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Raymond S. Schmidgall Ph.D., CPA

Michigan State University, schmidga@bus.msu.edu

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Abstract

Financial ratios are the most meaningful information in financial statements to executives and managers. The author analyzes the results of two surveys designed to rank the degree of importance and usefulness of these ratios to several user groups.

Keywords

Raymond S. Schmidgall, Financial Ratios: Perceptions of Lodging Industry General Managers and Financial Executives, Financial Statement, Research Project, Debt/Equity, Profit Margin, ADR

Financial Ratios: Perceptions of Lodging Industry General Managers and Financial Executives

by
Raymond S. Schmidgall
Associate Professor
School of Hotel, Restaurant & Institutional Management
Michigan State University

Financial ratios are the most meaningful information in financial statements to executives and managers. The author analyzes the results of two surveys designed to rank the degree of importance and usefulness of these ratios to several user groups.

Financial information is communicated both internally and externally via financial statements. Two major financial statements include the balance sheet and the statement of income. Information contained in these statements is used by bankers, owners, potential owners, department managers, general managers, and others in making decisions. Yet the financial statements must be reduced to more meaningful figures to be most useful rather than serving simply as lists of total assets, room sales, total expenses, or net income.

The more meaningful figures are financial ratios. For example, owners (stockholders) are more interested in earnings per share (EPS) than total earnings, since EPS relates total earnings to the average number of common shares outstanding during the accounting period. Bankers are most likely more interested in a debt-equity ratio than total liabilities, since the debt-equity ratio compares total debt to total owners' equity. Department heads are more likely to prefer food cost and labor cost percentages than simply the cost of food sold and cost of labor, since the cost of food sold percentage and labor cost percentage compare the given expense to the appropriate sales figure. Thus, ratios reflect relationships between two related numbers and generally, the closer the relationship, the more meaningful the ratio.

Many articles have been published in hospitality journals and textbooks discussing financial ratios and their perceived usefulness.¹ Two major accounting firms serving the lodging industry publish periodic statistical reports containing thousands of ratios when one considers the breakdowns based on size of hotel, age of hotel, etc.² Yet the hospitality literature is nearly devoid of information regarding the degree of importance of these ratios to various users. Gibson surveyed general industry financial executives regarding their perceptions of financial ratios.³ His research covered several industries, with the largest re-

sponse from financial executives in the motor vehicle parts and accessories, and chemical and allied products industries. He found financial ratios to be an important tool in analyzing financial reports and in managing businesses. Further, he found the most significant ratios to financial executives to be profitability ratios.

Two Research Projects Discussed

This article reports the results of two separate research projects: first, research into the perceived usefulness of ratios by general managers (GMs) of lodging properties, and, second, research into perceived usefulness of ratios by financial executives of lodging properties.

GMs of 500 lodging properties were mailed questionnaires containing 48 different ratios; 115 usable responses (23 percent) were received. GMs were requested to rank the degree of importance of each ratio to four user groups: themselves as GMs, corporate officers, owners, and personnel of financial institutions. The degree of importance choice ranged from "most important" to "least important"; "ratio is not used" was also a possible response.

Financial executives of 300 lodging properties were mailed a similar questionnaire; 55 usable questionnaires (18 percent) were received. The financial executives were requested to rank the degree of importance of each ratio to several user groups: GMs, food and beverage department managers, rooms department managers, financial executives (themselves), owners, personnel of financial institutions, and corporate officers. The "importance alternatives" were the same as the questionnaire mailed to GMs.

Exhibit 1 contains the list of ratios common to both surveys. It includes the classification of ratios by operating, solvency, activity, profitability, and liquidity classes. Both surveys contained the same ratios except for four additional operating ratios included on the questionnaire sent to GMs. These four ratios were total payroll costs/occupied room, total housekeeping costs/occupied room, energy costs/occupied room, and repair and maintenance costs/occupied room. Since they were not included on the questionnaire sent to financial executives, the response by GMs to these ratios is not included in the reported results.

Exhibit 1 **Ratios Evaluated by GMs and Financial Executives**

Operating Ratios

- Cost of Food Sold (percent)
- Cost of Beverage Sold (percent)
- Cost of Labor (percent)
- Average Daily Rate
- Average Food Check

Average Beverage Check
Cost of Supplies/Sales
Food Sales/Total Sales
Beverage Sales/Total Sales
Room Sales/Total Sales

Other Sales/Total Sales
Total Revenue (percent) Change from Prior Period
Total Revenue (percent) Change from Budget
Total Revenue per Full-Time Equivalent Employee
Employee Turnover

Solvency Ratios

Debt/Equity Ratio
Fixed Charge Coverage
Solvency Ratio
Long-term Debt to Total Capitalization

Activity Ratios

Fixed Asset Turnover
Asset Turnover Ratio
Daily Occupancy (percent)
Month to Date Occupancy (percent)
Average Occupancy Per Room
Double Occupancy (percent)

Seat Turnover—Food Operation
Food Inventory Turnover (days)
Beverage Inventory Turnover (days)
Beverage Inventory Turnover (times)
Food Inventory Turnover (times)
Sales/Net Worth

Profitability Ratios

Earnings per Share
Profit Margin
Operating Efficiency Ratio
Return on Assets
Gross Return on Assets
Return on Stockholders' Equity
Price Earning Ratio
Dividend Payout Ratio

Liquidity Ratios

Current Ratio
Accounts Receivable Turnover (days)
Accounts Receivable Turnover (times)
Quick Ratio
Current Assets/Total Assets

In addition, the perceived usefulness of ratios to department heads and financial executives results based on surveys received from financial executives is not included in the comparative results since GMs were not surveyed regarding these uses.

The response for each ratio per user was converted to a mathematical score, referred to as score hereafter, based on a value of five for "most important" to one for "least important." Alternative responses of "very important," "average importance," and "less than average importance" were assigned values of four, three, and two, respectively. Responses indicating the ratio was not used were not included in the data analysis.

A score of 3.76, such as shown in Exhibit 2 for the user group of corporate executives for operating ratios as perceived by GMs, suggests GMs perceived corporate executives consider the class of operating ratios to be between very important (4.0) and of average importance (3.0). However, since 3.76 is closer to 4.0 than 3.0, the result suggests this class of ratios is closer to the former than the latter.

Perceptions by Respondent Groups Show Perceived Importance

Exhibit 2 reveals the scores reflecting the perceived importance to users of ratios by class of ratios. The scores are shown by the two respondent groups, GMs and financial executives, for each of the four user groups of GMs, corporate executives, owners, and personnel of financial institutions, hereafter referred to simply as bankers. The totals by class of ratio and respondent group are included, as well as totals by user group and respondent group.

Overall, GMs rank ratios as more useful to users than do financial executives, based on the value of 3.72 across all ratios for all users as compared to 3.53 by financial executives (see Exhibit 2). This overall result is surprising since the financial executives are responsible for producing most, if not all, of the ratios.

Based on the total score by user group, GMs perceive that ratios are slightly more useful to themselves, as a group, (3.80) than to corporate executives (3.79) and to owners (3.73), and considerably more important than to bankers (3.34). Financial executives agree with GMs in that they perceive GMs to find ratios slightly more useful (3.60) than corporate executives (3.59), and even more useful than owners (3.35) and bankers (3.43).

The GMs responding to the survey place the most value on profitability ratios across all users based on a score of 3.94. Their ratings of other classes of ratios are 3.74 for operating ratios, 3.70 for liquidity ratios, 3.61 for activity ratios, and 3.59 for solvency ratios. Thus across all users, all classes of ratios are rated between important (3.00) and very important (4.00).

The financial executives responding to the survey, like GMs, also place the most value on profitability ratios across all users, based on a score of 3.87. However, they differed from GMs in the order of importance of other ratios across all user groups as they rated solvency ratios as second most important (3.72), followed by operating (3.54), activity ratios (3.40), and liquidity ratios (3.31).

Exhibit 2
Perceived Importance to Users of Ratios by Classification

Class of Ratios	Respondents (GM & FE)	Users				Total
		GMs	Corporate Executives	Owners	Bankers	
Operating	GMs	4.06	3.76	3.54	3.20	3.74
	FE	3.78	3.66	3.00	3.17	3.54
Solvency	GMs	2.78	3.77	4.00	3.84	3.59
	FE	3.09	3.59	4.15	4.20	3.72
Activity	GMs	3.80	3.69	3.54	3.05	3.61
	FE	3.59	3.41	3.08	3.17	3.40
Profitability	GMs	3.54	4.04	4.32	3.80	3.94
	FE	3.57	3.86	4.18	4.00	3.87
Liquidity	GMs	3.74	3.80	3.78	3.25	3.70
	FE	3.06	3.54	3.18	3.40	3.31
Total	GMs	3.80	3.79	3.73	3.34	3.72
	FE	3.60	3.59	3.35	3.43	3.53

GMs = General Managers; FE = Financial Executives

Both GMs and financial executives perceive GMs place more importance on operating ratios than other user groups, based on scores of 4.06 and 3.78, respectively. This is to be expected since GMs have the operating responsibility of their lodging properties, and the operating ratios reflect various operating results such as cost of food sold, cost of labor, and average daily rate.

Solvency ratios are perceived to be more useful to owners and bankers than to other user groups (GMs and corporate executives), according to the respondents. Financial executives' responses to solvency ratios for bankers and owners scored 4.20 and 4.15, respectively, while GMs' responses to solvency ratios for bankers and owners scored 3.84 and 4.00, respectively. Financial institutions are most concerned about the capital structure when considering loan applications; thus it is expected that they would be perceived to place a high level of importance on this group of ratios. In addition, owners can be expected to place a high degree of importance on these ratios since they reflect, in part, financial risk being taken by the owners. On the other hand, GMs and corporate executives, though concerned about solvency, focus more attention on operations.

Some Results Can Be Expected

Both GMs and financial executives perceived activity ratios, such as occupancy percent, to be most useful to GMs, followed by corporate

executives. Since activity ratios measure the use of resources and GMs are delegated the responsibility for using resources to achieve profits, these results are to be expected. Since corporate officers are responsible for how GMs are using the resources of the hotel firms, then it follows that they would be expected to value these ratios second to GMs and more highly than owners and bankers.

Profitability ratios are perceived by both GMs and financial executives to be most useful to owners (see Exhibit 2). GMs and financial executives responses for owners were scored as 4.32 and 4.18, respectively. The result is expected as profits accrue to the owners who have invested in the hotels for this very reason. Both respondent groups agree that profitability ratios are less useful to GMs than to the other user groups. This is not to suggest GMs are perceived as not finding these ratios useful, but only versus the other user groups. As discussed previously, profitability ratios across all users are perceived to be the most useful class of ratios.

Finally, the analysis by classes of ratios reveals that both GMs and financial executives believe liquidity ratios to be most useful to corporate executives. This most likely reflects the centralization of cash operations at corporate headquarters for many hotel chains. In a centralized cash management system, most of the bills are paid by the corporate office. The differences between perceptions of GMs and financial executives regarding liquidity ratios for other user groups were significant. GMs believe that owners and GMs (themselves) find these ratios to be more useful than bankers, while financial executives perceive the reverse to be true.

Overall, based on the quantified results, both GMs and financial executives perceive the following:

- GMs find operating and activity ratios more useful than other user groups.
- Owners find profitability ratios more useful than user groups.
- Corporate executives find liquidity ratios more useful than other user groups.

Regarding solvency ratios, the two respondent groups differ. Financial executives believe bankers find this group of ratios most useful, while the GMs perceive owners to find these ratios more useful than other groups. Still another way to view the results shown in Exhibit 2 is which class of ratios is perceived as most useful to each user group.

Again GMs and financial executive respondents agree:

- GMs find operating ratios the most useful class of ratios.
- Corporate executives place the most importance on profitability ratios rather than on other classes of ratios.
- Bankers find solvency ratios to be most useful.
- Owners find profitability ratios most useful.

Most Useful Ratios Show Some Agreement

Exhibit 3 reveals the ranking of the 10 most useful ratios by all user groups by GMs and financial executives. The two lists contain nine common ratios. Only "room sales to total sales" by GMs and "total revenue percent change from prior year" by financial executives are not on both top 10 lists. Further, the two respondent groups agree on four of their top five ratios as shown in Exhibit 3, mainly profit margin, occupancy percent daily and month to date, and average daily rate.

Exhibit 3
The 10 Most Useful Ratios Across All User Groups

Ratios	Respondents	
	GMs	Financial Executives
Profit margin	4.56 (1)	4.37 (1)
Occupancy % – Month-to-date	4.46 (2)	4.25 (3)
Cost of labor %	4.26 (3)	3.93 (8)
Daily occupancy %	4.25 (4)	4.09 (5)
Average daily rate	4.19 (5)	4.14 (4)
Total revenue % change from budget	4.12 (6)	4.27 (2)
Cost of food sold %	4.11 (7)	3.69 (9)
Cost of beverage sold %	4.09 (8)	3.62 (10)
Room sales to total sales	3.96 (9)	NA
Operating efficiency ratio	3.94 (10)	4.00 (6)
Total revenue % change from prior year	NA	3.94 (7)

(X) Numerical rating of ratio by respondent groups

NA Not applicable as the ratio was not rated in the top 10 by the respondent group.

Profit margin is considered to be the single most useful ratio. It compares the bottom line (net income) to total revenue. Since users are most interested in profitability, it is no surprise that this ratio is ranked as the most useful.

To be successful, lodging properties must sell rooms. Thus, the prime measure for selling rooms, occupancy percentage, both on a daily basis and month-to-date basis, is included among the top 10. Rooms revenue results from selling rooms (occupancy) at a price (ADR). As expected, ADR is perceived to be quite useful. Three ratios

of the 10 are targeted toward cost control, namely cost of labor percent, cost of food sold percent, and cost of beverage sold percent. Again, the inclusion in the top 10 can be expected since product and labor costs are generally significant in amount and must be controlled if lodging firms and their properties are to be profitable.

Finally, comparison of operating results to plan (budget) and prior year are commonly conducted by hotels on a monthly basis. The importance of these comparisons is underscored by the inclusion of "total revenue percent change from budget" and "total revenue percent change from prior year" on the top 10 lists.

Exhibit 4 contains the nine ratios both respondent groups rated among their 10 most useful, as shown in Exhibit 3, and the focus of each ratio based on its computation is shown. For example, profit margin is determined by dividing net income by total sales. So the focus is considered to be mixed since both sales and expenses are included.

Exhibit 4
Focus of Nine Most Useful Ratios
Common To Both Respondent Groups

Ratio	Focus
Profit margin	Sales-expense (mixed)
Occupancy % – daily	Sales
– month to date	Sales
Cost of labor %	Expense
Average daily rate	Sales
Total revenue % change from budget	Sales
Cost of food sold %	Expense
Cost of beverage sold %	Expense
Operating efficiency ratio	Sales–controllable expense (mixed)

Exhibit 4 includes four ratios focusing on sales, three focusing on expense, and two that are considered to be mixed since they focus on sales and expenses.

Therefore, these most useful ratios appear to suggest across all user groups that more attention is paid to sales, hopefully the generation of sales, than to the containment of expenses.

In addition, the 10 most useful ratios on each list are based on numbers primarily from the income statement. No ratios reflecting balance sheets numbers made either top 10 list.

This research reveals that GMs and financial executives perceive ratios by class to be of above average usefulness to all user groups.

The class of profitability ratios is perceived as the most useful across all groups; however, on a group by group basis, the most useful class of ratios differs.

The single most useful ratio is perceived to be profit margin. This is not a real surprise since profits are the major goal of most, if not all, lodging corporations.

Future Research Can Increase Response Rate

The findings of this research are limited since the response of GMs and financial executives was fairly low. Future research could be undertaken to increase the response and thereby increase the ability to generalize the results. Secondly, the findings are limited to the 44 ratios included in this research. Future research would include additional ratios. Finally, future research could include surveying the user groups to determine the usefulness of ratios to them rather than what GMs and financial executives perceive them to be. Then a comparison of the usefulness by user group could be compared to the perceptions of GMs and financial executives to determine if perceptions of these two respondent groups are reasonable. If user groups place a different value on various ratios than GMs and financial executives, then GMs and financial executives may need to change the importance they have been placing on such ratios.

References

¹A few hospitality oriented textbooks included the following: Raymond Cote, *Understanding Hospitality Accounting II*, (East Lansing: Educational Institute of the AH&MA, 1987); Raymond S. Schmidgall, *Hospitality Industry Managerial Accounting*, (East Lansing: Educational Institute of the AH&MA, 1986); Michael M. Coltman, *Financial Management for the Hospitality Industry*, (Boston: CBI Publishing Company, Inc., 1979).

²For examples, *Trends in the Hotel Industry* by Pannell Kerr Forester and *U.S. Lodging Industry* by Laventhol & Horwath.

³Charles H. Gibson, "How Industry Perceives Financial Ratios," *Management Accounting*, (April 1982), pp. 13-19.