PacificCPE

COURSE

21802A

Income Statements and Cash Flow Analysis

Understanding how a company earns money and manages cash is essential for any financial professional. This course covers the income statement and the statement of cash flows, helping you interpret reported results with greater confidence and precision. You'll explore how these two statements connect, where discrepancies can signal problems, and what key line items actually reveal about business performance. Perfect for CPAs and tax advisors who regularly work with client financials or advise on business decisions.

CREDIT HOURS 2 | FIELD OF STUDY ACCOUNTING | EXAM QUESTIONS 10

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Assignment

- Study the full course materials included here.
- Complete the review questions after each chapter.
- Answer 10 final exam questions.
- Final exam is scored immediately, 70% or better passes.
- Certificate of completion is available in your account.
- Failed exams can be retaken free of charge.

Course Objectives

- Recall the ways in which management can boost sales through techniques that qualify as corporate finance.
- Recognize the financial planning requirements of public companies.

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Chapter 1: THE INCOME STATEMENT

Chapter Objective

After completing this chapter, you should be able to:

- Recall the ways in which management can boost sales through techniques that qualify as corporate finance.

The goal of analyzing an income statement is essentially to determine whether the story it tells is good, bad, or indifferent. To accomplish this objective, the analyst draws a few initial conclusions, then puts the income statement into context by comparing it with income statements of earlier periods, as well as statements of other companies. These steps are described in the section of this chapter titled "Making the Numbers Talk."

Simple techniques of analysis can extract a great deal of information from an income statement, but the quality of the information is no less a concern than the quantity. A conscientious analyst must determine how accurately the statement reflects the issuer's revenues, expenses, and earnings. This deeper level of scrutiny requires an awareness of imperfections in the accounting system that can distort economic reality.

The section titled "How Real Are the Numbers?" documents the indefatigability of issuers in devising novel gambits for exploiting these vulnerabilities. Analysts must be equally resourceful. In particular, students of financial statements must keep up with innovations in transforming rising stock values into revenues of dubious quality. Abuses in reporting supplementary, non-GAAP numbers frequently facilitate such chicanery.

MAKING THE NUMBERS TALK

By observing an income statement in its raw form, the reader can make several useful, albeit limited, observations. Jack in the Box's income statement for 2019 (Exhibit 3.1) shows, for example, that the company was profitable rather than unprofitable. The statement also provides some sense of the firm's cost structure. Cost of goods sold (COGS) was the largest component of total costs, at about nine times selling, general, and administrative expenses (SG&A). Depreciation and amortization, essentially a fixed expense in the short run, was a minor factor.

EXHIBIT 3.1 JACK IN THE BOX INC. INCOME STATEMENTS IN $ THOUSANDS

For Fiscal Year 2019 12 months	Jack in the Box Inc. (NASDAQ GS: JACK)
Sales/Revenue	**950,107**
Cost of goods sold (COGS) including D&A	660,438
COGS excluding D&A	605,257
Depreciation	55,081
Amortization of intangibles	100
Gross income	**289,669**
Gross profit margin	30%
SG&A expense	76,357
Research & development	–
Other SG&A	76,357
Unusual expense	21,456
Non-operating income/expense	(18,202)
Non-operating interest income	1,060
Interest expense	**58,942**
Pretax income	**115,772**
Pretax margin	0
Income tax – current domestic	19,925
Income tax – current foreign	–
Income tax – deferred domestic	4,100
Consolidated net income	91,747
Minority interest expense	–
Net income	**91,747**
Extraordinaries & discontinued operations	2,690
Discontinued operations	2,775
Net income after extraordinaries	94,437
Net income available to common	**94,522**
Basic shares outstanding	25,823
EBITDA	**268,493**
EBITDA margin	28%
Market capitalization	1,900,000
Market cap/EBITDA	**7.1**

Source: Barron's, Bloomberg, and author calculations.

Based on these observations, we can infer that Jack in the Box's profitability is highly sensitive to changes in the prices of materials and labor that are included in COGS. Companies generally have limited control over those costs. Management has more discretion with SG&A, but changes in that category have a proportionally smaller impact on profits.

The relative importance of the various cost components is largely a function of Jack in the Box's business, which consists of operating and franchising quick-service restaurants that offer burgers, breakfast sandwiches, and other items. Depreciation is a larger component of the income statements of heavy manufacturing companies that require huge production facilities (e.g., steel mills, automobile plants).

Jack in the Box's income statement is void in a category that is a significant cost item for many other companies – research and development (R&D). For pharmaceutical producers and companies that create and market electronics and computer software, R&D is generally a significant cost element.

Even within an industry, the breakdown of expenses can vary from company to company as a function of differing business models and financial policies. This is illustrated by Exhibit 3.2, which compares the income statements of Jack in the Box and two other restaurant chains, Shake Shack and Yum! Brands. To facilitate the comparison, the exhibit converts the components of the companies' income statements to percentages of revenues. Note that percentage breakdowns are also helpful for comparing a single company's performance with its results in previous years and for comparing two different companies on the basis of their effectiveness in controlling costs.

Despite being in the same general line of business, the three companies' business profiles differ in significant ways. Like Jack in the Box, Shake Shack emphasizes burgers in its menu, but the format of its restaurants is fast casual rather than fast food. Yum! Brands differs from the other two by operating under multiple fast food brands, namely KFC, Pizza Hut, and Taco Bell. Another important difference among the three companies is the percentage of restaurants that they franchise rather than operate directly. For Shake Shack it is 3 percent, for Jack in the Box 65 percent, and for Yum! Brands 98 percent.

The divergent levels of franchising contribute to the three restaurant companies'dissimilar cost structures. For chains that franchise high percentages of their restaurants, franchise fees constitute a large portion of revenues and items such as ingredients and labor represent comparatively small portions of their costs. Accordingly, COGS (excluding depreciation and amortization) ranges from a low of 46.76 percent at mostly franchising Yum! Brands to a high of 75.12 percent at Shake Shack, which relies the least on franchising among the three companies. The larger components of COGS at Shake Shack and Jack in the Box make their profit margins more sensitive than Yum! Brands's to increases in food and labor costs.

Differences in cost sensitivities among companies in the same industry can occur at a more micro level as well. For example, as the U.S. economy emerged from the COVID-19 pandemic in 2021, CEO

Dave Boennighausen maintained that Noodles & Co. would be less affected by potential rises in meat prices than some other restaurant chains. Wisconsin Mac & Cheese was among the favorites on its menu and recent additions focused on noodle items based on zucchini (Zoodles) and cauliflower (Caulifloodles)[1].

EXHIBIT 3.2 SHAKE SHACK INC., JACK IN THE BOX INC., AND YUM! BRANDS INC. INCOME STATEMENTS IN $ THOUSANDS

Income Statement in $ Thousands For fiscal year 2019 12 months	Shake Shack Inc. (NYSE: SHAK)		Jack in the Box Inc. (NASDAQ GS: JACK)		Yum! Brands Inc. (NYSE: YUM)	
Sales/Revenue	**594,519**	100.00%	**950,107**	100.00%	**5,597,000**	100.00%
Cost of goods sold (COGS) including D&A	487,311	81.97%	660,438	69.51%	2,783,000	49.72%
COGS excluding D&A	446,607	75.12%	605,257	63.70%	2,617,000	46.76%
Depreciation	40,392	6.79%	55,081	5.80%	114,000	2.04%
Amortization of intangibles	312	0.05%	100	0.01%	52,000	0.93%
Gross income	107,208	18.03%	289,669	30.49%	2,814,000	50.28%
Gross profit margin	18.03%		30.49%		50.28%	
SG&A expense	65,337	10.99%	76,357	8.04%	917,000	16.38%
Research & development	0		0		0	
Other SG&A	65,337	10.99%	76,357	8.04%	917,000	16.38%
Unusual expense	–194	–0.03%	21,456	2.26%	87,000	1.55%
Non-operating income/expense	(14,117)	–2.37%	(18,202)	–1.92%	58,000	1.04%
Non-operating interest income	0		1,060	0.11%	10,000	0.18%
Interest expense	434	0.07%	58,942	6.20%	501,000	8.95%
Pretax income	27,514	4.63%	115,772	12.19%	1,373,000	24.53%
Pretax margin	4.63%		12.19%		25%	
Income tax – current domestic	7,267	1.22%	19,925	2.10%	145,000	2.59%
Income tax – current foreign	2,183	0.37%	0		166,000	2.97%
Income tax – deferred domestic	(6,064)	–1.02%	4,100	0.43%	–19,000	–0.34%
Consolidated net income	24,128	4.06%	91,747	9.66%	1,294,000	23.12%
Minority interest expense	4,301	0.72%	0		0	
Net income	19,827	3.33%	91,747	9.66%	1,294,000	23.12%
Extraordinaries & discontinued operations	0		2,690	0.28%	0	
Discontinued operations	0		2,775	0.29%	0	
Net income after extraordinaries	19,827	3.33%	94,437	9.94%	1,294,000	23.12%
Net income available to common	19,827	3.33%	94,522	9.95%	1,294,000	23.12%
Basic shares outstanding	31,381	5.28%	25,823	2.72%	306,000	5.47%
EBITDA 1	82,575	13.89%	268,493	28.26%	2,059,000	36.79%
EBITDA margin	13.89%		28.26%	0		
Market capitalization	2,700,000		1,900,000		35,200,000	
Market cap/EBITDA	32.70		7.08		17.10	

Source: Barron's and author calculations.

Continuing with the data displayed in Exhibit 3.2, a comparatively small COGS cost component means that other costs, particularly SG&A, represent a larger portion of total costs and expenses. Yum! Brands, with the lowest COGS percentage, has the highest SG&A percentage, 16.38 percent, twice the level of Jack in the Box, at 8.04 percent. As noted, SG&A expenses may be more controllable than COGS during business downturns, conferring an advantage on companies with a higher concentration of the cost side of their business in SG&A.

Shake Shack stands out in the category of interest expense, which accounts for just 0.07 percent of its sales. That compares with 6.20 percent for Jack in the Box and 8.95 percent for Yum! Brands. With their greater reliance on debt financing, the latter two companies' profitability is more sensitive than Shake Shack's to fluctuations in interest rates.

Another factor that may give rise to differences in cost structures within an industry is the availability of **economies of scale**, as discussed later. Greater size does not invariably confer an advantage in profitability. In this particular comparison, however, pretax margin is highest on the company with the largest revenue (Yum! Brands) and lowest on the one with the smallest revenue (Shake Shack).

Costs as percentages of sales also vary among competitors within an industry for reasons other than differences in business models. Some companies operate more efficiently than others, generating more revenue from each dollar of expenditures. Where a company stands in its life cycle can also make a difference. A long-established restaurant chain can reach the point of saturating its market. A younger chain's profitability may be helped by not having to choose more marginal locations in order to maintain the pace of new store openings.

The variation in cost structures and profit margins that Jack in the Box, Shake Shack, and Yum! Brands exhibit within the restaurant business is paralleled in other industries. For example, some pharmaceutical manufacturers also produce and market medical devices, nonprescription health products, toiletries, and beauty aids. A more widely diversified manufacturer can be expected to have a higher percentage of product costs, as well as a lower percentage of research and development expenses, than industry peers that focus exclusively on prescription drugs. Analysts must take care not to mistake a difference that is actually a function of business strategy as evidence of inferior or superior management skills.

Segment reporting data in the notes to financial statements can provide a measure of insight into the underlying differentiators of profit margins among companies that tend to be grouped together. Unfortunately, companies have considerable discretion in defining their segments, resulting in a lack of standardization that often makes comparisons difficult. In such cases, an analyst must dig deeper for an understanding of the competitors' cost structures by obtaining as much information as their investor **relations officers** will divulge and drawing on industry sources.

HOW REAL ARE THE NUMBERS?

Many individuals are attracted to business careers not only by monetary rewards but also by the opportunity, lacking in many other professions, to be measured against an objective standard. The personal desire to improve the bottom line, that is, a company's net profit, challenges a businessperson in much the same way that an athlete is motivated by the quantifiable goal of

breaking a world record. The income statement is the stopwatch against which a company runs; net profit is the corporation's record of wins and losses for the season.

The analogy between business and athletics extends to the fact, which is apparent to any close observer, that superior skills and teamwork alone do not win championships. A baseball manager can intimidate the umpire by heatedly protesting a call on the base paths, hoping thereby to have the next close ruling go in his team's favor. A corporation has the power to fire its auditor and may use that power to influence accounting decisions that are matters of judgment rather than clear-cut reporting standards. A baseball team's front office can shorten the right-field fence in its home stadium to favor a lineup stocked with left-handed power hitters; a corporation's management can select the accounting method that shows its results in the most favorable light. Collectively, the team owners can urge the rules committee to move the pitching mound further back from the plate if they believe that a predictable increase in base hits and runs will boost attendance. Similarly, a group of corporations can try to block the introduction of new accounting standards that might reduce their reported earnings.

Attempts to alter the yardstick become most vigorous when the measure of achievement becomes more important to participants than the accuracy of the measure itself. Regrettably, this is often the case when corporations seek to motivate managers by linking their compensation to the attainment of specific financial goals. Executives whose bonuses rise in tandem with earnings per share have a strong incentive not only to generate bona fide earnings but also to use every lawful means of inflating the figures through accounting sleight of hand.

It would take many more pages than are allotted to this chapter to detail all the ways that companies can manipulate the accounting rules to inflate their earnings. Instead, the following examples should convey to the reader the thought process involved in this rule bending. Equipped with an understanding of how the rule benders think, users of financial statements will be able to detect other ruses they are sure to encounter.

Not All Sales Are Final

"Take care of the top line and the bottom line will take care of itself." So goes a business bromide that was popularized by Apple co-founder Steve Jobs. It underscores the importance of revenues (the top line) to net income (the bottom line). The point is that if a company wants to cure an earnings problem, it should concentrate on bringing in more sales.

Generally, this is sound advice, as long as the requisite sales are brought in by the sales force. Acompany can ultimately worsen its operating troubles if the financial staff makes up the shortfall in revenues through accounting gimmicks. Some revenue-inflating tricks are achievable within GAAP boundaries, while others clearly fall outside the law. They all produce similar ill effects, however. Enhancements to reported sales boost reported earnings without increasing cash flow commensurately.

Often, a company's earnings and cash flow diverge to an extent that becomes unsustainable. The eventual result is an abrupt adjustment to the financial statements of previous periods. In the process, earnings and cash flow come back into alignment, but management's credibility plummets. Even when no such shock occurs, the practice of pumping up revenues through *discretionary* accounting decisions represents a hazard for analysts. At a minimum, it reduces the comparability of a company's financial statements from one period to the next.

Additional Reasons to Be Skeptical about Revenues

Unfortunately for analysts, companies do not always spell out in the notes to financial statements the means by which they have artificially inflated their revenues. A company might lower the credit standards it applies to prospective customers without simultaneously raising the percentage of reserves it establishes for losses on receivables. The result would be a rise in both revenues and earnings in the current period, with the corresponding increase in credit losses not becoming apparent until a later period. Alternatively, a manufacturer may institute short-term discounts that encourage its dealers or wholesalers to place orders earlier than they otherwise would. In this case, sales and earnings will be higher in the current quarter than they would be in the absence of the incentives, but the difference will represent merely a shifting of revenues from a later to an earlier period. Analysts will face disappointment if they extrapolate from the inflated quarterly data to project future revenues.

Although the current-period income statement may offer no clues that these gambits have been used, several techniques can help the analyst detect artificial expansion of revenues. On a retrospective basis, a surge in credit losses or an unexpected shortfall in revenues may indicate that revenues were inflated in an earlier period with the techniques described in the preceding paragraph. (Hindsight of this kind is not without value; an analyst who finds a historical pattern of hyperbolized sales at a company will be appropriately skeptical about future income statements of that company looking surprisingly strong.) On a current basis, analysts should take notice if a company posts a substantially greater sales increase than its competitors. If discussions with the company and other industry sources fail to elicit a satisfactory explanation (such as the introduction of a successful new product), artificial methods may be the root of the matter. Industry sources can also provide direct testimony about tactics being used to shift revenues from future periods to the present.

Unusual Items

To most individuals who examine a company's income statement, the document is less important for what it tells about the past than for what it implies about future years$_2$. Last year's earnings, for example, have no direct impact on a company's stock price, which represents a discounting of a future stream of earnings (see Chapter 1 of course 21807B). An equity investor is therefore interested in a company's prior-year income statement primarily as a basis for forecasting future earnings.