A Textbook of Hospitality Sales & Management

A. Khanna
V.S. Rana
Aditi Garg
Dr. Anuj

A Textbook of Hospitality Sales & Management

A. Khanna
V.S. Rana
Aditi Garg
Dr. Anuj Goel

A Textbook of Hospitality Sales & Management

A. Khanna
V.S. Rana
Aditi Garg
Dr. Anuj Goel

Wisdom Press
NEW DELHI

A Textbook of Hospitality Sales & Management

A. Khanna
V.S. Rana
Aditi Garg
Dr. Anuj Goel

This edition published by Wisdom Press,
Murari Lal Street, Ansari Road, Daryaganj,
New Delhi - 110002.

ISBN: 978-93-82006-58-9

Edition: 2022

Wisdom Press

Production Office: "Dominant House", G - 316, Sector - 63, Noida, National Capital Region - 201301.
Ph. 0120-4270027, 4273334.

Sales & Marketing: 4378/4-B, Murari Lal Street, Ansari Road, Daryaganj, New Delhi-110002.
Ph.: 011-23281685, 41043100.
e-mail : wisdompress@ymail.com

CONTENTS

Chapter 1. An Overview of Basic Financial Accounting.....1

— Aditi Garg, Dr. Anuj Goel

Chapter 2. Understanding the Financial Statements: An Analysis 8

—Aditi Garg, Dr. Anuj Goel

Chapter 3. Analysis and Interpretation of Financial Statements.....16

— Aditi Garg, Dr. Anuj Goel

Chapter 4. Evaluating the Importance of Ratio Analysis.....22

— Aditi Garg, Dr. Anuj Goel

Chapter 5. Exploring the Rate of Internal Control: A Review Study.....29

—Aditi Garg, Dr. Anuj Goel

Chapter 6. The Bottom-Up Approach to Pricing: An Analytical Review.....36

—Dr. Somprabh Dubey, Dr. (Prof.) Ashok Kumar

Chapter 7. Calculating Meal Selling Prices and Room Rates for a Sufficient Return on Investments.....43

— Dr. Somprabh Dubey, Dr. (Prof.) Ashok Kumar

Chapter 8. Exploring the Importance of Cost Management.....50

— Dr. Somprabh Dubey, Dr. (Prof.) Ashok Kumar

Chapter 9. An Analysis of the Operations Budgeting.....57

— Dr. Somprabh Dubey, Dr. (Prof.) Ashok Kumar

Chapter 10. Statement of Cash Flows and Working Capital Analysis.....66

—Harsh Panwar, Dr. Neha Vashishtha

Chapter 11. Advantages of Effective Cash Management: An Overview.....73

— Harsh Panwar, Dr. Neha Vashishtha

Chapter 12. Capital Budgeting and the Investment Decision 80

—Harsh Panwar, Dr. Neha Vashishtha

Chapter 13. An Analysis of Feasibility Studies an Introduction.....86

— Harsh Panwar, Dr. Neha Vashishtha

CHAPTER 1
AN OVERVIEW OF BASIC FINANCIAL ACCOUNTING

Aditi Garg, Assistant Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- aditi.garg@shobhituniversity.ac.in

Dr. Anuj Goel, Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id- anuj.goel@shobhituniversity.ac.in

ABSTRACT:
Every firm, whether for profit or nonprofit, needs a solid internal system of accountability. This accountability is provided by a business accounting system, which keeps track of all transactions involving the generation of monetary inflows for revenue and monetary outflows for operational expenses. The accounting system offers the financial data required to assess the efficiency of ongoing and previous operations. The accounting system also keeps track of the information needed to produce reports that illustrate the state of the corporate entity's asset resources, creditor liabilities, and ownership equity. In the past, a large portion of the work needed to maintain an efficient accounting system involved time-consuming, difficult, and individual manual labour. These systems required each user to continuously record transactions, perform additions, subtractions, summaries, and error checks. The quick development of computer technology has reduced costs significantly while increasing operational speed, data storage, and reliability. Cheap microcomputers and accounting software have developed to the point that the computerized system can swiftly offer all of the record posting, calculations, error checking, and financial reports. Management can continue to have direct human control over the accounting system thanks to the effectiveness and affordability of the supporting computer software. The reader must possess both a conceptual and practical understanding of accounting foundations in order to comprehend the topics and analysis techniques covered in this text.

KEYWORDS:

Accounting, Costs, Income, Labour, Revenue.

INTRODUCTION

Stockholders, creditors, lenders, governmental organizations, and other external users who are interested in or impacted by the operation of the business are among the users whose information is provided by financial accounting. The goal of hospitality management accounting is to give managers in charge of leading and overseeing activities within the hotel sector specific internal information. Planning different short- or long-term courses of action and choosing the best course of action are both based on internal knowledge. It is explained in full how the chosen course of action will be carried out. To carry out a chosen course of action, managers motivate the human resources and direct the material resources required. The implemented course of action is under the management of managers who ensure that the plan is being followed and, if necessary, amended to achieve the goals of the chosen course of action.

Hospitality Accounting Professions

There are several job prospects in the hotel sector for those interested in accounting. First, there is general accounting, which entails the generation and recording of accounting data as well as possible specializations like cost control for food and beverage services. Second, larger companies may provide opportunities in accounting system design (or revision) and implementation. Careers in budgeting, tax accounting, and auditing that confirm the financial records and reports of individual properties in the chain could also be available in a larger corporation[1]–[3].

Overview Of Hospitality Accounting

The common consensus is that all business activities, including those in the hospitality industry, have a variety of various cyclical sales revenue cycles. The daily operational cycle is the first, and it is especially relevant to restaurant operations since daily sales revenue frequently depends on mealtimes. There is a weekly cycle, too. One the one hand, business travelers typically use hotels, motels, and other hospitality businesses during the week but typically don't generate much revenue on the weekends. On the other hand, locals tend to visit restaurants more frequently on the weekends than they do during the week. Third, there is a seasonal cycle that depends on tourists to support hospitality businesses during the summer. Fourth, there will be a broad business cycle during a recession, and hospitality enterprises will normally see a significant drop in sales revenue. Forecasting revenue and operational costs is particularly challenging in the hospitality industry due to the numerous recurring accounting cycles that are encountered. Particularly, special planning and procedures are needed for variable expenses (such as labor costs and cost of sales), which help with budget forecasting. It is more challenging to efficiently automate and regulate hospitality expenditures than it is in other no hospitality company sectors because hospitality operations are people-oriented and people-driven. Regrettably, the majority of accounting textbooks and generic accounting courses place an emphasis on accounting systems using methods and software

Overview Of Hospitality Accounting

applicable to firms in the service, retail, and manufacturing sectors. These kinds of enterprises typically don't need to apply the particular accounting methods and procedures needed by hospitality operations. In manufacturing processes, direct expenses and indirect costs are typically assigned to specific products or product lines. All labor and material expenses that may be linked directly to the manufactured good are considered direct costs. Manufacturing or factory overhead is typically referred to as "indirect costs," which includes things like factory supporting costs like administrative salaries, labor, and other overhead, utilities, interest, taxes, and depreciation. Since indirect costs cannot be clearly linked to a single product due to its fundamental nature, it is challenging to isolate individual costs. Each product or product line receives a portion of the supporting indirect costs that are allocated using allocation methodologies. However, a hospitality organization typically has distinct operating divisions that offer services like lodging, food, drink, banquets, and gift shops. Each operating department and its operating divisions must be able to be evaluated independently by a hospitality accounting system. Direct costs are those that may be directly linked to a department or division. Cost of sales (cost of items sold), pay and wage labor, and certain running materials are frequently the largest direct expenditures. Following the determination of direct expenses, revenue is subtracted in order to separate contributory income, which represents the department's or division's contribution to the support of the operation's undistributed indirect costs. Costs that cannot be directly linked to a department or division are known as indirect costs. In general, little effort is made to assign indirect costs to the department or divisions at this point in the review. Managers examine operational results to make sure that contributed income from all departments or divisions is enough to pay all indirect costs for the entire hospitality business and leave enough money over to achieve the desired level of profit[4]–[6].

DISCUSSION

This text's goal is to give managers in the hospitality sector a practical understanding of how an accounting system creates, updates, and presents financial data. Understanding the data that an accounting system provides improves managerial analysis. Management effectiveness will be significantly lowered if management does not comprehend the information being

delivered. The principles, concepts, practices, and general rules that management must utilize in a workable accounting system in order to make choices and maintain a successful, efficient, and profitable firm are defined by financial accounting, a common language created by accountants over time. An accounting system displays comprehensive data on assets, liabilities, ownership equity, and sales revenue.

A Review of Basic Financial Accounting

operating costs, and it controls the recording, reporting, and creation of financial statements that depict a company entity's financial situation. The two accounting methods are cash basis and accrual basis. How and when sales revenue and expenses are recorded differs between the two approaches. According to the cash basis of accounting, sales revenue inflows are recorded when money is received, and operating expense outflows that result in sales revenue are recorded when money is paid. Simply defined, the cash basis only records sales income and operations costs when money is actually exchanged. No matter when cash is collected or spent, the accrual foundation of accounting records sales revenue inflows when earned and operating expense outflows to produce sales revenues when incurred. When it makes sense for their sort of organization, many small enterprises employ the cash basis of accounting; there is no necessity to compile and disclose their financial situation to external users. As seen below, the cash basis can be calculated. The accrual basis does not have a fundamental equation. We'll use a hypothetical new restaurant that operated on a cash basis for its first two months of business to demonstrate cash accounting. Assuming monthly sales revenue of $10,000 and total inventory of $8,000 for resale, a partial income statement generated on a cash basis for the first two months of operation would display the following[7], [8].

Income Statements and Balance Sheets

By displaying the status of a company's assets, liabilities, and ownership interests as of a certain operating period's conclusion, the balance sheet displays the financial health of a business entity. By matching sales revenue inflows and expense outflows to indicate the results of operationsnet income or net lossthe income statement reflects the economic performance of the corporate organization. The income statement is typically regarded as being more significant than the other two key financial reports. It clearly highlights the costs that must be incurred in order to earn sales revenue because it reports the results of operations. The income statement will be covered later in this chapter. It will be covered first since it gives an easier foundation for comprehending double entry accounting. Three essential components make up the accounting equation, which establishes the fundamental structure of the balance sheet. Expanded upon are the fundamental arrangements of a balance sheet and an income statement presented in this chapter[9], [10].

Accurate Double-Entry Accounting

The core of double-entry-accrual accounting is the analysis of accounting transactions, as well as the recording, posting, adjusting, and reporting of economic outcomes and financial position of a business entity. A balance sheet equation or an income statement must have at least one new or altered component for there to be an accounting transaction. A transaction is an exchange between two commercial entities where services are provided or items are sold to a third party for cash or on credit, or where services are obtained or goods are bought. After the transaction, adjustment entries must be made to the business entity's operating accounts to recognize internal accruals and deferrals at the end of an operating period. Sales revenues earned but not yet received or recorded, as well as expenses incurred but not yet paid or recorded, will be recognized in such transactions. Closing the temporary income statement operating accounts (sales revenue and expenses) and transferring net income or net loss to the capital account(s) or the retained earnings account are both necessary steps to finish the accounting period. The phrase "double-entry accounting" comes from the fact that

this requirement calls for an entry to be made on both sides of the equation. In a later section of this chapter, we'll go into more depth about adjusting and closing entries. The balance sheet equation and the equality between both sides of the equation, are maintained since no transaction can have an impact on just one account. Each transaction specifies how each account involved in the transaction should be changed. Each directed adjustment will result in a monetary increase or decrease to the designated account in the given amount. It's crucial to comprehend how a journal entry designates such modifications for a particular account. In order to receive numerical values that adhere to the norms of debit and credit entries, two account columns are used.

Principle of the Business Entity

The transactions of a business entity functioning as a proprietorship, partnership, or corporation are deemed to be separate and distinct from all personal dealings of its owners from an accounting perspective, if not from a legal perspective. Even if the owners labor for or for the business entity, the separation of the owners' personal affairs from the company entity must be preserved. Only the consequences of the corporate entity's assets, liabilities, ownership equity, and other transactions are recorded in the accounting records of the company. The corporate entity does not include the ownership's personal possessions, liabilities, or costs[11], [12].

Financial Uniform Principle

According to the monetary unit principle, business exchanges and operational transactions are recorded numerically using the fundamental national monetary unit. The dollar is the official currency of the US. As a result, the accounting function in our scenario keeps track of how much money the corporate entity spends and brings in through sales revenue during operations. Within financial accounts and reports, financial information is also expressed in terms of the dollar's monetary unit. The accounting system records data that is supplied and preserved in dollars.

Principle Of Going Concern

The going concern principle presumes that a company entity will continue to operate indefinitely under normal conditions. This continued existence is based on the idea that the cost of business assets will eventually be recouped by earnings produced by profitable activities. Long-lived assets including land, buildings, and equipment are valued at their actual acquisition costs on the balance sheet. Such assets should not be valued at market value because it is not the purpose to sell them. Depreciation expense is used to recover the initial cost of a long-lasting physical asset (other than land) over the course of its useful life.

Principle of Cost:The cost principle, which mandates that the value of business transactions be documented at the actual or equivalent cash cost, is directly related to the assumption made by the monetary notion. Under the stable dollar assumption, comparing income statements for several years over protracted periods of inflation or deflation becomes challenging, if not nonsensical. With regard to the valuation of inventories for resale and the expression of some balance sheet and income statement items in terms of current, as opposed to historic, dollars, there are a few exceptions.

Period of Time Principle

According to the time period principle, a business entity must conduct a study of the financial health and profitability of its operations over a given period of time. An ongoing business is always in operation. Although electrical power really continues to flow constantly to the user, theoretically the flow should stop once the service meter data has been logged. The billing statement indicates that although service continued without a hitch, the time period's service

formally terminated at a particular date. Although the principle can be used to any time perioddaily, weekly, monthly, quarterly, semi-annually, or annually, this example refers to a monthly period. An accounting year, often known as a fiscal year, is a 12-month span of time. A fiscal year is any twelve-month period, which may or may not be the same as a calendar year that runs from January 1 to December 31 of the same year. In the hospitality industry, monthly and occasionally weekly statements are commonly prepared.

Principles of Conservatism

A company should never create financial statements that may result in overstatements or understatements of assets, liabilities, sales revenues, or expenses on the balance sheet. Estimates may be required in certain circumstances, such as when determining an appropriate depreciation rate or determining inventory values. The valuation of the inventory ought to be lower rather than higher. Conservatism in this case results in higher sales costs and a lower gross margin also known as the gross profit. Depreciation expense is a methodical way to recover the expenses of long-lived assets (apart from land), and as such, these costs need to be higher rather than lower. Conservatism's objective is to prevent overstating income, which will result in higher expenses and lower reported operational income in this situation. To prevent conservatism from being taken too far and producing false findings, vigilance must be taken. For instance, five years of use could be enough time for restaurant equipment to fully depreciate. Although this course of action is undoubtedly conservative, it is barely practical[13], [14].

Principle of Consistency

The purpose of the consistency principle is to ensure that the methods and practices used to prepare financial statements are comparable and consistent from one accounting period to the next. For instance, the cash basis mandates the exchange of cash prior to the recognition of sales income or expenses. The accrual foundation of accounting mandates that income and costs be recorded as they are incurred. Both alternating between the two and arbitrarily modifying inventory valuation would not be consistent. A review of basic financial accounting principles of accounting generally acceptedtechniques from one period to the next. The disclosure principle dictates that modifications should be disclosed to likely and potential readers of the statements when they are inconsistent with the most recent accounting period. The disclosure should include both the likely economic impact on future periods as well as the economic effects of the modifications on the financial results of the current period.

Principle of Full Disclosure

Financial statements mostly focus on a past time period. According to the full disclosure principle, every future event that might or would happen and would materially affect the business's financial status would need to be disclosed to likely and potential readers of the statements. Footnotes are the most popular way to provide these disclosures. A hotel should disclose things like the construction of a new wing or the potential purchase of another property. If a patron files a lawsuit against a restaurant alleging, they were negligent for allowing a frayed carpet edge to cause them harm, they are required to divulge this information. The adjustments should be stated if the accounting techniques used to prepare the current financial statements have changed and diverge from those used to prepare earlier financial statements. If at all possible, changes from one period to the next that have an impact on present and upcoming business operations should be recorded. Such adjustments would raise or lower the value of ending inventory, cost of sales, gross margin, and net income or loss. Such changes include those made to the method used to calculate depreciation expense or to the method of inventory valuation. Every change that is communicated should be accompanied by a financial impact statement.

CONCLUSION

This objectivity principle demands that a transaction have a factual foundation. Before a transaction may be recorded in the accounting records, it must be supported by some sort of independent evidence or documentation. A receipt for the payment of a guest check, the acceptance of a credit card, or the invoicing of a house account that supports earned sales revenue are examples of this type of proof. Revenue is recognized on the accrual basis of accounting when it is earned, not necessarily when it is received. Accounts receivable, a record of the sum anticipated to be received soon, are created when sales income is collected through the receipt of cash or the granting of credit. When money is spent or credit is granted, expenses are incurred, establishing an account payable that needs to be paid soon. A receivable's payment may be written off as a bad debt expense (income statement method for tax purposes) if it is no longer possible to collect it. The creation of an allowance for uncollectable accounts (balance sheet approach for financial reporting purposes) is another way to write off an uncollectible account. To prepare for potential future bad debts, the allowance for uncollectable accounts may be established. However, one instance of an exception to the objectivity idea is the formation of an allowance account for bad loans (balance sheet approach). The allowance account is based on hypothetical future events, hence there is no absolute basis in reality. The allowance account for bad debts, however, is often based on historical data regarding the percentage of receivables that were not collected.

REFERENCES:

[1] C. Burgess, "Managerial Competencies for U.K. Hotel Financial Controllers: Are They Hospitality Managers or Accountants?," *J. Hosp. Financ. Manag.*, 2017, doi: 10.1080/10913211.2017.1313612.

[2] O. Muhrtala Tijani and A. Kayode Mohammed, "Computer-Based Accounting Systems in Small and Medium Enterprises: Empirical Evidence from a Randomized Trial in Nigeria," *Univers. J. Manag.*, 2013, doi: 10.13189/ujm.2013.010103.

[3] E. Yaw Arhin, "Accounting Record-Keeping and Tax Compliance in the Hospitality Industry in Ghana," *IMPACT Int. J. Res. Bus. Manag. (IMPACT IJRBM)*, 2018.

[4] K. Park and S. C. (Shawn) Jang, "Hospitality finance and managerial accounting research: Suggesting an interdisciplinary research agenda," *Int. J. Contemp. Hosp. Manag.*, 2014, doi: 10.1108/IJCHM-12-2013-0554.

[5] P. J. Harris and J. Brander Brown, "Research and development in hospitality accounting and financial management," *Int. J. Hosp. Manag.*, 1998, doi: 10.1016/s0278-4319(98)00013-9.

[6] K. Frimpong, K. A. Frimpong, I. K. Yawson, and E. A. Akomeah, "Computerized accounting in Ghana: The shift from books to software: The benefits and challenges associated with the transition," *Int. J. Adv. Res. Dev.*, 2018.

[7] W. Noh and J. Y. Lim, "Nurses' Educational Needs Assessment for Financial Management Education Using the Nominal Group Technique," *Asian Nurs. Res. (Korean. Soc. Nurs. Sci).*, 2015, doi: 10.1016/j.anr.2015.04.004.

[8] A. A. Habib, "THE PRINCIPLE OF ZAKAT, INFAQ, AND SHADAQAH ACCOUNTING BASED SFAS 109," *J. Account. Bus. Educ.*, 2016, doi: 10.26675/jabe.v1i1.6725.

[9] J. Kinnunen and M. Koskela, "Do cash flows reported by firms articulate with their income statements and balance sheets? Descriptive evidence from finland," *Int. J. Phytoremediation*, 1999, doi: 10.1080/096381899335745.

[10] M. S. Maulana, "Rancangan dan Implementasi Aplikasi Web Point of Sales pada Butik Anak ' Galery Freya ,"' *J. Khatulistiwa Inform.*, 2017.

[11] L. Bohutska, "Implementing principles of transparency in business entities," *Her. Ternopil Natl. Econ. Univ.*, 2017, doi: 10.35774/visnyk2017.04.149.

[12] N. N. A. Astiti, "Tanggung Jawab Pengurus Terhadap Pelanggaran Prinsip-Prinsip Koperasi," *J. Ilmu Huk. Tambun Bungai*, 2016.

[13] A. Juanda, "Kandungan Prinsip Konservatisme dalam Standar Akuntansi Keuangan Berbasis IFRS (International Financial Reporting Standard)," *J. Humanit.*, 2012.

[14] T. K. Fagan, "Animal mindreading and the principle of conservatism," *South. J. Philos.*, 2016, doi: 10.1111/sjp.12167.

CHAPTER 2
UNDERSTANDING THE FINANCIAL STATEMENTS: AN ANALYSIS

Aditi Garg, Assistant Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- aditi.garg@shobhituniversity.ac.in

Dr. Anuj Goel, Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id- anuj.goel@shobhituniversity.ac.in

ABSTRACT:
The balance sheet and the income statement are the two main financial statements that are covered in this chapter. In hospitality operations, income statements are often created by each of the subordinate operational departments (or divisions) and balance sheets are typically prepared for the whole operation. A hospitality operation incurs costs that can be divided into two categories: direct costs and indirect charges. Operating expenses that are defined as direct expenditures and that can be traced back to the department are reported in departmental income statements. Costs that are difficult to link to a certain department and are typically undistributed are known as indirect costs. Unallocated expenses are typically incurred to sustain the facility as a whole and will typically show up on a summary income statement. A generic income statement will list all costs as specified expenses and cost of sales. This chapter will provide a detail on calculating the cost of sales. It will be taught how to modify the cost of food and beverages used to arrive at net cost of sales and four different techniques of estimating the value of inventory will be covered. Transfers across departments, adjustments for employee and promotion lunches, and other changes may be included. For profit and cost centres, responsibility accounting will be introduced and addressed. Methods of allocating indirect costs to departments will be covered, as well as the impact on overall profit of altering the mix of sales among departments.

KEYWORDS

Costs, Food, Income, Revenue, Sales.

INTRODUCTION

It's not a must to be able to prepare financial statements in order to understand them. The advantage of being able to generate a set of statements, notably a balance sheet and an income statement, is that you may evaluate the data in greater detail and utilize it to improve business operating results. The main focus of this work is for use of internal management, from the department head up to general management, despite the fact that there are numerous internal (different levels of management) and external users (employees, stockholders, creditors, county, and local and national regulatory authorities). If managers at all levels are to make informed decisions for the near or immediate future, they require access to financial information. Information is needed, and two sources are logical decisions and financial statements.

Uniform Accounting System

The majority of businesses in the hospitality sector (hotels, motels, resorts, restaurants, and clubs) employ the Uniform System of Accounts that is suited for their specific industrial niche. The original Uniform System of Accounts for Hotels (USAH) was started in 1925 by the Hotel Association of New York. The system was created to categorize, arrange, and show financial data so that uniformity reigned and financial data comparison between hotels was easy. One benefit of accounting standardization is that data from comparable firms in the hospitality sector can be gathered on a local or national level. Then, this information can be repeated as average numbers or statistics. Each company can then compare its outcomes to

the averages. This does not imply that specific hotel owners should set their organization's objectives based on the national hotel average performance, for instance. Average outcomes are merely a benchmark for comparison, and there are numerous explanations as to why a certain organization's results could deviate from sector norms. However, an individual operator at least has information from which he or she can decide whether remedial action is necessary inside the operator's own company by conducting the comparison, identifying where disparities occur, and studying the causes.

Balance Sheet And Income Statement

Although they are discussed individually in this chapter, the income statement and balance sheet should actually be read and examined together. Always keep in mind how the two financial accounts relate to one another. When the definition and goal of each statement are compared, the relationship between the two is very obvious. The goal of the balance sheet is to paint a picture of the financial situation of a company entity in relation to its assets, liabilities, and ownership equity at a certain point in time. Each individual account is listed by category at the end of a particular date, which is typically the conclusion of an operating period. Each account is shown by name and numerical balance. The income statement's objective is to display the financial outcomes of a company's profit-driven operations throughout a certain operational period. The precise date of the balance sheet is often the finishing date of an operating period that is stated in the income statement.

How to Comprehend Financial Statements

Any 12-month span with a start date of any day and an end date of any day the following year qualifies as an annual operational period. A business entity may also employ an interim reporting cycle, such as one that is weekly, monthly, quarterly, or semi-annual. Revenues Statements There are few differences between the balance sheet presentations of various hospitality businesses. The presentations also resemble the majority of those for non-hospitality commercial operations quite a bit. This similarity does not apply to the income statement, though. The income statement must display operating results for the operation as a whole as well as for each department, as most hospitality companies are departmentalized. The needs of any unique establishment's management govern exactly how such an income statement is to be constructed and presented. Because each must be prepared to reflect operating results that will enable management to make informed decisions about the future of the business, income statements for other branches of the industry (resorts, chain hotels, small hotels, motels, restaurants, and clubs) will likely be very different from one another. As a result, the income statement for one hotel may be completely different from that of another. This chapter's discussion of the income statement will be in broad terms only, not specific to any one area of the hospitality sector. A long-form income statement is advised by the USAH but is not required.

REVENUE: An influx of assets received in exchange for goods or services rendered is referred to as revenue. While a restaurant's income comes from the sale of food and drinks, a hotel's income comes from renting out guest rooms. Additionally, the resort generates income from a variety of other sources, including catering, entertainment, casinos, room rents, vending machine operations, and gift shop businesses. Receiving nonoperating revenues, which are listed in the income statement's "Other income" section after operating income (before income tax), is not rare. Nonoperating revenues are those received for purposes other than the selling of goods and services, which is the main goal of the company. Items like interest on certificates of deposit, notes payable, investment profits, and maybe franchise or management fees are examples of other income. When such money is received, it should be included in a classified income statement after operating income before taxes are calculated.

Revenue is recognized using the accrual accounting technique when it is earned, rather than always when it is received. Income is generated and recorded in a revenue account[1]–[3].

How To Comprehend Financial Statements

By receiving money in cash or extending credit, you can settle an account. Theoretically, ownership equity will rise when income is recognized. After costs are incurred and revenues (the matching principle) are received over an operational period, ownership equity will actually rise or fall. When revenues (R) surpass expenses (E), ownership equity rises; conversely, when revenues (R) fall short of expenses (E), ownership equity falls. According to the cash basis of accounting, cash must exchange hands in order to recognize revenues and/or expenses. Theoretically, the capital account rises when products or services are sold and falls when expenses are paid. The discussion that follows will be based on accrual accounting.

EXPENSES: The definition of an expense is an outflow of resources used to produce revenue. According to the accrual technique, costs must be documented when they are incurred, not necessarily when they are paid. Though in theory ownership equity is increased by expense recognition, in practice ownership equity won't rise or fall until after expenses are incurred and revenues are matched at the end of an operational period. The same revenue minus expense (R E) functions mentioned in the revenue discussion that came before are used to determine an increase or reduction in ownership equity. The cost of sales for a food operation is not recognized until it is known how much of the food inventory was consumed, for instance, in a restaurant where food inventory is purchased for resale and reported as an asset.

DISCUSSION

if a waiter serves both food and drinks, when they are working for the food department and when they are working for the beverage department. As a result, the food and beverage department generate a single income statement. In order to make the income statements more meaningful, it is recommended that the revenue and expenses for food and beverages be maintained separate wherever possible. Food and drink are thus depicted in this work as independent functioning departments, despite the fact that it is acknowledged that this may not always be practical in actuality. It is always possible to eventually combine the two distinct sets of numbers to produce a combined food and beverage income statement for comparison with those of other businesses or with industry averages. Keep in mind the following as you examine the sample departmental income statement. Each revenue division is noted; and the cost of staff meals is subtracted from the cost of sales. Employee meals are paid for at the real food cost, no sales money was made or collected from those meals.

The term "net food cost" denotes the real expenses required to generate the sales income and suggests that all necessary adjustments to the cost of food sales have been made. The price of staff lunches started to be included in employee benefits that were reported as a departmental expense. The income statement for each department discloses its portion of the costs directly due to it, which the department head is responsible for managing. These direct costs would include the cost of sales (food and beverage charges), the salaries, wages, and related payroll expenses of the staff members working in the department, as well as the cost of linen, laundry, and any other categories of supplies needed to run the department. Because they go toward the indirect, undistributed expenses that aren't billed to the operating departments, the resulting departmental incomes (revenue less direct expenses) are occasionally referred to as contributing incomes. The various departmental contribution earnings are added to yield a combined, total departmental income. As previously noted, each departmental income figure would be supported by a departmental income statement. What are frequently referred to as indirect expenses are subtracted from the total departmental income amount.

Unrelated costs to the operation's operations that generate revenue are known as indirect costs. Undistributed operational costs and fixed charges are two different components that make up indirect costs. Administrative and general, marketing, property operation and maintenance, and energy expenditures are a few examples of undelivered operating expenses. In certain establishments, management fees, franchise fees, and guest entertainment may also fall under this heading. The majority of unallocated operational costs are thought to be under control, but not by the managers or heads of the operating departments. The general manager is in charge of them and is accountable for them. Keep in mind that the cost of the concerned employees' salaries and wages is included in the undistributed operating expenditures. Since it gauges the overall management effectiveness of the organization, income before fixed charges is a crucial line on an income statement. The fixed expenses are not taken into account in this evaluation since they are capital costs associated with owning or renting the property (i.e., with the investment in land and buildings) and cannot be managed by the operation management of the institution.

Only one stock item of inventory was analyzed, despite the fact that the variations between the four inventory value methodologies do not seem to be significant. The variations may grow large and affect the value of the entire inventory, cost of sales, and item description if a comprehensive inventory evaluation were conducted. Chateau Dupont Balance Available June Purchase Received Issued Sales

Relative cost of sales

There will typically be rounding errors with the weighted average method, in this example a 4 or $0.04 error. the accurate sales cost. When recorded and reported, the cost of sales is changed from $287.06 on the control record to $287.10. Weighted average perpetual inventory control record 4259operating income and taxes. However, the impact on inventory valuation, cost of sales, and operating income will be consistent if one inventory technique is routinely used.

Last but not least, keep in mind that the FIFO approach often results in a larger net income when cost prices are rising and a lower net income when cost prices are dropping. In general, it is the simplest way to employ, especially when maintaining manual inventory records. This makes it frequently the method of choice for food inventory[4]–[6].

The stock rotation needed to maintain fresh food inventory is compatible with FIFO as well. The worth of the entire inventory can be computed after each item has been enumerated and its expenses determined. The majority of things' price is a straightforward operation, as it seems.

For some goods, the procedure could be more challenging. What is the cost of a gallon of soup that is being made in a kitchen while an inventory is conducted, for instance? Because the soup has a variety of ingredients, in this situation, that value might need to be calculated. The time it takes to value something affects how accurate the final inventory is. Time requirements and precision are trade-offs. Food (and beverage) costs and net income won't be accurate if inventory is not as exact as it should be.

However, in most cases, relatively small inventory-taking errors tend to equal out over time. Food inventory figures should be computed independently of alcoholic beverage inventory figures. The cost of purchases may be estimated more readily than the cost of inventory because it is equal to the entire amount of food and beverages provided throughout the month minus any items returned to suppliers due to factors like unsatisfactory quality. This amount can easily be provided by invoices that were entered in the purchasing account throughout the month. Purchase costs for these two categories must also be documented in separate purchase accounts in order to determine food cost separately from beverage cost.

Modifications to Food Sales Cost

We have only covered the cost of sales calculation for food up to this point. Why is "cost of salesfood" used instead of "net food cost," "cost of food sold," or "food cost"? Cost of salesfood in many small restaurants is identical to net food cost, but in the majority of food and beverage enterprises, cost of salesfood must be adjusted before it can be properly labelled as net food cost. The following are some potential adjustments: Interdepartmental and interdivisional transfers: For instance, in a restaurant with a separate bar operation, products may be bought and received in the kitchen and recorded as food purchases before being transferred to the bar for usage there. Examples include the inclusion of fresh fruit, cream, and eggs in some drinks. Similar to this, some purchases made by the bar that are later transferred to the kitchen, like wine used in cooking, may be accepted by the bar and recorded as beverage purchases.

It is important to keep track of transfers so that at the end of each month, the costs for meals and beverages can be adjusted to make sure they are as precise as possible. It would be necessary to subtract the cost of the moved inventory from the cost of sales in order to account for the cost of transfers from the food operation to the bar operation. The bar adding the transfer cost to alter the cost of salesbeveragewould have the opposite effect. Employee meals: The majority of food businesses permit some employees to eat meals at little or no cost while on the job. In these situations, the price of that food has nothing to do with the sales revenue made during regular business operations. As a result, the price of employee lunches should be subtracted from the price of the food consumed. The cost of the employee meal is then moved to another expense account. As an employee benefit, it might be included in payroll costs. Keep in mind that cash payments for meals that result in a discount from the standard menu prices should not be included in regular food revenue because doing so will affect how much food costs as a percentage.

It ought to be moved to a different revenue account, like other income. Restaurants occasionally give guests gratis (free) food and/or drinks as a form of advertising. If done for loyal clients who are likely to keep giving the operation business, this is an excellent practice. The same procedures that apply to employee meal costs should also apply to the cost of promotional meals. Because the cost will once again skew the cost of food and/or beverages sold, it shouldn't be included in cost of sales for food or cost of sales for beverages. The expense needs to be deducted from food and/or beverage costs and documented as an expense for advertising or promotion. A sales check should always be written out to reflect the item's sales value for employees who are permitted to offer promotional items to customers. For marketing purposes, certain restaurants will hand out vouchers that are good for two meals for the price of one. Even though the consumer only pays for one meal in this instance, the value of both meals should still be listed on the sales check. The cost of promotional meals can be determined from sales checks by applying the operation's typical food cost and/or beverage cost percentage.

Requirement Accounting

Responsibility accounting is a practice used by a hospitality organization that has multiple departments, each of which is responsible for managing its own costs and holding its department head accountable for the departmental profit realized. Departments can be classified as cost centers, revenue centers, profit centers, or investment centers within a single organization that uses responsibility accounting. This system is based on the idea that department heads or managers should be held accountable for both their own performance and that of the employees in their department. A cost center is a division that doesn't bring in any money directly (like the maintenance division). The department manager is alone accountable for the costs incurred in such a case. Some businesses have revenue centers as

well. Although these divisions generate revenue from sales, they incur few or no operating expenses directly. For instance, a sizable resort hotel might rent out a significant portion of its floor space to shops[7], [8].

The department receives income from the rent, all of which is profit. A department that incurs expenses and also brings in money from that area is said to be a profit censer. For instance, in the rooms division, the manager is in charge of increasing revenue through the selling of guest rooms. The sales revenue that a profit centre can produce should be somewhat under the manager's control. Therefore, profit centers are in charge of increasing revenue and reducing costs, which in turn increases departmental profit. The success of each profit center manager or department head can therefore be judged by how well they increased profits while upholding the standards of customer service set by top-level management. What costs should be allocated to each center in terms of both cost and profit centers is a crucial subject. Typically, only costs that can be directly controlled by the department head or manager of that center are assigned. The last category of responsibility center is seen in a big or chain company with branches spread throughout numerous different towns or cities. Each organizational unit is allowed complete autonomy over how it conducts business and is held accountable for the outcomes of its decisions. Each unit in a huge company like this is said to be decentralized, and units are occasionally referred to as investment centers. The rate of return that investment centers' general managers earn on the investment in that center is used to evaluate those centers.

Transfer Rates

Products are moved from one unit to another in some chain businesses. For instance, raw food items may be acquired and processed in a central commissary before being distributed to the responsibility accounting 69 separate units in a multiunit food organization. The cost to be distributed to each unit for the partially or fully processed products is a subject of discussion. There are many different pricing options available. In order to accurately assess each unit's performance, a suitable pricing strategy must be chosen. The transfer price, for instance, could consist of the commissary's cost plus a set percentage markup to cover operations expenses. A different approach may be to base the transfer price on the products' market value. When determining the market price, it is necessary to consider what the receiving unit would have paid if it had bought the goods from an outside supplier. To account for the commissary's cheaper marketing and distribution costs, the market price could occasionally be decreased by a set percentage. Each user unit would obviously prefer to have the transfer price as low as possible to reduce costs, while the commissary would obviously prefer to have the transfer price as high as possible to improve performance[9]–[11].

Repartition of Indirect Costs

The distribution of indirect expenses to the departments is one contentious matter pertaining to the income statement. Finding a sensible foundation to apportion these expenditures to the operating divisions is the difficulty. On some logical basis, some direct expenses could also need to be divided across two running departments. For instance, a worker in the food department may be offering customers alcohol in addition to meals. The credit for the food department's revenue and the credit for the beverage department's revenue will both be given. The complete expense of the employee's salaries should not, however, fall on either of these two departments. The expense needs to be divided between the two departments, perhaps prorated based on the amount of revenue.

It is simple to do these types of interdepartmental cost transfers, which are required to have a relatively accurate profit or loss for each running department for which the relevant department head is responsible. One of the arguments in favor of allocating indirect costs to departments is that, even though they are not in charge of managing those costs, departmental

managers should be aware of the percentage of them that pertains to their own, as this may have an effect on the decisions they make, such as setting selling prices at a level that covers all costs, not just direct costs. A manager can determine the entire minimum income that must be generated to pay all costs when this kind of full-cost accounting is used in a responsibility accounting system, even while some of those costs are not within their direct control. It is simple and logical to allot certain unallocated indirect costs. For instance, marketing could be allocated based on revenue ratios. However, the complete cost of an advertising campaign may be justifiably charged as a direct cost to one department if it had been created expressly for that department and it was believed that other departments would receive little to no benefit from it.

CONCLUSION

There is one aspect that will affect net income even if there is no change in total indirect expenses or total revenue, despite the fact that the allocation of indirect expenses to the departments has no impact on the operation's overall net income because total indirect expenses are unchanged. A shift in the revenue mix is that element. In this case, a change in the revenue volume of the various operational departments is understood to be the same as a change in the revenue mix. Contributory income percentages have been rounded to the nearest whole percentage. The rooms department's departmental income, at 68 percent of revenue, is higher than any other departments and has the lowest overall direct costs as a percentage of revenue. Alternatively, this means that, regardless of a change in the volume of sales revenue, $0.68 will be available for each dollar rise in room revenue as a contribution to the total indirect costs for each department. Despite with no change in total revenue or total indirect expenses, total contributory income and net income have increased by $39,900. It could be crucial for decision-making if management is aware of the impact each department has on total contributory income and net income. For instance, it can suggest the best way to use the marketing money to highlight the various organizational departments. Alternately, a study of each department's relative contributory income would help in selecting how to deploy the remaining cash if a restricted budget were available for building enlargement to meet rising business.

REFERENCES:

[1] C. Graham, “Teaching accounting as a language,” *Crit. Perspect. Account.*, 2013, doi: 10.1016/j.cpa.2012.01.006.

[2] I. Ahmed, M. Zeeshan Shaukat, and T. Islam, “Mission statements readability: an insight into Islamic banks,” *J. Islam. Account. Bus. Res.*, 2013, doi: 10.1108/JIABR-04-2012-0019.

[3] B. Kumar, “Insurance Industry and its Financial Ratios,” *Int. J. Res. Soc. Sci.*, 2018.

[4] N. Huyghebaert and M. Luypaert, “Sources of Synergy Realization in Mergers and Acquisitions: Empirical Evidence from Non-Serial Acquirers in Europe,” *Int. J. Financ. Res.*, 2013, doi: 10.5430/ijfr.v4n2p49.

[5] E. Goldeng, L. A. Grünfeld, and G. R. G. Benito, “The performance differential between private and state owned enterprises: The roles of ownership, management and market structure,” *J. Manag. Stud.*, 2008, doi: 10.1111/j.1467-6486.2008.00790.x.

[6] O. A. Tumbol, J. Tinangon, and S. K. Walandouw, “Analisis Alokasi Biaya Bersama Untuk Penentuan Biaya Produksi Nutella Cheese Cupcake Dan Cookies Cupcake Pada Shmily Cupcakes Samrat Manado,” *going concern J. Ris. Akunt.*, 2014, doi: 10.32400/gc.9.1.25231.2014.

[7] S. G. Ryan, “Do the Effects of Accounting Requirements on Banks’ Regulatory Capital Adequacy Undermine Financial Stability?,” *Annual Review of Financial Economics*. 2017. doi: 10.1146/annurev-financial-110716-032340.

[8] S. Glass, T. Hiller, and S. Jacobs, “Mobile IP Authentication, Authorization, and Accounting Requirements,” *IETF RFC*, 2000.

[9] F. Garcia-Ochoa and E. Gomez, “Bioreactor scale-up and oxygen transfer rate in microbial processes: An overview,” *Biotechnology Advances*. 2009. doi: 10.1016/j.biotechadv.2008.10.006.

[10] M. Cheng, X. Gao, S. Gao, and D. Xu, “Design and implementation of a brain-computer interface with high transfer rates,” *IEEE Trans. Biomed. Eng.*, 2002, doi: 10.1109/TBME.2002.803536.

[11] C. R. Baumrucker, C. D. Dechow, A. L. Macrina, J. J. Gross, and R. M. Bruckmaier, “Mammary immunoglobulin transfer rates following prepartum milking,” *J. Dairy Sci.*, 2016, doi: 10.3168/jds.2016-11370.

CHAPTER 3
ANALYSIS AND INTERPRETATION OF FINANCIAL STATEMENTS

Aditi Garg, Assistant Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- aditi.garg@shobhituniversity.ac.in

Dr. Anuj Goel, Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id- anuj.goel@shobhituniversity.ac.in

ABSTRACT:
The reader is introduced to the many types of persons who might be interested in examining a company's financial accounts in the first section of this chapter. The balance sheet and the income statement are highlighted, while the remainder of the chapter focuses on the fundamental study of financial statements. Financial information for at least two consecutive time periods is displayed side by side in comparative financial statements. For each line item on the financial statement, the dollar change and the percentage change are displayed, along with totals and subtotals.

A comparative horizontal analysis, in its simplest form, implies that the usage of at least two successive financial statements (balance sheets, income statements, etc.) is examined. A significant total is used to convert each line item in the statement to a percentage in the common-size method of financial statement analysis. This shows that the process of converting dollar amounts to percentages involves a vertical analysis. In this chapter, the concepts of comparative horizontal analysis and common-size vertical analysis will be utilized to describe and explain these techniques. The average check, average cost, average income per guest, and other revenue and cost averages can all be found using an extra way of income statement analysis that will be demonstrated and described.

KEYWORDS:

Analysis, Balance, Financial, Income, Statement.

INTRODUCTION

Financial statement analysis and interpretation involve examining the many components of the financial statements, linking them to one another and to the overall picture, and assessing whether any meaningful and practical interpretation can be drawn from this analysis. Analysis and interpretation of the financial statements are topics that managers, owners, investors, and creditors are all interested in. What interests one person might not be as interesting to another. Managers, for instance, are particularly concerned with the organization's internal operational efficiency and will search for signs that things are going well, that operating objectives are being fulfilled, and that the various departments are being handled as profitably as possible. On the other side, investors are more concerned with future earnings and dividend possibilities as well as net income.

They frequently wouldn't be interested in or aware of internal departmental results. Even though creditors and other investors besides stockholders may be interested in net income, they are more concerned with the company's ability to pay off its debts. Despite having high earnings, a corporation could not be able to pay its debts due of a cash flow problem. The scope of this work does not allow for a full discussion of financial statement analysis and interpretation. As a result, this presentation will be limited to some of the simpler analysis methods that are best suited for the hotel sector. The two main financial statements—the balance sheet and the income statement—will also be the only ones on which comments will be made. The analysis methods shown are those that the operation's management would typically employ.

Balance Sheet Comparative Horizontal Analysis

A balance sheet as of a particular date and an income statement for the accounting period that concluded on that date make up a fundamental set of financial statements. A balance sheet and an income statement for both the prior and current accounting periods may be included in some sets of financial statements. Changes between the two consecutive years or periods can be seen when prior and current period statements are presented. These modifications, though, might not be as visible as you might anticipate. The ability to analyze additional data is quite helpful because it is difficult to mentally evaluate the differences between two sets of figures. A comparative horizontal analysis of a balance sheet or an income statement is one approach. This method needs at least two uninterrupted informational sessions. Finding and identifying changes that have taken place throughout an accounting period is the goal.

A positive or negative dollar value change is determined by calculating the difference in dollar value stated between the two statements for each line item, subtotal, and total of the statement. The percentage change is calculated by dividing the change, whether positive or negative, by the dollar amount from the previous period. The challenging aspect of a comparative analysis is not concluding a comparable horizontal analysis of every item, subtotal, or total appearing in a financial statement. Understanding what the analysis is trying to tell you is the challenging part. The balance sheet information for two consecutive years is provided together with the names of all line items, subtotals, and totals for all assets, liabilities, and stockholders' equity. For comparison analysis, two additional columns are also provided; one displays the change in dollar value, and the other expresses the change in percentage for each reported line item.

Vertical Analysis of Balance Sheets of Common Size

Converting the statement to a common-size vertical analysis format is another method for analysing balance sheet data. For this strategy, only one period of financial data is needed. Common size denotes that all assets are valued at 100% and that each item's conversion value corresponds to a fractional portion of all assets. Every line item, subtotal, and total on a balance sheet may be stated as a percentage of total assets because assets, liabilities, ownership equity, and each side of the balance sheet have the same total value.

The cash account in Year 0003 represented 1.6 percent of all assets, according to the common-size statement, which was derived by dividing the cash amount by all assets: $22,900 / $1,448,800. Accounts payable in Year 0003 are $19,200 / $1,448,800, or 1.3 percent of total assets. Each balance sheet item for Year 0003 is divided by Year 0003's total assets. The product of total assets divided by total assets will equal 100% when all of the component percentages for Year 0003 are added together. Any balance sheet component, including current assets, fixed assets, current liabilities, long-term liabilities, and ownership equity, can be transformed into a common-size vertical format and examined independently. A common-size vertical analysis of current liabilities will express each individual current liability as a percentage of the total because each current liability is a component of the total current liabilities[1], [2].

Alterations In Price and Cost Levels

The reader must be aware of how changing dollar values affect the findings when comparing operating outcomes, and in particular when studying trend figures. A few years ago, 100 pounds of veggies weighed precisely the same as they do now, but they were far less expensive to buy. Costs fluctuate over time. Prices for rooms, meals, beverages, and other services must change along with those for us, just as they do for our customers. It is important to evaluate the effects of rising expenses or prices (inflation) or the opposite (deflation) when comparing revenue and expense items over a considerable amount of time.

Take into account a restaurant with the volume of sales income increasing as follows. However, if inflation had caused restaurant menu prices to rise by 10% over the course of the year, our Year 2 sales income would have needed to be at least $110,000 to maintain parity with Year 1's volume.

To put it another way, when we attempt to compare sales revenue for subsequent periods in an inflationary or deflationary environment, as we are doing here, we are comparing different numbers. The value of a dollar today is not the same as it was last year. What a dollar could buy today might have cost $1.10 last year. Is there a way to translate the currency of one period into the currency of another so that trends can be more accurately analyzed? By using index numbers, the answer is yes. One of the indices that is probably used and understood the most is the consumer price index. But numerous more indices are created by the government and other organizations. The translation of the previous period's currency into the current year's currency is accomplished by choosing the right index. Take a look at the trends in the following numbers for a restaurant's sales revenue over the previous five years.

This method is well-known if it appears like it. The trend index figures given in an earlier discussion were calculated using a similar methodology, which may also be applied to cost functions. By building its own trend index in this way, a restaurant may find that it is far more accurate as it only takes into account changes in its own prices. There may be elements in a national average restaurant trend indicator that have no influence on any specific operation. Such an individual trend index should ideally only be utilized if the operation's size and character have remained constant over the course of the review period; otherwise, the findings could be deceptive. Once the trend index has been created, it can be used to translate historical sales income into current dollars by applying the previously shown equation. The same type of handmade trend index might be used by a bar utilizing average customer spending.

A hotel or motel could utilize the average room prices translated to a trend index to calculate its room sales revenue. Using a suitable trend index for the specific expenses or costs under consideration, costs can be translated in the same manner. For instance, it would probably be fair to modify labor costs using a wage trend index. As was previously shown for hotel rates, an individual business might also be able to create its own trend index for each individual expense, basing it on a cost per guest or cost per room occupied. In fact, the entire income statements for previous periods can be rebuilt by changing them to the currency of the present period or current year. The majority of hotel or food service managers generally wouldn't need such extensive modifications.

Regardless of whether a significant accounting conversion is employed, the effects of changing prices and cost levels should not be disregarded. Balance sheets experience the same issues. It can appear that there has been no change in the cash situation if the balance sheet for two consecutive years shows a cash balance on hand of $100,000. Will $100,000 today still buy the same amount as it did last year? In a similar vein, historical costs for land, structures, and equipment on balance sheets could also be deceptive. A thorough examination of inflation accounting or current dollar accounting, however, is outside the purview of this work[3]–[5].

DISCUSSION

A computer may create and print both comparative and standard-size vertical balance sheets and income statements, together with the pertinent dollar and percentage changes, using a spreadsheet program. Additionally, spreadsheets contain a graphical feature that can give managers information about the trend of particular things that is easier to interpret. These graphs can be displayed in a variety of ways, such as pie charts or bar graphs.Financial statement analysis entails linking the statements' many components to one another and to the

overall statement in order to interpret the findings. Users of financial statements may have varied perceptions of the data being viewed because they are interested in certain parts and particular elements. Based on the findings of their study, different readers of financial accounts are likely to draw different conclusions. One method for analysing financial accounts is comparative horizontal analysis, as shown in this chapter. In order to demonstrate changes in numerical value and the percentage that change reflects for each line item, subtotal, and total, two balance sheets or two income statements must be compared side by side. An explanation of the findings will be provided to wrap up the analysis.One balance sheet or one income statement is all that is needed for common-size vertical analysis of financial statements. Each line item, subtotal, and total on a balance sheet will be expressed as a percentage of all assets in a common-size vertical analysis. To express the percentage of each element as a percentage of total sales revenue, a common-size vertical analysis of an income statement divides each item (aside from cost of sales), subtotal, and total appearing in the income statement by total sales revenue. Typically, the cost of sales is divided by the corresponding sales revenue[6], [7].

Ethical Condition

Based on sales revenue increases that have averaged around 5% over the prior year, a restaurant manager has received a bonus each of the last five years. The manager had an accountant make the necessary adjustments after the restaurant owner requested that the sales income data for the previous five years be adjusted for inflation. When evaluating the figures, the manager finds that sales revenues have essentially remained steady and have actually slightly decreased over the past year.

The management chooses to alter the data to reflect an annualized rise in sales revenue of about 3% before submitting them to the owner. The manager aims to convince the owner that the annual bonuses were warranted by altering the adjusted data. Discuss the situation's ethical implications.

Comparative Horizontal Analysis of Balance Sheets

A basic set of financial statements includes a balance sheet as of a specific date and an income statement for the accounting period that ended on that date. Some sets of financial statements may have a balance sheet and an income statement for the previous and current accounting periods. When prior and current period statements are presented, changes between the two subsequent years or periods can be noted. These changes, however, might not be as obvious as you might expect. It is tough to mentally compare and contrast two sets of data, so the capacity to examine new data is quite useful. One method is to perform a horizontal comparative study of a balance sheet or an income statement. This approach requires a minimum of two continuous informational sessions.

The objective is to locate and recognize changes that have occurred during the course of an accounting period. Calculating the difference in dollar values expressed between the two statements for each line item, subtotal, and total in the statement yields a positive or negative dollar value change. The change, whether positive or negative, is divided by the dollar amount from the prior period to determine the percentage change. The difficult part of a comparison analysis is avoiding coming to a similar conclusion after examining each item, subtotal, and total that appears in a financial statement. The difficult part is figuring out what the analysis is attempting to tell you. It includes the titles of all line items, subtotals, and totals for all assets, liabilities, and stockholders' equity from the balance sheets for the past two years. Two additional columns are also included for comparison analysis; one shows the change in dollar value, and the other represents the change in percentage for each reported line item[8]–[10].

Vertical Analysis of Common Size Balance Sheets

Another technique for examining balance sheet data is to transform the statement into a common-size vertical analysis format. Only one period of financial data is required for this method. The term "common size" indicates that all assets are valued at 100% and that the conversion value of each item represents a percentage of all assets. Because assets, liabilities, ownership equity, and each side of the balance sheet have the same total value, every line item, subtotal, and total on a balance sheet can be expressed as a percentage of total assets.

According to the common-size statement, which was created by dividing the cash amount by all assets ($22,900 / $1,448,800), the cash account in Year 0003 represented 1.6% of all assets. In Year 0003, accounts payable total $19,200/$1,448,800, or 1.3 percent of total assets. The total assets for Year 0003 are divided by each balance sheet item. All of the component percentages for Year 0003 combined together will equal 100%, which is the product of total assets divided by total assets. Any component of the balance sheet can be converted into a common-size vertical format and studied separately, including current assets, fixed assets, current liabilities, long-term obligations, and ownership equity. Since each current responsibility is a part of the overall current liabilities, a common-size vertical analysis of current liabilities will express each individual current liability as a proportion of the whole.

Alterations (Inflation or Deflation) In Price and Cost Levels

When comparing operating outcomes, and in particular when examining trend numbers, the reader must be mindful of how shifting dollar values impact the conclusions. A few years ago, 100 pounds of vegetables cost much less to purchase than they do today, although weighing exactly the same. Prices change over time. Prices for accommodations, food, drinks, and other services must alter in tandem with those that apply to us, just as they do for our clients. When comparing revenue and expense items over an extended period of time, it's critical to assess the consequences of growing costs or prices (inflation) or the inverse (deflation). Consider a restaurant where the income from sales is increasing as shown below.

To maintain parity with Year 1's volume, our Year 2 sales income would have required to be at least $110,000 if inflation had forced restaurant menu prices to increase by 10% throughout the year. Or, to put it another way, we are comparing different numbers when we attempt to compare sales revenue over succeeding periods in an inflationary or deflationary context, as we are doing here. A dollar's worth has changed from the previous year. What would cost $1.10 previous year might cost $1.0 today. Is it possible to convert money from one era into money from another in order to evaluate trends more precisely? The answer can be determined by using index numbers. The consumer price index is undoubtedly one of the indexes that is used and understood the most. But the government and other organizations also produce a huge number of additional indicators. By selecting the appropriate index, the currency of the preceding period is converted into the currency of the current year. Look at the trends in the sales revenue of a restaurant over the preceding five years in the statistics below.

CONCLUSION

In the first half of this chapter, the reader is introduced to the many categories of people who might be interested in reviewing a company's financial records. While the remainder of the chapter concentrates on the fundamental analysis of financial statements, the balance sheet and the income statement are highlighted. Comparative financial statements provide financial data for at least two consecutive time periods side by side. The dollar change and the percentage change, as well as totals and subtotals, are shown for each line item on the financial statement. In its most basic form, a comparative horizontal analysis requires that at

least two consecutive financial statements (balance sheets, income statements, etc.) are used, and their use is scrutinized. The common-size method of financial statement analysis converts each line item in the statement to a percentage using a significant total. This demonstrates that a vertical analysis is used throughout the dollar amounts to percentages conversion procedure. These methods will be described and explained in this chapter using the ideas of comparative horizontal analysis and common-size vertical analysis.

REFERENCES:

[1] Wartoyo, "Analisis Common Size Terhadap Kinerja Keuangan Bank Syariah (Studi pada Laporan Keuangan PT. Bank Syariah Mandiri tahun 2013)," *J. IAIN Syekh Nurjati Cirebon*, 2014.

[2] Z. A. Channar and N. Ram, "Impact of financial crisis on the textile industry of Pakistan: A case study of Fateh textile industry," *Aust. J. Basic Appl. Sci.*, 2011.

[3] H. Alizadeh, S. J. Mousavi, and K. Ponnambalam, "Copula-Based Chance-Constrained Hydro-Economic Optimization Model for Optimal Design of Reservoir-Irrigation District Systems under Multiple Interdependent Sources of Uncertainty," *Water Resour. Res.*, 2018, doi: 10.1029/2017WR022105.

[4] P. Damos, "Stochastic modeling of economic injury levels with respect to yearly trends in price commodity," *J. Insect Sci.*, 2014, doi: 10.1673/031.014.59.

[5] Z. Barabás and G. Fazakas, "Tax implications of dividend policy," *Corvinus J. Sociol. Soc. Policy*, 2010, doi: 10.14267/cjssp.2010.02.03.

[6] N. J. van Eck and L. Waltman, "Software survey: VOSviewer, a computer program for bibliometric mapping," *Scientometrics*, 2010, doi: 10.1007/s11192-009-0146-3.

[7] M. G. Schaap, F. J. Leij, and M. T. Van Genuchten, "Rosetta: A computer program for estimating soil hydraulic parameters with hierarchical pedotransfer functions," *J. Hydrol.*, 2001, doi: 10.1016/S0022-1694(01)00466-8.

[8] L. Yelles Chaouche, S. K. Solanki, and M. Schüssler, "Comparison of the thin flux tube approximation with 3D MHD simulations," *Astron. Astrophys.*, 2009, doi: 10.1051/0004-6361/200912390.

[9] S. Rassenfoss, M. Zborowski, J. Parshall, and S. Whitfield, "E&P Notes (March 2018)," *J. Pet. Technol.*, 2018, doi: 10.2118/0318-0023-jpt.

[10] K. J. A˚ström *et al.*, "Abstracts," *J. Power Sources*, 2015.

CHAPTER 4
EVALUATING THE IMPORTANCE OF RATIO ANALYSIS

Aditi Garg, Assistant Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- aditi.garg@shobhituniversity.ac.in

Dr. Anuj Goel, Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id- anuj.goel@shobhituniversity.ac.in

ABSTRACT:
This chapter has focused on gaining a broad but thorough understanding of accounting ideas and principles as well as how to apply them to company activities. Understanding the internal operations of an accounting system helps one identify the source and particulars of the data required for the creation of financial statements. In order to gather indirect knowledge about economic operations, this chapter continues financial statement analysis by discussing major financial and other varied ratios. Ratio analysis is used to compare current period ratios to historical ratios and industry averages. Ratio analysis expresses the proportional numerical relationships between statistics provided in financial statements. One needs to be aware of where to seek to find the data required to perform a ratio analysis in order to assess the various statistics efficiently. The relationship between two values is expressed using a variety of commonly used ratios. The following four general approaches to ratio and percentage evaluation will be covered: industry data, external competitive data, operational results from a prior period, and preset budgetary requirements. Current liquidity ratios, long-term solvency ratios, profitability ratios, activity and operating ratios are the five main categories of typical ratio analysis approaches frequently employed by a corporation to express the status of its operations, finances, and economic position.

KEYWORDS:

Accounts, Credit, Current, Revenue, Sales

INTRODUCTION

In its most basic form, ratio analysis is the comparison of two numbers, such as quantity values or monetary values. Ratio analysis enables the assessment of selected items from the balance sheet along with some data from the income statement to identify possible correlations between those selected items. Comparative horizontal and common-size vertical analyses of balance sheets and income statements are the two fundamental types of ratio analysis that we have covered. Through comparison, the numerical change is identified and expressed as a percentage. The income statement's total sales revenue and the balance sheet's total assets are expressed as a proportion of each item via common-size analysis. Relationships can be expressed using ratios as percentages, numbers, quantities, or on a per-unit basis. Fractions with a numerator that is stated as a percentage of the denominator are called ratios. Assume, for illustration, that a given month's sales income was $48,000 and that the cost of sales was $19,200. The calculation aims to determine what the cost of sales is as a percentage of sales revenue.

According to the first ratio, total current assets are 2.5 times bigger than total current liabilities, or $2.50 for every $1.00 in current liabilities. Total current liabilities are expressed as 40% of total current assets in the second ratio. The format that will effectively convey the relationship between two figures and the facts at hand will determine how a ratio is expressed. It's crucial to keep in mind that for two numbers to be translated into a ratio, their link must be plausible, significant, and clear. The ratio analysis would be plausible, significant, and reasonable if we compared the cost of sales-food to the sales revenue from

the food generated. This is obviously not the case if management pay and food cost of sales were compared, as no meaningful data is given.

Comparisons Of Ratios

Ratios are used to aid a business organization in assessing the financial and economic outcomes of operations focused on making a profit over a specific accounting period. A ratio by itself is only a number and seems to have little significance because it does not immediately indicate whether a situation is favorable or unfavorable. For instance, a restaurant's four-times-per-month food inventory turnover may seem good, but its true worth cannot be ascertained unless the turnover ratio is compared to some benchmark, such as the industry average for that kind of restaurant. A ratio must be comparable to a base ratio that has been established in order for it to have meaning. An industry average could serve as a benchmark ratio, but it might not be the best option.

Industry standards are typically produced using data from hospitality businesses that engage in similar activities, albeit these facilities may be dispersed over a wide area. Different operating conditions (such as average family income, salaries, hourly pay rates, cost of living levels, and disposable money) apply in various parts of the geographical area. There might not be one operation that is exactly like the "average operation" from which the standard ratios are determined because of such economic variations across a region. Industry averages are useful for letting a management know if their operation is "in the ballpark" with the competition, but they shouldn't be used as their benchmark. Ratio Examination 133 Utilizing comparable ratios from similar competitive firms is one more way to compare ratios.

Finding competitive ratios could be challenging, if not impossible. Which ratios are preferable if competitive ratios are available and they differ from the ratios of your operation? There are numerous factors that could account for the variations in individual ratios amongst competitors. Comparing present operating period ratios to historical operating period ratios is a better method. For instance, how does the current seat turnover or room occupancy ratio compare to the corresponding figures from the prior month or year? The trend, what is it? Is the number of seats in the room or the rate of seat turnover rising or falling? How can you tell whether a ratio difference is appropriate or inappropriate? One quickly learns that a hotel business operates in a dynamic and quickly changing environment, even with short exposure. As a result, contrasting current period ratios with previous period ratios might be like contrasting copper with gold. Comparing current period ratios to benchmarks established for that operating period is the best way to compare ratios.

The set standard should take into account all operationally relevant aspects, both internal and external. The mix of sales revenue (cash versus credit sales), fixed and variable costs, internal operating policies, modifications to operating procedures, and a wide range of other operational variables are examples of internal factors. The state of the economy in general and what the competitor is doing are examples of external forces. The annual operational budget (forecasted income statement) can be developed with the help of operating plans that are periodically created using specified operating standards. The operating budget can be divided into quarterly or monthly operating periods, with seasonal fluctuations taken into account. Operating budgets should forecast future operations based on both recent and historical operating performance. Budgeting is a crucial and urgent management skill that is thoroughly covered[1], [2].

Assigns of Ratio

Internal operations management, existing and potential creditors, and the company's owners are typically the three main groups with an interest in the ratio analysis. One person owns a proprietorship, two or more people own a partnership, and many people own a corporation,

who are known as stockholders or shareholders. The management team is in charge of protecting the company's assets, keeping costs under control, and maximizing profits. In order to assess if the operating budget objectives are being met, management frequently uses ratio evaluation to compare the operation's performance to preset standards. In order to satisfy both owners and shareholders, various ratios are employed to gauge the success of ongoing operations, the company's present liquidity situation, and other economic circumstances.

In the fundamental balance sheet equation, the liabilities component represents the equity claim that creditors of a business operation have on the operation's assets.The business activity receives loans from creditors or trade credit. As a result, some ratios that may indicate the degree of safety of their loaned funds or trade credit are typically of interest to creditors. Additionally, current and potential creditors utilize specific ratios to calculate the potential risk associated with any potential future loans that the business operation may require. In some circumstances, a creditor could demand that the borrower keep working capital at a certain level, or a certain level of current assets over current liabilities. Last but not least, a business operation's owners might utilize specific ratios to gauge their return on investment, the risk associated with their investment, or project the likelihood that future operations would be successful. Members of the three groups concerned in the evaluation of ratios frequently disagree on the meaning of a given ratio. Since each group sees the ratio differently, this is to be expected[3]–[5].

DISCUSSION

Using data from annual balance sheets for Years 0003 and 0004, condensed income statement for the year ending December 31, 0004, ratio analysis will be covered in the following five primary categories: ratios of current liquidity. Liquidity ratios are primarily used to determine the link between current assets and current liabilities. As a result, liquidity ratios serve as the foundation for assessing a company's capacity to fulfill its current obligations. The current ratio (also known as the working capital ratio) and the quick ratio (also known as the acid test ratio) are liquidity ratios that offer a direct analysis of current and quick assets in comparison to current liabilities.

The average amount of time that passes between the creation and collection of current receivables is examined through the examination of credit sales. Credit card receivable turnover, credit card receivables as a percentage of net credit sales, credit cards average collection period, accounts receivable turnover, accounts receivable as a percentage of net credit sales, and accounts receivable average collection period are typical ratios pertaining to receivables. ratios of profitability. The profitability ratios demonstrate how effectively management used the resources (assets) during operational periods. Management is provided with resources and assets to undertake sales-revenue-generating operations. Return on assets, profit margin, return on equity, return on total investment, and earnings per share are among the profitability statistics that will be covered.

The discussion of financial leverageor, to put it simply, the use of debt to obtain capitalcommences this chapter. There are essentially two ways to get operating capital: taking on long-term debt or raising ownership equity by selling more ownership rights. The use of debt financing rather than equity financing to boost the return on owned equity is referred to as financial leverage. The only purpose for categorizing ratios is convenience. Working capital turnover, for instance, may be categorized by some as a current liquidity ratio, but in this chapter, it is listed under the activity ratios. Instead of focusing on a ratio's category, it's critical to comprehend what a ratio means and how it might be used. Finding the causes of a ratio that was not what was anticipated is necessary for this analysis. The examination and interpretation of many ratios together will produce a more comprehensive perspective of a

business operation than a single ratio or financial statements alone. Individual ratios typically give information about one area of a business operation.

Ratios of Current Liquidity

Current liquidity ratios, also known as simply "liquidity ratios," show whether a business can easily satisfy its short-term loan repayment commitments. Without the ability to cover its present responsibilities, let alone its long-term debt obligations, a business's operational income statement may display operating income (before taxes) or net income (after taxes). The reader is specifically directed to the chapter's discussion on working capital management and the section on cash management. We will now focus on a few of the current liquidity ratios that show how well working capital management is performing. The difference between current assets and current liabilities is known as working capital[6], [7].

There are $1.16 in current assets available for every $1 in current short-term debt (current liabilities). According to the general rule of thumb, current assets should be greater than current liabilities by a ratio of two to one, or $2.00 for every $1.00 in current liabilities. However, this general rule was created to offer a safety net for companies, such as manufacturing and other processing industries, that typically have a percentage of their current assets locked up in inventories. The largest inventories maintained by a hotel or motel operator in the hospitality sector are in the form of guest rooms that are available for purchase. These inventory items are classified as buildings, which are a type of fixed assets known as property, plant, and equipment.

Only the food and beverage services are held in current inventories (inventory for resale) by hotel-motel operations, and these current inventories make up a relatively minor fraction of current assets. As a result, motels and restaurants can function with a current ratio of less than 1 to 1, whereas hotels can operate with a current ratio of 1.5 or less. A minimum percentage must be established for each unique hospitality operation. The minimum ratio will be one that does not impair profitability or cause a short-term liquidity issue. Working capital represents funds that are not being used to generate revenue. Since it serves as a strong signal of a business operation's capacity to meet its debt commitments, creditors and potential creditors prefer to see a high ratio of current assets to liabilities. Many creditors demand a minimum current ratio before approving a loan or extending credit. The creditor may demand that a minimum current ratio be kept when a loan or credit is provided.

A creditor may demand prompt payment in full of any outstanding balance if a minimum current ratio is necessary and the current ratio falls below that level. Owners, on the other hand, typically desire a low ratio of current assets to current liabilities because a high ratio could mean that more money is being held in working capital and isn't being used effectively. The cost of maintaining inventory may worry owners if there are more resale items on hand than are anticipated to be needed. Additionally, owners could worry that receivables are not being recovered as promptly as they ought to be. It is challenging for management of the operation to keep the current ratio in an acceptable range for both ownership and creditors. The current ratio might be altered to appear better than it actually is. The current asset and current liability components of the balance sheet given. If, immediately before the conclusion of an accounting month, $20,000 in cash was utilized to pay down accounts payable

The Makeup of Current Assets

Using the methods covered and a common-size vertical analysis of the current assets, we may evaluate the change in the operation's current liquidity. The percentage relationship between each item inside a subset of a financial statement, such as total current assets, can be determined through analysis. It displays the Years 0003 and 0004 current asset portions in a common-size vertical analysis format. It displays how the percentage of current assets

changed over a two-year period. The amount of cash as a percentage of all current assets increased from 25.2% in Year 0003 to 37.2% in Year 0004. Cash, receivables, and marketable securities, which are the most liquid current assets, have fallen overall from 67.8% (25.2% 13.4% 8.2% 21.0%) in Year 0003 to 62.6 percent (37.2% 14.2% 8.7% 2.5%) in Year 0004. Although the four most liquid assets' combined value has decreased, the cash situation has improved. Selling marketable securities in Year 0003 in order to lower current liabilities and raise the current ratio was the main factor contributing to the drop. Quick assets are sometimes categorized as the most liquid current assets[8], [9].

Accessible Ratio

Total sales revenue should be divided into cash, credit card receivables, and accounts receivable from sales revenue in order to provide the most accurate evaluation on an annual, monthly, quarterly, or semiannual basis. Receivable ratios must be appropriately calculated using data from at least two consecutive time periods. Operations should be aware of the percentages of sales revenues that are made up of cash, accounts receivable, and credit card receivables because they must record each of these amounts in the proper accounts to determine how much they need to collect. A strategy that assesses each individual receivable in relation to the kind of credit sales generated is the most accurate way to calculate a receivable ratio. The next best option is to maintain total sales that are stated to consist of both cash and credit sales if credit card receivables and accounts receivable are not managed by subsidiary accounts inside the total sales revenue figure[10], [11].

Receivable ratios will be skewed by this option since reported credit sales will have two distinct components: credit cards and accounts receivable. The final option is to just use total sales revenue to assess receivable ratios, however this will distort the ratios even more because total sales revenue does not include any categories for credit sales. The final and worst option is to use historical percentages of credit sales broken down by category to assess receivable ratios. Using historical data carries the ever-present risk that the ratio of current cash to credit sales has altered. As the largest component of sales revenue in the hotel sector today, credit card transactions should not be disregarded when assessing current receivables. Major, large hospitality firms typically have completely automated accounting systems that are computerized and enable quick access to any ratios that are chosen for evaluation. This isn't necessarily the case for smaller enterprises, which might not have access to a larger organization's online digital resources.

Due to the credit card company's prompt reimbursement, sales revenue generated by credit cards is a close to cash transaction. Credit card receivables are typically collected in 1.5 to 5.0 operation days. The typical rotation rate for credit card receivables can range from 243 to 73 times every year operation period, depending on the number of credit card sales and the effectiveness of credit card businesses. Depending on the card type, a different collection period applies. The same day the credit card sale is made or at the moment of the sale, larger hospitality enterprises that are electronically connected online with a card-clearing center are also compensated. Companies that accept credit cards often incur a discount of 1.5 to 5.0 percent. The variations in the discount rate may be caused by a negotiated rate, the amount of credit card purchases, the size and nature of the company, or all of the above. Two significant factors that affect cash flows are the average credit card collection duration and the discount rates applied. When clients make purchases using debit cards, their bank accounts are debited at the time of the transaction, and the money is then transferred to the business's bank account. The usage of a debit card qualifies as a cash sale due to the manner and quickness of the reimbursement.

Accounts receivable will continue to be used in private clubs, for corporate organizations, for special food and beverage functions (banques), and in other hospitality areas where the use of

accounts receivable is deemed appropriate, despite the fact that the use of credit cards continues to rise and the use of accounts receivable (trade credit) continues to decline. As was previously said, if accounts receivable is calculated using total sales revenue instead of credit sales revenue, the ratio will be skewed. Due to a failure to acknowledge the rise in credit card sales revenue, which has added a second component to credit sales, the skewing impact has persisted. The management might not realize that collection times are excessively long if this skewing impact goes unreported for years. It may be wise to include credit card sales under the general classification of accounts receivable as the percentage of credit card sales exceeds 50 to 60 percent of total credit sales. In general, subsidiary accounts receivables, which list each credit card accepted by nameVisa, MasterCard, and so forthcan be used to integrate credit card receivables into the accounts receivable classification.

The same method of identifying a person or business that has received trade credit should be used, which involves establishing subsidiary accounts. The sections that follow go over and provide examples of the fundamental techniques (apart from using historical data) used to calculate various ratios that apply to credit receivables. Credit card receivables will come first, then accounts receivable.

To emphasize the significance and impact of this classification of credit sales, credit card receivables are discussed separately from other types of credit sales. As each receivable ratio for credit card sales, accounts receivable credit sales, total credit sales, and total sales revenue is addressed, it will become clear how an operating receivable ratio could bias results. Even though receivable ratios can be assessed annually, semiannually, quarterly, or even monthly, only the annual basis is covered in this article.

CONCLUSION

According to the ratio, an average of 5.5 percent of credit revenue from accounts receivable was in the form of accounts receivable on any given business day. This ratio would obviously be 0% at a drive-in, cash-only establishment. Accounts receivable as a proportion of income may range from 10 to 20 percent if a private club allows only internal charge transactions and bills members on a monthly basis. The majority of patrons in a normal hotel or restaurant will pay with a credit card, while a small number may use a house account or accounts receivable. Some patrons will pay with cash. House accounts or accounts receivable may account for 4 to 10% of total revenue, however credit card use may easily account for 40% to 70% of total revenue. These numbers are averages for the industry, but an organization should be more interested in data on current trends inside its own operation than in a comparison to industry norms. The method discussed on a yearly basis divides the beginning plus ending accounts receivables by two. We have spoken about the ideal approach for a seasonal business with wildly variable sales. Calculating the annual average accounts receivable may be easiest by adding together each month's receivables and dividing by 12. A monthly, quarterly, or semi-annual calculation of average accounts receivable is also an option. An annual ratio could be determined using total credit revenue or total sales revenue rather than accounts receivable credit revenue, albeit this is far from the ideal approach.

REFERENCES:

[1] R. Stavy, R. Babai, and A. Y. Kallai, “Proportional reasoning: The role of congruity and salience in behavioral and imaging research,” *Zeitschrift fur Psychol. / J. Psychol.*, 2016, doi: 10.1027/2151-2604/a000262.

[2] N. Bryson, A. Mobolurin, and O. Ngwenyama, “Modelling pairwise comparisons on ratio scales,” *Eur. J. Oper. Res.*, 1995, doi: 10.1016/0377-2217(93)E0151-M.

[3] A. Biedermann, F. Taroni, and C. Champod, "How to assign a likelihood ratio in a footwear mark case: An analysis and discussion in the light of R v T," *Law, Probab. Risk*, 2012, doi: 10.1093/lpr/mgs015.

[4] R. Meledin, S. M. Mali, S. K. Singh, and A. Brik, "Protein ubiquitination: Via dehydroalanine: Development and insights into the diastereoselective 1,4-addition step," *Org. Biomol. Chem.*, 2016, doi: 10.1039/c6ob00882h.

[5] Y. Tao, J. P. Masly, L. Araripe, Y. Ke, and D. L. Hartl, "A sex-ratio meiotic drive system in Drosophila simulans. I: An autosomal suppressor," *PLoS Biol.*, 2007, doi: 10.1371/journal.pbio.0050292.

[6] D. Suhendro, "Analisis Penilaian Kinerja Keuangan Perusahaan Menggunakan Rasio Keuangan Pada PT Unilever Indonesia Tbk Yang Terdaftar Di Bursa Efek Indonesia (BEI)," *AT-TAWASSUTH J. Ekon. Islam*, 2018, doi: 10.30821/ajei.v3i1.1710.

[7] L. Hamida, "Pengaruh Likuiditas Dan Leverage Terhadap Yield Sukuk Dengan Peringkat Sukuk Sebagai Variabel Intervening (Study Pada Perusahaan Non Keuangan di Bursa Efek Indonesia)," *J. Ekon. dan Bisnis*, 2017, doi: 10.30659/ekobis.18.1.71-86.

[8] W. Li, L. Lo, and J. Xu, "U.S. Minority Depository Institutions at the Dawn of the Twenty-First Century," *Pap. Appl. Geogr.*, 2017, doi: 10.1080/23754931.2017.1347809.

[9] K. Ramanna, "Why 'Fair Value' Is the Rule The answer lies in the changing makeup of the Financial Accounting Standards Board," *Harv. Bus. Rev.*, 2013.

[10] W. Wang, M. Sain, and P. A. Cooper, "Study of moisture absorption in natural fiber plastic composites," *Compos. Sci. Technol.*, 2006, doi: 10.1016/j.compscitech.2005.07.027.

[11] F. Smedes, L. A. Van Vliet, and K. Booij, "Multi-ratio equilibrium passive sampling method to estimate accessible and pore water concentrations of polycyclic aromatic hydrocarbons and polychlorinated biphenyls in sediment," *Environ. Sci. Technol.*, 2013, doi: 10.1021/es3040945.

CHAPTER 5
EXPLORING THE RATE OF INTERNAL CONTROL: A REVIEW STUDY

Aditi Garg, Assistant Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- aditi.garg@shobhituniversity.ac.in

Dr. Anuj Goel, Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id- anuj.goel@shobhituniversity.ac.in

ABSTRACT:
Management accounting and management control systems are covered in this text. Management makes judgments and puts policies in place to protect assets, keep costs under control, boost sales, and maximize profitability using the data provided by management accounting. To help managers fulfil their duties, the information provided must be accurate and up-to-date. All aspects of an establishment's activities, from procurement to sales, are subject to effective and efficient internal control rules and processes. entails keeping track of and being accountable for cash inflows and outflows as well as the numerous other resources an organization needs to run its business. Few internal controls are necessary in a small, owner-operated business like an independent restaurant or small motel since the owner, who is frequently present at all times and who handles all the cash coming in and payments going out, performs the control. One-person control is impractical in larger companies. In larger firms, it is actually important to divide operations into several divisions and to create an organizational chart. An effective internal control system is built on the organization chart itself, in fact. It develops channels of communication as well as degrees of power and accountability. Lines of power, accountability, and communication get increasingly complicated in huge establishments, as the organization charts demonstrate. Consequently, a large establishment's internal control system will also be more complicated.

KEYWORDS

Control, Cashier, Employees, Sales, System.

INTRODUCTION

Methods and guidelines that employees in the different job categories should adhere to. These processes guarantee that staff members adhere to management policies, achieve operational effectiveness, and safeguard assets from waste, fraud, or theft. Cash, receivables-to-be-paid, inventory, equipment, structures, and land are all examples of assets. The use of safes for storing significant amounts of cash, locked storerooms for food and beverage inventory, limiting access to sites where cash and products are housed, and keeping all equipment in good operating order are some examples of the protections that are required. Reliable forms and reports that can be used to gauge staff productivity and effectiveness and identify issues.

These reports offer data, typically of an accounting or financial nature, that can be examined to find areas of concern. If this information is to be useful, it must be current and accurate. It must also be cost-effective, which means that the advantages (cost savings) of an internal control system must outweigh the expenses of setting it up and maintaining it. The data generated must also be helpful. Money and effort have been wasted if the information is false and unusable. These two important requirements may appear to be at odds with one another. For instance, the processes for securing and obtaining food products from storage and the paperwork needed to do so may be so onerous that staff members in departments (like the dining room) that require those products don't bother to restock worn-out supplies. Sales could be lost as a result, and the operation's efficiency is decreased. As an alternative, if workers comply with all paperwork requirements to guarantee they always have enough

supplies on hand, the additional labor cost might outweigh any potential product losses due to theft or waste. Although we will largely explore internal control from an accounting perspective in this chapter, control is not just confined to money-related issues. The system of internal control, for instance, includes the personnel policies of an organization. A corporation's policies on things like staff education and skill development are crucial since they eventually show up in the financial outcomes of the organization.

Specific Hospitality Industry Problems

Although internal control issues are a common concern for most firms, the hospitality industry has several particular issues that frequently complicate and make implementing absolute control more challenging. The subject of this section is a few of these traits. Nearly every hospitality operation can be categorized as a small business, therefore it is typically more challenging for a small firm to have as thorough a control system as a large corporation even if the particular property is part of a major worldwide chain.

Transactions In Cash

Even while many clients in the hospitality industry now pay with credit cards, many still pay with cash, especially in restaurants and beverage shops. This indicates that a significant amount of money is amassing in sales departments every day, making it simple for some of this money to "disappear". The fact that several divisions in many hospitality operations are open 24/7 complicates cash management and its supervision even more.

Inventoried items

Even though the assets in inventory for the majority of hospitality operations only make up a small portion of total assets, many individual products in those inventories (such as expensive food containers and bottles of fine wine) are valuable to dishonest employees who may be tempted to steal them from the business for their own use or even to sell them for profit.

High Personnel Change

Finally, compared to most other industries, the industry has a substantially greater rate of employee turnover. Because they are frequently untrained, employees frequently do not obtain the training they require, and they also frequently lack the loyalty to the company that long-term employees frequently build [1]–[3].

Make Management Supervision Standard

The majority of employees are trustworthy by nature, but some may succumb to temptation and become dishonest due to a lax internal control system or, worse yet, the complete lack of any controls. Why ought employees to care if management does not? Control mechanisms do not automatically fix every issue. The requirement for management to continuously monitor the efficacy of the system via supervision is not eliminated by the adoption of a control system. Fraud or theft cannot be stopped by a control system, but it can be detected if it is happening. Even with a top-notch control system, some types of fraud or theft could go undetected. Collaboration between two or more employees for dishonest ends may go unnoticed for a protracted length of time. It's crucial to keep in mind that no method of control is perfect. A good manager will be aware of this truth at all times.

Systems For Monitor Control

Any control system needs to be watched over to make sure it keeps giving out the right data. Therefore, the system must be adaptable enough to modify to meet various needs. Changes should be made to reporting forms if they need to be. When a form is no longer necessary, it should be completely discarded or changed for something better. It is expensive to ask

employees to fill out paperwork that is never looked at, and when there doesn't seem to be any use to what they are being asked to do, employees quickly lose faith. Additionally, staff members may commit theft from the business by profiting from management's lack of interest [4], [5].

System for the selection and training of employees

Employee training, competence, and reliability are crucial components of a good internal control system. This entails putting in place a sound system for interviewing candidates, choosing staff, and conducting regular evaluations as well as employee orientation and on-the-job training. Additionally, supervisory staff members need to be competent and skilled in upholding the operation's standards, inspiring the workers they manage, creating staffing schedules, preserving employee morale (to lower the cost of employee turnover), and putting policies into place to control labor and other costs. A bad manager won't get the most out of their staff members, raising the expense of the business.

DISCUSSION

Making clear definitions of work duties is one of the requirements for effective internal control. Designing an organization chart is just one aspect of this. Who will be in charge of receiving, for instance, food deliveries to a hotel? Will it be the cook, the storekeeper, someone whose primary responsibility it is to be the recipient, or someone who just so happens to be nearby when a delivery is made? Once the designated person has been identified, they must be given a list of receiving procedures, ideally in writing, so that they may be held accountable if mistakes or discrepancies are discovered.

Configure Written Methods

As previously stated, processes should be documented once they have been established for each region and each job type where control is required. Employees will be aware of the rules and processes in this way. In the hotel sector, where employee turnover is rather high and ongoing employee training is required to support the system of internal control, written procedures are particularly crucial. Because there are so many different types, sizes, and operating methods in the hospitality sector, it is hard to define rules in this chapter that will work in every case. Even in two establishments of comparable size and kind, the procedures for any particular control area may vary due to management philosophy, client type, establishment structure, or a variety of other factors. However, the following could be one example of how a written set of instructions could be created for the receiver in a culinary operation[6]–[8].

Keep Sufficient Records

Possessing quality written records is a crucial aspect of effective internal control. For instance, there should at the very least be a written record of what is to be supplied, from which suppliers, and at what costs on a daily order sheet for food deliveries. The authorized receiver can then compare the invoiceswhich come with the delivered productsto the actual goods and to the order form. More written records may be required for a larger establishment. A market quotation sheet, for instance, could be used to assign a responsible individual the task of requesting quotations from two or more vendors before any orders are placed. Employees won't be as interested about doing a good job without good records. The internal control system's forms, reports, and other records will vary greatly depending on the size and nature of the business.

Separate Asset Management and Record Keeping

Separating the tasks of documenting asset information from the actual control of the assets is one of the fundamental tenets of effective internal control. Think about the accounts of the visitors who have checked out of a hotel and charged their bills to a credit card or business account. Such accounts are assets known as accounts receivable, and at certain hotels, they are kept there until they are paid. City ledger accounts are the name given to these accounts. The front office cashier receives checks received as payment and enters the payments on the accounts. At the conclusion of the cashier's shift, these checks are turned in together with additional cash and checks that were given to departing customers. There is nothing wrong with this procedure as long as the cashier is trustworthy! However, a dishonest cashier might engage in a practice called lapping[9], [10].

He submits his check for $175 when he receives his statement at the end of the month. Mr. X's account is not updated by the cashier with the payment. Instead, the cashier just places the check in the cash drawer and takes $175 out for their own use. At the end of the shift, the cashier's remittance will be in balance, but Mr. X's account will still have a $175 sum due. The cashier registers $175 as a payment on Mr. X's account, places the $285 check in the cash drawer, and removes an additional $110 in cash for personal use when Mr. Y, who has a $285 account in the city ledger, sends in his payment. A few days later, Mr. Z receives his $350 payment on his municipal ledger account. The cashier deposits the $350 check in the cash drawer, registers $285 on Mr. Y's account, and takes out an additional $65 in cash. The cashier will eventually be unable to cover a specific account due to the lapping of accounts, which will lead to the fraud being uncovered.

The unpaid balance may be so high, though, that it may be impossible to pursue the dishonest cashier for the money that was wrongfully taken. Receiving cash should be separated from recording it on accounts in order to help prevent this kind of loss. Cash or checks sent to the accounting office in payment for city ledger accounts could be deposited directly into the bank. The front office cashier only needs to be given a list of the accounts and sums received so that the correct accounts can be credited without having to handle any cash. However, there's a chance that the cashier and the person in the accounting office will collude despite this approach. Cash is not the only asset for which asset control and recordkeeping are separated. For instance, a storekeeper may control (receive and issue) food and beverage inventories maintained in a storeroom, but it is frequently a good idea to have the records of what is in the storeroom (such as perpetual inventory cards) maintained by some other person.

Reduce Access to Assets

Employee access to resources like cash and inventories should be strictly regulated. The risk of loss from theft or fraud increases with the number of employees who have access. The amount of cash and inventory should be kept to a minimal in a similar manner. This necessitates a delicate balancing act since cashiers must have enough money on hand to make change and the store's departments must maintain enough inventory to prevent frequent product shortages and inability to meet client demand. Additionally, the controls over who has access to those resources shouldn't be so onerous as to seriously hinder efficient operations.

Take Surprising Checks

It is best to perform surprise checks (such counting cash or taking inventory) at odd hours. There are two concepts at play here: First off, the individual performing surprise checks should never be connected to the aspect of the business being examined. In other words, the

person who typically conducts the storeroom inventory at the end of the month shouldn't be the one to write the surprise check. Second, these unexpected checks should be performed frequently enough to become usual but not according to a set schedule.

Share Responsibility for Connected Transactions

So that the work of one person may be confirmed by the work of another, responsibility for linked transactions should be divided. This is not meant to advise doing the same thing twice because it would be expensive, but rather having two things that must be completed for control reasons completed by two different personnel. This technique limits the amount of power one person has over assets and could help stop theft. For instance, on handwritten sales checks, many restaurants list the goods sold and their pricing. When the customers pay, these checks are then placed into a cash register, which writes the total amount paid on the sales check and on an audit tape that runs continuously. The total sales are printed on the audit tape, which is subsequently removed by the accounting department, at the conclusion of the shift or the day the machine is cleared. The total amount of money received and the total sales recorded on the audit tape should match. However, there is no assurance that the audit tape value is accurate even if there is consensus. A sales check could have been rung up more than once, not at all, or without being put in the register. Over- or under-ringings could also happen. The cash would be short if the same transaction was rung up twice, and the over-ring[11], [12].

Control Internal

A cash overage, which may be taken by the cashier, would exist if a cash transaction was not rung up. Further supervision over sales checks is required in light of all these potential outcomes. All sales checks should first have their prices, extensions, and additions validated (if time does not permit this daily, then it should be done on a spot-check basis). The order in which the sales checks were submitted should then be checked to make sure none are missing. The final step is to create an adding machine listing of the sales checks. The sum on this listing should be compared to the cash handed in, assuming that this adding machine listing was error-free. The register audit tape and the adding machine listing should match if there were no cashier mistakes. To make sure there are no missing sales checks, someone other than the cashier should check the sales checks for prices, extensions, additions, and other changes. The adding machine tape should also be prepared by this person. In this approach, the duty of overseeing sales is divided, and each individual confirms the other's job. As a result of fewer losses due to uncovered errors, the cost of the second person's time spent conducting the verification will typically be more than made up for in improved net profits.

Discuss The Reasons

The justification for assigning employees to conduct internal control activities should be made clear to them. For instance, it was advised in the part before that a second person check the cashier's job. Many dollars could be lost as a result of servers' mistakes when pricing things on sales checks, multiplying prices by quantities, and tallying sales checks. Losses from missing sales checks could also occur when a customer gave cash but a dishonest cashier or waiter pocketed the cash instead of destroying the sales check. The worker performing the task needs to be made aware of the significance of reducing these losses.

Render Jobs

Jobs should be alternated whenever possible. In a small business with few staff, it could be challenging to accomplish this. In a larger organization, cashiers may occasionally be transferred from one department to another, or members of the accounting office may rotate duties every few months. Employees are less inclined to be dishonest if they are aware that

their position won't last for a long time. The likelihood of collusion is also decreased because the same two employees won't collaborate for an extended period of time. Another benefit of job rotation is that it keeps workers from getting bored by doing the same things all the time. Additionally, it adds flexibility to job descriptions and will help employees comprehend how different jobs are related to one another.

Apply Machines

Machines should always be utilized. Even if machines can't completely eliminate the possibility of theft or fraud, they can greatly reduce it. When a machine is installed, labor costs may be decreased if an employee is no longer needed to complete a task manually. These devices include cash registers and/or point-of-sale (POS) systems for restaurants and bars, front office billing and auditing equipment, and mechanical or electronic drink dispensers. For instance, many losses resulting from the earlier described error categories will be eliminated by an electronic point-of-sale system. Additionally, the labor savings from eliminating the need for human verifications will go toward covering the cost of the apparatus.

Establish Standards and Judge Results

One of the prerequisites of an effective internal control system is to have a reporting system that shows whether every area of the company is running smoothly in addition to controlling the obvious visible objects, like cash or inventories. The food cost % is just one of the numerous benchmarks used in the food sector to gauge a manager's effectiveness. The management wants to know if the actual food cost % obtained is even remotely close to the desired level. As a result, the management needs a benchmark to which to compare the actual cost data. Standards of performance should be created when procedures have been developed and the individual personnel have received comprehensive written instructions on how to conduct duties. We'll explore how to set cost control standards and assess real results later on in this chapter.

CONCLUSION

One of management's major responsibilities in internal control is constant supervision and review of the system. This supervision and review are necessary because the system becomes obsolete as business conditions change. Also, without continuous supervision the control system can collapse. If an employee (after having served food and beverages, presented the sales check and collected the cash) retains both the sales check and the cash and is subsequently not questioned about this, he or she will realize that the control system is not working effectively. The employee is then free to continue to hold back sales checks and pocket cash. In small operations, the supervision and review of the internal control system is the responsibility of the general manager. In larger establishments, with accounting departments, the supervision and review responsibility is turned over to the employees in that department. In the very large companies, internal auditing teams will be established. They will be responsible for appraising the effectiveness of the operating and accounting controls, and for verifying the reliability of forms, records, reports, and other supporting documentation to ensure that internal control policies and procedures are being followed and assets are adequately safeguarded.

REFERENCES:

[1] T. G. Deepak, A. Krishnamoorthy, V. C. Narayanan, and K. Vineetha, "Inventory with service time and transfer of customers and/inventory," *Ann. Oper. Res.*, 2008, doi: 10.1007/s10479-007-0304-z.

[2] O. Fasipe, "Accounting for Inventory," *SSRN Electron. J.*, 2012, doi: 10.2139/ssrn.2132606.

[3] M. Hariga, "Optimal inventory policies for perishable items with time-dependent demand," *Int. J. Prod. Econ.*, 1997, doi: 10.1016/S0925-5273(97)00006-6.

[4] S. Mnif, S. Darmoul, S. Elkosantini, and L. Ben Said, "An immune multiagent system to monitor and control public bus transportation systems," *Comput. Intell.*, 2018, doi: 10.1111/coin.12181.

[5] I. Legrand *et al.*, "MonALISA: An agent based, dynamic service system to monitor, control and optimize distributed systems," *Comput. Phys. Commun.*, 2009, doi: 10.1016/j.cpc.2009.08.003.

[6] J. Rodríguez-Guerra Pedregal, L. Alonso-Cotchico, L. Velasco-Carneros, and J.-D. Maréchal, "OMMProtocol: A Command Line Application to Launch Molecular Dynamics Simulations with OpenMM," *ChemRxiv*, 2018, doi: 10.26434/chemrxiv.7059263.

[7] D. O. Neville, "The story in the mind: The effect of 3D gameplay on the structuring of written L2 narratives," *ReCALL*, 2015, doi: 10.1017/S0958344014000160.

[8] Y. M. Dijkstra, R. L. Brouwer, H. M. Schuttelaars, and G. P. Schramkowski, "The iFlow modelling framework v2.4: A modular idealized process-based model for flow and transport in estuaries," *Geosci. Model Dev.*, 2017, doi: 10.5194/gmd-10-2691-2017.

[9] W. F. Sharpe and A. Silver, "'Sideways betas': Further comments.," *J. Portf. Manag.*, 1976.

[10] R. Stačiokas and R. Rupšys, "Application of Internal Audit in Enterprise Risk Management," *Business*, 2005.

[11] K. Paralkar, S. Yadav, S. Kumari, A. Kulkarni, and S. P. Pingat, "Photogroup : Decentralized Web Application Using Ethereum Blockchain," *Int. Res. J. Eng. Technol.*, 2018.

[12] J. de Vos, "Blockchain-Based Land Registry : Panacea , Illusion Or Something In Between ?," *Elra*, 2016.

CHAPTER 6
THE BOTTOM-UP APPROACH TO PRICING: AN ANALYTICAL REVIEW

Dr. Somprabh Dubey, Associate Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- somprabh.dubey@shobhituniversity.ac.in

Dr. (Prof.) Ashok Kumar, Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id- dr.ashok@shobhituniversity.ac.in

ABSTRACT:
This chapter describes several pricing strategies that have been employed in the hospitality sector and emphasizes the necessity for immediate, short-term, and long-term pricing strategies. The idea of using net income after taxes as a cost when setting product selling prices is thoroughly covered in this chapter. By estimating the typical check that will cover all of the operation's costs, including net income after tax, the use of net income after tax as a cost is demonstrated for a restaurant operation. The next image demonstrates how to calculate the average check per meal period. Additionally, this chapter discusses the topic of menu item price as well as any potential challenges that can arise. The themes of seat rotation and integrated pricing are covered, as well as the connection between the sales mix, average check, and gross profit. In this article, menu engineering is described. This method of menu analysis focuses on the contribution margin (gross margin) of each menu item as well as its popularity, which is gauged by client demand. Calculating the necessary average room rate for a hotel or motel operation uses the same methods as those used to get the required average check in a restaurant operation.

KEYWORDS:

Client demand, Cost, Contribution, Margin, Pricing.

INTRODUCTION

Generally speaking, pricing theory states that a hospitality organization should price its rooms and its food and beverage menu items to manage costs, increase profit, and simultaneously offer guests an appropriate value for their money. The pricing hypothesis is based on the idea that if things are priced fairly, owners should receive a reasonable return on their investment.

To a certain extent, the pricing strategy will determine whether or not financial objectives are accomplished. Customers would look elsewhere for the product and services if prices are too expensive since they will feel they are not getting enough for their money. Prices that are too cheap, on the other hand, do not maximize sales potential. In either scenario, it is possible that profits won't be as high as they should be.

As will be seen, there are numerous techniques used by hospitality operators to set their price structures, each with benefits and drawbacks.

Authority Method

The intuitive approach does not necessitate thorough business understanding or investigation into expenses, profitability, prices, rivalry, or the market. Because clients are willing to pay those prices, the business owner simply assumes that they are the proper ones. This approach offers no benefits. The biggest drawback is that there is no connection between the prices charged and profits.

Thumb-Rule Method

The marketplace (competition, value for money, and so forth) is not taken into consideration by rule-of-thumb methods, which may have been valid in the past. For example, a restaurant should price its menu items at 2.5 times food cost to achieve a 40% cost of sales.

Try-And-Fail Method

Prices are adjusted up and down using the trial-and-error method to determine their impact on sales and earnings. Prices are set at the point where profit appears to be greatest. This approach, however, ignores the fact that there are numerous other factors, aside from prices, that influence sales and profits. As a result, what initially appears to be the ideal pricing level may later be impacted by these other variables. Customers may find this strategy to be perplexing during the price-testing time[1], [2].

Marketing Strategy

When prices are lowered below those of the competitors, price reduction happens. If expenses are ignored, this might be a hazardous strategy because earnings will be reduced if variable costs are larger than prices. Some restaurant owners naively assume that by selling more alcoholic beverages, they will more than make up for the losses by pricing their food menu below costs. In order to employ this strategy, sales of more products must outpace price decreases. If competitors are simply given the extra business, they will be driven to lower their rates as well, which could lead to a price war. Another pricing strategy is to purposefully charge more than rivals while stressing factors like quality, which many consumers mistake for price.

However, if this tactic is not employed wisely, it may lead to clients looking elsewhere once they understand that high price and excellent quality are not mutually exclusive. Pricing that is competitive implies setting prices that are comparable to those of the competition while differentiating in areas like location, ambiance, and other non-price variables. This strategy is therefore referred to as the follow-the-leader method when there is one dominating operator in the market that typically takes the lead in setting pricing, with its close competitors mirroring rises and drops. Pricing that is competitive tends to prevent price reducing and the ensuing decline in profitability. In other words, market prices are stable. In the short term, this strategy might be helpful. However, this strategy can be dangerous if it is utilized without knowledge of the disparities that exist (in things like goods, expenses, and services) between one company and another.

Binding Method

The markup method is employed, for instance, when a restaurant uses its historical income statements' customary food cost % to set the price of any new menu items it offers. For instance, any new menu items would be priced so that they result in a food cost of 40 percent if the restaurant has historically operated at a 40 percent food cost. The biggest issue with this approach is that it makes the assumption that the appropriate food cost for the restaurant to make its goal profit is 40%. 242 using the right method, the bottom-up approach to price estimation Because they are simple to execute and are understood by operators, several of the pricing strategies we just covered are widely employed[3], [4].

Sales and earnings won't be maximized if, however, the establishment is not running as effectively as it should, since these tactics only have a tendency to reinforce the problem. Owners or managers that employ these strategies aren't in complete control of their business operations, and they're probably not making the most of their income statements and other financial accounting data to help them enhance their operational performance. Pricing can be a powerful strategy for increasing profitability. Often, the problem is finding a balance

between prices and earnings. In other words, pricing should only be set after taking into account how they would affect profitability. For instance, a restaurant may drop its rates to entice more clients, but if those prices are lowered so much as to not cover the costs of providing services to those more clients, earnings will actually decrease. Long-term supply and demand in the market influence pricing, which is a result. Prices must be set with the establishment's overall long-term financial aims in mind in order to be competitive in that market. Any of the following could be a typical objective.

Controlling sales revenueor, more specifically, controlling the pricing set for the goods and services providedis equally crucial. Prices therefore affect overall financial outcomes, such as the capacity to pay all operational costs and give a net income that produces an acceptable return on investment, because there is a relationship between prices charged and total sales revenue.

The conventional way to analyze an income statement is from top to bottom, which entails figuring out sales revenue and the costs related to that revenue in order to ascertain whether there is a net income. An alternative strategy may be to start with the target net income, calculate costs, and then decide what sales revenue and prices are necessary to reach the desired net income. This bottom-up strategy is based on the premise that net income is an expense of doing business, which it is. The interest charge is seen as a cost if a mortgage company lends money to a hotel or food service organization at a specific interest rate. The mortgage firm is a shareholder. Owners of the business, such as stockholders or unincorporated individuals, comprise another type of investors. They anticipate interest on their time and/or money investments as well, but their interest is referred to as net income. Net revenue is thus merely another kind of expense. Pricing decisions can benefit from this idea and the bottom-up method to calculating revenue.

DISCUSSION

No matter how much the typical check is, such information does not indicate how much each menu item ought to cost. The average check shows the typical amount that each consumer is anticipated to spend. The typical check does offer us a sense of how the menu's pricing structure should be balanced, with certain items priced on average higher and others lower. As the year goes on, the average check serves as a barometer that enables an assessment of whether we are meeting the net income goal. We know that action needs to be taken to address any potential net revenue gap if actual spending per customer is lower than the acceptable level and all other factors, such as seat turnover and operational costs, remain constant. If seat turnover needs to be increased, selling prices might need to go up, costs might need to go down, or any combination of these changes might be needed. The average check that has been discussed up to this point is an average over all mealtimes. The average check per meal period is covered in the next section.

Median Check by Meal Time

The majority of restaurants that serve more than one meal period each day will have a different average check for each meal period. The typical check will typically rise from breakfast to lunch and then rise again from lunch to dinner. Since the average check for each meal period varies, it would be very helpful to know the average check for each meal period provided in addition to the daily average check as a whole. Knowing the percentage of total sales income and seat turnover for each meal period is necessary to calculate the average check per meal period.Historical data can be used to offer the knowledge needed in a continuing business, but management forecasting will be required in the case of a new restaurant. We'll use a restaurant as an example, with 100 seats, serving lunch and dinner six days a week, or 312 days a year. According to records, the lunch hour generates 40% of total revenue with a 2.5 seat turnover, and the evening period generates 60% of total revenue with

a 1.5 seat turnover. Using $870,238 as the total sales revenue, we will apply the same calculation to find the average check that has been adjusted to discover the average check per meal period to obtain the average check[5]–[7].

Menu Expertise

Menu engineering is another approach to menu analysis. A Practical Guide to Menu Analysis, written by Michael L. Kasavana and Donald J. Smith and published by Hospitality Publications in 1982, was the first book to use the phrase and to discuss the idea of menu engineering. Using a worksheet like the one, menu engineering can be done. Each meal period must have its own worksheet, and within each meal period, each menu categorysuch as appetizers, entrees, and dessertsmust have its own worksheet. This is due to the fact that menu engineering bases its analysis on each menu item's contribution margin (or gross margin). If contribution margins for, say, appetizers and entree items were compared, no useful analysis would be made because there can be significant differences in contribution margin between those products.

The main focus of menu engineering is the contribution margin (or gross margin) of each item on the menu, together with consumer demand. Since the contribution margin is calculated in dollars rather than percentages, menu engineering ignores the food cost percentage. When compared to the average contribution margin for all sold items, the contribution margin is classified as high or low. An item with a contribution margin of $5.50 is thought to have a low contribution margin, but an item with a contribution margin of $7.00 is thought to have a large contribution margin, for instance, if the average contribution for all products is $6.50. Comparing each item's sales mix % to the average sales mix percentage, or the quantity sold of each menu item as a proportion of the total quantity sold of all menu items, determines if an item's popularity is high or low.

It is incorrect to presume that a product is good if its profit factor is very high. The method used to determine profit factors results in an average of 1.0 for all profit factors. This implies that all profit factors above 1.0 must be counterbalanced by profit factors below 1.0. In other words, certain things' profit factors will be larger while others would be lower. As a result, the menu won't be balanced, which it would be if each item deviated just a little from the average of 1.0. Items with extremely high profit factors must be balanced out by those with extremely low profit factors. The running costs for the menu items with a very low profit factor are typically viewed as being wasteful. These costs include those for buying, receiving, storing, distributing, preparing, and providing services. However, from the perspective of marketing[8]–[10], this viewpoint is utterly incorrect. It's critical to remember that from the perspective of the customer, the variety and accessibility of a balanced menu are not insignificant.

Stars

The restaurant manager would want to sell stars whenever it is possible. Unless there is a valid cause to remove them, these items ought to remain on the menu. But if the menu is imbalanced, as shown by the profit factors, and too much of the overall contribution margin is drawn from too few of the menu items, do not be fooled by the profitability of the stars. The total contribution margin should be distributed across the entire menu more fairly, or it should be increased even more by getting rid of the low-contribution margin items. In order to maintain their status as stars, stars should be placed in the most advantageous location on the menu. Additionally, due to their relative popularity, such things' pricing can frequently be raised without losing that popularity, so boosting earnings. Generally speaking, the products on the menu that are least price sensitive (or most inelastic, in terms of economics, described later in this chapter) are stars. Never lower the price of these things because doing so will likely not affect sales volume but will lower overall contribution margin. On the other side, if

star prices go up, demand won't be significantly impacted, and overall contribution margin will go up. If the demand for stars is more elastic, however, a price cut might significantly boost sales (and profitability) of these goods. Finally, quality control in their preparation and service is crucial because stars are the most well-liked and lucrative items on the menu.

Polyhouses

Despite being well-liked by consumers, plowhorses have a modest contribution margin per piece. Generally speaking, they ought to remain on the menu, but the restaurant manager ought to work on boosting their contribution margin without reducing demand. One approach to achieve this is to increase their pricing. Another option is to examine the recipes and purchasing requirements with the aim of lowering ingredient costs or lowering serving sizes. As an alternative, you can raise the price of the bundle after repackaging the item with a side item to improve the contribution margin. Plowhorses should be moved to a less desirable spot on the menu if the contribution margin cannot be increased. Plowhorses have a low contribution margin, so it wouldn't be a smart idea to lower their prices because that would lower the entire contribution margin. Favoring these goods through better placement on the menu or server recommendations is likewise a bad idea because it will only drive customers away from the more lucrative menu items. With plowhorses, the profit factors (found in worksheet column T) are crucial. Some products may account for a sizable overall contribution margin and, consequently, profits due to their high sales volume. They need to be properly examined.

Puzzles

Although their popularity is lower than normal, puzzles have a higher-than-average contribution margin. Despite being profitable, they do not sell well. They might not be selling well because their pricing is too expensive, their quality is subpar, or they are simply not appropriate for the restaurant's patrons. The restaurant manager should strive to improve demand for them by rebranding them, improving their menu descriptions, or moving them to a more desirable location on the menu. In general, they should be kept on the menu. Another option is to lower the price, especially if the product has an elastic demand and a relatively high contribution margin. In other words, since clients can object to the price of such things, sales should be promoted. Avoid lowering the price too much, though, as this can drive away customers from the stars and lower the contribution margin. In some circumstances, a puzzle piece's price may be increased if it is extremely popular with a small number of clients whose demand is inelastic. The demand from these clients won't be impacted by higher pricing, but the overall contribution margin will rise. If a puzzle item continues to be genuinely unpopular, it ought to be dropped from the menu and replaced with something that, according to a consumer survey, would be considerably more well-liked.

Summarizing Menu Engineering

Menu engineering focuses on three factors: item contribution margin (the difference between an item's selling price and its food cost), analysis of the menu items' sales mix to determine the profitability of each individual menu item, and customer demand (the number of customers eating in the restaurant). The most appealing menu is one that offers the biggest overall contribution margin; the overall food cost percentage is not taken into account. Keep in mind that when a reasonable amount of time has passed, any changes made to a menu as a consequence of menu engineering should be examined. Nothing has been accomplished if a changed menu results in a lower overall contribution margin than it did previously. Customers should be encouraged to focus on the stars, the number of puzzles should be decreased, and the dogs should be removed.

The fact that menu engineering is focused on maximizing item contribution margin is another issue with it. The most expensive goods typically have the largest food cost percentages as well as the highest contribution margins. Additionally, higher pricing can reduce consumer demand and, consequently, profit. But when sales revenues are rising steadily, which is frequently not the situation for many restaurants, menu engineering is effective. Additionally, below a given sales threshold, a specific menu item might offer a contribution margin that appears good but falls short of covering its entire cost. Menu pricing can be a difficult task for management due to all the variables (different menu items must be offered with different prices and markups, gross profit dollars will vary from menu item to menu item, food cost percentage alone may not be a useful guide in determining selling prices, and the sales mix must be taken into consideration). The suggestions given in this section regarding determining menu selling prices for food apply just as well to setting beer, wine, and liquor prices in a beverage establishment[11].

Rate of Rooms

For figuring out the required average restaurant check earlier in this chapter, the same method can be applied to figure out room rates. However, hotel or motel rooms are a different kind of commodity than dining room chairs. If you are not currently operating at the maximum capacity allowed by the operation's permits and the fire code to handle high demand, restaurant seats can be increased in the near term. To accommodate moments of high demand, a restaurant may instead speed up service and increase seat rotation. A hotel or motel's guest rooms cannot be used in the same way. Short-term supply increases are impossible. There are a set number of rooms, and turnover cannot be raised. The typical turnover rate for a room is once per 24 hours, with the exception of when rooms are sold throughout the day for meetings or other similar uses. Only 100 people can sleep in 100 single beds in a hotel for a full day.

If there is enough demand, 100 seats at a restaurant can accommodate 100, 200, or even 300 people or more throughout a mealtime or day. Another aspect to take into account is the fact that if revenue for a room is not realized on a specific night, it is lost forever. If a room is not sold, neither the room revenue nor the fixed cost of providing rooms may be reimbursed. In contrast to operations for food and drink, this. If the restaurant purchases food and beverage inventory that aren't sold on a specific day, they can be held for a short time and sold later, and the cost is still recoupable. In order to maximize occupancy levels and allow for the recovery of fixed expenses associated with providing the space, it is crucial that room rates be considered when setting prices.

CONCLUSION

The technique of lowering prices below the rack rate is known as room rate discounting. The highest price that will be quoted for a room is called the rack rate. A hotel cannot reach its maximum potential average room rate and maximum potential total income for any given night if some rooms are discounted. For groups, such as convention delegates and frequent guests from business and government, rooms are sometimes discounted. The discounts are a standard business practice to maintain occupancy levels, and the lost revenue from the rooms is frequently offset by increased profits from the room customers using the hotel's food and beverage services. Each additional room sold leads in a significant boost in net income because a hotel's variable costs for each occupied room are generally minimal when compared to the room rate. For instance, if the rack rate for a room is $99 and the variable cost is $9, selling the room results in an additional $90 in net income. 490% 7490% 7 268 The bottom-up approach to pricing each additional room that might otherwise go empty is discussed.

REFERENCES:

[1] M. C. Houston, "Alpha1-blocker combination therapy for hypertension. An option to try when traditional methods fail," *Postgrad. Med.*, 1998, doi: 10.3810/pgm.1998.09.581.

[2] M J . Neale and B.J. Woodley, "Condition Monitoring Methods and Economics," *Bruel & Kjaer*, 2017.

[3] K. Aalaei, M. Rayner, E. Tareke, and I. Sjöholm, "Application of a dye-binding method for the determination of available lysine in skim milk powders," *Food Chem.*, 2016, doi: 10.1016/j.foodchem.2015.10.004.

[4] D. A. M. Zaia, F. R. Marques, and C. T. B. Vieira Zaia, "Spectrophotometric determination of total proteins in blood plasma: A comparative study among dye-binding methods," *Brazilian Arch. Biol. Technol.*, 2005, doi: 10.1590/S1516-89132005000300008.

[5] D. R. GOLDNER, C. Y. OSBORN, L. E. SEARS, B. HUDDLESTON, and J. DACHIS, "A Machine-Learning Model Accurately Predicts Projected Blood Glucose," *Diabetes*, 2018, doi: 10.2337/db18-46-lb.

[6] ISRCTN14889127, "Pancreatic replacement therapy and glycaemic control in diabetes," *https://trialsearch.who.int/Trial2.aspx?TrialID=ISRCTN14889127*, 2017.

[7] H. Shinkoda *et al.*, "[Analysis of parent-child sleeping and living habits related to later bedtimes in children].," *Fukuoka Igaku Zasshi*, 2012.

[8] E. Thomas, "Food for thought: Obstacles to menu labelling in restaurants and cafeterias," *Public Health Nutrition*. 2016. doi: 10.1017/S1368980015002256.

[9] J. G. Hollands and P. M. Merikle, "Menu organization and user expertise in information search tasks," *Hum. Factors*, 1987, doi: 10.1177/001872088702900507.

[10] A. I. Goldman, "Expertise," *Topoi*, 2018, doi: 10.1007/s11245-016-9410-3.

[11] P. Dan, É. Velot, V. Decot, and P. Menu, "The role of mechanical stimuli in the vascular differentiation of mesenchymal stem cells," *J. Cell Sci.*, 2015, doi: 10.1242/jcs.167783.

CHAPTER 7
CALCULATING MEAL SELLING PRICES AND ROOM RATES FOR A SUFFICIENT RETURN ON INVESTMENTS

Dr. Somprabh Dubey, Associate Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- somprabh.dubey@shobhituniversity.ac.in

Dr. (Prof.) Ashok Kumar, Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id- dr.ashok@shobhituniversity.ac.in

ABSTRACT:
Approach presented in this chapter for figuring out meal selling prices and room rates to guarantee a sufficient return on investments has some drawbacks. The markup also known as cost-plus pricing method, which is used to set food and beverage prices in relation to the cost of the ingredients, does the same. The markup and return on investment approaches are both straightforward and simple to apply, but because of this, they overlook a lot of other elements that must be taken into account when determining prices. Because of this, return on investment and markup pricing should only be considered as guidelines and not as the primary factors in determining final rates. Additionally, estimates are made on seat turnover in restaurants and room occupancy rates in hotels. However, modifications canwhen it is observed that seat turnovers and/or room occupancies differ from those utilized in the original calculations, adjustments to pricing should the bottom-up approach to pricing be made to prices during the actual period. Unfortunately, the new choices can be the opposite of what would be appropriate given the situation. To give an example, imagine that a hotel had set its average room fee for the coming year of $79 based on a forecasted occupancy of 70%. The average room rate is adjusted upward to make up for the fact that real occupancy is closer to 65 percent throughout the year in order to maintain the intended profit.

KEYWORDS:

Average room fee, Cost-plus pricing method, Demand, Occupancy, Pricing.

INTRODUCTION

However, if you think about a normal business scenario, a price increase would frequently lead to a further decline in hotel demand, lowering occupancy even further. When all else is equal and an economy is functioning normally, the best course of action to increase demand is to drop prices, which will also increase net income. Bottom-up pricing approaches may lead to poor decisions, which could lead to unfilled hotel rooms and restaurant tables. When market conditions are such that clients are willing to pay higher prices, prices may be raised above those determined using the markup approach, which could result in missed profit possibilities. Markup pricing can be effective when inflation is moderate (as long as the economy isn't contracting at the same time) and when there isn't an excess of hotel rooms or restaurant seats (i.e., when there isn't an especially intense competitive environment). Although it is uncommon for this circumstance to occur, many hotels have started to use more complex techniques that systematically take into account all the pertinent aspects that should be taken into account when making the pricing decision. Yield management is one of these fewer basic strategies. The sections that follow address a few of the other pricing factors.

Demand elasticity

Demand elasticityis associated with how quickly demand reacts to price changes for a good or service. Elastic demand is defined as a substantial shift in demand caused by a minor change in prices. Inelastic demand is defined as a modest change in demand following a significant shift in prices.

Therefore, observing what happens to total sales income when prices change is the simplest way to determine whether demand is elastic or inelastic. If demand is elastic, a price drop will boost total sales revenue because, despite the fact that a lower price is being paid per unit, there are now enough extra units being sold to more than make up for the lower price. According to a generalization, if demand is elastic, a change in price will result in a change in total sales income that is the opposite of the change in price. If demand is rigid, a drop in price will result in a drop in overall sales revenue. The slight increase in sales revenue that takes place won't be enough to make up for the drop in sales revenue per unit. Again, generalizing, it may be said that if demand is rigid, a change in price will result in a corresponding change in total sales revenue. The presence of replacements is one of the elements that affects the elasticity of demand. Generally speaking, the highest price-charging hospitality businesses are able to do so because there are few alternatives available.

An elite hotel with minimal competition can charge more for rooms since its guests are used to paying more and can afford to do so. They also wouldn't typically switch to a less expensive, less opulent hotel if room rates were raised. The demand is rigid. On the other hand, if it increased its menu prices outside of line with its rivals, a restaurant that is one of many in a specific neighbourhood and caters to the family trade would undoubtedly lose a significant amount of business. Its commerce is extremely flexible. Customers who were price-conscious would just go to another eatery. In contrast, a restaurant with a high average check will likely encounter less opposition from patrons when raising menu prices. Therefore, it may be said that customers' demand is often more elastic the lower their income is and vice versa. The purchasing patterns of a company's clients are often tied to income levels.

Customers are less likely to object to an increase in costs the more habit-prone they are, as they have a tendency to develop "brand" loyalty to hotels and restaurants, just as they do with other things they purchase. Businesses that depend on recurring customers must be particularly aware of how pricing changes may affect that loyalty. Also keep in mind that as the amount of time under consideration grows, the demand for a good or service tends to be more elastic. Customers are creatures of habit, and while they do form loyalties, those loyalties and habits can shift over time. Therefore, any individual hospitality business needs to be aware of both the market's elasticity of demand and the level of client loyalty. In other words, its pricing strategy must be focused on the market. When making short-term decisions, such as reducing lodging rates on weekends and during off-peak seasons to boost occupancy or giving special food and beverage deals during sluggish times, this market orientation is especially crucial. Where demand is highly elastic, these discounted rates or prices are particularly appropriate.

Price Structure

Pricing selections are significantly influenced by a company's specific cost structure. In this context, the term "cost structure" refers to the division of costs into fixed and variable costs. The term "fixed costs" refers to expenses that typically do not fluctuate in the short term, such as manager salaries and insurance expenditures. Costs that fluctuate based on sales volume are known as variable costs. Cost of food is one instance. A company with more fixed costs than variable ones would probably experience less stable earnings when the volume of sales income fluctuates. Having the appropriate prices for the market becomes particularly crucial in this circumstance. In the short term, any price over the variable cost will result in a contribution to fixed costs and net income, and the larger the range of viable prices, the lower the variable costs must be. Any price between $10 and $95 will help offset fixed costs and boost net income, for instance, if the variable, or marginal, costs (such as housekeeping labour, linen and laundry expense), for selling an extra room, are $10 and the room typically sells for $95. In such a scenario, individuals who set prices have a wide range

of creative marketing and pricing options at their disposal to attract additional business and optimize sales revenue and profits (operation income). Keep in mind that this marginal or variable costing notion only works in the short term. In order to generate a long-term net profit, pricing must be set such that all costs (both fixed and variable) are covered. The Cost-Volume-Profit Approach to Decisions go into great detail on the subject of fixed and variable costs[1]–[3].

DISCUSSION

The competitive environment of a hospitality business has a big impact on price. There aren't many monopolistic hospitality firms (although there are few, like the restaurant owner with the sole concession at an airport). When there is a monopoly or a scenario that is close to a monopoly, the operator has more freedom in setting pricing and may actually have a tendency to charge more than is justifiably fair. The consumer still has the option to spend more or less money on a meal or beverage in these circumstances, as well as to stay fewer nights at the lodging. Additionally, new business owners are soon drawn to the monopolistic environment of high prices to provide competition. There is frequently an oligopoly in a more competitive but not entirely competitive environment.

An oligopoly often consists of one large, dominant firm and numerous smaller, competitive firms. In an oligopoly, the dominant firm frequently sets the price. The prices of the other firms also increase or decrease in response to changes in the price of the market leader. In a resort location with a single large resort hotel and a number of nearby motels that target slightly lower-income guests, an oligopolistic situation could develop. However, the majority of hospitality businesses operate in a purely competitive environment where the demand for any given establishment's goods and services is extremely sensitive to the prices paid. In these circumstances, there isn't much of a pricing difference between one restaurant and the next. When there is intense competition, competitive price will frequently win out without giving other factors a second thought. For instance, a business that uses competitive pricing may overlook the fact that a certain product or service is in some respects superior to those offered by rivals and thus be able to charge a higher price without affecting demand.

An intelligent operator will consider both the advantages and disadvantages of his or her own situation and those of the rivals in a highly competitive environment. Operators should consider how to set themselves apart from their rivals while assessing their strengths and weaknesses. The businesses with the greatest success in differentiating also enjoy greater latitude in setting their rates. This distinction can be found in areas like ambiance, decor, location, view, and related elements. In fact, psychological pricing is possible given distinction. According to psychological pricing, prices are set based on what customers anticipate paying for the "different" items or services provided. Higher pricing can be set as differentiation increases. This condition, for instance, is prevalent at upscale eateries and swanky resorts where a specific market niche has been developed. A monopolistic or nearly monopolistic situation may now be in effect. In conclusion, there isn't a single way to set prices for all hospitality businesses. Each business will have slightly different long-term 278 goals. pricing strategies relating to its overall objectives and will adopt suitable short-term pricing policies depending on its cost structure and market condition.

Selling hotel rooms is the primary objective of the rooms division in many hotels in order to raise the occupancy rate. The management's goal is to increase sales income (or yield) from the available rooms. Regrettably, many of the techniques employed to gauge a hotel's marketing efforts do not result in sales decisions that increase profits. The average room rate or the occupancy rate have traditionally been used to evaluate marketing efforts. Occupancy percentage has the drawback of not indicating whether or not sales revenue is being maximized. For instance, even though a hotel may be fully booked, many of the guests may

be paying less than the standard (rack) cost. In other words, managers whose success is determined by the number of occupied rooms are prone to try to boost occupancy at the expense of room rates. The average room rate is used to compare other managers.

Once more, refusing to sell any rooms for less than the rack rate and driving away potential clients who won't pay this price would raise the average room rate. The goal is to maximize average room revenue at the expense of occupancy. As was covered in a previous section of this chapter, expressing average room rate as a ratio of maximum potential average rate can make it slightly more meaningful, but doing so alone does not paint a whole picture. The yield statistic is a more accurate indicator of a manager's performance than a high occupancy or high average rate. The yield percentage is a single integrated statistic that is produced by multiplying the occupancy percentage and average rate ratio together. This statistic is much more significant and is a more reliable indicator of a hotel's performance, even though the occupancy percentage and average rate ratio by themselves do not provide all the information. Utilizing fundamental economic principles, yield management aims to optimize hotel room income by assigning the appropriate room to the appropriate visitor at a cost the visitor is willing to pay. Maximizing sales revenue is not a novel idea. In fact, hotel management have long recognized that, during sluggish times, they can boost demand for rooms by assessing the volume of prospective reservations they already have and then lowering the rates of any remaining rooms to encourage additional demand. On the other hand, during times of high demand when occupancy will be at or close to 100%, they can raise hotel rates because they know that guests are willing to pay more to ensure a reservation. The majority of hotel operators historically base their pricing on the supply and demand principle.

A kind of yield management is used when a hotel's sales manager signs a contract with a conference group at a room rate that is less than that for transient visitors. Similar to this, offering transient rates that are cheaper on the weekends than they are during the week is another way to manage yield, as is refusing to lower prices than the rack rate during the busiest travel season. To really benefit from yield management, managers must, however, go beyond these ad hoc methods of room rate pricing. For instance, it has long been standard practice for hotels to cease taking reservations on certain days once a certain number had been achieved. Empty rooms are the result of future cancellations and no shows. If more reservations had been made, these "spoiled" rooms might have been occupied. The level of these spoiled rooms can be monitored by a good yield management system, which can also indicate when additional reservations should be accepted. This increases room revenue and boosts customer satisfaction by allowing guests who would otherwise have their reservations declined to stay at the hotel of their choice. The amount of extra sales income that was generated as a result of management choices based on yield management can also be shown by a computerized yield management system. When a consumer inquires, many hotels customarily quote a rate (often the highest, or rack rate), which is then dropped (sometimes many times) as the customer exhibits reluctance. Due to the large number of rooms sold at a discount, hotels that engage in this activity will experience a dropping average rate. Rational yield management has little to do with this method. As visitors become aware that they could have gotten a cheaper fee by putting up more resistance, there will also be an increase in consumer dissatisfaction.

Computer programs

Because computerized spreadsheet applications can quickly complete the calculations in what-if scenarios that would take hours to compile if done manually, they can be very helpful in pricing decisions. For instance, different room rates and an expected occupancy rate for each individual room rate can be entered into the computer. The projected level of variable expenses can also be input for each room pricing and occupancy percentage. In order to

educate management about which average room rate is the most profitable, the computer may then compute the total sales revenue and predicted departmental profit (operation income) for each scenario. More advanced software can also forecast the impact that a change in occupancy or room pricing will have on various departments, including food and beverage[4]–[6].

The calculations required for items like average checks, seat turnovers, menu gross profit, the Hubbart formula, and a discount grid can also be performed with ease using a spreadsheet software. Spreadsheets and specialized menu engineering software programs can be utilized to cut down on the time-consuming manual process of creating worksheets. Only the cost, selling price, and menu mix of each item must be entered; all other calculations are carried out automatically and written out. Finally, as was already indicated previously in this chapter, it is possible to create a yield management system using certain software packages that are now available on the market.

The reader was introduced to the numerous pricing strategies that have been employed in the hospitality sector in this chapter. It made clear the need for both tactical and long-range pricing strategies. When analyzing an income statement, it is customary to subtract costs from sales revenue and refer to any surplus as net income. The required revenue that must be achieved to cover all expenditures, including net income after tax, can be determined in advance each month, quarter, or year. On the other hand, if net income (after tax) is viewed as a cost, it can then be planned for like any other cost. This number enables us to compute the average check or the average client spending for a certain establishment. The calculation is as follows[7], [8]:

The average check does not represent the cost of every item on the menu; it is merely an average. Individual menu item price can be a challenging management issue that calls for taking into account a variety of variables. The price ranges on the menu that must satisfy the clientele, the gross margin of the various menu items, and the pricing of the competition are all taken into account. The impact of the menu sales mix on the average check, the gross margin, and the net income should all be considered. Never disregard the impact that seat turnovers can have on overall sales revenue. A decreased average check might be offset by rising seat turnover. Menu engineering is a technique for menu analysis that combines each menu item's contribution margin (gross profit) with its level of popularity or demand among consumers of the restaurant. Following the categorization of menu items into one of four groupsstars, plowhorses, riddles, or dogs’decisions can be taken regarding how to alter the menu. The average room rate that a hotel or motel must charge to cover all expenditures, including net profits, can be computed similarly to how average restaurant checks are determined.

The average room rate is merely an average and not necessarily the rate for any particular category of rooms, just like the average check. A typical breakdown of the average room rate includes a rate for single rooms and a rate for double rooms. Additionally, the square footage of rooms of various sizes is taken into account when determining room rates. Average room rate and actual room occupancy together make up total room revenue. The occupancy of rooms by day of the week should therefore be taken into consideration because a decline in room rate can be offset by an increase in occupancy, and vice versa. If the rack rate is discounted in room rate discounting, an equation can be used to determine the equivalent occupancy required to maintain total sales income minus marginal costs at the same level. The following equation is used to determine equivalent occupancy[9], [10].

You can contrast the actual average with a prospective average room rate. Once an estimated average rate has been determined, different market segments can receive discounted accommodation prices. Keep in mind that when determining actual prices, both the markup

technique and the return-on-investment method should primarily serve as benchmarks. There are other additional factors to take into account. For instance, prices must be set in order to achieve the organization's long-term goals. In addition, crucial considerations include the elasticity of demand, the cost structure of the company (the breakdown between fixed and variable expenses), and the competitive environment in which it works. The effectiveness of most hotels' rooms departments is assessed using either the average rate or the occupancy percentage, both of which have drawbacks. Utilizing the yield statistic, which combines the occupancy percentage and average rate, is an option. The chapter came to a close with a section on yield management, a technique for matching customers' purchasing habits and their demand for hotel rooms in order to provide more accurate occupancy estimates and maximize room revenue.

CONCLUSION

A hotel management has established a rack rate for all of the hotel's rooms for the following year. The rack fee charged could be lowered to a lower rate of early next year, and corporations, conventions, and conference groups have been informed of this possibility. The potential reduction will depend on the volume of business they give. The and room rate savings are available with restrictions, according to travel firms, which make a significant proportion of hotel reservations for independent visitors. The travel companies were also informed that reservations for rooms at the rate would result in a commission rise to 15% rather than the customary 10% for reservations at a discounted rate. When making a reservation over the phone, the hotel will initially quote a rate of; however, front desk staff are instructed to drop this price to but never to. Employees who book rooms must also inform prospective visitors of the limitations that are applicable at each pricing level. Talk on the situation's ethics.

REFERENCES:

[1] S. M. Olmstead, W. Michael Hanemann, and R. N. Stavins, “Water demand under alternative price structures,” *J. Environ. Econ. Manage.*, 2007, doi: 10.1016/j.jeem.2007.03.002.

[2] I. M. Rosa Diaz, “Price assessments by consumers: Influence of purchase context and price structure,” *Int. J. Consum. Stud.*, 2013, doi: 10.1111/j.1470-6431.2011.01053.x.

[3] Y. Xu, Q. Zhang, S. Zheng, and G. Zhu, “House Age, Price and Rent: Implications from Land-Structure Decomposition,” *J. Real Estate Financ. Econ.*, 2018, doi: 10.1007/s11146-016-9596-6.

[4] N. J. van Eck and L. Waltman, “Software survey: VOSviewer, a computer program for bibliometric mapping,” *Scientometrics*, 2010, doi: 10.1007/s11192-009-0146-3.

[5] M. G. Schaap, F. J. Leij, and M. T. Van Genuchten, “Rosetta: A computer program for estimating soil hydraulic parameters with hierarchical pedotransfer functions,” *J. Hydrol.*, 2001, doi: 10.1016/S0022-1694(01)00466-8.

[6] C. Cayron, “ARPGE: A computer program to automatically reconstruct the parent grains from electron backscatter diffraction data,” *J. Appl. Crystallogr.*, 2007, doi: 10.1107/S0021889807048777.

[7] D. J. Arrigo, “An Introduction to Partial Differential Equations,” *Synth. Lect. Math. Stat.*, 2018, doi: 10.2200/S00814ED1V01Y201711MAS021.

[8] B. Winter, "What These Models Are Doing … and Then We'Ll Spend Most of the Time," *arXiv*, 2013.

[9] N. Shoval, "The geography of hotels in cities: An empirical validation of a forgotten model," *Tour. Geogr.*, 2006, doi: 10.1080/14616680500392499.

[10] Z. Yang and J. Cai, "Do regional factors matter? Determinants of hotel industry performance in China," *Tour. Manag.*, 2016, doi: 10.1016/j.tourman.2015.06.024.

CHAPTER 8
EXPLORING THE IMPORTANCE OF COST MANAGEMENT

Dr. Somprabh Dubey, Associate Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- somprabh.dubey@shobhituniversity.ac.in

Dr. (Prof.) Ashok Kumar, Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id- dr.ashok@shobhituniversity.ac.in

ABSTRACT:
The various costs that can occur in a business operation are introduced and discussed in this chapter, including direct costs, indirect costs, controllable and noncontrollable costs, joint costs, discretionary costs, relevant and nonrelevant costs, sunk costs, opportunity costs, fixed costs, variable costs, semifixed or semi variable costs, and standard costs. The next section of the chapter demonstrates how to divide indirect costs among departments and discusses the potential problems this could cause. It is demonstrated how to use pertinent charges to help choose which piece of equipment to purchase. The utilization of fixed and variable costs in the management decision-making process namely, whether to accept or reject an offered price for services to be rendered is examined. Three further decisionswhether close or not to close during an off-season; which company to buy; and whether to accept a fixed or variable lease on a facility showcase how to evaluate fixed and variable costs. The chapter finishes with an example of how semifixed or semi variable costs can be divided into their fixed and variable portions after having shown how crucial knowing fixed and variable cost relationships is in the decision-making process.

KEYWORDS

Costs, Expenses, Income, Variable.

INTRODUCTION

A direct expense is one that can be linked back to and is accountable to a specific operating department or division. Most direct costs are cyclical in nature and will rise or fall in response to changes in sales income. Because of this, direct costs are viewed as being under the authority and care of the department or division manager to whom they are charged. Cost of sales for food and beverages, wages and salaries, operating supplies and services, and linen and laundry costs are a few examples of this type of expense.

Direct Cost Management Cost

Any expense that cannot be connected to, traced to, or linked with a certain operating department or division cannot be charged to that department or division. It was impossible to bill general building upkeep to different departments or divisions (like rooms, food, or beverage). Even if this obstacle could be overcome, it is still important to acknowledge that operating department or division managers cannot typically be held accountable for indirect expenses. Undistributed costs, often known as indirect costs, are a common term. The manager can regulate how much is spent if a cost is under control. The kitchen manager, for instance, has some control over the amount spent on food. However, it is unlikely that the kitchen manager will have any immediate impact on how much is spent on rent. It's a common error to refer to direct expenses as controllable costs whereas indirect costs are noncontrollable expenditures. Although direct expenses can be managed more easily than indirect costs in general, all costs can eventually be managed by someone[1].

Union Cost

A cost that is shared by and afterwards the responsibility of two or more departments or areas is known as a joint cost. An example would be a waiter who serves both food and drinks in the dining room. The server's wages are a shared expense that should be split between the food and beverage departments, either proportionally to income or by another appropriate way. Most joint costs and indirect costs are related. Finding a sound justification for allocating a portion of the expense to each department is the difficulty. considerable cost This is a cost that will depend on the choice of a specific person, typically the general manager, and may or may not be incurred. A discretionary expense is non-emergency maintenance. The outside painting of the building could either be completed this year or put off until. Sales revenue shouldn't be impacted either way. Since the general manager has the option, the expense is discretionary. Keep in mind that a cost is only a discretionary expense in the near term. For instance, painting the structure will be necessary at some point to maintain its appearance[2]–[4].

Relevant And Non-Relevant Cost Types

A decision-affecting cost is one that is relevant. A cost needs to be different from alternatives and in the future in order to be relevant. For instance, a restaurant is thinking about switching to an electronic sales register from its mechanical one. The price of the new register (minus any trade-in value of the old one), the cost of retraining staff members to use the new system, and any changes to maintenance and material supply expenses for the new machine would be the pertinent costs. The cost of labor at the restaurant won't matter if the quantity of needed servers doesn't vary. It wouldn't affect the choice in any way. Rubber cost a sunk cost is a cost that has already been paid for and for which there is no recourse. It won't have an impact on choices made later. The $250 would be a sunk cost, for instance, if the same restaurant had paid an employee $250 to research the relative advantages of utilizing mechanical or computerized registers. It cannot affect the choice in any way. Optional cost a missed opportunity cost is the price of not acting. A firm can choose to invest its excess cash at a rate of 10% in marketable securities or keep it in the bank at a rate of 6%. In the event that it purchases marketable securities, its opportunity cost is 6%. Another way to put it is to say that the investment is earning 10% after deducting the opportunity cost of 6%; the net gain is thus equal to a 4% interest rate.

Stable Cost

In the short term of an operational period of a year or less, fixed expenses are not anticipated to alter, and they will not change in response to changes in sales income. As an illustration, consider managerial wages, fire insurance costs, square-foot rent, or the committed cost of an advertising campaign. Although fixed expenses may vary in the long run, no changes are anticipated in the near term. If a fixed cost were to alter in the near future, it would often be due to a specific senior management decision. Variety of cost a variable expense is one whose change corresponds directly to an alteration in sales revenue. The cost of selling food and beverages are two costs that (with a very minor chance that they will not always fulfill this rigorous criteria) fall into the category of strictly linear costs. Costs will increase as more food and drinks are sold. No food or beverage expenses are incurred if sales are nil. Most have both a fixed cost component and a variable cost component. Additionally, they are not necessarily immediately correlated on a straight-line basis with sales. Payroll, maintenance, utilities, and the majority of the direct operating expenses would all go under this category. It is advantageous to separate these semifixed or semi variable expenses into their two components: fixed or variable, in order to make some useful decisions. Later in this chapter, methods for doing this will be covered. Average cost what the cost ought to be for a specific volume or level of sales is the standard cost. Other applications include planning for

expansion b pricing decisions and budgeting. Each business must generate its own standard costs because there are numerous variables that affect standard costs and cause them to vary from one establishment to another. Let's examine some of the ways that analyzing the type(s) of costs we are dealing with could influence our decision-making[5], [6].

Assigning indirect costs to areas of revenue

Determining the appropriate foundation to be utilized to apportion indirect costs to each sales revenue department or division is one of the challenges in indirect cost allocation. A few of the techniques that might be employed were covered.Decisions may be made incorrectly if the allocation of indirect costs is done on the wrong basis. The wrong decisions would likely not be made if the right allocation basis were applied. Think about the following restaurant complex, which has a dining room and a snack bar as its two primary revenue sources. Below is a breakdown of sales revenue, direct costs for each sales area, and indirect costs that have not yet been dispersed for a typical month. Operating income for the entire business is estimated to be $12,000 on a monthly basis.

According to the owner's estimate, he should close in order to stop the $30,000 loss during the two-month loss period. But if he does, the fixed expenses for the two months ($42,000) will have to be covered out of the ten months' net revenue, which will drop his annual net income from $60,000 to $48,000 from the present $90,000. He shouldn't close if he doesn't want his annual net income to drop. Other elements that might need to be taken into account in this circumstance would support the choice to remain open. For instance, there can be significant additional start-up and close-down costs that need to be factored into the closing cost estimate. Also, if key staff were fired, would they come back? Is there a sufficient number of skilled workers who are willing to work just seasonally available? When a new season began, would there be recurring training hours (and expenses)? If the motel was closed for two months, would there be a certain segment of frequent visitors who might not come back? Before making a final decision to close, these are some of the questions that would need to be resolved.

DISCUSSION

Although the sales revenue and net income for each restaurant are the same, the way their costs are structured differs, and this will have an impact on which one is more likely to be profitable. The chain of restaurants that is interested in acquiring either A or B is upbeat about the future. It thinks it can boost annual sales income by 10% while keeping fixed costs the same. What impact will this have on A and B's net income? Each restaurant's net income won't rise by the same amount. The variable cost of Restaurant A is 50%. Accordingly, it will have $0.50 in variable expenses and $0.50 in net profits for every dollar more in sales revenue (fixed costs remain the same). Restaurant B has variable costs of 30%, or $0.30 out of every dollar of revenue, leaving $0.70 in net income for every dollar of additional sales revenue (again, fixed costs remain the same). The income statements for the two restaurants have been updated assuming a 10% increase in sales revenue and no new fixed costs. Note that while Restaurant B's net income increased by $70,000 to $170,000, Restaurant A's increased by $50,000 to reach $150,000. The wiser investment in this case would be Restaurant B.

A corporation is said to have significant operating leverage if its fixed costs are high in comparison to its variable costs. In terms of net income, it will perform better during periods of increasing sales revenue than a business with low operating leverage (low fixed expenses compared to variable costs). When sales revenue starts to decline, a business with modest fixed costs will fare better. This under the suppositions that fixed costs won't change and that sales income at our two restaurants will drop by 10% from its current level of $1,000,000. With diminishing sales revenue, it demonstrates that Restaurant A's net profitability will be

higher than Restaurant B's. In reality, Restaurant B will run into financial trouble far before Restaurant A if sales revenue drops off enough. The sales revenue for Restaurant A could drop below $800,000 if the breakeven point were computed, whereas Restaurant B would be in trouble at $857,143.

The breakeven point is the level of sales revenue at which there will be neither a net profit nor loss. There is a formula for easily estimating the breakeven level of sales income, although one might also estimate it through trial and error. Cost-volume-profit (CVP) analysis is the name of the formula, and it is discussed along with a more thorough discussion of fixed and variable costs and how being aware of this structure can be very helpful in many different types of business decisions.

Complete Graph

A multipoint graph for our sales in units and our salary cost for each of the 12 months was used to extract the sales and expenses. Sales and earnings are the two variables represented by the graph. Wages are designated the dependent variable in this instance and are plotted on the vertical axis. Because wages fluctuate with sales, wages are a function of sales. Sales are the independent variable as a result. The horizontal axis is used to plot the independent variable. We have what is known as a scatter graph, which is a collection of dots dispersed around a line that has been drawn through them, after plotting each of the 12 points. There must be a straight line drawn. The number of straight lines that can be drawn through the points is infinite. The line that appears to fit best in our opinion is the one we want. Every person who performs this exercise will likely see the line from a slightly different angle, but most people with a reasonable eye will identify a line that is, for all intents and purposes, near enough. Draw the line, please[7]–[9].

Keep in mind that when creating graphs for the aforementioned use, the intersection of the vertical and horizontal axes should be given a reading of 0. Next, plot each axis' figures to scale starting from the (0, 0) intercept point. A scatter graph's straight line can be drawn by hand and will typically provide us with a reliable measurement of the fixed cost. However, the issue of whether there is a single optimum method that offers the most precise responses in relation to the graph or the high-low methods arises. Regression analysis is the most precise technique, and the answer is yes.

Analysis of regression

Regression analysis eliminates the requirement to plot points on a graph and draw a line between them. Finding the line's intersection with the vertical axis is the main goal, as it allows us to determine the fixed costs at that location. Once we are aware of the constant costs, calculating the variable costs (total costs fixed costs variable costs) becomes simple. Many equations have been developed in regression analysis for various uses. Without using a graph, we can determine the fixed costs using one of the equations. Data on sold units (rooms) and salary costs must first be developed slightly, before the equation can be used. It includes the symbol X (X stands for the independent variable). The dependent variable, the salary cost column, has the sign Y. XY (X multiplied by Y) and X2 (X multiplied by X) are two brand-new columns that have been added. It goes like this: A joint expense is one that is incurred jointly and then is the responsibility of two or more departments or sectors.

An illustration would be a waiter who works in the dining area and provides both food and beverages. The food and beverage departments should split the cost of the server's pay proportionally to their respective incomes or in another reasonable method. The majority of joint and indirect costs are connected. The challenge is coming up with a solid explanation for splitting the cost across each department. significant expense A specific person's decision, usually the general manager, will determine whether or not this expense is incurred. Non-

emergency maintenance is a discretionary expenditure. The building's exterior painting could either be finished this year or postponed until. Either way, it shouldn't have an effect on sales income. The cost is optional as the general manager has the choice. A cost is only a discretionary expense in the short term, so keep that in mind. For instance, painting the building will eventually be required to preserve its beauty.

Analysis of Results

Let's contrast the outcomes of our fixed/variable breakdown of the annual wage cost for the Model Motel using each of the three techniques mentioned. The results are listed in the table below. Only one of the three approaches would be adopted in real life. Although regression analysis is the most accurate, it should probably only be used by people who are proficient in mathematics or as a spot-check on the results of any of the other two approaches because it takes time to do the necessary calculations. Another option is to enter the data into a programmed calculator or spreadsheet program, which will perform all the necessary computations. The correlation between the regression analysis findings and the multipoint graph results suggests that, assuming the graph is well-drawn, we should receive results that are accurate enough for all practical applications. Regression analysis tells us the most accurate result should be 17.3 percent different from the high-low technique results. Therefore, the high-low technique should only be used if the two chosen eras are representative of all periods, which may be challenging to ascertain.

Once a method has been decided upon, it must be consistently used for all semi-variable costs. So far, we have examined the semi-variable wage cost using the cost data for our Model Motel. The three additional semi-variable costs of maintenance, utilities, and office/telephone need to be examined in a similar manner. Assuming we did this with regression analysis, our finished cost analysis provides us with the fixed and variable costs[10], [11].

A Different Method

The problem can be made simpler by first totalling up all semi-variable costs, then using one of the three methods described in this section to divide merely the total into its fixed and variable components. This is an alternative to dividing semi-variable costs by individual expense. The time and effort required are greatly decreased as a result. On the other side, it might make the outcomes less accurate. But in many situations, this diminished precision can still be adequate for making choices. Despite the fact that a motel scenario has been chosen, the same kind of research may be done just as effectively for a restaurant or a section of a hotel. The challenge in a hotel might be dividing up the overhead expenses among the many departments fairly.

Computer programs

Most of the ideas covered in this chapter can be put into practice using an electronic spreadsheet tool. The computer simply needs the formula for each notion once, and it will then automatically calculate the outcomes for each scenario. All three of the approaches described in this chapter can be used to a spreadsheet to do the computations required to divide costs into their fixed and variable components. One of the issues in allocating indirect costs to each department or division responsible for generating sales is choosing the proper foundation to use. If the allocation of indirect costs is done on the erroneous premise, decisions may be taken that are inappropriate. If the appropriate allocation basis was used, it is likely that incorrect decisions wouldn't be made. Consider the following complex of restaurants, where the dining room and the snack bar are the two main sources of income. The sales revenue, direct costs for each sales area, and unassigned indirect costs for a typical

month are broken down below. The expected monthly operating income for the entire company is $12,000.

The owner estimates that he should close to stop the $30,000 loss over the course of the two-month losing period. But if he does, he'll have to use the ten months' worth of net sales to pay the fixed costs for the two months ($42,000), which will reduce his annual net income from $60,000 to $48,000 from the current $90,000. If he doesn't want his annual net income to decrease, he shouldn't close. The decision to remain open would be supported by additional factors that might need to be taken into account in this situation. For instance, the closing cost estimate needs to account for potentially sizable additional start-up and close-down expenditures. Also, would important employees return if fired? Are there enough skilled individuals available who are willing to work only seasonally? Would there be ongoing training hours (and costs) when a new season started? Would a certain group of regular guests stop coming if the motel was closed for two months? These are some of the issues that would need to be overcome before reaching a final decision to close.

CONCLUSION

Increasing sales revenue is one strategy for boosting a company's net income. Controlling expenses is another option. To do this, it is necessary to comprehend the various charges. A department head or department manager is responsible for and has control over a direct cost. An indirect cost, often known as an overhead expense, is typically not allocated to a certain department. When such expenses are allocated to the departmental revenue statement and split down by department, the resulting departmental profit or loss figure must be understood very carefully. Regardless of whether they are direct or indirect, all costs are controllable; the only factor affecting whether a cost is controllable or not is the degree of responsibility for its management. A cost that is shared by two or more departments or the entire organization is referred to as a joint expense. A shared expense could be direct (like wages) or indirect (like building maintenance). A discretionary expenditure is one that could be incurred at the discretion of a specific individual, usually the manager. A relevant expense is one that must be taken into account when making a certain choice. Costs are irrelevant if they have no bearing on the choice. Sunk costs are expenses that have already occurred and are therefore irrelevant to certain choices. When choosing to purchase a new machine today, the initial cost of an item of equipment purchased five years ago that will be traded in is a sunk cost. The income lost as a result of not taking action is known as an opportunity cost. A motel might rent out its restaurant or operate one on a profitable basis. The loss of rent revenue is an opportunity cost if it is run independently. However, if net operating income from the business were higher than any prospective rent revenue, the motel owner would gladly bear this opportunity cost.

REFERENCES:

[1] B. U. Nwachukwu *et al.*, “Management of end-stage ankle arthritis: Cost-utility analysis using direct and indirect costs,” *J. Bone Jt. Surg. - Am. Vol.*, 2015, doi: 10.2106/JBJS.N.01215.

[2] B. Amoah, K. Ohene-Asare, G. A. Bokpin, and A. Q. Q. Aboagye, “Technical efficiency: the pathway to credit union cost efficiency in Ghana,” *Manag. Financ.*, 2018, doi: 10.1108/MF-10-2017-0431.

[3] C. L. Ekegren, E. R. Edwards, R. de Steiger, and B. J. Gabbe, “Incidence, costs and predictors of non-union, delayed union and mal-union following long bone fracture,” *Int. J. Environ. Res. Public Health*, 2018, doi: 10.3390/ijerph15122845.

[4] H. Chen, M. Kacperczyk, and H. Ortiz-Molina, "Labor unions, operating flexibility, and the cost of equity," *J. Financ. Quant. Anal.*, 2011, doi: 10.1017/S0022109010000645.

[5] E. Stafyla, M. Geitona, T. Kerenidi, A. Economou, Z. Daniil, and K. I. Gourgoulianis, "The annual direct costs of stable COPD in Greece," *Int. J. COPD*, 2018, doi: 10.2147/COPD.S148051.

[6] S. F. Kurtoglu and A. Uzun, "Red Mud as an Efficient, Stable, and Cost-Free Catalyst for COx-Free Hydrogen Production from Ammonia," *Sci. Rep.*, 2016, doi: 10.1038/srep32279.

[7] R. Li, H. Broersma, C. Xu, and S. Zhang, "Cycle extension in edge-colored complete graphs," *Discrete Math.*, 2017, doi: 10.1016/j.disc.2017.01.023.

[8] S. Jendrol', J. Miškuf, and R. Soták, "Total edge irregularity strength of complete graphs and complete bipartite graphs," *Discrete Math.*, 2010, doi: 10.1016/j.disc.2009.03.006.

[9] M. Changat, D. S. Lekha, S. Mohandas, H. M. Mulder, and A. R. Subhamathi, "Axiomatic characterization of the median and antimedian function on a complete graph minus a matching," *Discret. Appl. Math.*, 2017, doi: 10.1016/j.dam.2016.04.013.

[10] P. Ewels, M. Magnusson, S. Lundin, and M. Käller, "MultiQC: Summarize analysis results for multiple tools and samples in a single report," *Bioinformatics*, 2016, doi: 10.1093/bioinformatics/btw354.

[11] G. Palareti *et al.*, "Comparison between different D-Dimer cutoff values to assess the individual risk of recurrent venous thromboembolism: Analysis of results obtained in the DULCIS study," *Int. J. Lab. Hematol.*, 2016, doi: 10.1111/ijlh.12426.

CHAPTER 9
AN ANALYSIS OF THE OPERATIONS BUDGETING

Dr. Somprabh Dubey, Associate Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- somprabh.dubey@shobhituniversity.ac.in

Dr. (Prof.) Ashok Kumar, Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id- dr.ashok@shobhituniversity.ac.in

ABSTRACT:
Typically described in monetary terms, a budget is a business strategy. A management must consider the future in order to make informed judgments. The creation of forecasts or budgets is one technique to plan ahead. A forecast may be quite straightforward. The budget for a restaurant owner/operator might only consist of planning for the future, anticipating the number of diners, and buying food and supplies to meet this need. In contrast, a major organization's budget may call for daily budgeting as well as estimates for up to five years (such as for the acquisition of furniture and equipment). Budgets that are not defined in dollars may instead be expressed in terms of the number of customers to be served, the number of rooms to be occupied, the number of personnel needed, or some other unit. The following three main goals of budgeting can be summed up:

KEYWORDS:

Budget, Costs, Department, Revenue, Sales

INTRODUCTION

Budgets can typically be divided into two categories: long-term and short-term. A long-term budget would be one to five years in the future. These budgets, which are frequently referred to as strategic budgets, deal with the organization's big plans (growth, development of a new market, funding, and other relevant issues). The policies governing the day-to-day operations of the business, and consequently the short-term budgets, develop from such long-term goals. Budgets for the short term could be for one day, one week, one quarter, or one year. These budgets require middle management to use its resources to accomplish the long-term plans' goals.

Flexible Versus Fixed Budgets

A fixed budget is predicated on a specific volume of activities or money from sales. Estimates of expenses are based on this volume of sales. There is no attempt to adjust the budget's expenses to account for higher or lower levels of sales revenue. The drawback of such a budget is that there is no strategy for this possibility and spending can only be changed in the short term by guesswork if the actual sales level differs from the anticipated sales level. Assume, for instance, that the budget for the hotel's rooms department is based on a year-round average occupancy rate of 70%. Based on this amount of occupancy, operating expenses (such as payroll, supplies, linen, and laundry) are calculated. It might be challenging for the manager of the rooms department to determine what the new payroll level should be in the short term if real occupancy reduced to 60 percent due to unanticipated economic circumstances. All other costs are the same in this regard.

Possible Budgets

On the basis of various levels of activity, a flexible (or variable) budget is created. For the rooms department in our example, sales income may be projected for occupancy levels of 60%, 70%, and 80% (or whichever many levels are appropriate). The level at which the operation will fit best can be decided as the real year goes on, and the proper spending levels for this level will already have been established. In other words, it's simpler to adapt. By

utilizing the rooms department as an example, it may be questioned whether there are indeed three set budgets at three distinct occupancy levels, or more if more occupancy levels are used. Although the question is legitimate, the practical outcome is that management is ready to adapt to the actual situation as necessary. With flexible budgeting, fixed expenses stay the same while variable expenses alter in response to sales volume. For instance, a restaurant's budget might be created based on various levels of sales revenue. The calculation of expenses depends on the various levels of revenue. Both a percentage of sales income and a dollar amount per unit sold can be used to describe variable costs. However, depending on the real quantity of sales revenue, advertising expenses might be fixed and remain the same. In other words, a specific, fixed amount is planned for this expense regardless of the volume of sales. In a fully flexible budget, variable costs would be shown as a percentage of sales income and fixed costs as a fixed cash number[1], [2].

Budgets For Capital

A capital budget is a strategy for buying new fixed assets or replacing old ones. A capital budget is a replacement timetable for hotel room furnishings that spans five years. The continuing predictions of revenue and spending items that have an impact on the income statement are the subject of an operating budget. An operating budget can include a prediction of sales income for a restaurant for one month. In a hotel with multiple departments, an operating budget is a forecast of the entire annual payroll expense[3], [4].

Company Budgets

Only a restaurant complex (with, for example, dining room, bar, and event spaces) where departmental income statements are created, or a hotel with numerous departments, would be concerned with a department budget. In this way, a department budget would be for a particular department and would display expected revenue minus running costs for that department. Alternatively, if a department doesn't produce any money directly (like the hotel's maintenance department), a department budget could be created that outlines expected costs in great detail for a certain operating period. Such department budgets are typically created yearly and broken down each month.

Pprimary budgets

The most comprehensive budget is a master budget. A master budget is often created for the following year and contains a balance sheet for that year as well as all departmental income and spending statements.The proprietor would create the budget for a small, independently owned restaurant or lodging. The assistance of an accountant may be beneficial if the budget were formal or written down. The budget might not have any written supporting data if it were an informal budget. The owner may just have an idea of where he or she wants to go and work toward that goal on a daily basis, or as closely as possible. Budgets serve as a guide for future planning and budgeting. The creation of the budget may involve numerous people in a larger organization. Budgets are created in these companies from the ground up. The department leaders or supervisors must be involved, at the very least. They ought to be involved in creating their own departmental budgets if their subsequent performance is judged according to the plans outlined in the budget. They might then speak with staff members inside their own departments about the budget numbers. A budget committee would be in charge above the department heads. Members of this committee might be department managers. For the budget to be coordinated effectively and produce a final budget package, such a committee is necessary. For instance, a hotel's room occupancy greatly influences the breakfast earnings for the culinary department. The budget committee must make sure that the morning food sales aren't calculated using an occupancy that's different from the number provided by the rooms department. The accounting department is responsible for the official budget formulation. The role of the comptroller of the organization, who most often serves on

the budget committee, is to produce the final budget data for submission to the general manager for approval. The worst method of budget development is to force budgets on the operating and other departments through the accounting department. Although coordination may exist, there won't be much employee cooperation where the activity is taking place[5], [6].

DISCUSSION

Top-level management typically develops long-range budgets for up to five years each year. Department heads may or may not be involved. Such budgets are updated annually for the upcoming period (up to five years). The budget committee would be involved for coordination. The majority of the time, annual short-term budgets are created using monthly predictions. Budgets for the remaining months of the year should be updated each month to account for any alterations in circumstances. Such adjustments ought to engage department managers, and the budget committee ought to be involved for general coordination. Internally managed weekly or daily short-range budgets are often handled by the department managers or other supervisory staff. For instance, the housekeeping supervisor might schedule housekeepers daily depending on expected room occupancy which has an impact on the payroll budget.

What Benefits Does Budgeting Offer

An organization that adopts a budget planning process gains a variety of benefits: Since department heads and sometimes other staff members within the department are involved, it encourages their engagement and thereby enhances communication and motivation. As a result, these operational staff members can more easily relate to the organization's goals or ambitions. Everyone involved is required to think about alternate strategies while creating the budget. For instance, would better results be obtained if the advertising budget was used to focus more on one department rather than the corporation as a whole? At the departmental level, a restaurant management could weigh the potential implications of slower service, fewer seat turnover, and possibly lower overall sales revenue against increasing the number of patrons to be served per meal period per server (improved productivity per server). In advance, budgets specify the sales income targets to be met as well as the associated expenses. The results of each budget period can be compared to the actual results. In other words, a baseline for comparison is established in advance, making it possible to evaluate all parties participating in the process later. Flexible budgets allow for modifications to be made to any level of activity between the high and low sales levels, and each department within the business is ready for these adjustments[7]–[9].

Budgeting for operations

The process of budgeting requires everyone concerned to think ahead. For instance, is it necessary to adjust the selling pricing of our menu items to account for foreseeable future increases in food, labour, and other running costs? This is not to say, however, that the past is unimportant or that it should not be taken into account while creating a budget. Those concerned in budgeting must take into account both internal and external considerations. In a restaurant, internal elements include things like seating capacity, seat turnover, and menu prices. In a hotel, internal factors include things like rooms available, rooms occupied, and room rates. The competition, the local economic climate in which the business operates, and the trend in the inflation rate are examples of external influences. What are the budgeting disadvantagesNaturally, budgeting has both benefits and drawbacks. For example, creating a budget can take a lot of time and money. Budget preparation often takes more time and costs more money the bigger the firm. Budgets are dependent on unknown (as well as certain known) variables that can significantly affect what actually occurs. This may not be considered a drawback because it compels everyone concerned to plan ahead and be ready for

anything. Confidential information may need to be incorporated into the budget during budget development. If sensitive material is included, though, it might not stay that way. The "spending to the budget" strategy may not always work. When a cost budget is underestimated, there may be a temptation to spend any remaining funds as the budget period's end draws near. This inclination may be brought on by a desire to show that the initial budget prediction was accurate and to defend the budget against cuts for the next period.

Establishing attainable objectives or goals

The ideal situation must be balanced with reality while creating goals. In other words, these elements must be taken into account if any circumstances restrict sales income to a specific upper limit. A hotel's inability to have more than 100% of its rooms occupied serves as an obvious illustration. In the near term, if a hotel is fully booked every night, room prices would need to go higher in order for sales revenue to rise. However, using 100% as the projected occupancy on an annual basis would be foolish given that very few hotels attain 100% occupancy year-round. Similar restrictions apply to a restaurant's seating capacity. Only raising menu prices or seat turnover (seat occupancy) will enhance sales revenue when it is operating at capacity, and only in the short term. But once more, there is a limit to raising meal prices because customer opposition and competitive pressure frequently impose higher pricing ranges. However, if consumers are given hurried service in an effort to maximize seat turnover, the ultimate consequence could be falling revenues.

The absence of trained workers or qualified supervision employees may be other limiting considerations. It would be ideal to increase productivity by serving more clients per server; this would lower our payroll cost per customer. However, well-trained staff—or individuals who could be trainedare frequently hard to find. In a similar vein, supervisory staff members who may mentor others are not always accessible. Plans for expansion could be restricted by a capital shortage. It would be pointless to incorporate expansion in our long-term budget if money is not available to add guest rooms or enlarge dining facilities. Budgets may also be constrained by management's strategy for the industry in which the firm will compete. For instance, the department head of a coffee shop might suggest that serving bus tour groups would boost sales. The general manager, on the other hand, might think that accommodating such sizable transient groups is too disruptive to the typical clientele. The region of rising expenses could be another limiting issue.

A business may discover that it is unable to increase pricing for its customers in order to cover rising costs. Finally, when budgeting, it is important to continually consider client demand and competition. There is typically a finite amount of business in the short term. The demand for hotels in the neighborhood does not necessarily rise when a hotel adds more rooms. Demand and supply require some time to match up, so until then, new hotels or a room block added to an existing hotel will often run at a lower occupancy than usual. For its portion of the market, a new restaurant or amenities added to an existing restaurant must compete[10], [11].

Planning to reach objectives or goals

Plans must be made to accomplish goals once they have been set. A restaurant management needs to staff each department with workers who are qualified to handle the expected volume of business. A chef or shopper must buy food in the quantity needed to satisfy expected demand and of a caliber that satisfies the standards demanded by the patrons. The food business must be able to meet its budgeted food cost as nearly as feasible through purchases. In the long run, senior management may need to prepare for financing and possibly look for the best conditions for payback in order to reach the budgeted additional profit needed for the expansion.

Analysingthe differences between planted and actual results

This is most likely the crucial and beneficial phase of the budget cycle. Our actual dining room revenue for the month of April was $60,000 instead of the budgeted $63,000, which allows one to raise doubts. Was there a drop in business that could account for the $3,000 difference? If so, is there a reason (e.g., have prices gone up and people are staying away, or has a rival restaurant opened up nearby)? Is there a $3,000 difference because fewer seats are being used (is service sluggish)? Are consumers spending less (a lower average check or less consumer spending as a result of consumer restraint)? Yesterday, the housekeeping manager hired two more housekeepers than were necessary to take care of the actual number of occupied rooms. Is there a breakdown in communication between the front desk and the housekeeping manager? Did the front desk neglect to inform the housekeeping supervisor of cancellations of reservations, or did the housekeeping supervisor miscalculate the necessary number of housekeepers? Although the annual revenue for the cocktail lounge section was higher than the year before, it was still below the amount planned. Has the rise in sales income met the projected level? Or did expenses grow over the course of the year at a faster rate than revenue? If so, what fees? Have our products changed (has the sales mix changed)? In other words, in relation to total sales revenue, are we now offering less lucrative goods. These are but a few illustrations of the kinds of queries that might be posed and to which solutions ought to be sought when examining discrepancies between budgeted and actual performance. The discussion of such differences will be expanded upon in the chapter's section on variance analysis. It should be emphasized that the variations themselves do not present potential issues with solutions. They merely mention potential issues.

The budget process' third step highlights discrepancies and their potential reasons. The next stage of the budget cycle entails determining whether corrective action is necessary and then taking the appropriate action. A scenario (such as the weather, a sudden shift in economic conditions, or a fire in part of the premises) that no one could see coming or predict could be the reason for a discrepancy. The budgeted forecast for guest room occupancy may not have been sufficiently reduced to account for the construction of a new hotel nearby, or staff may not have been as productive in terms of serving customers or cleaning rooms as they should have been in accordance with predetermined standards. On the other hand, a difference may have resulted from these factors. Whatever the cause, it needs to be fixed as soon as possible so that scheduled activities may be predicted more accurately in future budgets. Budget discrepancies should not be used as justification for not creating a budget. Without a budget, it wouldn't even be obvious that the business isn't operating as efficiently as it could and ought to. The cause should also be established if the deviation was favorable (for example, guest room occupancy was higher than planned), as that knowledge could aid in improving the accuracy of future budgets. After you've taken corrective action, you should evaluate how well it worked to fix the issue. If the corrective action did not resolve the issue, the circumstance must be reviewed, and an alternative approach must be taken to address the issue.

Administrative Budgets

The departmental income statement serves as the foundation for any comprehensive budgeting process. The outcomes of these operating divisions determine how the budgeting process will go moving forward. For instance, it is impossible to create a budgeted balance sheet without budgeted income statements, to create a cash budget without having knowledge of departmental revenue and expenses, or to create long-term budgets for the purchase of new furniture and equipment, dividend payments, or future financing arrangements without first determining how much money will be made from the operation. The most challenging to create are the budgeted income statements for each department and the total company. The creation of the cash budget and budgeted balance sheet, however, is rather simple once this

has been done. Since income statement budgets are the main topic of daily management at a hotel or restaurant, this chapter will only cover them. Briefly stated, the process is as follows:

Subtracting the estimated direct operating costs for each department

Since the majority of departmental direct operating costs are directly tied to sales revenue levels, the majority of the budget has been completed once sales revenue has been determined. In general, historical accounting records will demonstrate that each direct expense varies as a percentage of sales revenue within strict bounds. Thus, the budgeted sales revenue can be used to determine the expense dollar amount by applying the proper expense to sales revenue ratio. For instance, if a hotel's rooms department expects sales revenue for a given month to be $100,000 and laundry costs range from 4.5 percent to 5.5 percent of sales revenue, laundry costs for that same month would be 5 percent of $100,000, or $5,000. Similar reasoning applies to all other direct expenses, for which cost to income percentages are clear. Using historical cost percentages is an easy way to budget, but it presupposes that the costs were reasonable. This might not be true, though.

However, the issue might not always be as straightforward. Labor is a good illustration of this, as a large portion of the cost is fixed and unaffected by changes in sales revenue. The salary of the host or hostess, the cashier, and the restaurant manager are often fixed. Such workers are paid a set pay regardless of business volume. Only the short-term pay for bus drivers and waitresses varies. In these situations, it is necessary to create a month-by-month staffing calendar that details the number of variable staff from each category needed to achieve the budgeted sales income level, calculates the overall variable cost, and then adds the total variable cost to the fixed cost element to determine the total labor cost for that month. Even though this necessitates some intricate calculations, without them the budget may not be as precise as it needs to be for efficient budgetary monitoring. It is possible to create staffing plans for each department based on the level of sales. These schedules would be determined by historical performance data and the institution's performance standards. The correct number of labor-hours or employees needed for each type of job can thus be read straight from the staffing schedule when sales levels are projected. The needed staffing hours or employee count can then be multiplied by the appropriate pay rates for each job category[12]–[14].

A new operation's budgeting

Because they lack internal historical data to utilize as a framework, new hotels and restaurants will have a harder time budgeting in their early years. If a feasibility study had been created before opening, the budget should be built off of it. Forecasts must instead be based on a combination of known facts and market or industry averages for the type and scale of operation. The following equation, for instance, might be used by a restaurant to determine its revenue for breakfast, lunch, supper, and even coffee breaks. Because average check amounts and seat turnover rates might vary greatly from meal period to meal period, it is best to split meal periods. Seat availability and available days each month are known. You can find published data or observe at competing restaurants to find out the seat turnover rates and average check amounts. Once more, budgeting for direct operational costs can be done using percentages specific to the hotel's industry. It should be noted that in order to determine the average room rate to be utilized in the equation,

One must take into account the sales mix of the rooms, which includes the prices for various hotel kinds, market segments, and special weekend and off-season rates. For an extensive discussion of room-rate pricing. Calculating beverage figures can be a little challenging. There are various industry standards, such as the rule that alcoholic beverage sales at coffee shops that serve beer and wine should account for roughly 5 to 15% of total sales. Beer, wine, and liquor sales at a restaurant often account for 25 to 30 percent of total sales. For instance, a

restaurant with $100,000 in food sales per month should anticipate between $25,000 and $30,000 in total liquor sales. However, until the operation has its own accounting records, they may be the only figures that can be used. They are merely estimates. For beverage figures in a cocktail bar, there is no easy formula to use. Average check numbers can be deceptive. On the one hand, a single patron could take a seat and spend $4 on five drinks; their average expenditure is $20. The average spending would be $4 if five separate customers shared a seat and each made a $4 purchase during that time. As a result, it could be challenging to employ the equation for determining food income in a bar environment. Use of the current industry average revenue per seat per year at a cocktail bar is one alternative.

These unallocated expenses are typically kept separate and not charged to the operating departments. Other fixed expenses associated with an operation could include rent, interest, insurance, and property taxes, for example, and wouldn't be billed to the operational departments. However, these expenses are typically imposed at a level that is in part external to the operation.

They won't be covered in this discussion of ZBB because they aren't under daily management, let alone monthly or annual control. These four undelivered expenditures are typically scheduled for and, theoretically, under the control of incremental budgeting. With incremental budgeting, it is assumed that the expense level from the previous period was accurate. To account for the current situation, one raises or lowers the sum from the previous period in the budget for the new period. The only adjustments to the planned amounts that management tracks are those.

It doesn't matter whether the overall expenditure from the previous time was appropriate. The expense is considered to have been crucial to the company's goals. It is also generally assumed that, even in the absence of management direction, the department heads in charge of managing the undistributed expenses are engaging in efficient cost control, maintaining budgets, and avoiding overspending. Many of the costs included in this category undoubtedly fall within these headings. The opposite, however, probably holds true in many organizations that employ incremental budgeting. Managers in the hotel sector can use ZBB to handle these unforeseen costs. When effectively applied, ZBB can reduce costs from earlier levels in addition to controlling expenditures. The fundamental justification for this is that it treats demands for budget increases, which also need to be justified, on the same footing as previously unjustifiable expenses.

Discipline Units

The decision unit is one of the crucial components of a ZBB implementation that is successful. The size of each facility will affect how many decision units are needed. For instance, a small business with just one marketing person would likely have just one decision unit for marketing expenditures. A larger company could have numerous marketing decision-making units. Sales, advertising, merchandising, public relations, and research are among possible labels for these units. Large organizations might further subdivide these units into decision units that handle various tasks. For instance, the decision units for radio and television and print advertising could be separated. Each decision unit is vying for the same dollars in scarce resources. It is simpler for the general manager to analyze each decision unit and rank it against all other decision units if each decision unit only has one or two employees, associated costs, and a roughly equal total cost. After decision units have been established, each department head must then prepare an analysis of each distinct unit under his or her purview. Every year, before the start of the new budget cycle, this examination is performed. To ensure that each department head presents the data in a consistent manner, a well-designed form should be used. The department head will note the following for each decision unit:

CONCLUSION

The general manager starts the evaluation process after the decision unit activities have been recorded. The general manager must rank all operations in terms of relevance to the company in order to decide how much money will be spent and in which areas or departments. The activities would be accepted up to the entire planned budget for all activities after this order was established. The biggest challenge with ranking is figuring out the importance of each of the operation's operations. This might not be too challenging in a small organization, especially with the help of a committee, if necessary. Each department head may be requested to rank all tasks that fall under their purview in larger enterprises. The general manager can then be reached by repeating this process through each level of middle management. Another strategy may be to automatically approve the top 50 or 60 percent of all operations within each department by the general manager. Middle management may then rate the following 10 or 20 percent.

REFERENCES:

[1] G. Kockaya, E. Tuna, and K. Atikeler, "PCV20 Possible Budget Impact of Internal Reference Pricing for Statins in Turkey," *Value Heal.*, 2012, doi: 10.1016/j.jval.2012.08.963.

[2] J. Kim and B. Kim, "An asymmetric lottery Blotto game with a possible budget surplus and incomplete information," *Econ. Lett.*, 2017, doi: 10.1016/j.econlet.2016.12.029.

[3] K. K. Ogujiuba and K. Ehigiamusoe, "Capital budget implementation in Nigeria: Evidence from the 2012 capital budget," *Contemp. Econ.*, 2014, doi: 10.5709/ce.1897-9254.147.

[4] J. M. Poterba, "Capital budgets, borrowing rules, and state capital spending," *J. Public Econ.*, 1995, doi: 10.1016/0047-2727(94)01431-M.

[5] A. Goerzen, "Small Firm Boundary-spanning via Bridging Ties: Achieving International Connectivity via Cross-border Inter-cluster Alliances," *J. Int. Manag.*, 2018, doi: 10.1016/j.intman.2017.09.006.

[6] B. H. Reich, A. Gemino, and C. Sauer, "How knowledge management impacts performance in projects: An empirical study," *Int. J. Proj. Manag.*, 2014, doi: 10.1016/j.ijproman.2013.09.004.

[7] K. L. Wolf, "Metro nature: Its functions, benefits, and values," in *Growing Greener Cities: Urban Sustainability in The Twenty-First Century*, 2008.

[8] V. Nakrošis, "Reforming Performance Management in Lithuania: Towards Results-based Government," *Mix. Matches Mistakes new public Manag. Russ. Former Sov. Republics*, 2008.

[9] L. Datta, "Evaluation Theory, Models, and Applications, book review," *Am. J. Eval.*, 2007.

[10] X. Qin, C. Zhi, and K. Vachal, "Calibration of Highway Safety Manual Predictive Methods for Rural Local Roads," *Transp. Res. Board 93rd Annu. Meet.*, 2014.

[11] X. Qin, M. R. R. Shaon, and Z. Chen, "Developing analytical procedures for calibrating the Highway Safety Manual predictive methods," *Transp. Res. Rec.*, 2016, doi: 10.3141/2583-12.

[12] M. A. Szelezniak, G. W. Deptuch, F. Guilloux, S. Heini, and A. Himmi, "Current mode monolithic active pixel sensor with correlated double sampling for charged particle detection," *IEEE Sens. J.*, 2007, doi: 10.1109/JSEN.2006.886897.

[13] S. Ma, M. Odgaard, and E. Skou, "Carbon dioxide permeability of proton exchange membranes for fuel cells," in *Solid State Ionics*, 2005. doi: 10.1016/j.ssi.2005.09.024.

[14] K. Zaretzky and P. Flatau, "The cost effectiveness of Australian tenancy support programs for formerly homeless people," *AHURI Final Rep.*, 2015.

CHAPTER 10
STATEMENT OF CASH FLOWS AND WORKING CAPITAL ANALYSIS

Harsh Panwar, Associate Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- harsh.panwar@shobhituniversity.ac.in

Dr. Neha Vashishtha, Associate Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id-nehavashistha@shobhituniversity.ac.in

ABSTRACT:
The accrual foundation of accounting, which produces the income statement, balance sheet, statement of ownership equity, and a statement of cash flows, has traditionally been utilized by profit-oriented firms. Accounting period-specific measurements of operating performance, financial situation, ownership status, and a cash flow analysis are all based on financial statements. The income statement and balance sheet in accrual financial statements show profitability and solvency, respectively. These statements do, however, take into account non-cash sales income and non-cash expenses. Therefore, the fundamental balance sheet and income statement alone are unable to provide answers to queries about the cash inflows and outflows that have taken place over the course of an operational period. The statement of cash flows (SCF) is used primarily to track and report the effects of cash inflows and outflows for three distinct company activities. Operation, investment, and financing are the three main areas of activity that make up a business' normal activities. Working capital analysis shares the notion of identifying cash inflows and outflows since managing current assets and current liabilities on a daily basis is a crucial component of managing any corporate operation.

KEYWORDS:

Account, Capital, Income, Outflow, SCF.

INTRODUCTION

A foundation for forecasting future cash flows is provided by the statement of cash flows (SCF). It is crucial to be able to predict the amount of cash that will be needed for capital asset purchases, noncurrent debt repayment, and other noncurrent balance sheet items. Owners and creditors believe that if a company has produced good cash flows in the past, it will probably continue to do so in the future. The SCF gives this information on cash availability since it documents the company's capacity to create cash. An SCF can also be used as a benchmark for assessing management's success in terms of cash management.

Compare Net Cash Flows

A hospitality business may generate positive net income while simultaneously producing negative cash flow, or it may generate positive cash flow while recording a net loss. An operational period's net income or net loss is adjusted and compared to the net cash flow from operations in the operating portion of a statement of cash flows. When net cash flow, whether positive or negative, is equal to the change in the cash account and the amount of actual cash on hand at the end of the period is verified, the change in the cash account is identified. Cash equivalents also include cash on hand, cash in the bank, and cash. Marketable securities and short-term investments that can be instantly converted to cash, when necessary, often make up cash equivalents. Marketable securities, short-term investments, and cash equivalents will all be referred to in this discussion as current asset accounts rather than actual cash accounts. The direct technique and the indirect approach are the two ways to calculate net cash flows from activities. The income statement is produced using a cash basis by the direct method using cash receipts from activities and cash disbursements.

Starting with net income, the indirect method modifies it to account for changes to current asset and current liability accounts. The indirect method will only be covered in full in this chapter because it is typically the simpler and more popular approach. Regardless of the method used to calculate cash flows from activities, the investment and financing parts are calculated in the same way. To adopt efficient cash management rules and procedures, managers must be aware of the processes and their necessity. The SCF can respond to some of the following significant inquiries: How much has operating activity changed the cash position since the past accounting period, for better or worse? Did routine business operations account for the majority of cash inflows? How much was spent on long-term physical assets like new furniture, equipment, or other capital assets? How much money was made when furniture, fixtures, equipment, or other durable physical assets were sold? How much money was made when long-term assets were sold?

How much money was raised through the creation of long-term liabilities? How much cash was devoted to lowering or eliminating long-term obligations? How much money was made through selling owning equity? How much was distributed in dividends? How much money did the owner or the partners take out? analysis of net cash flows 413 The SCF enables the distinction between cash inflows and outflows from operating, investing, and financing operations. The three sections' main goal is to show all cash flows that took place within a certain period of operations. By examining the balance sheet accounts that have changed over an operating period, the reported accrual net income (or loss) is converted from an accrual basis to a cash one in order to create a SCF. A positive or negative net cash flow, which is equivalent to the overall change in the cash account between the beginning and end of the year's balance sheets, is the SCF's ultimate output. Each active current asset and current liability account in the operating sector, with the exception of cash, is assessed to determine the change in the account for the whole reporting period. The type of account being examined dictates how the change is considered, and the change is classified as either an increase or a loss. Converting accrual net income (or net loss) to a cash basis involves adding a positive cash flow and subtracting a negative cash flow.

Value of cash flows statement

Because it enables a determination of the operation's liquidity and offers a foundation for an examination of cash management, the SCF is valuable to management. Additionally, it supports management in making decisions about its finance and investing needs as well as budgeting for funds. The ability of the operation to meet its payment obligations is also important to creditors such as suppliers of goods and services required by the business. Generally speaking, these creditors prefer it when cash is earned through operating activities rather than investing or financing activities to satisfy their commitments. An SCF can be used by both short-term and long-term lenders to assess a company's ability to continue making payments on its debt. The SCF can be used by shareholders to determine a company's ability to maintain or possibly enhance dividend payments. The SCF is a historical document that provides a comparative analysis of what has occurred and is crucial for managers, creditors, lenders, and stockholders to evaluate and project the future[1], [2].

Analysis Of Segmenting Cash Flow

Current assets and current liabilities are the two main operating accounts that are evaluated and identified for changes in cash flow. Additionally, specific adjustments that are by definition noncash. Cash flows and working capital analysis changes are taken into account. During actual operations, the majority of transactions that effect cash flows take place in the key operating accounts. The sections on investing and financing assess noncurrent account operations that have an impact on cash flows but are often not regarded as ordinary everyday

operating transactions. Operating, investing, and financing are the three distinct types of activities that make up cash flows.

This segmentation enables the addition of positive cash flow changes and the subtraction of negative cash flow changes to alter accrual net income or loss. The order of each activity's appearance in the SCF is followed when discussing it. The main goal of a business is to generate sales revenue inflows through the exchange of goods, merchandise, and services, which results in sales revenue inflows for cash or on credit. The current asset accounts produced by revenue inflows on credit include credit card and accounts receivable. In addition to cash, additional current assets are produced and used to support operations that generate revenue from sales, including supplies, resaleable inventory, and pre-paid expenses. Sales revenue production results in expense outflows, which are recorded when they are paid for in cash or incurred on credit. The main current operational liability account is accounts payable. When settled, current liabilities indicate cash outflows.

The payment of cost-of-sales items, personnel costs, insurance costs, facility support costs, interest, taxes, and other necessary recurring costs of operations all result in ongoing expense outflows. Adjustments are also made to account for non-cash costs like depreciation and the reporting of gains or losses from the sale or disposal of long-term assets. Transactions involving noncurrent accounts are a part of investing activity. A long-term asset's sale results in a cash inflow; its purchase results in a cash outflow. A long-term noncash equivalent investment acquisition results in a cash outflow; a non-cash equivalent investment sells results in a cash inflow.Transactions that affect ownership equity as well as the repayment or borrowing of long-term debt are included in financing activities. The investment or withdrawal of equity capital and operating profits (or losses) often have an impact on a proprietorship's or partnership's financing activities.

The issuing of capital stock, a cash inflow, and the recovery by the corporation's own stock (treasury stock), a cash outflow, have an impact on financing activities in a corporation. Reissuing Treasury Stock generates an influx of cash. Cash flows are produced when long-term debt is assumed and when long-term debt (principal) is repaid. A cash outflow occurs when cash dividends are paid to stockholders. A whole operating period's worth of revenue inflows, expense outflows, and the resulting net gain or net loss from operations are detailed in the accrual income statement.

However, management is unable to easily understand why or how cash changes occurred from the income statement. Although the cash account may generally be impacted by the amount of net income or net loss, the reported net income or net loss will typically not equal the increase. analysis of segmenting cash flow drops in the cash account of 415 or more. Accrual accounting is typically used to determine the reported net income or loss at the end of an accounting period. The accrual approach recognizes noncash costs, gains, or losses associated with the sale of long-term assets as well as noncash revenue transactions. Depreciation and amortization costs as well as losses on the sale of long-lived assets are typical noncash accrual factors subtracted in determining net income (or loss). These are noncash loss and expense items that do not require cash outflows and are added back as adjustments in the SCF's section on operating operations. Gains from the sale of long-lasting assets are noncash earnings that don't involve cash inflows. Since these non-cash gains are included in net income and have inflated net income from ongoing operations, they are subtracted as adjustments in the operating activities section.

DISCUSSION

We now turn our attention to the comparative balance sheets, where we will examine the property and equipment (fixed assets) section to separate the acquisition and disposal of long-lived assets from the acquisition or disposal of noncurrent investments. Neither the building

nor the land accounts have changed. The equipment part of the fixed asset table indicates an increase in equipment of $17,000 in year 0005, which is interpreted as a negative outflow and subtracted. The equipment was sold for $3,000, according to an analysis of this account, which is viewed as a positive inflow and added back to cash. Additionally, throughout the time period, $20,000 in new equipment was bought; this expenditure is considered a negative outflow and is removed. The only other item in the fixed asset part that was altered was cumulative depreciation, which was reduced by $144,200 because it had already been applied to the operating operations section's depreciation expense (noncash) adjustment. The other assets column reveals a $100,000 rise in the investment account, which is considered a negative outflow and subtracted. A review of this account during that time reveals, however, that an investment was sold for $25,000, which is viewed as a positive inflow and added. Additionally, a new investment worth $125,000 was bought throughout the period and is being deducted as a negative outflow.

Revenues From Financial Activities, Net

We examine the comparative balance sheets and the statement of retained earnings to establish cash flow adjustments from financing operations. Long-term liabilities and stockholders' equity are the current topics of discussion. Identify any long-term liabilities accounts that have changed throughout the period, either positively (a positive inflow) or negatively (a negative outflow). Find out whether any stock equity has been purchased, sold, or repurchased (treasury stock), or if any cash dividends have been paid, a negative outflow. The mortgage payable (on a building) account has been decreased by $5,900 in year 0005, according to the long-term obligation section. However, $14,300 in cash was actually used. This sum is calculated using the existing mortgage due for the year 0004. The operation agrees to pay the present mortgage outstanding on the balance sheet during the following year or in year 0005 by doing so. So, in order to assess if we took on any new long-term debt throughout the year, we need to conduct some additional analyses. We can monitor events if we utilize a T-account[3].

Compared to the current and acid test ratios, which are computed at a single point in time on the balance sheet date, this ratio has advantages. Ratios will be affected if the quantities utilized in the calculations on the balance sheet date are significantly greater or lower than usual. Since the cash flow is for a year and the average current liabilities are taken from two subsequent balance sheets, the cash flow from operations to current liabilities ratio solves this issue. Everybody who reads financial statements prefers to see this ratio greater than lower. It is recommended that a ratio of at least 200 percent be preferred; the more the ratio deviates from that minimum number, the better the operation's liquidity will be. The suggested minimum is far greater than our result of 742 percent. The conventional current and acid test ratios should not be abandoned because of the usage of this ratio. They are still valuable, and many lenders demand that these ratios be maintained at a certain minimal level.

Additionally, the cash flow from operations to average total liabilities ratio solves the issue that the total assets to total liabilities ratio does not account for the differing liquidities of the various assets employed in the equation. The operation's capacity to repay its various categories of debt is more accurately reflected by the ratio of total assets to total liabilities. A minimum acceptable ratio is said to be 20%, and the greater this ratio, the better the operation's ability to pay off its debts with cash. The suggested minimum is substantially higher than our finding of 3.8 percent. This low percentage would suggest that the business is heavily indebted, and lenders could be concerned about the security of their loans as a result.

Analysis Of Working Capital Changes

Additional data for efficient cash management and budgeting is provided by the SCF. The SCF and working capital analysis are closely intertwined, and the latter offers a different

angle on the data to enable efficient cash management. Working capital is the difference between current assets and current liabilities, and it represents the amount of current assets above current liabilities that are accessible for use in revenue-generating activities. The value of working capital (CA CL) is equal to the total current asset minus the total current liabilities. Here is a list of these terms' definitions: Cash, marketable securities, notes receivable, credit card receivables, accounts receivable, inventories (for resale), supplies, and pre-paid expenses are the different types of current assets. The resources that will be used to generate sales income during the upcoming operating term are known as current assets. Accounts payable, accumulated expenses (such as wages and salary due, interest due, and taxes due), and notes payable make up current liabilities. operational expenses that were incurred on credit and will be repaid during the following operational period are represented by current liabilities. In many ways, the creation of a SCF and the creation of a statement of changes in working capital are comparable. However, the working capital analysis differs from the cash flow analysis in a number of ways and serves various functions. For the following reasons, working capital analysis assesses changes to working capital over an operational period[4]–[6].

Sources of working capital: INFLOWS

The main influxes or sources that will boost working capital are as follows. operating revenue. In general, accrued income is calculated as sales revenue less all costs (including income tax) incurred to generate the sales revenue intake. Sales revenue is produced through cash transactions or credit-based receivables that eventually convert to cash. Expenses are paid either right away in cash or on credit using payables. There will be a final payment of the payables, accounts payable, and accrued payables. The organization's working capital and cash accounts should rise as a result of net income. cumulative net income. After deducting non-cash expenses, this is calculated. These non-cash expenses depreciate long-term assets and/or accrue amortization costs in order to change their book or carrying value. Net income must be adjusted to include all capitalized costs in order to reflect the growth in working capital.

This follows the same process that is used in the SCF's operating activities section. Franchise fees that have already been paid for or the amortization of other intangible assets like goodwill are examples of additional expenses that are handled in the same way as depreciation and amortization charges. sale of noncurrent assets or other long-term assets. These could be a piece of real estate, a structure, furnishings, gear, or an investment. The proceeds from their sale are viewed as an inflow, which raises operating capital. With no equivalent impact on a current liability, the sale will result in an increase in a current asset, cash, or current receivable. Long-term liability growing. This is accomplished by establishing or expanding a loan, mortgage, debenture, or bond, which is an input that raises operating capital. A rise in a current asset, cash, or current receivable will result from taking on additional long-term debt, but there won't be any equivalent change in a current liability. the issuing of shares. Working capital is increased as a result of equity financing. Stock is not issued in a proprietorship or partnership (an unincorporated business), but any investment made by the owner(s) raises their equity capital accounts. A current asset, cash flow, or current receivable will increase as a result of the sale of equity or receipt of an owner's investment, while a current liability will not change in response.

Outflows: Working Capital Uses

The principal transfers or uses that will reduce working capital are as follows: operational loss. Working capital increases and decreases are both reflected in accrual net income and net loss. Operating costs have surpassed sales revenue when a loss arises, which lowers working capital. The net loss is adjusted in the same manner as net income for noncash expenses

(depreciation, franchise, goodwill, write-downs, or amortization). Any non-cash item listed on the income statement may be deducted from the net loss. buying a long-term asset or another non-current asset. This would include any investment that reduces operating capital, such as real estate, construction, furnishings, and equipment. Another outflow that reduces working capital is the price of a noncurrent asset, like the upfront payment of a long-term franchise fee. settlement of long-term debt. Working capital is depleted by any payment that lowers the principal balance due on a long-term (noncurrent) liability. exchange of shares. Treasury stock is any previously issued stock that the issuing corporation buys back; this is an outflow that reduces working capital[7], [8].

Uses of Statement

The discussion starts with a statement of changes to working capital, then moves on to a statement of changes to specific working capital accounts. Let's take a look at the following three scenarios, which include three different restaurants. Every restaurant boosted working capital by $12,000 from the $88,000 it had at the start of the operating year to the $100,000 it had at the conclusion. The same bank is willing to lend each eatery $15,000 at interest for three years. Their balance sheets provide information that is easily accessible, but without an explanation of the sources and uses of working capital input and outflow, it is difficult to determine the reasons for the increase in working capital. When complete, the statement will explicitly list each source of working capital inflow and outflow. We'll assume the banker gathered the exact same data.

The banker would grade the eatery as moderate to high risk based on this information. Although the restaurant also distributed $8,000 in cash dividends, it already has a loan that must be repaid with interest at the rate of $5,000 year. If a fresh loan were approved, it might be in doubt as to whether the restaurant could afford the $10,000 annual payments plus interest. A slight drop in net income over the coming years would reduce working capital and possibly make it more difficult for the restaurant to make debt payments and distribute dividends. If this were to happen, the risk would increase in direct proportion to the drop in net income. Therefore, the lender is at considerable risk[9]–[11].

It would be exceedingly risky for the bank to lend this eatery $15,000 in this particular scenario. It appears that a net income of $4,000 was sufficient to cover the $4,000 current debt payment but not the interest. The payment of the dividend in this circumstance is in doubt in and of itself. The restaurant won't be able to fulfil its current debt obligation or dividends if net income stays at this level. The Restaurant C example may be a bit extreme, but it does highlight how the information offered by the statement of changes to working capital can be useful in making decisions.

CONCLUSION

The SCF and a statement of changes in working capital are two of the most helpful papers to accompany financial statements. Because they both examine current assets and current liabilities, these two statements are related to one another. The SCF ascertains the alterations to the cash account throughout a predetermined operational period. Using the statement, accrual net income (or net loss) is changed to a cash basis. The conversion process identifies cash sources and uses and is frequently used to assess a business entity's liquidity and solvency (or net worth). The statement is generally divided into three distinct categories of company activity, where net cash flows are shown as increasing or decreasing. Net cash flows from operations are examined in the first section. Net income and declines in current asset operating accounts (apart from cash) are two sources of cash. Increases in current asset accounts and operating net losses are both seen as cash outflows. Depreciation and amortization are two examples of non-cash expenses that are recognized in the operational activities section by adding them back.

REFERENCES:

[1] F. Laswad and R. F. Baskerville, "An analysis of the value of cash flow statements of New Zealand pension schemes," *Br. Account. Rev.*, 2007, doi: 10.1016/j.bar.2007.08.002.

[2] Q. L. Burke and M. M. Wieland, "Value relevance of banks′ cash flows from operations," *Adv. Account.*, 2017, doi: 10.1016/j.adiac.2017.08.002.

[3] S. Basu, B. E. Landon, J. W. Williams, A. Bitton, Z. Song, and R. S. Phillips, "Behavioral Health Integration into Primary Care: a Microsimulation of Financial Implications for Practices," *J. Gen. Intern. Med.*, 2017, doi: 10.1007/s11606-017-4177-9.

[4] D. D. Ravinder, "Financial Analysis – A Study," *IOSR J. Econ. Financ.*, 2013, doi: 10.9790/5933-0231022.

[5] P. Sopini and C. Y. Trifani, "Analisis Sumber Dan Penggunaan Modal Kerja Pada Mini Market Pelangi Jambi," *Ekon. J. Econ. Bus.*, 2017, doi: 10.33087/ekonomis.v1i1.20.

[6] K. Padachi, "Trends in Working Capital Management and its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms," *Int. Rev. Bus. Res. Pap. Vo*, 2006.

[7] I. Anshari and Safri, "Pengaruh Modal Kerja dan Pendapatan Usaha Terhadap Laba Bersih Perusahaan Pada PT. Fajar Adhisurya Perkasa," *J. Manaj.*, 2016.

[8] H. Tranchart *et al.*, "Bleeding control during laparoscopic liver resection: A review of literature," *J. Hepatobiliary. Pancreat. Sci.*, 2015, doi: 10.1002/jhbp.217.

[9] H. E. Vanauken, S. Ascigil, and S. Carraher, "Turkish SMEs' Use of Financial Statements for Decision Making," *J. Entrep. Financ.*, 2016, doi: 10.57229/2373-1761.1267.

[10] S. Akhtar and Y. Liu, "SMEs ' Use Of Financial Statements For," *J. Appl. Bus. Res.*, 2018.

[11] S. Akhtar and Y. Liu, "Smes' use of financial statements for decision making: Evidence from Pakistan," *J. Appl. Bus. Res.*, 2018, doi: 10.19030/jabr.v34i2.10138.

CHAPTER 11
ADVANTAGES OF EFFECTIVE CASH MANAGEMENT: AN OVERVIEW

Harsh Panwar, Associate Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- harsh.panwar@shobhituniversity.ac.in

Dr. Neha Vashishtha, Associate Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id-nehavashistha@shobhituniversity.ac.in

ABSTRACT:
The discussion of cash flows is carried on in this chapter. It serves as an example of how net income on an income statement does not necessarily translate into an identical amount of cash on hand. This chapter also shows how to create a cash budget using cash receipts and cash outlays. There may occasionally be a negative cash flow. There is also discussion of a number of additional nonrecurring transactions that might influence the creation of a cash budget. Working capital management and cash conservation are covered. Cash on hand and in the bank, usage of bank float, concentration banking, use of two bank accounts, accounts receivable, use of lockboxes, aging of accounts, marketable securities, inventory, and accounts payable are among the things that are covered. Finally, we discuss long-term cash flow (as opposed to short-term cash budgeting) and how to apply CVP analysis to translate required cash flow into a sales revenue figure while accounting for income tax.

KEYWORDS:

Accounts, Bank, Budget, Money, Payments.

INTRODUCTION

Simply put, managing cash ensures that obligations such as loans and invoices are fulfilled on time. A business's inflow of cash does not always match its outflow. There will occasionally be too much cash on hand and occasionally not enough. Both of these occurrences must be foreseen in order to take advantage of surpluses and prepare for shortages. The cash balance will be maintained at its ideal level in this manner. This chapter primarily examines cash inflows and outflows on a monthly basis, despite the fact that the statement of cash flows permits an examination of inflows and outflows of cash on an annual basis.

The Cash Flow Cycle

Figure1 shows the cycle of cash flow through a business. This demonstrates that managing cash involves more than just ensuring that the bank balance is accurate and that the cashiers have the appropriate quantity of money on hand. Instead, it involves managing all working capital accounts, including cash, inventories, accounts receivable, as well as managing accounts payable and loan payments. It also involves managing discretionary expenditure items, like the purchase of new capital assets and the payment of dividends if cash is available. Cash budgets can be used to manage control over these numerous cash sources and cash disbursements. The greatest way to illustrate the significance of cash planning or cash budgets is to demonstrate that a firm's net income, which is defined as the difference between sales revenue and expenses, is not always a reliable indicator of how much cash the company has on hand.

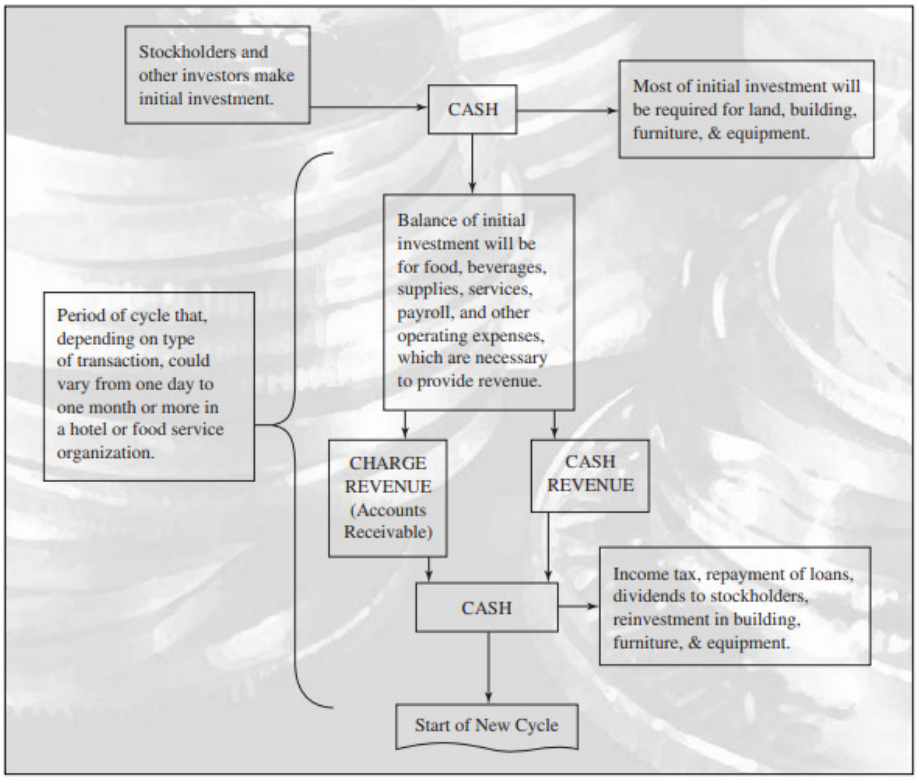

Figure 1: The financing section and other transactions that affect the cash budget.

All cash receipts and payments that are not related to the regular operations of the company are entered into the financing portion of the cash budget. Cash loans from banks or stockholders, for example, to fulfil short-term obligations, must be documented as receipts in the same way as a cash investment (due to surplus funds) must be noted on the cash budget. Such loans' repayments are noted as disbursements. These transactions are noted in the cash budget's finance section. Other conceivable transactions that need to be noted on the cash budget include a number of others. For instance, cash received during a cash budget period and cash received from any new stock issuance would both need to be recorded as receipts in the financing section if any new long-term loans were negotiated. The finance portion of the cash budget would be impacted if any fixed assets were sold for cash. However, any principal loan repayments, stock redemptions for cash, or purchases of new fixed assets would necessitate disbursements under the financing part of the cash budget. Additionally, any cash dividends paid would decrease the amount of cash on hand, necessitating a note in the finance section[1]–[3].

The cash budget, especially if it is created for a full year in advance, assists management in making discretionary decisions regarding items like major renovations, replacing fixed assets, and paying dividends, as well as decisions about where to invest surplus funds and how to borrow money to make up for shortfalls. The cash budget demonstrates to management how much money is available for these luxuries. If correctly constructed, a cash budget enables management to plan ahead and decide what to do or not do based on cash availability. Without creating a cash budget, large purchasing decisions and plans could result in unexpected cash flow problems. Because no arrangements had been established to provide loans to offset these shortages, it may be difficult to do so rapidly.

DISCUSSION

An essential component of a business's immediate survival and long-term performance is the creation of a cash budget. To save money, maybe earn interest on it (one possibility), and so

increase net income, there are some procedures that any hospitality company should implement. These more popular cash management techniques are discussed.

Money In Hand

The quantity of money that is in circulation within a business is known as cash on hand, as opposed to cash in the bank. Cashiers utilize this money for petty cash, change, or just general cash in the company safe. Only standard daily activities should require more money than is currently on hand. Any extra money that is sitting around should be put into savings accounts so it can collect interest. The net cash receipts for each day should ideally be deposited as quickly as feasible the following day in the bank[4], [5].

In Bank Cash

Only the employee payroll and current accounts payable due should be covered by cash in the bank in the current operating account. Any extra money should be put in short-term securities (making sure to strike a balance between the investment's interest rate, security, and liquidity), savings accounts, or other interest-bearing accounts. After taking the following into account, the typical hotel industry business will likely decide on a suitable level of cash to be held:

Utilize Floates

The discrepancy between the bank balance shown on a company's books and the actual amount of cash in the bank is known as a bank float. There is a distinction because checks that a business writes are subtracted from its current record of the bank balance. However, there is a lag between that point and the time the check is received by the company's bank and deducted from its books (due to shipping, handling by the receiver, and then by his bank). A business can invest the money for that time period and boost its net income if it can calculate the size of this float and the duration of the transaction[6]–[8].

Bank concentration

Chain hotels or eateries may benefit from concentration banking, commonly referred to as integrated banking. It is a technique for hastening the transfer of money from the chain's different locations to the company's main office bank account. The local bank in the city where the unit is operated will continue to serve as the account holder for the individual units, but agreements will be made with the local bank to promptly transfer any surplus in the account that exceeds a specified amount to the bank of the head office. The head office account would be used to make payments for supply and payroll on behalf of the various units. Only the amount of money required to cover typical daily disbursements would be kept in the local account. Any extra money would be invested in things like marketable securities. A concentration banking system improves the chain's overall cash management. For instance, a local unit manager can be tempted to pay invoices ahead of time in order to satisfy nearby suppliers. Additionally, if a specific unit needs cash, the head office can provide it, saving the local unit manager from having to agree to less advantageous conditions on a loan with the local banker. The cost of money transfers must be kept to a minimum in concentration banking. Daily transfers from the various units to the head office account might not always be the best course of action. The following calculation can be used to calculate how often transfers should be made.

A Double Bank Account

Large chain operations can profit from the float effect in addition to concentration banking by holding one bank account on the East Coast and the other on the West Coast. Payments on behalf of these businesses would be made from the East Coast bank, while collections from

the Pacific-side operations would be placed in the West Coast bank. The scenario for activities on the Atlantic side would be the opposite. Making sure that invoices are sent out on time and taking action to collect late payments should be the two main areas of attention for accounts receivable. Money held in accounts receivable is money that isn't producing a profit. Credit extensions to clients are a recognized kind of commercial transaction, but they shouldn't go too far and cause payments to arrive two or three months after bills are mailed.

Accrues Available

City ledger accounts and house accounts make up the accounts receivable for hotels. Banquet and convention business, routine credit card charges for guests using the hotel's food and beverage options, and accounts for guests who were staying at the hotel but who checked out and charged their bills are all included in the city ledger accounts. For collecting such accounts, standard collection practices are used. The hotel's house accounts are for guests who are registered but have not yet checked out. In some instances, these accounts can quickly accrue huge sums of money. Setting a limit on how much can be deposited into a single account is a wise idea. When this limit is reached, the night auditor may be ordered to inform the credit manager, or general manager in a smaller hotel, who will then decide whether to request full or partial payment of the account or to speak with the guest about a credit arrangement. Giving the guest a copy of the bill at least once every week is a good practice in situations when guests remain for longer periods of time without necessarily accruing significant accounts. This does two things. It offers the guest the chance to validate or dispute the veracity of the account and proposes that a payment be made or credit arrangements arranged[9], [10].

Lockboxes

Using a lockbox can also improve the efficiency of collecting accounts receivable. Chain activities are the best candidates for lockboxes. Customers are instructed to mail their checks for account payment to a specific post office mailbox when they are utilized. The bank of the lodging facility picks up the mail, deposits the receivables payments into the lodging facility's bank account, and then notifies the lodging facility of the information required for it to record payments in its accounts receivable. The individual units in the chain are not required to accept and deposit payment checks, and the collection procedure is sped up by one or more days thanks to the lockbox system. The use of a lockbox carries a price. The expense should be weighed against the additional revenue from the cash that was freed up for other investments to evaluate whether the greater efficiency is profitable. The system is lucrative if income exceeds costs; if the opposite is true, it is not. As an alternative, it might be helpful to determine the lowest amount of the typical accounts receivable payment at which a lockbox system would be lucrative. The opportunity cost of the interest the hospitality firm may earn by investing freed-up funds in alternative investments, such as marketable securities, is 9 percent. Assume the bank charges 20 cents for each payment check handled. The collection of accounts receivable is sped up by using a lockbox by two days. The following equation can be used to determine the minimal number of receivables required to make the lockbox system profitable:

Advertised Securities

In general, any extra money that isn't required for immediate or preventative needs should be put into a form of security. Investments can be made for as little as one day, although they often last longerrarely longer than a year. It might be wise to look for long-term investments, like building a new home or expanding an existing one, if surplus cash were available for periods of a year or longer because the return on those investments would likely be higher in the long run than an investment in short-term securities. Most businesses in the hospitality sector have peaks and troughs in their cash flows, especially those that depend heavily or

exclusively on seasonal tourists for their business. When off-season cash flows are low or negative, excess cash from peak-season flows should be placed in short-term securities until it becomes necessary to sell them. In order to cover periodic lump-sum payments, such quarterly tax or dividend payments, it is occasionally necessary to accumulate extra cash. Until they were required for the repayment of these liabilities, these accumulated sums could be invested in marketable securities. When interest rates are high, many businesses find it advantageous to put all of their extra income in the most liquid marketable securities, those that can be swiftly turned into cash in the case of an unexpected occurrence demanding cash.

Little to no precautionary cash will be carried in this fashion. When making an investment in marketable securities, risk and preserving liquidity are crucial elements to take into account. A low interest rate typically goes hand in hand with a low risk. To entice investors, a riskier investment would need to provide a higher interest rate. Government securities often ensure that the security can be redeemed at full face value at any time and have relatively low risk. However, their interest rate is also quite cheap. On the other hand, long-term corporate bond investments might provide a greater interest rate. However, this type of security is susceptible to economic conditions, which increase the volatility of their buy-sell price. Due to their increased volatility, they carry a higher risk and may be less profitable to invest in if they need to be converted into cash or sold at an inconvenient moment. Government treasury bills, bankers' acceptances, short-term notes, bank deposit receipts, and corporation or finance company paper are examples of short-term, liquid marketable securities. Corporate bonds, preferred and ordinary stock, equipment trust certificates, and municipal securities are examples of long-term, less liquid investments.

Current Liabilities, Accrued Expenses, And Accounts Payable

Delaying payment until payment is necessary will help the business conserve funds. This does not, however, imply delaying payment until it becomes past due. A business with a bad reputation could have trouble getting goods and services other than cash, including meals, drinks, supplies, and services. If a discount is provided for on-time payments, the benefits of this should be taken into account. A typical discount rate, for instance, is 2% off the entire invoice amount if paid within 10 days; otherwise, the balance is due without the discount within 30 days. This would save $20 on a $1,000 purchase made within 10 days. This may not seem like a lot of money, but when compounded by all the identical purchases made over the course of a year, it may add up to a lot of money. In the stated example, the business might need to borrow the $980 in order to make the payment in time for the 10-day period. Assume that the loan had a 20-day term and an interest rate of 8%.

Periodic Cash Flow

The long-term cash flow budget is somewhat different from the short-term cash budget. The long-term cash flow estimates presume that the existing asset and liability amounts will remain mostly unchanged over time and neglect any changes in working capital. Typically, the long-range cash flow budget is created for annual periods up to five years in the future. The annual net income figure serves as the foundation for creating a long-term cash flow budget. Cash inflow is calculated by subtracting depreciation. Normal cash outflows consist of dividend payments, equipment purchases, and principal payments on long-term debt. The following objectives are accomplished by the long-term cash flow budget: The manager can use it to determine if there will be enough cash on hand to pay long-term mortgage, bond, or other loan commitments. It suggests that further long-term financing arrangements may be necessary, or that extra shares may need to be issued in order to raise money. It enables the planning of long-term asset replacements or additions (keep in mind that if any long-term assets were purchased or sold, the proceeds would be accounted for in the cash flow estimates).

Computer programs

The same spreadsheet can take the budgeted statistics and produce a cash budget if operational budgets are computerized. This cash budget may be created so quickly that it can show the need for cash on a weekly, daily, or even hourly basis in addition to a monthly basis. This is especially true when variables like the proportion of cash to charge sales stay largely stable. A computerized budget may be updated continuously, which enables management to easily foresee cash surpluses so that the extra money can be invested or used for discretionary expenses.

CONCLUSION

Cash budgeting for up to a year can be helpful in predicting cash surpluses and shortages. The budgeted income statements are transformed into a cash position through the cash budget. It is not always the case that sales revenue for a given month is paid out in cash within that month. Cash payments for some sales that are made on a charge basis might not be made for 30 days or longer. Similar to this, not all expenses listed on the income statement require a cash outlay for that particular month. Payments can frequently be postponed. The sale of a fixed asset is one example of a cash revenue item that does not display on an income statement. Another example is making principal payments on a loan. These can be included in the financing portion of the cash budget so that surplus money can be anticipated and profitably employed, such as by investing, and so that cash shortfalls can be projected and met by making in advance arrangements for short-term financing. Cash conservation is a step in the cash management process. This only implies that a skilled manager will keep an eye on inventory levels, accounts receivable, and accounts payable in order to preserve the business's most liquid financial position at all times. In order to maximize the organization's current cash position on a daily basis, cash budgets necessitate attentive day-to-day inspection of the various current asset and liability accounts.

REFERENCES:

[1] B. N. Prathap, K. C. Subrahmanya, and B. S. Harisha, “Microfinance Delivery – Challenges and Remedies,” *Int. J. Manag. Stud.*, 2018, doi: 10.18843/ijms/v5i3(9)/17.

[2] O. E. Williamson, “The Journal Of Finance" Corporate Finance and Corporate Governance,” *J. Finance*, 1987.

[3] Oliver E. Williamson, “Corporate Finance and Corporate Governance,” *J. Finance*, 1987.

[4] K. D. Vohs, N. L. Mead, and M. R. Goode, “Merely activating the concept of money changes personal and interpersonal behavior,” *Current Directions in Psychological Science*. 2008. doi: 10.1111/j.1467-8721.2008.00576.x.

[5] A. Gallo, “A Refresher on Net Present Value,” *Harv. Bus. Rev.*, 2015.

[6] G. Fu *et al.*, “The prevalence of and factors associated with willingness to utilize HTC service among college students in China,” *BMC Public Health*, 2018, doi: 10.1186/s12889-018-5953-0.

[7] G. P. Donaldson *et al.*, “Gut microbiota utilize immunoglobulin a for mucosal colonization,” *Science (80-.).*, 2018, doi: 10.1126/science.aaq0926.

[8] L. Spiga *et al.*, “An Oxidative Central Metabolism Enables Salmonella to Utilize Microbiota-Derived Succinate,” *Cell Host Microbe*, 2017, doi: 10.1016/j.chom.2017.07.018.

[9] S. H. Bhuiyan, "Trajectories of E-government implementation for public sector service delivery in Kazakhstan," *Int. J. Public Adm.*, 2011, doi: 10.1080/01900692.2011.586894.

[10] J. D. Mancuso *et al.*, "Dod-supported overseas training rotations in tropical medicine and global health, 2000-2015," *Military Medicine*. 2017. doi: 10.7205/MILMED-D-16-00108.

CHAPTER 12
CAPITAL BUDGETING AND THE INVESTMENT DECISION

Harsh Panwar, Associate Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- harsh.panwar@shobhituniversity.ac.in

Dr. Neha Vashishtha, Associate Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id-nehavashistha@shobhituniversity.ac.in

ABSTRACT:
This chapter starts off by going over some of the issues that can arise while making judgments about purchasing capital assets, such as the assets' lengthy lifespans, initial high expenses, and unknowable future costs and benefits. The accounting rate of return and the payback time, two relatively straightforward techniques of evaluating potential investments, are next demonstrated and discussed. The idea of the time value of money is then presented, along with an illustration of discounted cash flow. Then, internal rate of return and net present value, two further investment measurement techniques, are combined with discounted cash flow. The comparison of net present value and internal rate of return is followed by a discussion of capital investment control. The chapter ends by showing how discounted cash flow might be utilized to inform judgments about leasing versus buying. This chapter discusses techniques for determining the long-term asset to choose. Capital budgeting is the term usually used to describe this. We are more interested in deciding whether to make a certain investment or which of two or more investments would be the best than we are in the budgeting process. The land and buildings of a hotel or food service operation require the most investment, which is a rare investment choice for each individual property. The main topic of this chapter is more regular investment choices, such as those made for equipment, furniture purchases, and replacements. For a variety of reasons, capital budgeting and investment decision-making are distinct from continuing budgeting and daily decision-making.

KEYWORDS:

Depreciation, Investment, Rate, Return, Saving.

INTRODUCTION

Assets with a reasonably lengthy lifespan are the subject of capital investment choices. Daily decisions on present assets are choices about things that change regularly, like inventories. The consequences of making the wrong choice when buying food are short-lived. But making the wrong choice when it comes to a piece of machinery (a long-term asset) can take years. The difficulty of calculating an asset's life span to determine how far into the future the benefits of its purchase will be distributed is brought on by the long life of a capital asset. Both physical damage to the equipment and obsolescencethe creation of a newer, better, and potentially more profitable piece of equipmentcan shorten its lifespan.

Capital budgeting and the decision to invest fees for assets

Daily shopping decisions typically do not entail significant sums of money for any one transaction. The cost of purchasing a capital asset or assets, however, is typically high, thus one must be certain that the investment's net income will be able to cover the initial investment cost over time. future outcomes and costs future costs and benefits are taken into account in investment decision-making analytical approaches, as will be shown. The future is never clear, but on the other hand, if we make a choice simply based on past costs and net income, we might not be any better off because those costs and net income may not be indicative of what they will be in the future. The asset's recovery (scrap) value after the end of its economic life, for instance, is one element taken into account. The choice would likely

be made in favor of the equipment with the highest potential trade-in value if two comparable pieces of machinery were being evaluated and the only difference from every angle was that one was predicted to have a higher scrap value than the other at the end of their equivalent economic lives. But in five or more years, due to technology advancement, that choice can turn out to be incorrect.

Resources to help in investing decisions

So, these are a few risks associated with choosing capital investing options. Hazards are rarely completely avoidable, but there are ways that the manager can use to lessen some of the uncertainty. Consider a restaurant that has an ineffective dishwasher as a backdrop for the accounting rate of return and payback period approaches. The dishwasher operator makes $4,000 per year in part-time pay. As the servers can run the dishwasher, the restaurant is evaluating the benefits of installing a new one to do away with the requirement for the part-time staff. We have information on the two computers under consideration.

In the above scenario, it was presumed that each of the five years' net yearly savings would be the same. This could not always be the case in practice. For instance, there might be one-time costs in year 0001 (or in any of the other years), such as those associated with training or a significant revamp. As an alternative, the amount of an expense could fluctuate over time, such as with double-declining balance depreciation. For the duration of the full time under consideration, we forecast total savings and total costs for each year. The net saving amount for the full time period is calculated by adding the annual net savings. The total net savings amount can then be divided by the project's duration in years to produce an average yearly net savings value for the equation. Let's use Machine A just to demonstrate this. Savings and expenses are the same, with the exception of the $1,000 special overhaul cost in year 0003 and the use of the double-declining balance method of depreciation (instead of the straight-line approach). The asset has a life of five years; hence the depreciation rate is 40%. The sum of the net savings for each of the five years will represent the overall net saving. It comes to $7,000 in all. The average net save will be $7,000 each year, multiplied.

Since average depreciation is still $800 year and average tax and average net saving are also the same, depreciation alone had no impact on the ARR's change. In this instance, the $1,000 overhaul cost was the only thing that contributed to our ARR for Machine A falling from 51.3 to 46.7 percent. The accounting rate of return method has the benefit of being straightforward. It is used to contrast a proposal's expected return with a minimal desired return. The proposal is rejected if the return is insufficient. If the ARR of the proposal exceeds the targeted rate of return, a more thorough analysis of different investment strategies may then be performed. The accounting rate of return method's primary drawback is that it bases its calculations on net income or net savings rather than cash flow.

Machine A recovers its original investment more quickly than Machine B, despite having a larger initial cost. This supports the findings of the earlier accounting rate of return calculation. The only initial investment is the payback mechanism Net yearly financial savings 496 The cash flows up until the cost of the asset has been recovered are taken into account. The ARR method might be viewed as more realistic because it accounts for all benefit flows from an investment rather than just those that occur during the payback period. The ARR approach simply takes into account net savings, but the payback method also takes into account cash flows. It should be noted that in this example, straight-line depreciation was employed, and it was assumed that the amount of net yearly cash savings was constant throughout time. In practice, this might not be the case. For instance, using an accelerated depreciation technique (such double declining balance) will result in a higher initial depreciation expense. In turn, this will lower income taxes and boost cash flow in those years,

making it a little more challenging to calculate the payback period. Consider an initial investment of $6,000 and the ensuing annual cash flows to provide an example[1]–[3]:

By dividing the remaining sum ($300 by $900), the remaining amount will be recovered in one-third of a year. Therefore, the overall payback period will be 3.33 years. Although straightforward, the payback time analysis approach simply measures how quickly an investment might be recouped and not the qualities of the investment. It can be used to evaluate several proposals such that only those that are within a given payback period will be taken into account for further review using other investment approaches. However, the time value of cash flows, or the idea that money now is worth more than the same amount at some point in the future, is ignored by both the payback period and the ARR techniques. We will study the application of the internal rate of return and net present value methodologies after discussing this idea in the following section.

DISCUSSION

The information required to make decisions may not just be the outcomes of investment decision processes. Even if some information is difficult to quantify, it can still be useful when making decisions. Prestige, goodwill, reputation, employee acceptability, and the ramifications for society or the environment are all things that shouldn't be disregarded. What financial advantages may a hotel receive, for instance, if it redecorates its lobby? The lobby may need to be redecorated in order to maintain customer goodwill, albeit these benefits may be hard to measure. How should the relative merits of investing $50,000 to upgrade the employee cafeteria versus allocating $50,000 for holiday incentives be determined? Then, in making such investing judgments, judgment must be used.

These are a few of the dangers related to selecting capital investment options. Although it is uncommon for hazards to be entirely avoided, there are steps a management can take to reduce some of the uncertainty. As the accounting rate of return and payback period approaches, imagine a restaurant with an inefficient dishwasher. Part-time remuneration for the dishwasher operator is $4,000 annually. The restaurant is weighing the advantages of adding a new dishwasher to do away with the need for the part-time workers because the servers can operate the current one. Itshows the data we have on the two machines under consideration[4]–[6].

In the aforementioned scenario, it was assumed that the net annual savings for each of the five years would be the same. In actuality, this might not always be the case. In year 0001 (or any of the subsequent years), there might be one-time expenses like those related to training or a sizable renovation. An expense could also change in size over time, for as with double-declining balance depreciation. We project overall savings and overall costs for each year of the complete time under consideration. The annual net savings are added to determine the net saving amount for the entire time period. The average yearly net savings value for the equation can then be obtained by dividing the overall net savings amount by the project's years-long lifetime. For the purpose of illustration, let's utilize Machine A. With the exception of the $1,000 special overhaul cost in year 0003 and the use of the double-declining balance method of depreciation (instead of the straight-line approach), savings and expenses are the same. The depreciation rate is 40% because the asset has a five-year life.

Depreciation alone had little bearing on the change in ARR because average depreciation is still $800 per year, and average tax and average net saving are likewise the same. In this case, the sole factor that caused our ARR for Machine A to decrease from 51.3 to 46.7 percent was the $1,000 overhaul cost. The simplicity of the accounting rate of return method is a plus. It is used to compare the predicted return on a proposal with the minimum return that is wanted. If the return is insufficient, the plan is turned down. If the proposal's ARR is higher than the desired rate of return, it may then be possible to conduct a more in-depth review of other

investment options. The main disadvantage of the accounting rate of return technique is that it uses net income or net savings as the basis for its computations rather than cash flow.Despite having a higher beginning cost than Machine B, Machine A recovers its initial investment more rapidly. The results of the preceding accounting rate of return computation are supported by this. The payback method is the sole initial investment. Annual net financial savings 496 Considered are the cash flows up until the asset's cost has been recouped.

An Investment Choice

Because it accounts for all benefit flows from an investment rather than just those that happen during the repayment period, the ARR technique may be seen as being more realistic. The payback method additionally considers cash flows, whereas the ARR methodology only considers net savings. It should be emphasized that straight-line depreciation was used in this case, and it was presumed that the volume of net yearly cash savings remained constant throughout time. This might not actually be the case. For instance, utilizing a twofold decreasing balance accelerated depreciation technique will double the initial depreciation expense. This will thus result in a decrease in income taxes and an increase in cash flow in those years, making it slightly more difficult to determine the payback time. As an example, consider a $6,000 initial investment and the annual cash flows that follow:

The leftover amount ($300 by $900) can be recovered in one-third of a year by dividing it. The total repayment term will therefore be 3.33 years. Although simple, the payback time analysis approach does not evaluate the attributes of an investment; rather, it merely analyzes how quickly an investment might be recovered. It can be used to compare a number of proposals such that only those that fall within a certain payback period are considered for further analysis using other investment strategies.However, both the payback period and the ARR methodologies overlook the time value of cash flows, or the notion that money now is worth more than the same amount at some point in the future. After addressing this concept in the section below, we will examine how the internal rate of return and net present value approaches are applied[7], [8].

Choosing between leasing and owning

The discussion of long-term or fixed assets up to this point has centred on buying and owning them. However, there might be instances where renting or leasing makes financial sense. For instance, income tax is a factor. Leasing can be advantageous because, in general, lease payments are tax deductible. However, ownership enables tax deductions for both depreciation and interest paid on any debt used to finance the acquisition. What might be helpful in one circumstance might be harmful in another. Every case needs to be looked upon on its own merits. Let's examine a technique for evaluating the two options side by side. Let's say we are debating whether to purchase or rent brand-new furniture for a motel. The bank will have to finance $125,000 for the cost of the furniture. The furniture costs $125,000. The principal of the bank loan must be repaid in four equal annual payments of principal ($31,250 each), with an interest rate of 8%. Over the course of five years, the furniture will be depreciated at a rate of $25,000. At the conclusion of that time, it is presumptively worth nothing in a trade-in.

The income tax rate is 50%. An alternative is to lease the furnishings for five years at a cost of $30,000 a year. To start, we must create a bank repayment schedule for the purchase plan that details principal and interest payments for each of the four years. Next, we must figure out the net cash outflow for each of the purchasing plan's five years. Since, interest and depreciation costs are tax deductible and the motel is subject to a 50% tax rate, there is a tax benefit equivalent to 50% of these costs. As a result, in year 1, the $17,500 tax savings balance the $35,000 in expenses. After taxes, the final price is only $17,500. The bank loan principle payments of $31,250 must be added to this $17,500, and the depreciation expense

of $25,000 must be subtracted since depreciation does not need a cash outlay. Thus, the net cash outflow for year one is $23,750. The figures for the other years are derived in a similar manner. Notably, the cash flow is positive rather than negative in year 5 due to the absence of interest expenses and loan payments. The calculation of the annual net cash outflows under the rental plan is shown. Notably, since the hotel does not own the furniture, there are no depreciation costs or interest or principal payments under the leasing option. Finally, using the appropriate discount rate, the net cash flow data have been moved to and discounted. The discount rate applied is 8%. Because it represents the current cost of bank borrowing, this rate was chosen, demonstrates that renting in this particular scenario would be preferable from a present value perspective because the total present value of cash outflows is $4,450 less ($64,339 $59,889). There could be additional considerations in each buy-or-lease scenario. For instance, if a company chooses the purchase option, it may put some of its own money down and borrow a portion of the purchase amount rather than the entire amount. The down payment in this scenario is an extra financial outflow at the start of the first year. There may be a trade-in value at the conclusion of a purchasing plan as well[9]–[11].

The computations would treat this trade-in amount as a cash inflow at the conclusion of the term. In a leasing arrangement, the annual payment can be due at the start of the year rather than the end as in our example. As a result, the first rental payment is made at time zero, and the remaining annual instalments are each made one year earlier. There may be a buy option available to the lessee under a rental agreement at the conclusion of the rental period. The purchase will result in an additional financial outflow if it is used. Additionally, the conditions of borrowed funds may alter from one circumstance to another, and various depreciation rates and methodologies may be employed. An accelerated depreciation technique, for instance, will result in higher depreciation expense in the earlier years, lowering income tax and increasing cash flow in those years. Because of all these and other potential outcomes, each buy-or-lease scenario must be researched independently, taking into account all the known variables before a choice are made.

CONCLUSION

The payback period method's drawback is that it ignores events that take place after the payback period. The payback period and ARR techniques both have a flaw in common. The time value of money is not taken into account. Future cash flows may easily be discounted back to today's values thanks to the development of discounted cash flow tables, which are the opposite of compound interest tables. These tables are used by the NPV and IRR techniques. To calculate net present value (NPV), the initial investment is subtracted from the sum of the present values of the future cash flows. If the NPV is positive, making the investment is wise; if it is negative, it shouldn't be done. With IRR, calculating the interest rate (rate of return) that will match the total amount of future discounted cash inflows with the initial investment is as simple as using the tables. The investment should go on if the rate of return exceeds the minimum desired return that the company has set; otherwise, it shouldn't. For any given investment, the NPV and IRR approaches will typically yield the same accept or reject result. The rankings, however, might be different if a variety of alternative projects were being considered. Regardless of the investment strategy employed, the outcomes of each investment should be examined in order to improve and streamline the investment process.

REFERENCES:

[1] C. D. Kuempel, V. M. Adams, H. P. Possingham, and M. Bode, “Bigger or better: The relative benefits of protected area network expansion and enforcement for the conservation of an exploited species,” *Conservation Letters*. 2018. doi: 10.1111/conl.12433.

[2] J. L. Barker, P. Barclay, and H. K. Reeve, "Competition over Personal Resources Favors Contribution to Shared Resources in Human Groups," *PLoS One*, 2013, doi: 10.1371/journal.pone.0058826.

[3] E. Antarciuc, Q. Zhu, J. Almarri, S. Zhao, Y. Feng, and M. Agyemang, "Sustainable venture capital investments: An enabler investigation," *Sustain.*, 2018, doi: 10.3390/su10041204.

[4] M. Aceves-Martins, "Cuidado nutricional de pacientes con cirrosis hepática," *Nutricion Hospitalaria*. 2014. doi: 10.3305/nh.2014.29.2.7024.

[5] A. N. Kluger and K. Zaidel, "Are Listeners Perceived as Leaders?," *Int. J. List.*, 2013, doi: 10.1080/10904018.2013.754283.

[6] J. P. Mulki and F. Jaramillo, "Workplace isolation: Salespeople and supervisors in USA," *Int. J. Hum. Resour. Manag.*, 2011, doi: 10.1080/09585192.2011.555133.

[7] J. Zhai and Y. Wang, "Accounting information quality, governance efficiency and capital investment choice," *China J. Account. Res.*, 2016, doi: 10.1016/j.cjar.2016.08.001.

[8] N. Jamaludin, "Religion and Individual Investment Choice Decision : The Case of Malaysia," *Int. J. Soc. Sci.*, 2013.

[9] W. Parrott, "Management Accounting - Financial Strategy.," *Financ. Manag.*, 2009.

[10] A. Bernstein, "Rent, lease or buy? How to finance your new equipment," *Nurs. Resid. Care*, 2016, doi: 10.12968/nrec.2016.18.8.440.

[11] M. Jeffery, C. Shield, H. N. Ekici, and M. Conley, "Shilling & Smith Acquisition of Xteria Inc.: Data Center Technology Leasing," *Kellogg Sch. Manag. Cases*, 2017, doi: 10.1108/case.kellogg.2016.000299.

CHAPTER 13
AN ANALYSIS OF FEASIBILITY STUDIES AN INTRODUCTION

Harsh Panwar, Associate Professor, Department of Business Studies & Entrepreneurship,
Shobhit University, Gangoh, Uttar Pradesh, India,
Email Id- harsh.panwar@shobhituniversity.ac.in

Dr. Neha Vashishtha, Associate Professor, Department of Business Studies,
Shobhit Deemed University, Meerut, Uttar Pradesh, India,
Email Id-nehavashistha@shobhituniversity.ac.in

ABSTRACT:
This chapter describes the goals of a feasibility study and summarizes the two key components of such research. The study's front matter, basic market characteristics, a site appraisal, supply and demand data, and a supply and demand analysis are all included in part one. The chapter discusses the four phases necessary and provides an illustration of a thorough supply and demand study for a hotel. Instead of a promoter's assumption that a novel proposal will be financially successful, a feasibility study is a thorough examination of the financial unpredictability of a real estate development. A feasibility study is not intended to demonstrate the viability of a new business endeavour. Either a favourable or unfavourable suggestion could come from an impartial third party's professional independent feasibility assessment. If the answer is no, the project should not be developed, and both the borrower and the lender should be pleased. Even a positive result shouldn't be interpreted as a success assurance. A feasibility study is limited to taking into account what is now known and what might occur in the future. There can be no assurances, though, because it is hard to predict the future with accuracy, and a lot of unforeseeable events could come into play. In other words, a feasibility study may lessen but not completely eliminate the risk associated with a particular investment. Some feasibility studies start by determining the best location for a new building and then continue from there. Others only take into account one place while ignoring alternatives.

KEYWORDS:

Demand, Feasibility, Information, Sales, Supply.

INTRODUCTION

The essential structure of every feasibility study is the same, even though the scope of one for a large downtown hotel complex vary significantly from one for a suburban eatery. The majority of feasibility studies wrap up with a proposal's financial analysis. Later in this chapter, this will be discussed in further detail. The other components of a feasibility study, which come before the financial analysis, will, however, only be briefly covered here. We'll assume for the purposes of this discussion that the feasibility study is for a hotel with a restaurant and bar. Facilities information specific to only guest rooms would be included in a feasibility study for a motel with only rooms. Room data wouldn't be useful in a study for a restaurant without a hotel or motel. General market characteristics, site appraisal, supply and demand, and the front matter are suggested formats for hotel feasibility studies. The format may occasionally provide space suggestions. Let's take a closer look at these sections. This contains an introduction explaining the motivation behind the study's execution, information on the property being assessed and how it was evaluated, information about when and who did the study, and a summary outlining the study's key results, conclusions, and recommendations.

Common Market Characters

The topics covered in this section include the site's location and the general area's population growth trends, industrial diversification and growth, building permit activity, employment and economic trends, disposable incomes, housing, transportation, attractions, convention

facilities, and unique factors such as whether the region's economy is heavily reliant on the local university population. There should only be discussion on topics that are pertinent to the envisioned new hotel. Data that is both descriptive and statistical should be provided. Since other hotel services are typically generated directly from the demand for rooms, the information should be brief and mostly connected to the demand for rooms.

Site Analysis

Detailed maps of the area should be included in any section of the study that goes into great detail about the site's location. These maps should, whenever possible, display significant subcenters of activity associated with the plan, such as industrial zones, shopping hubs, and the sites of convention and support centers. Routes for transportation, such as those to and from the airport, should be displayed. These auto routes should be specified if accessibility by car is crucial. Include physical details about the location, such as its dimensions, any upgrades (buildings) already there, and whether it is suitable for potential growth in the future. Property taxes, site-related expenses, and site preparation expenditures should all be included. Finally, this section should include any additional pertinent information, such as zoning constraints, height restrictions, parking space requirements, potential changes to traffic flow, and the availability of utility services.

Render and request information

Three factors could justify the construction of a new hotel. The first is that there is a gap between the demand and supply for rooms; the second is that a new market has a need that cannot be met by the current supply; and the third is that the quality of the supply is inadequate to meet the demands of the market or demand. Therefore, it is crucial that the study determine the market for the proposed new property by analysing the supply and demand condition. The best way to do this is to assess the current state of the local market as a whole and then make adjustments for predicted future changes. The following fundamental details should be included: trends in local occupancy over the previous five years. If possible, occupancy trends ought to be broken down by hotel type (see following point). a list of hotels that currently cater to the neighborhood market. The hotels ought to be categorized by kind. Typically, three types are listed: the most competitive properties, the fairly competitive properties, and the less competitive properties[1]–[3].

Each hotel's name, how many rooms it has, and its current nightly rates should be listed on the list. If any of the hotels on this list were constructed within the last five years, they should be noted with additional details, such as the amenities they offer in addition to rooms (for example, the number of seats in their restaurants) and the caliber of those amenities. The most competitive hotels should also be highlighted by adding further details (if available) about their occupancy rates, how often people use their food and beverage options (such as seat turnovers and average checks), and the makeup of their market for lodging, food, and drink. the primary demand sources. The visiting businessperson, the convention delegate, and the general tourist or vacationer are the three main categories into which the sources of room demand for a city hotel are divided. Relevant information that can reveal room demand should be provided for each category.

Since there is typically a strong correlation between the demand for hotel rooms and growth in local office space occupancies, useful data for business travelers may include growth in local airport traffic and/or growth in occupancies during the past five years. The number of conventions held in the area annually, their sorts, sizes, total number of delegates, average duration of stay, and average daily spending of conventioneers are only a few of the statistics pertaining to the convention or business conference delegate. Information on tourist arrivals would include the number of visitors, the typical duration of stay, the daily average spent on lodging and food, and any changes or extensions to the tourist season during the previous

several years. This should be mentioned if there is a substantial demand for hotel rooms from any unique source. For instance, there is frequently a significant increase in demand for hotel rooms around athletic events. FEASIBILITY STUDIES: A PROPOSAL The local chambers of commerce, convention and visitor bureaus, hotel and motel associations, airport authorities, government agencies, and, in the case of office space occupancies, the local office building owners' association, can provide much of the data required for this section of the study. Contact with additional potential sources of pertinent information will be necessary in each specific circumstance.

DISCUSSION

The figures in the supply-required column were calculated by dividing the future demand figures from step 3 by a 70 percent occupancy rate (as was shown before for the current year). The current supply of rooms (1,156) has been calculated based on the number of rooms needed per year, existing supplies, demand for rooms, average occupancy percentage for normal occupancy, daily average demand Lack of rooms 898 rooms are available.

Feasibility Study Format

The ultimate result is a prediction of how many additional rooms each of the upcoming five years may support based on all these presumptions. We can show that 731 more rooms might be supported after five years at an average occupancy of 70%. Also take note that the numbers in the right-hand column for the number of rooms needed are cumulative. Instead of assuming a 70% occupancy, we might prefer to assume a 75% occupancy to lower risk. In that instance, the annual demand statistics would be divided by 75%, resulting in a less annual increase in the number of rooms that the market could bear. However, some additional aspects might need to be taken into account before the supply/demand analysis is complete and a suggestion about the size of property to be developed is provided. For instance, the supply estimates should be updated if any of the current competing facilities are anticipated to be removed from the market (demolished or put to another use). Similarly, if any information on any proposed hotels in the vicinity that will compete with them is available, it should be taken into account when calculating future supply. Last but not least, deciding whether to build should not be only dependent on numbers. Two adjacent, rival hotels, motels, or eateries may have radically differing customer expectations for their goods. This is due to a number of non-quantifiable elements, including the environment, the decor's quality, management, and staff training, to mention a few.

Recommendations For Space

At this phase, the feasibility study can contain data that the architect needs to create more thorough drawings. The number of rooms and the percentage of rooms of different types (singles, doubles, and twins) should be included, but it should also include the proportion of space and the number of seats suggested for food, drink, and related facilities, such as meeting rooms and public spaces (lobbies), and perhaps even suggested themes for bars and restaurants. In addition to parking space requirements, back-of-the-house facilities and space requirements (kitchens, storerooms, offices) should be considered. Finally, this section should include any recommendations for recreational facilities[4], [5].

Similar calculations would need to be undertaken for the other mealtimes and perhaps the coffee breaks as well, depending on whether or not it was anticipated that these would result in considerable sales revenue. Normal mealtime variations in seat turnover data and average check amounts necessitate different calculations. An analysis of the competitor hotel restaurant operations in the area, along with an assessment of the type of customer the guest rooms will serve, can frequently be used to determine turnover rates and average checks. It could be important to take sales from places like room service into account when calculating

the total meal revenue. The number of guests per day who could need some sort of food service will be indicated by the room occupancy figure in room service. Total daily sales would result from this, which would then need to be multiplied by 365. The generated demand from nonfood categories may also increase overall food sales. For instance, if the cocktail bar offers food service to patrons, a prediction of daily sales would be produced by multiplying the potential number of orders per day by the average check that is predicted.

The number of days the lounge will be open during the year can then be multiplied by this daily sales amount. Let's say that this work is finished and that the expected annual food sales totals $1,575,000. This food figure has to be increased. open days each year average score Seat reversal rate amount of seats the sales of alcoholic beverages in the lounge, eating area, coffee shop, and so forth. For information on predicting beverage sales. Assume that the planned hotel's expected $1,038,000 total yearly beverage sales have been determined. Sales of both food and drink will total $2,608,000. Direct operating costs must be subtracted from the total sales of food and beverages. Similar to the rooms department, these expenses can be calculated as a percentage of sales using data from the national restaurant sector for an operation of this size and type, and then local conditions can be adjusted as necessary. Now you may create the departmental income statement.

The overall departmental operating income can be determined once the predicted departmental revenue statements have been finalized. The unallocated costs (administrative and general, marketing, property operation and maintenance, and energy expenditures) can be subtracted from this. These costs are typically fixed in nature and can be roughly estimated most of the time. The amount in this instance is predicted to be $480,000 per year. For each of the first five years of operation, the projected departmental operating income estimates have been transferred, less undistributed expenses. It should be noted that these numbers remain the same each year, with the exception of the rooms departmental income, which will grow starting in year 2 due to the predicted rise in occupancy rate, room rate, and direct expenses, as previously mentioned. In all other instances, the likelihood of rising costs has been disregarded with the understanding that any such costs will be passed on via higher room rates or food and beverage pricing, resulting in little change in net operating income. Additionally, no upward adjustment has been made for years 2 through 5 to account for any increased sales revenue that the food and beverage sections would generate from the greater room occupancy. The sales revenue statistics should be as cautious as feasible at this time. $50,000 has been subtracted from the $100,000 in preopening operating costs in years 1 and 2. The $220,000 in interest expenditure on the interim funding is not allowable as a deduction for tax purposes in the United States (or certain other countries).

Permanent and chattel mortgage interest, as well as building, furniture, and equipment depreciation, have been subtracted for each of the five years to determine the projected hotel's overall net income (or loss). Income tax has now been subtracted. There wouldn't be any income tax if there had been an operational loss prior to income tax in year 1. Additionally, that loss would be carried forward into year 2 and subtracted from the income before tax before the taxable income was subject to the 40 percent tax rate.

Estimated Cash Flow

The annual net income of the hotel is changed into an annual cash flow as the next step in determining its financial viability. First, expenses that were previously subtracted from net income but did not require a cash spend during that year have been added back. These include preopening costs for years 1 and 2 (also paid from the equity investment before to opening), depreciation (which is simply a write-down of the book value of the linked assets), and depreciation. In order to get at net income, the main portions of the permanent and chattel mortgage payments have also been subtracted because they entail a financial outlay that is not

recorded as a deduction. The net cash flow is the result for each year. Since the cash flow is positive each year, it is clear that the suggested financing strategy will make it possible to pay the debt in full, including interest and principal[6]–[8].

Assessment Of Projects

Finding the return on the equity investment that would be made possible with the provided projections of income and expenses may be helpful at this stage of the investigation. The total net income throughout the first five years is as follows. The average return on the initial $1,090,000 equity investment was approximately 23.3 percent, which, while not great for the risk involved, may be thought of as respectable after income tax. This equates to an average of slightly less than $253,600 each year ($1,268,000 divided by 5). Return on investment, however, might not be the greatest criterion to apply in assessing an investment plan, as discussed.

The methodologies of internal rate of return (IRR) and/or net present value (NPV) explained and shown, are frequently more reliable metrics for project appraisal. Additionally, just one occupancy level, one set of accommodation rates, and one set of food and beverage pricing were used in the projections. Preparing a flexible budget and estimating net income from both a level of sales that is greater than anticipated (giving a larger return on investment) and a level of sales that is lower than anticipated is standard procedure. The project might be abandoned now if a good return couldn't be anticipated. Another option would be to try a new financing arrangement with more or less leverage, different terms, and/or various interest rates. Manually doing this task could take a significant amount of time, but spreadsheets can be readily designed to handle changes in a number of variables, either separately or simultaneously, and generate updated net income and cash flow figures based on the changes. The cash flow forecasts should be extended beyond the five-year term to prolong them for the entire life of the project if a plan were to be set up that appeared to yield net income and cash flow statistics that were, in the initial years, acceptable. Before a decision is made to move forward with the development, the lifetime cash flow estimates could then be assessed using the NPV or IRR investment analysis methods.

Suitability Of Improving Current Operation

Although a financial feasibility study for a new operation has been covered in this chapter, the same methods can also be used to determine whether expanding an existing hotel, motel, restaurant, or other similar business is feasible. In that instance, the net income and cash flow estimates would only take into account the marginal or incremental revenues and costs as well as debt and equity financing costs related to the expansion. In fact, an existing organization may create these estimates considerably more easily since it has historical accounting data from its current operations to use as a foundation. The financial viability of a property expansion or new property development is thoroughly examined in a feasibility study. Although a feasibility study cannot ensure financial success, it significantly lowers the uncertainty and risk associated with a new business initiative. A hotel feasibility study typically consists of two main sections.

The front matter (which includes recommendations and conclusions), general market characteristics (location, population and industrial growth, employment, incomes, and economic trends), site evaluation (which includes maps, transportation routes, and physical information about the site), and supply-and-demand information (which includes market to be served, information about competitive properties, and the likely sources of demand for the facilities to be offered) are all included in the first part. An analysis of the supply and demand for hotel rooms would comprise the following section in the first portion of the study. Four steps make up the supply-and-demand analysis[9]–[11]:

CONCLUSION

A feasibility study carefully assesses the financial sustainability of a property expansion or new property development. A feasibility study considerably reduces the uncertainty and risk attached to a new business project, even though it cannot guarantee financial success. Typically, a hotel feasibility study is divided into two parts. Front matter (which includes recommendations and conclusions), general market characteristics (location, population and industrial growth, employment, incomes, and economic trends), site evaluation (which includes maps, transportation routes, and physical information about the site), and supply-and-demand information (which includes the market to be served, information about competing properties, and the likely sources of demand for the facilities to be offered) are all included in the report. The following component of the study's first part would analyze the supply and demand for hotel rooms. The supply-and-demand analysis involves these four steps.

REFERENCES:

[1] S. Canazza, G. De Poli, and A. Rodà, "CaRo 2.0: An interactive system for expressive music rendering," *Adv. Human-Computer Interact.*, 2015, doi: 10.1155/2015/850474.

[2] K. Benzekki, A. El Fergougui, and A. E. B. Elalaoui, "A context-aware authentication system for mobile cloud computing," in *Procedia Computer Science*, 2018. doi: 10.1016/j.procs.2018.01.135.

[3] C. Trevisiol, M. Gion, R. Dittadi, M. Zappa, and A. S. C. Fabricio, "Epidemiology-based assessment of tumor marker overordering in breast cancer: An algorithm to examine different disease conditions," *Int. J. Biol. Markers*, 2017, doi: 10.5301/ijbm.5000274.

[4] Z. L. Zhao, C. D. Wang, Y. Y. Wan, and J. H. Lai, "Recommendation in feature space sphere," *Electron. Commer. Res. Appl.*, 2017, doi: 10.1016/j.elerap.2017.10.007.

[5] C. Y. Liu, C. Zhou, J. Wu, Y. Hu, and L. Guo, "Social recommendation with an essential preference space," in *32nd AAAI Conference on Artificial Intelligence, AAAI 2018*, 2018. doi: 10.1609/aaai.v32i1.11245.

[6] D. M. dan Hertanto, "the Role of Discounted Estimated Cash Flow and Financial Ratio To Probability of Financial Distress," *Staff.Ui.Ac.Id*, 1999.

[7] M. Hughes, S. Hoy, and B. Andrew, "Cash flows: The Gap Between Reported and Estimated Operating Cash Flow Elements," *Australas. Account. Bus. Financ. J.*, 2010.

[8] A. B. Abel, "The effects of q and cash flow on investment in the presence of measurement error," *J. financ. econ.*, 2018, doi: 10.1016/j.jfineco.2018.02.005.

[9] V. De Martinis and F. Corman, "Data-driven perspectives for energy efficient operations in railway systems: Current practices and future opportunities," *Transp. Res. Part C Emerg. Technol.*, 2018, doi: 10.1016/j.trc.2018.08.008.

[10] R. B. Rebak, "Iron-chrome-aluminum alloy cladding for increasing safety in nuclear power plants," *EPJ Nucl. Sci. Technol.*, 2017, doi: 10.1051/epjn/2017029.

[11] M. Harb and P. Y. Hong, "Anaerobic membrane bioreactor effluent reuse: A review of microbial safety concerns," *Fermentation*, 2017, doi: 10.3390/fermentation3030039.