INVESTMENT TODAY

FORECASTING REVENUES AND EXPENSES

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In forecasting revenues and expenses for a lodging facility, progressive hotel-appraisal firms use a fixed and variable component model. This model is based on the premise that hotel revenues and expenses have one fixed component and another that varies directly with occupancy and facility utilization.

A projection can therefore be made by taking a known level of revenue or expense and calculating the fixed and variable components. The fixed component is then held constant, while the variable component is adjusted for the percentage change between the projected occupancy and facility utilization and the actual occupancy and facility utilization that produced the known revenues or expenses.

The table below illustrates the revenue and expense categories that this fixed and variable component model can project. The percentages show the portions of each category that are typically fixed and variable. The last column describes the basis for calculating the percentage of variability.

An example can best illustrate the process of forecasting revenues and expenses using this fixed and variable component model. Assume we are dealing with a 200-room commercial hotel that last year had an occupancy of 70 percent, an average room rate of $104.33 and a rooms department expense of $1,226,000, or 23 percent of rooms revenue. Projections for this year indicate that because several new hotels should open in the area, the subject's occupancy will fall to 61 percent.

To begin our projections, we would first calculate the 1989 rooms department expense. To do so, we convert the 1988 rooms department expense into 1989 dollars (assume a five-percent inflation rate):

$$\$1,226,000 \times 1.05 = \$1,287,000$$

We then estimate the fixed and variable components:

Fixed: 55% $\times$ $1,287,000 = $708,000
Variable: 45% $\times$ $1,287,000 = $579,000

Next, we adjust the variable component for the decline in occupancy from 70

Revenue Projection Components

REVENUE AND EXPENSE CATEGORY	PERCENT FIXED	PERCENT VARIABLE	INDEX OF VARIABILITY
REVENUES			
Food	30-50	50-70	Occupancy
Beverage	0-30	70-100	Food revenue
Telephone	10-40	60-90	Occupancy
Other income	30-60	40-70	Occupancy
DEPARTMENTAL EXPENSES			
Rooms	50-70	30-50	Occupancy
Food and beverage	35-60	40-65	F & B revenue
Telephone	55-75	25-45	Telephone revenue
Other income	40-60	40-60	Other income revenue
UNDISTRIBUTED OPERATING EXPENSES			
Admin. & general	65-85	15-35	Total revenue
Management fee	0	100	Total revenue
Marketing	65-85	12-35	Total revenue
P.O.&M.	55-75	25-45	Total revenue
Energy costs	80-95	5-20	Total revenue
FIXED EXPENSES			
Property taxes	100	0	Total revenue
Insurance	100	0	Total revenue
Reserve for replacement	0	100	Total revenue

percent to 61 percent. We calculate the percentage decline in occupancy (occupancy adjustment) by dividing the projected occupancy by the known occupancy:

$$61\% \div 70\% = .8714$$

Multiplying the occupancy adjustment by the variable component yields the adjusted variable component:

$$.8714 \times \$579,000 = \$505,000$$

Combining the fixed component and the adjusted variable component produces the estimated 1989 rooms department expense at a 61-percent occupancy:

Fixed component	$ 708,000
Adjusted variable component	505,000
Projected rooms department expense	$1,213,000

Because of this fixed and variable relationship, the rooms expense ratio equals 24.9 percent of rooms revenue, demonstrating the effects of a nine-point drop in occupancy.

This fixed and variable component model represents a highly accurate method for forecasting hotel revenues and expenses. It is well-suited for various computer formats and forms the basis for most sophisticated forecasting programs. **LH**