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Explanations for the Predominant Use of Cash Financing in Hospitality Acquisitions

Abstract

Seventy-five percent of hospitality acquisitions were cash-financed from 1980 to 2000. In other industries this figure has been closer to 43%. Since the choice of cash versus stock financing can have a significant effect on a hospitality acquiree's capital structure, the purpose of this study was to examine possible explanations for the high level of cash financing used in hospitality acquisitions. The results indicate that in both the hotel and restaurant industries, the use of cash payments in acquisitions is positively related to the acquiring firm's debt ratio. Firm size is also positively related to the use of cash payments but only in the restaurant industry. Free cash flow and internal growth opportunities do not appear to be significant determinants of the use of cash payments in acquisitions in the hospitality industry.

Key words: acquisition, free cash flow, growth opportunity

Explanations for the Predominant Use of Cash Financing in Hospitality Acquisitions

Introduction

Hospitality studies (Canina, 2001; Sheel and Nagpal, 2000) have used event studies to measure market gains/losses around a hospitality firm's acquisition announcement. However, payment type in the acquisition process has not been explained except with regard to insider trading (Oak and Andrew 2005). During the twenty-year period from 1980 to 2000, cash was the dominant method of payment in hospitality acquisitions (see Table 1). Cash payments were used in 75% of hospitality acquisitions while stock financing was used in only 14% of acquisitions (the remaining 11% were financed with a mix of cash and stock). When acquisitions for all industries were categorized by the method of payment used during the same twenty-year period, cash represented only 43% of total acquisition financing while stock represented 34% (Rhodes-Krof and Viswanathan, 2004). Cash is a valuable resource to a firm but also is costly to maintain (with generally lower rates of return than the firm's other, hospitality-focused investments). It is important to understand why the hospitality industry depends predominantly on raising and using cash to finance its acquisitions. In this study we used the hotel and restaurant industry as the hospitality industry since hotel and restaurant companies are the main players in the eating & drinking, hotel, amusement & recreation, and water transport industry. The purpose of this study was to examine factors that may contribute to the predominant use of cash financing in acquisitions in the hospitality industry.

In contrast to this study, the previous hospitality acquisition literature has focused primarily on wealth gains associated with an acquisition announcement (Canina, 2001; Kwansa, 1994; Sheel and Nagpal, 2000) rather than the way the acquisition was

financed. Oak and Andrew (2005) used a market microstructure analysis to examine the relationship between informed trading and the payment type offered by a hospital-acquirer, but the study did not analyze the effect of other firm characteristics on the payment type decision. In another study related to hospitality financing, the relationship between debt and growth opportunities (Dalbor and Upneja, 2004) was analyzed. Our study differs from these studies because we look specifically at the issue of the choice of financing payment type in relation to specific firm characteristics that might logically have relevance to the payment type chosen in an acquisition.

Literature Review

The literature on acquisitions and the associated payment type offered by an acquirer suggests that the type of offer chosen (cash, mixed, or stock) may be related to the acquirer's free cash flow, the acquirer's use and level of debt financing, the level of the acquirer's other growth opportunities, and the acquirer's size. We explore the connection between these characteristics in the following discussion.

Free Cash Flow and the Use of Cash Financing

Free cash flow has been postulated as having an influence on the use of cash financing in acquisitions (Jensen, 1988; Martin, 1996). Free cash flow is defined as net firm cash flow in excess of that required to fund all positive net present value projects (Jensen, 1988). It is possible that large amounts of free cash flow lead firms to finance acquisitions with cash. Martin (1996) presented a univariate analysis that revealed a significant positive linear relationship between the use of cash financing and the free cash flow of acquiring firms. His analysis, however, did not control for other characteristics of individual firms such as growth opportunities, debt ratio, and size.

Additional evidence on the relationship between free cash flow and the type of payment offered in an acquisition is sketchy. Lang, Stulz and Walkling (1991) and Harford (1999) showed that cash-rich firms are more likely to be bidders even for value-decreasing acquisitions but they did not specifically look at whether cash or stock was used to pay for the acquisition. Hence, it is possible that cash-rich firms are more likely bidders for acquisitions but still choose to pay for the acquisition with stock. This might occur if, for some reason, being cash-rich better enables a firm to obtain general financing in the future.

Further support for the role of free cash flow and the resulting cash accumulation as a factor in the choice of payment type in an acquisition has been suggested by Bruner (1988), who found that successful bidders in acquisitions already had financial slack in their cash holdings two to three years prior to a merger announcement. Eisinger (2005) suggested that firms accumulate cash in order to generate financial slack and gain the ability to escape future capital market constraints. However, this still does not answer the question of whether this would lead a firm to finance current acquisitions with cash (they may want to husband their cash for the future purposes stated above).

Hence, there is no clear-cut relationship in the literature between the level of a firm's free cash flow and cash holdings and its use of cash in a current acquisition. This study empirically investigated this issue in the context of hospitality firm acquisitions.

H₁: There is a significant positive relationship between the acquirer's use of cash financing in an acquisition and the level of the acquirer's free cash flow.

Justification: Acquiring firms with more free cash flow may be more likely than ac-

quiring firms with low free cash flow to use cash payment in an acquisition due to the ready availability of cash

The Relationship between Cash Payment Offers and Debt

One explanation for the payment type utilized in financing acquisitions is the pecking order theory, which suggests that investments are financed using internal funds first, new issues of debt second, and new issues of equity last in order to use the cheapest financing source possible (Brealey and Myers, 2001). In applying the pecking order theory to acquisition payment type offers, one would expect to see cash offers (even if financed by debt) significantly exceed stock offers.

There may also be other reasons to prefer the use of cash raised through debt financing rather than using stock payments to finance hospitality acquisitions. Managers may prefer to issue debt to raise cash rather than issue new equity under conditions of asymmetric information where managers have better knowledge about the firm's future value than outside investors. Managers may also avoid issuing both undervalued and overvalued shares in order to avoid signaling share overvaluation (Lee, 1997; Myers, 1984). Dalbor and Upneja (2004) provided evidence that managers, in general, prefer debt to equity in the lodging industry. It has been suggested that high levels of debt may reduce the agency problems associated with excess free cash flow (Hart and Moore 1995; Novaes, 2003; Stulz, 1990). For these reasons, the acquiring firm's managers may prefer to use cash (whether internally generated or raised by debt financing) to fund an acquisition rather than issuing new equity to directly pay for the acquisition. Hence, we hypothesize that there is a positive relationship between a hospitality firm's use of debt (via the debt ratio) and the use of cash to pay for an acquisition.

H₂: There is a significant positive relationship between the acquirer's use of cash financing in an acquisition and the acquirer's debt ratio.

Justification: This may result from firms preferring to use cash raised via debt for financing an acquisition rather than issuing new shares of stock to use in payment.

Cash Financing and Growth Opportunities

For firms with a significant number of positive NPV projects, cash holdings tend to increase as the number of strong growth opportunities grows (Opler, Pinkowitz, Stulz and Williamson, 1999). The reason for this is that if firms with many positive NPV investment opportunities confront a cash shortage, they may have to forgo some of those value-creating projects. Hence, there may be a strong incentive for hospitality firms with more internal growth opportunities to hold significant cash balances so that they have the flexibility to pursue positive NPV investments, even in the face of capital market-rationing. This may lead such hospitality firms to use stock payment in acquisitions to conserve cash for their growth opportunities. In support of this, Martin (1996) showed that acquiring firms with few positive NPV investment opportunities tend to finance acquisitions with cash, while those with a high number of positive NPV investment opportunities tend to pay with stock.

In the lodging industry, growth enhancement has been one of the leading stated objectives in lodging acquisitions (Kwansa, 1994; Kim and Olsen, 1999). In addition, both restaurant and lodging firms look at acquisitions as a way to increase their market share in an environment of high competition and high development costs (Harford, forthcoming). Hence, acquisitions in the hospitality industry may be driven more by the lack of internal growth opportunities of the acquiring firms than by other factors

(Harford, 2005; Kim and Olsen, 1999; Kwansa, 1994). This would suggest that such hospitality firms would tend to use cash payments instead of using stock in their acquisitions. On this basis, we hypothesize that the level of internal growth opportunities should be inversely related to the use of cash financing in hospitality acquisitions.

H₃: There is a significant negative relationship between the acquirer's use of cash financing in an acquisition and the acquirer's internal growth opportunities.

Justification: When acquiring firms have poor internal investment opportunities, the cash and cash flow of the acquiring firm may be used to finance acquisitions rather than holding the cash or paying it out as a dividend. On the other hand, firms with a high level of internal growth opportunities may conserve cash to be able to take advantage of their internal growth opportunities and hence use stock financing in an acquisition.

Cash Financing and Firm Size

Another factor that may affect a hospitality firm's choice of payment type in an acquisition is the firm's size. Previous research has shown in general that small firms tend to have larger cash holdings and more limited access to the capital markets than larger firms (Opler, Pinkowitz, Stulz and Williamson, 1999). We hypothesize that for these reasons, smaller firms may be more likely to make cash acquisition offers than larger firms. Larger firms, having on average lower relative cash levels and easier access to financial markets, may be more inclined to use stock for payment in an acquisition instead of cash. This leads us to hypothesize an inverse relationship between firm size and the use of cash payment in hospitality acquisitions.

H₄: There is a significant negative relationship between the acquirer's use of cash financing in an acquisition and the acquirer's size.

Justification: Smaller firms tend to hold relatively larger cash balances than larger firms and often have less access to capital markets than larger firms (Opler, Pinkowitz, Stulz and Williamson, 1999). Thus, smaller firms may be more likely to depend on cash financing of their acquisitions than would larger firms.

Data & Methodology

Acquiring Firms

The sample of acquiring firms was drawn from the Securities Data Corporation (SDC) International Merger and Acquisition Database (SDC-IMAD) for the period 1980–2004. Data in the database range from 1980 to 2004. To be included in the study sample, the observations had to satisfy the following conditions: 1) both the acquiring firm and the target were classified as belonging to one of the following SIC codes—5812 (restaurant) or 7011(hotel); 2) the transaction was successfully completed; and 3) the payment type was all cash or all stock. All cash and all stock deals paid 100% of stock or cash to the target, respectively. Also, since firm-related variables for this study were drawn from the Compustat Industrial Annual Files, the acquirer and the acquired firm had to be listed in the Compustat database.

Although the SDC database provides 1,522 hospitality acquisition observations for the period 1980–2004, only 363 observations (all cash or all stock payment) were used in the analysis due to the lack of corresponding data in the Compustat Industrial Annual Files (Table 1). An additional 43 observations were paid by a mix of cash and stock and hence were excluded.

Methodology

The sample of hospitality acquiring firms was divided into two groups by payment type (cash or stock). Since the dependent variable is the payment type, which was a categorical dummy variable, and the independent variables are metric accounting variables having to do with the firm's characteristics, binary logistic regression was used (Hair, Anderson, Tathan and Black, 1998). Previous studies (Martin, 1996; Opler and Titman, 1993) reported in the acquisition literature have also used logistic regression with categorical dependent variables. In binary logistic regression, the dependent variable is assigned a one or a zero. In this study the dependent variable was 1 if the payment method of the acquisition was cash and 0 if the payment method was stock. All of the independent variables were calculated using data from the fiscal year prior to the takeover announcement date.

The analysis was initially done for the whole sample (restaurants plus hotels). In addition, two subsamples were created-one consisting of the hotel subgroup and the other of the restaurant subgroup and the same analysis was performed on each of the two subgroups. The intent in doing this was to see if similar variables impacted the subgroups in the same way that they did the overall sample. Since cash financing is predominant in both subsamples, if there was little difference between the subsample and overall results, it would suggest that the significant variables in the models would represent a general hospitality industry characteristic.

The first independent variable, free cash flow, was calculated by dividing cash and short-term investments by total sales (Harford, 1999; Lang, Stulz and Walking, 1991). Free cash flow calculations were made over the fiscal year prior to the takeover announcement date. We also used other free cash flow measurements (operating income before depreciation minus interest expense, taxes, preferred dividend

and common dividends by total assets, cash and short-term investments dividend by total assets). The results were similar.

The second independent variable, the debt ratio, was the ratio of the book value of debt to the sum of the market value of equity and book value of debt (Harford, 1999).

The third independent variable, growth opportunities, was defined as capital expenditures-to-total sales and capital expenditures-to-total assets (Opler, Pinkowitz, Stulz and Williamson, 1999; Dalbor and Upneja, 2004). Since there is support for both versions of this variable in the literature, we tested each one in the empirical analysis. We also used the pseudo Q as growth opportunities. The results turned out to be insignificant. This may be due to inaccurate measurement of the replacement value of assets in Tobin's Q.

The fourth variable, firm size, was calculated as the log of the book value of total assets (Harford, 1999).

Results

Table 2 shows the mean value of the study variables for the cash and for the stock payment offer samples. T-statistics were used to measure the significance of the difference in the means of firm characteristics between those firms that made cash acquisitions and those that made stock acquisitions. While capital expenditures-to-assets (growth opportunity proxy), size, and the debt ratio were significantly different at the 1% level, capital & short-term investment-to-sales (free cash flow proxy) was only significant at the 5% level.

Table 3 presents the binary logistic regression results for the full sample with two versions of the growth opportunities variable (Models 1 and 2). A previous study (Dalbor and Upneja, 2004) showed inconsistent result for the two growth opportuni-

ties. Table 4 shows a binary logistic regression with the same variables for the two sample subsets representing the hotel (Model 3) and the restaurant (Model 4) industries. For the hotel industry, press's Q statistic is 85.90 which is more significant than the critical value at a significance level of 0.01. For the hotel industry, a prediction accuracy of 84% (cash payment) would be acceptable because it is above 73.56% proportional chance criterion (C pro). For the overall logistic results all four models showed significant results (Tables 3 and 4), all of the models had large p-values for the Deviance test (Model 4's value was lower but the results were still significant). In the Deviance test, the higher the p-value, the better the logistic regression model fits the data. A low p-value implies that the predicted probabilities deviate from the observed probabilities (see Minitab 14.20). For the four models the correctly predicted probabilities ranged from 76% to 87% indicating that the models represent the overall inferred relationship well. In Table 5, the result of ordinal logistic regression with all three payment types (cash, mixed and stock) has opposite sign to Table 3 and Table 4. Size and debt are negatively related to cash financing. Mixed payment may not be determined by hypotheses. The classification rate is 73 percent.

In terms of the logistic results, free cash flow did not appear to be a significant determinant of the type of payment used in acquisitions in the hospitality industry as a whole or in the individual hotel and restaurant subsamples (Tables 3 and 4). This result differs from previous studies in the general finance literature that looked across aggregated data for a number of different industries (see, for example, Lang, Stulz and Walkling, 1991; Martin, 1996). The hospitality free cash flow results suggest that there may be important differences between the hospitality industry and other industries in terms of how hospitality firms view and use free cash flow.

We found positive significant coefficients for the debt ratio in all four models.

This is consistent with the original hypothesis. Thus, hospitality-acquiring firms with larger debt ratios and hence more of their capitals raised as debt are more likely to use cash than stock payments in their acquisitions (Brealey and Myers, 2001). The debt ratio results using the full hospitality industry sample (Table 3) were consistent with the results for the two industry segments (Table 4).

The coefficient of the capital expenditure-to-assets ratio was negative and only marginally significant (0.09 p level) in the overall model (Model 2, Table 3). The capital expenditures-to-sales ratio was not significant as shown in Model 1. This result offers only very weak support for Hypothesis 3 - hospitality-acquiring firms with low internal growth opportunities are more likely to pay cash for their acquisitions. When analyzing the results by industry segment (Table 4), the capital expenditure-to-assets ratio was insignificant for both the hotel industry and the restaurant industry subsamples. Thus, the weak results for the overall model are not supported in the subsample analysis. This evidence suggests that a hospitality firm's internal growth opportunities are not meaningfully related to its choice of payment type in an acquisition.

The coefficient for the size term is positive and significant in both Models 1 and 2 (Table 3) for the overall sample. However, the sign of the size coefficient is opposite to the predicted direction. Thus, larger hospitality-acquiring firms are more likely than are smaller firms to use cash rather than stock payment in an acquisition. The subsample results shed more light on this finding. When the two industry subsamples were examined, the hotel industry subsample size variable had an insignificant coefficient (Model 3, Table 4). In contrast, the size coefficient for the restaurant industry subsample was positive and strongly significant. Hence, the overall sample results appear to have resulted from the tendency to use of cash payments in an acqui-

sition in the restaurant industry, with this tendency being positively and strongly related to firm size. Why the results differ for the hotel and restaurant industry subsamples is unclear. It could be due to the smaller sample size for the hotel subsample or to some fundamental difference between the behaviors of hotel and restaurant firms. In addition, possible explanations for the positive coefficient of the restaurant subsample could be the existing restaurant owners' control issues (preferring not to issue new stock) or the fact that larger restaurant firms find it easier to accumulate the large amounts of cash needed to finance an acquisition.

Discussion and Significance

This study used a dataset that contained twenty-five years of information about the hotel and restaurant industry. Previous hospitality studies had not used this database to examine this long-term period. When hospitality acquirers' managers need to make a decision about payment type in mergers and acquisitions, they can look to the results from this study. Hotel and restaurant acquirers with higher debt are more likely to use cash. Larger restaurant acquirers tend to use cash. Free cash flow and growth opportunities are not significantly related to the choice of payment type in the hotel and restaurant industries. The difference between hotel and restaurant industries in payment type needs to be analyzed in the future study. Industry influence on acquisition activity should also be examined.

Conclusion and Implications for future study

For twenty-five years, cash has been the dominant method of payment in hospitality acquisitions. Our overall results show that hospitality acquirers are more likely to use cash rather than stock in acquisitions the higher their when they have a

higher debt ratio; the same is true for, restaurant companies that are larger in size. Neither free cash flow nor internal growth opportunities appear to be significantly related to the payment type used in a hospitality acquisition.

The results of this study suggest potential areas for further research. First, since the use of cash acquisition payments is positively associated with the acquiring hospitality firm's debt ratio, more cash payment acquisitions may occur during economic periods when interest rates are low and debt financing is easily obtained. Second, it would be interesting to explore the characteristics that differ between the hotel and the restaurant industries that lead restaurant firm size to be positively related to the use of cash payments for an acquisition. Greater understanding of this finding may reveal different critical characteristics of each segment. Another interesting area of exploration may be whether there are any differences in the longer-run performance of hospitality firms that use cash payments in acquisitions versus the longer-run performance of firms that use stock payments due to the undervaluation of the acquirer's stocks. Given the preponderance of cash payments (as opposed to stock) in acquisitions in the hospitality industry one might expect that the decision to use cash payments would lead to superior long run firm performance. Also it is important to know whether social value is improved through mergers. Finally, the effect of restructuring between two firms in the same industry needs to be analyzed.

Table 1. Number of Acquisition Deals in Hospitality Industry

Year	Total	All cash	All stock	Mix of cash and stock
1980	1	0	0	1
1981	4	2	1	1
1982	8	6	1	1
1983	22	18	3	1
1984	11	7	0	4
1985	9	7	2	0
1986	4	1	0	3
1987	7	6	1	0
1988	6	5	0	1
1989	9	5	2	2
1990	6	4	1	1
1991	9	6	1	2
1992	12	9	3	0
1993	20	12	5	3
1994	25	16	6	3
1995	31	20	9	2
1996	42	29	8	5
1997	48	38	6	4
1998	39	35	2	2
1999	33	28	3	2
2000	17	13	2	2
2001	7	6	1	0
2002	19	16	0	3
2003	9	8	1	0
2004	8	8	0	0
total	406	305	58	43

Table 2. Mean Value of Variables for the Two Payment Types

Payment Type	Stock		Cash		Comparison of Means	
	mean	s.d.	mean	s.d.	T-stat	p-value
Number of acquisitions	58		305			
Cash & short-term investment-to-sales (proxy for free cash flow)	0.77	3.50	0.64	4.10	0.03	0.85
Capital expenditure-to-sales (proxy for growth opportunities)	0.42	1.77	0.18	0.21	** 5.7	0.02
Capital expenditure-to-assets (proxy for growth opportunities)	0.20	0.14	0.12	0.10	*** 31.18	0.00
Size	1.85	0.75	2.57	0.83	*** 39.41	0.00
Debt Ratio	0.20	0.21	0.39	0.24	*** 32.94	0.00

, *: significant at 5% and 1% level

Table 3. Binary Logistic Regression with Full Sample #**Dependent Variable: 1 = cash, 0 = stock**

Number of observations	Model 1			Model 2		
	cash = 207 , stock = 51			cash = 207, stock = 51		
	coefficient	p-value	Z	coefficient	p-value	Z
Constant	-1.34	0.02	-2.42	-0.78	0.24	-1.19
Cash & short-term investment-to-sales (proxy for free cash flow)	0.18	0.51	0.66	0.03	0.62	0.50
Capital expenditure-to-sales (proxy for growth opportunities)	-1.34	0.16	-1.40			
Capital expenditure-to-assets (proxy for growth opportunities)				* -2.46	0.09	-1.72
Size	*** 1.02	0.00	4.03	*** 0.88	0.00	3.56
Debt ratio	*** 3.06	0.00	3.46	*** 2.77	0.00	3.04
Goodness-of-fit test	chi-sq	p-value		Chi-sq	p-value	
Deviance	198.45	0.42		201.29	0.36	
% correctly classified	78.8			78.5		

*, **, ***: significant at 10%, 5% and 1% levels

#: Number of observation differs in each regression due to missing variables.

Table 4. Binary Logistic Regression by Industry #**Dependent Variable: 1 = cash, 0 = stock**

Number of observations	Hotel Industry Only Model 3			Restaurant Industry Only Model 4		
	cash = 61, stock = 5			cash = 146, stock = 46		
	coefficient	p-value	Z	coefficient	p-value	z
Constant	0.97	0.64	0.46	-0.97	0.18	-1.33
Cash & short-term investment-to-sales (proxy for free cash flow)	-0.14	0.89	-0.14	0.08	0.59	0.53
Capital expenditure-to-assets (proxy for growth opportunities)	-9.03	0.15	-1.44	-2.06	0.18	-1.35
Size	-0.21	0.77	-0.30	*** 0.99	0.00	3.51
Debt	*** 10.17	0.03	2.17	*** 2.16	0.03	2.21
Goodness-of-fit test						
	chi-sq	p-value		chi-sq	p-value	
Deviance	16.88	1.00		175.76	0.07	
% correctly classified	87.5			76.4		

*, **, ***: significant at 10%, 5% and 1% levels

#: Number of observations differs in each regression due to missing variables.

Appendix

Table 5. Ordinal Logistic Regression with stock, mixed and cash payment

Dependent Variable: 1=stock 2=mixed 3=cash

Number of observations	Model 5 cash = 207, stock = 51, mixed = 43			Model 6 cash =207, stock =51, mixed=43		
	coefficient	p-value	Z	coefficient	p-value	z
Constant 1	0.46	0.32	0.99	-0.58	0.31	-1.01
Constant 2	***1.25	0.01	2.70	0.23	0.69	0.04
Cash & short-term investment-to-total assets (proxy for free cash flow)	-0.06	0.95	-0.06	1.08	0.19	1.30
Capital expenditure-to-sales (proxy for growth opportunities)	0.09	0.25	1.16			
Capital expenditure-to-assets (proxy for growth opportunities)				***2.98	0.01	2.67
Size	***-0.75	0.00	-4.44	***-0.61	0.00	-3.57
Debt	***-2.18	0.00	-3.54	***-1.70	0.01	-2.66
Goodness-of-fit test	chi-sq	p-value		chi-sq	p-value	
Deviance	477.8	1.00		472.8	1.000	
% correctly classified	73.1			73.9		

*, **, ***: significant at 10%, 5% and 1% levels

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