	0.0090	0.7516	0.0202	1.7000
+6	-0.0033	-0.8453	0.0026	0.6695	-0.0035	-0.9121	-0.0013	-0.3316	-0.0011	-0.0900	0.0192	1.6100
+7	0.0001	0.0258	0.0027	0.6953	-0.0003	-0.0661	-0.0015	-0.3977	0.0031	0.2606	0.0223	1.8706***
+8	0.0028	0.7150	0.0055	1.4103	0.0001	0.0193	-0.0014	-0.3784	0.0123	1.0350	0.0346	2.9055*
+9	-0.0011	-0.2954	0.0043	1.1149	-0.0017	-0.4516	-0.0032	-0.8300	0.0056	0.4697	0.0402	3.3752*
+10	-0.0043	-1.1149	0.0000	0.0000	0.0032	0.8300	0.0000	0.0000	-0.0402	-3.3752*	0.0000	0.0000

Source: Author's calculations based on secondary data (***Significant at 10%; ** Significant at 5%; *Significant at 1% significance level).

Table 1A shows the AAR and CAAR for shareholders of acquirer firm from combined 94 M&A announcements in Indian hospitality sector. Similarly, Table 1B and 1C reports the AAR and CAAR from 76 acquisition deals and 18 merger deals in hospitality sector respectively. After analyzing the combined sample of M&A deals and only acquisition deals, it is observed that AAR is statistically significant on two days before the official announcement of M&A and acquisition event in the market. Furthermore, AAR are also statistically significant on the day of announcement and on day +1 of event window. It indicates the possibility of insider trading due to information leakage and shareholders manage to have significantly positive AAR before announcement of event in industry. Thus, efficient market hypothesis (EMH) does not hold true. CAAR also presents similar observations from M&A and acquisition deals in industry as shareholders earn significant AAR during pre-announcement days and on the day of announcement.

Furthermore, the positive AAR during pre-announcement period may also be possible due to expected synergy benefits associated with M&A deals (Rani et al., 2013). It indicates that market may have treated the news of acquisition as good news (Koppel & Shtrimberg, 2006) and investors are showing confidence in new management (Lichtenberg, 1987). These results are also possible when strategic reasons like economies of scale and scope behind M&A deals create more scope of value creation for acquirer firms. These findings are consistent with Chatfield et al. (2011); Canina (2001); Kwansa (1994) and Dodd and Ruback (1977) and contrary to Dogru et al. (2020) and Bloom (2010).

M&A Announcements and Acquirer's Stock Volatility

Table 2A shows the AAS and CAAS for shareholders of acquirer firm from combined 94 M&A announcements in Indian hospitality sector. Similarly, Table 2B and 2C reports the AAS and CAAS from 76 acquisition deals and 18 merger deals in hospitality sector respectively. Table 2A reports that AAS are significantly high on day -1, +1 and decreases on day +9 of event window. It indicates that risk of shareholders is high during -1 to +1 of event window. CAAS is lower in pre-event period and increases in post-event period. It shows that risk decreases significantly during pre-event period and there are chances of increase in risk during post-event period.

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Table 2: Calculations of AAS and CAAS for 94 M&A, 76 Acquisitions and 18 Mergers in Indian Hospitality Industry

Event Window	Table 2A				Table 2B				Table 2C			
	Combined Volatility				Acquisition Volatility				Merger Volatility			
	AAS	T Values	CAAS	T Values	AAS	T Values	CAAS	T Values	AAS	T Values	CAAS	T Values
-10	-0.0035	-0.8228	-0.0035	-0.8228	-0.0021	-0.4544	-0.0021	-0.4544	-0.0107	-1.4951	-0.0107	-1.4951
-9	-0.0028	-0.6696	-0.0063	-1.4923	-0.0010	-0.2199	-0.0031	-0.6743	-0.0108	-1.5082	-0.0215	-3.0033*
-8	-0.0035	-0.8235	-0.0097	-2.3158**	-0.0046	-1.0068	-0.0077	-1.6810***	0.0003	0.0351	-0.0212	-2.9682*
-7	0.0015	0.3524	-0.0083	-1.9634**	0.0005	0.1080	-0.0072	-1.5730	0.0055	0.7730	-0.0157	-2.1952**
-6	-0.0062	-1.4849	-0.0145	-3.4483*	-0.0086	-1.8908***	-0.0158	-3.4637*	0.0026	0.3644	-0.0131	-1.8307***
-5	-0.0014	-0.3305	-0.0159	-3.7788*	-0.0021	-0.4639	-0.0180	-3.9276*	0.0006	0.0884	-0.0125	-1.7423***
-4	-0.0034	-0.8115	-0.0193	-4.5903*	-0.0026	-0.5643	-0.0205	-4.4919*	-0.0070	-0.9778	-0.0195	-2.7201*
-3	0.0047	1.1182	-0.0146	-3.4721*	0.0065	1.4240	-0.0140	-3.0679*	-0.0034	-0.4736	-0.0229	-3.1937*
-2	0.0033	0.7803	-0.0113	-2.6918*	0.0022	0.4870	-0.0118	-2.5809*	0.0078	1.0929	-0.0150	-2.1008**
-1	0.0082	1.9545***	-0.0031	-0.7373	0.0075	1.6482***	-0.0043	-0.9327	0.0090	1.2604	-0.0060	-0.8404
0	0.0041	0.9764	0.0010	0.2391	0.0034	0.7446	-0.0009	-0.1881	0.0057	0.7960	-0.0003	-0.0444
+1	0.0076	1.7972***	0.0086	2.0364**	0.0086	1.8721***	0.0077	1.6839***	0.0028	0.3959	0.0025	0.3515
+2	-0.0005	-0.1205	0.0081	1.9159***	0.0022	0.4762	0.0099	2.1601**	-0.0126	-1.7616***	-0.0101	-1.4101
+3	0.0020	0.4793	0.0101	2.3952**	0.0020	0.4438	0.0119	2.6039*	0.0033	0.4646	-0.0068	-0.9455
+4	0.0010	0.2367	0.0111	2.6319*	-0.0002	-0.0423	0.0117	2.5616**	0.0062	0.8675	-0.0006	-0.0780
+5	-0.0016	-0.3805	0.0095	2.2515**	-0.0020	-0.4471	0.0097	2.1145**	0.0020	0.2749	0.0014	0.1969
+6	-0.0017	-0.4161	0.0077	1.8354***	-0.0019	-0.4069	0.0078	1.7076***	0.0002	0.0329	0.0016	0.2298
+7	0.0017	0.3986	0.0094	2.2340**	0.0030	0.6552	0.0108	2.3628**	-0.0027	-0.3732	-0.0010	-0.1434
+8	-0.0029	-0.6856	0.0065	1.5484	-0.0009	-0.1928	0.0099	2.1701**	-0.0095	-1.3257	-0.0105	-1.4691
+9	-0.0072	-1.7205***	-0.0007	-0.1721	-0.0081	-1.7774***	0.0018	0.3926	-0.0017	-0.2331	-0.0122	-1.7022***
+10	0.0007	0.1721	0.0000	0.0000	-0.0018	-0.3926	0.0000	0.0000	0.0122	1.7022***	0.0000	0.0000

Source: *Author's* calculations based on secondary data (***Significant at 10%; ** Significant at 5%; *Significant at 1% significance level).

Whereas results in Table 2B suggests that EMH does not hold true in case of M&A deals in hospitality industry. AAS significantly decreases six days before the announcement of M&A event. Moreover, AAS significantly increases on day -1 and +1 of event window. It also indicates that there is possibility of insider trading on the basis of private information, due to which returns to shareholders are volatile in pre-announcement period. Significant increase in AAS during post-announcement period may be due to risk involved in integration of target and acquirer firms. Thus, EMH does not hold true in case of acquisition deals in hospitality industry. Table 3C shows that AAS is statistically significant on days +2 and +10 of event window and CAAS is significantly lower during pre-event period and statistically insignificant during post-event window. Thus, there is more risk for shareholders of acquirer firms during pre-event period.

M&A Announcements and Acquirer's Stock Liquidity

Table 3A presents the AAL and CAAL for shareholders of acquirer firm from combined 94 M&A announcements in Indian hospitality sector. Similarly, Table 3B and 3C reports the AAL and CAAL from 76 acquisition deals and 18 merger deals in hospitality sector respectively. It is observed in Table 3A that AAL is statistically significant on day -7 and -2 of event window. Table 3B reports that there is no significant change in AAL during event window of twenty one days except for day +1. Information of acquisition reflects in prices on day 0 but it is statistically insignificant.

Furthermore, it is observed that change in CAAL in case of acquisition events is negative during pre-announcement window and it is significantly positive during day +1 to +6 of post- announcement period. Table 3C shows that AAL in case of merger deals is significantly high on day -2 of event window. From this analysis it is observed that there are chances of information leakage in market in case of combined M&A deals and merger deals, which leads to increase in trading volume and AAL of stocks during M&A announcements (Kumar et al., 2013; Rodrigues et al., 2012).

Thus, above results indicates that shareholders of acquirer firms can generate significant AAR from combined M&A deals and acquisition deals in hospitality sector due possibility of information leakage and thereof insider trading. On the other hand, no such returns are found from merger deals. Furthermore, these returns are also significantly volatile around the day of announcement of deal and significantly liquid during pre-announcement period due to information leakage in the market.

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Table 3: Calculations of AAL and CAAL for 94 M&A, 76 Acquisitions and 18 Mergers in Indian Hospitality Industry

Event Window	Table 3A Combined Change in Liquidity				Table 3B Acquisition Change in Liquidity				Table 3C Merger Change in Liquidity			
	AAL	T Values	CAAL	T Values	AAL	T Values	CAAL	T Values	AAL	T Values	CAAL	T Values
-10	-0.6797	-0.3875	-0.6797	-0.3875	-0.5549	-0.3262	-0.5549	-0.3262	-0.8989	-0.1736	-0.8989	-0.1736
-9	-0.0591	-0.0337	-0.7389	-0.4212	0.5424	0.3189	-0.0125	-0.0073	-2.0327	-0.3925	-2.9316	-0.5660
-8	-0.1082	-0.0617	-0.8471	-0.4829	-0.6002	-0.3529	-0.6127	-0.3602	1.7404	0.3360	-1.1912	-0.2300
-7	2.9877	1.7031***	2.1407	1.2203	1.8754	1.1026	1.2627	0.7424	6.6849	1.2907	5.4937	1.0607
-6	-1.3800	-0.7866	0.7607	0.4336	-1.4273	-0.8391	-0.1646	-0.0967	-0.4942	-0.0954	4.9996	0.9653
-5	-1.0500	-0.5985	-0.2893	-0.1649	-0.5859	-0.3445	-0.7504	-0.4412	-3.9281	-0.7584	1.0714	0.2069
-4	-1.3077	-0.7454	-1.5970	-0.9103	-1.0215	-0.6006	-1.7719	-1.0418	-2.1781	-0.4205	-1.1067	-0.2137
-3	0.0840	0.0479	-1.5129	-0.8624	0.0674	0.0396	-1.7046	-1.0022	-2.1741	-0.4198	-3.2808	-0.6334
-2	3.5790	2.0402**	2.0661	1.1777	-0.0750	-0.0441	-1.7796	-1.0463	19.4471	3.7548*	16.1663	3.1214*
-1	0.0580	0.0331	2.1241	1.2108	-0.4314	-0.2536	-2.2110	-1.2999	2.5087	0.4844	18.6751	3.6057*
0	0.2967	0.1691	2.4207	1.3799	0.9948	0.5849	-1.2162	-0.7150	-2.3420	-0.4522	16.3331	3.1535*
+1	4.8188	2.7469*	7.2395	4.1268*	6.2929	3.6997*	5.0767	2.9847*	-1.5680	-0.3027	14.7651	2.8508*
+2	-1.1786	-0.6719	6.0609	3.4549*	-0.7685	-0.4518	4.3082	2.5329**	-2.6690	-0.5153	12.0960	2.3355**
+3	0.2451	0.1397	6.3060	3.5946*	0.6817	0.4008	4.9899	2.9336*	-1.1579	-0.2236	10.9382	2.1119**
+4	-1.2564	-0.7162	5.0496	2.8785*	-1.2258	-0.7207	3.7640	2.2130**	-0.8744	-0.1688	10.0638	1.9431***
+5	-0.5138	-0.2929	4.5358	2.5856*	-0.0785	-0.0462	3.6855	2.1668**	-1.9218	-0.3711	8.1420	1.5720
+6	-0.8941	-0.5097	3.6418	2.0759**	-0.4278	-0.2515	3.2577	1.9153***	-2.4254	-0.4683	5.7165	1.1037
+7	-0.5968	-0.3402	3.0449	1.7357***	-0.6630	-0.3898	2.5948	1.5255	0.2560	0.0494	5.9725	1.1532
+8	-1.6906	-0.9637	1.3543	0.7720	-1.4641	-0.8608	1.1306	0.6647	-2.7584	-0.5326	3.2141	0.6206
+9	-0.6595	-0.3760	0.6948	0.3961	-0.1719	-0.1011	0.9587	0.5637	-3.5816	-0.6915	-0.3674	-0.0709
+10	-0.6948	-0.3961	0.0000	0.0000	-0.9587	-0.5637	0.0000	0.0000	0.3674	0.0709	0.0000	0.0000

Source: Author's calculations based on secondary data (***Significant at 10%; ** Significant at 5%; *Significant at 1% significance level).

Contribution and Conclusion of the Study

The present study examines the stock behavior during M&A announcements in Indian hospitality sector. For this purpose stock return, volatility and liquidity in Indian hospitality sector are examined against the benchmark data of Nifty 50. The study observes significantly positive AAR for shareholders of acquirers in hospitality sector around M&A and acquisition announcements and evidences of trading on the basis of information leakage are also found. It is evident from the findings that investors are able to generate significant AAR from acquisition deals than merger deals in Indian hospitality sector, thus acquisition deals are more beneficial for investors. Examination of volatility and liquidity analysis is the novelty of this study as to the best of our knowledge, no study has examined these stock characteristics in Indian hospitality sector. It is observed that risk of shareholders of acquirer firms in hospitality sector increases during three day event window from -1 to +1. Furthermore, liquidity analysis suggest that AAL is significantly high during pre-event window in case of combined M&A and merger deals, whereas, AAL is significantly high only on the day following the day of announcement of acquisition event in market.

As the findings in existing literature are not conclusive and fails to explain whether M&A announcement reflects in stock prices and its impact on stock volatility and stock liquidity, therefore, the results of this study shall help in plugging the gap in literature regarding stock behavior during M&A announcements in Indian hospitality sector. These findings may contribute to the literature investigating the acquirer's performance in hospitality sector during restructuring events and literature of behavioral finance. Various deal consultants, market regulators, shareholders, research scholars may find these results helpful in understanding the performance of stocks of acquirers in Indian hospitality sector through stock movements around M&A announcements and plan their investment pattern on such basis.

Furthermore, it is obvious that hospitality sector has been hit hard due to (COVID-19) pandemic worldwide. As per the report by HVS - BW Hotelier (2020[3]), this pandemic has completely shattered the transient demand due to which global tourism and hospitality sector has witnessed a steep decline in revenue in 2020 as compared to 2019. The International Air Transport Association (IATA) has also estimated that an emergency fund of up to 200 billion USD$ is required to revive the global airlines industry, which is an integral part of hospitality industry. WTTC Report (2020) has reported that

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[3] https://www.hvs.com/article/8725-covid-19-impact-on-the-indian-hotels-sector

COVID-19 has adversely affected the employment in hospitality sector and it is expected that 50 million jobs can be slashed globally.

The report by HVS - BW Hotelier (2020) also reveals that most economists and analysts expect that this is the major crises after 2008 crises. Even if this epidemic is contained soon still the industry has to face ripple effect, which can drag many economies to the recession. In such scenario, it is expected that business firms have to adopt strategy for revival as well as survival strategies and measures in latter part of 2020. Thus, it is expected that number of M&As will rise in future, especially in hospitality sector. This study will help the firms going for M&A to understand the stock behavior during such consolidations and can plan the policies accordingly.

In addition, the findings may prove helpful for the stakeholders in hospitality sector to understand the movement of stock return, spread and liquidity during M&A announcements as well as during acquisition and merger announcements in particular. It will help them in knowing how market reacts in different type of restructuring deal in Indian hospitality sector. However, these findings are limited to Indian hospitality sector only, whereas, the scope of the study may be extended to other industries and economies in future research.

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