Income and Its Management

To each participating agent, the firm is a source of income. Agents participate if they expect the return on their contribution to the firm to exceed what they can get elsewhere. A measure of income from the firm can be defined for each factor input. Use of the term income in this broad sense is not new. Wage income, personal service income, interest income, and income from the sale of goods and services are standard business terms.

A well-known definition of income is:

The purpose of income calculation in practical affairs is to give people an indication of the amount they can consume without impoverishing themselves. Following out this idea, it would seem that we ought to define a man’s income as the maximum value that he can consume during a week and still expect to be as well off at the end of the week as he was at the beginning.\(^1\)

Agents estimate returns on their respective contributions and observe the actual returns. When used without qualification, income has a more restrictive meaning in accounting, referring to shareholders’ income. Of all the incomes that accrue to various agents in the firm, what is so special about the income that accrues to the shareholders?

First, the shareholders are entitled to the resources left after the entitlements of all other agents are paid or set aside. In contrast, the entitlement of every other factor of production (with the partial exception of management) is defined independently of the entitlements of the other agents. What they receive is either a direct function of their contribution (e.g., vendors, hourly workers) or a constant (salaried staff). Defining one of the entitlements as the residual is necessary. When a pie is divided into \(n\) portions, the size of only \((n-1)\) portions can be independently defined. The size of the \(n\)th portion is defined by the size of the first \((n-1)\). Income allotted to equity capital is the \(n\)th portion.
Second, the resource entitlements of all agents other than shareholders are transferred to them according to a contractually specified schedule. Disbursements for payroll, bonuses, interest, taxes, accounts payable, and so on are arranged by the firm’s treasurer to meet various contractual deadlines. Shipments of goods and delivery of services to customers are arranged according to agreed-upon schedules. Few such payments are deferred beyond a few weeks or months.

In contrast, the wealth that accrues to shareholders is not routinely transferred to them. Only a part of this entitlement is distributed as dividends, and the balance is retained in the firm for reinvestment, thus increasing the agent’s commitment of equity capital to the firm. Shareholders, being a diffuse body, cannot directly control the decision about how much of their total accrued entitlement—income—should be taken out of the firm in the form of dividends. The rights issue is a mechanism whereby they could make this decision themselves. The firm could mail out dividend checks in an amount equal to income along with a form that shareholders could use to exercise their rights. Each shareholder could return to the firm an amount he or she wishes to reinvest. However, the U.S. tax law penalizes such a procedure by making the entire dividend immediately taxable. Therefore, the top managers and the board of directors of the firm make the dividend decision, subject to the constraints imposed by debt and other covenants.

Third, income to equity capital cannot be measured as accurately and reliably as income to other factors of production. While the former is easily defined as the resource residual, measuring it in units of money presents severe problems. Modern industrial corporations do not liquidate their assets and hand over the residual to the shareholders at the end of each reporting period. Equity investment—initial commitment plus cumulative amounts retained from periodic income—is carried over from period to period, mostly in the form of physical, human, and reputation capital. Markets for such forms of capital are far from perfect or complete. Therefore, the monetary valuation of physical capital is not unique. It depends both on the assumptions made about the future operation of the contracts that constitute the firm and on the agent whose judgments about the future are relied upon in arriving at valuation. This fundamental indeterminacy in valuation and measurement of periodic income to the shareholders, combined with the managers’ responsibility to carry out this measurement, gives rise to the problem of, and opportunity for, income management.

The managers’ entitlement depends partly on the income to the shareholders because the managers’ input cannot be measured directly. This arrangement may induce managers to use their discretionary powers to manage income in a way that enhances their personal welfare. Managers operate the firm and its accounting and control, but their judgment in resolving the uncertainties of valuation is biased.

Independent audits are used to constrain the managers’ tendency to manage income. How much damage income management does to the shareholders is a matter of some debate. In any case, the cost of audits makes total elimination of income management uneconomical. As a consequence, monetary representation
of income to shareholders is less accurate and reliable than is the case with income of other agents. In this chapter we discuss the functions of income in a firm, the attitudes of various agents to this measure, and its management.

Law of Conservation of Income

The total lifetime income of a firm is invariant to the changes in accounting methods for the purpose of financial reporting. As long as these changes have no cash-flow effects (e.g., tax implications), changes in accounting methods shift income from one period to another without altering the total that will be recognized over the lifetime of the firm. This Law of Conservation of Income always holds as long as income is calculated using a clean surplus rule: All changes in owners’ equity, except the transactions with the shareholders themselves, must pass through the income statement.

Since accounting income is measured without subtracting the cost of equity capital, this conservation law holds for undiscounted income. Perhaps it is better to call this the Law of Conservation of Undiscounted Accounting Income. It is easily modified to discounted form by subtracting the cost of the book value of the equity capital from accounting income to get the residual income. This calculation yields the Law of Conservation of Discounted Residual Income.

The lifetime sum of accounting income, as well as the discounted sum of residual income, are invariant to accounting methods. Both forms of the Law of Conservation of Income are derived from accounting identities. There is nothing true or false about them, as long as we assume no cash-flow consequences and the clean surplus definition of income.

Functions of Income in a Firm

Both the process and the outcome of income measurement play an important role in operating the firm. Income itself measures the entitlement of the shareholders. The processes by which the entitlement of the government and the managers are determined depend on the process of measuring income to the shareholders. Because of its residual nature, income carries valuable clues about the continued viability of the firm. Agents use these clues to plan their own future and to renegotiate their contracts.

Assessing Viability of the Firm

Shareholder income, being a residual statistic, contains valuable information about the continued viability of the firm under its current policies and contracts. Low income (in relation to the equity input) could be the result of poor management, contracts unfavorable to the shareholders, or bad luck. Whatever the reason, poor income unambiguously informs all agents that the firm cannot survive in its
current state. If all agents agree that low income resulted from transient bad luck, it is seen as part of the risk borne by the shareholders. Everyone waits for another period and another turn of chance. If poor management or contracts that are disadvantageous for the shareholders are to blame for the low income, all agents are immediately put on notice that the firm will have to be dissolved unless these causes are repaired.

Shareholders have no reason to continue to participate in the firm if the expected returns on their investment are negative. If the firm is reorganized, all contracts are renegotiated. If the firm is liquidated, participants must look elsewhere for employment of their resources. The firm's income helps participants plan by predicting the demand for their contributions. No other accounting statistic carries information so vital to so many different agents.

Managerial Evaluation and Contract Renegotiation

If they believe that the cause of low income is not transient, shareholders press to renegotiate the contracts with managers, labor, vendors, customers, the government, and so on. All negotiations are conducted under an implicit threat of withdrawal by each agent. Credibility of these threats depends on the information that other agents have about alternative employment opportunities of each resource and the related transaction costs. A worker whose transferable skills are in high demand elsewhere can hardly be intimidated into making concessions by the threat of being laid off. The workers will simply find another job rather than agree to a lower wage. If the physical capital of the firm does not have an alternative use, the shareholders as a group, when faced with small, but positive income, have little flexibility. They continue to operate the firm, perhaps searching for better managers at the same time. If, on the other hand, income is negative, they can make credible threats to walk out or to dissolve the firm, even if the firm's physical capital has no alternative use. Wage concessions made by unions in the U.S. auto and steel industries in the early eighties are examples of this phenomenon. Pan American World Airways is an example of the failure of such negotiations and the resulting dissolution of the firm.

If income is higher than what the shareholders as a group could earn on alternative uses of the firm's physical capital, there is pressure on the shareholders to share some of the rents with the agents who supply other factors of production. Managers, labor, suppliers, and customers all seek to improve their share of the pie. Their ability to do so depends on the elasticity of supply of the respective resources. Income plays an important role in contract renegotiation among agents.

Attitudes of Agents Toward Income

The attitudes of various types of agents toward income vary, depending on how income affects their interests. We shall confine our discussion to shareholders and managers.
Shareholders

Income measured in units of money is an estimate of the shareholders' periodic entitlement from the firm; it is not the entitlement itself. The shareholders' stake in the firm, and changes in this stake, exist in the form of physical capital. For example, if the firm starts a period with five oranges and ten apples, and ends the period with six oranges and eight apples, its income for the period is one orange minus two apples. Translation of this physical-capital income into units of money could be labeled as first-best valuation if it were carried out by the proprietor or shareholder of the firm for his or her own information. Even this valuation is not without ambiguity. Changes in relative and nominal prices, and errors in measuring prices, cause errors in valuation.²

As much as shareholders would prefer to have income reported to them by the first-best valuation, there is no practical way of accomplishing this. Shareholders must depend on hired managers to translate physical capital income into units of money. Managers have their own interests to look after, and the luxury of forcing managers to report income by the first-best mapping is either not available to the shareholders of large corporations or is not worth the cost. Knowing this imperfection, shareholders do not mistake the income reported to them as the product of first-best valuation. Reported income is a noisy indicator of investors' resource entitlements. The contractual definition of income is in the form of physical capital. The imperfect monetary measure is produced only because the principal cannot be directly observed and conveniently reported.

For the purpose of making short-term trading decisions, individual investors use income as well as other sources of information. They get some direct information from the financial press, while the market process itself is an important source of indirect information. In Chapter 7 we discuss the attitude of equity investors toward accounting and control in the context of the stock market.

Managers

Following Berle and Means, Gordon suggested that managers can be expected to choose and operate an accounting system in a way that enhances their welfare.³ The welfare of managers increases with job security, job level, compensation, and firm size, and each of these is directly or indirectly linked to higher corporate income. Further, if managers dislike risk, they attain a greater satisfaction when income is smoothed over reporting periods. Therefore, managers can be expected to resist reporting abrupt changes in income.

Consider a manager who is pouring over the preliminary financial statements near the end of the fiscal year and who knows the past income, dividends, sales, gross margins, and so on, as well as the projections of the future values of these variables. The uncertainty of future income and other variables increases with the projection interval. The manager may expect his or her own term of employment with the firm or tenure in his or her current position to be shorter than the planning horizon of the firm.
The manager has an approximate idea of how the board of directors evaluate him or her. If the manager receives a bonus—for example, a percentage of income when income exceeds a specified level—he or she could benefit by maximizing the firm’s income. Since money earns interest, the manager prefers to receive a bonus earlier rather than later. The manager risks losing his or her job if income drops, unless some satisfactory explanation—an industry-wide drop in demand, for example—can be found to appease the shareholders and the board of directors. Income reported in the subsequent years may yield scant benefits to the fired manager, even if it is the result of his or her foresight and labor. If the manager’s bonus is capped (cannot exceed some specified level), he or she may hide some income in good years and report it in leaner times. If the manager does not earn a bonus unless the income exceeds some minimum level, he or she may dump extra expenses into years that have poor results. In the 1990s, many U.S. firms have reported massive restructuring charges, setting up high earnings growth for subsequent years.

The manager may own stock, stock options, or warrants of the firm. This ownership gives the manager a beneficial interest in the market price of the firm’s shares. In addition, evaluation of the manager’s own performance may depend partly on the price of these securities. The manager may be interested not only in the current but also in the longer-term price of the firm’s stock because his or her contract may not permit selling the stock or exercising stock options until a specified date.

Expectations of future dividends determine the value of stock for the long-term shareholders. However, for the shorter-term shareholders, the value derives only partly from the expectation of dividends. The rest of the value is based on their expectation of what others might be willing to pay for the stock at some time within their short decision horizon. In turn, what others might be willing to pay depends on their expectation of dividends and of what someone else might be willing to pay them for the stock. Thus, the current value of stock depends on the current shareholders’ expectations of dividends, as well as on their expectations of the expectations of others. Keynes described the process of stock market valuation as follows:

Professional investment may be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole; so that each competitor has to pick, not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is not a case of choosing those which, to the best of one’s judgment, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average
opinion to be. And there are some, I believe, who practise the fourth, fifth and higher degrees.\textsuperscript{4}

Unfortunately, expectations of one person about the expectations of another are not necessarily accurate. Managers know that people form their expectations about the future on the basis of past experience, of which past and current financial statements are an important part. The managers’ desires to smooth the income stream arise not only from personal considerations postulated by Gordon,\textsuperscript{5} but also from the role of income in forming of the expectations of other participating and potential agents. A variable income stream generates volatile investor expectations about the firm’s future. Volatility is compounded when some investors believe that other investors do not fully understand the import of the data on hand and conclude that the price others would be willing to pay for the stock at some future time would be too high or too low compared to what they themselves would consider appropriate. Wealth constraints and the high costs of short-sale transactions prevent these differentials from being completely eliminated through arbitrage.

Low or negative income carries the possibility that the firm’s contract set will be dissolved and all agents will be forced to incur the transaction costs of finding alternative employment for their resources. The manager’s job and, therefore, a large chunk of the manager’s human capital in the form of reputation, may be ir-retrievably lost on the downswing of a volatile income stream. Since the loss of the job can be an absorbing state (one that the manager cannot recover from), the manager has reason to prefer a smooth income series.

Unfortunately, from the managers’ standpoint, there are limits on freedom to reduce the variability of the firm’s income. Managers cannot iron out kinks in income already reported; their actions can only affect future reports. Altering production-investment decisions from their optimum levels has real cash-flow consequences for the firm. If the tax consequences of accounting choices alter the lifetime income of the firm, such decisions are best regarded as investment decisions. The effects of income shifts are usually spread over a number of future reporting periods, and managers can only estimate their pattern.

Managers cannot choose accounting methods at will. There is only a limited amount of flexibility in the accounting treatment of transactions, and they may have to obtain the consent of auditors to make a switch. Even if the auditors consent, any effect of accounting treatment on the current income will reverse in a later reporting period. Recall that the Law of Conservation of Undiscounted Accounting Income states that various accounting methods only shift income between the current and future reporting periods without altering the firm’s total income over its lifetime. Feltham and Ohlson transform it into the Law of Conservation of Discounted Residual Income: the discounted current value of the residual income (accounting income–cost of equity capital) is insensitive to alternative accounting treatments.\textsuperscript{6}

Managers are not certain about future results obtained in the absence of a smoothing decision. Furthermore, the firm’s future income is uncertain, and man-
Managers do not know if the effect of current smoothing actions on the future income will actually increase the volatility of the income stream. They cannot sit down with a graph of the firm's income stream for the next ten years and iron out the peaks and valleys.

To make the earnings record look smooth, a manager could consider several types of actions, though none guarantee the intended effect. First, the manager could try to make the current income equal to last year's, possibly with some growth factored in. (But what if the last year's income was much lower than the previous year's income?) Second, the manager could try to make the current income closer to the average or weighted average for the past few years. (But what if next year's income is likely to be much lower than the current income? Would it be better to lower the expectations of next year's income gradually by lowering the current income to a certain extent, so next year's drop does not appear to be too steep?) The manager will have to make some assumptions about how far into the past the investors look at the accounting data and how far into the future the financial analysts probe in forming their expectations about the future. This process, unfortunately, is poorly understood.

**Determination of Entitlements**

Income measures the entitlement of the shareholders and helps determine the entitlement of the top managers. In addition, income-like measures, devised to determine the entitlements of the middle- and lower-level managers, play a crucial role in the control systems of firms.

Corporate net income is a weak motivating device for individual middle-level managers because their contribution to the overall income of the firm is small. For each middle manager, top managers devise an income-like measure to which compensation is linked. Each division of the firm can be thought of as a subfirm. The boss of the division head occupies the position of the sole shareholder and creditors in this subfirm. This single "owner" can exercise close control over how divisional income is measured.

Managers of relatively large divisions of the firm might be evaluated as investment, profit, and cost centers, depending on the extent to which they make resource contracts on their own. For example, when division managers make their own capital decisions, income of their units is measured in relation to the funds invested in them. If capital decisions are outside their control, but they control product market and other factor decisions, the units might be treated as a profit center. Absence of control over product market transactions may result in cost centers, where the cost of a given output becomes a negative measure of income for evaluation of the unit. Smaller units in an organization may have income-like measures specified in physical units.

Divisional income streams are aggregated to arrive at a corporate figure after elimination of double counting due to interdivisional transactions. Corporate in-
come is the rope whose strands are threaded through the performance evaluation and control system at all managerial levels of the firm. The income number is the culmination of this managerial control process. The process of measuring at all levels is as important for the smooth operation of the firm’s contracts as is the final number it produces. Although the chief executive officer wants broad discretion in the selection of accounting methods to determine the corporate income, the CEO might be reluctant to grant similar discretion to the divisional managers.

The government’s share, in the form of income, excise, sales, value added, and property taxes, is also determined on the basis of the accounting system. Income plays a role only in determining income taxes, and the criteria for reporting revenue and expense for tax purposes are often different from the criteria used for financial reporting. This raises an interesting question: What is the economic explanation for these differences? The government, like the shareholders, has a residual interest in most firms. Indeed, it is often the largest single holder of such an interest. However, unlike the shareholders, the government does not make a precommitment of resources to the firm. These and other aspects of government involvement in accounting systems are discussed in Chapter 12.

A common system of accounting records and transactions analysis underlies the accounting for tax reporting as well as financial reporting. Most of their differences arise at higher levels of aggregation. This common system obviates the additional cost of maintaining and auditing a separate set of basic accounting records for each purpose.

Management of Income

The “first-best” mapping of physical resource income into dollars is rarely observed because the contractual system of the firm induces managers to depart from this neutral reporting. Furthermore, investors and other agents, expecting managers to engage in manipulation, would not necessarily accept the income reported as the result of such “first-best” mapping. Our understanding of how humans form expectations about natural events, the actions of others, and the expectations of others is still quite primitive. This weakness has frustrated many efforts to gain insights into the management of income by managers.

What do we understand by smoothness and smoothing of income? Managers’ attempts to smooth income do not necessarily yield a statistically smoother time series. Indeed, such efforts can yield the opposite effect. In the following discussion we refer to corporate income, but most of it is equally applicable to income-like measures used at any level of managerial hierarchy.

Statistical Measures of Smoothness

There are many ways of measuring the smoothness of income series. Variability (about a constant mean, about a trend line, or about an exponentially smoothed
mean) is a frequently used inverse measure of smoothness. First- and higher-order serial correlations provide another class of smoothness measures. The predictability of series from past data is the third class of measures.

The appeal of these measures is largely intuitive. Series that take extreme values can be said to be smooth in some well-specified sense. However, it is easy to construct counter-examples so that the statistics violate the intuition. For example, if series with low variability around a constant mean are to be regarded as smooth, a process that strictly follows a steep upward linear trend is less smooth than a constant mean process with a small independent error term (see Figure 5.1). The predictability of a series depends on the prediction model used and on the number of degrees of freedom one is willing to sacrifice in identifying the process from past data.

**Income Processes: Smoothness versus Smoothing**

Attempts to smooth time series of income are not always successful. The annual income of firms includes a significant random walk component. In a random walk, current observation is the best bet for predicting the next observation. In such cases, manipulating the current observation to bring it closer to the preceding observation also increases the expected difference between the current and the following observation. So smoothing in the current period can be attained only by increasing the chance of a bigger change in the next period. It is in this sense that income smoothing and the so-called “big bath” are two sides of the same coin. We return to the big bath in the next section.

A manager can smooth income only one observation at a time, and cannot go back and change the past income already in the public domain. This restriction, combined with the random walk component of income and the Law of Conservation of Undiscounted Accounting Income, can cause a paradoxical situation. Managers may smooth income every period, and yet the smoothed time series so generated may be less smooth than the original series would have been.

**Income Smoothing versus the “Big Bath” Hypotheses**

The discretionary treatment of accounting items to decrease income in an otherwise poor year is called a big bath or housecleaning. What motives may sustain such behavior? Manager may believe that one very poor performance report is not as harmful as several mildly poor performance reports. Taking a big bath creates the opposite effect on subsequent performance reports. In January 1996, The Wall Street Journal reported that U.S. corporations were taking a big bath under the label of “restructuring charges” in order to set up healthy earnings growth in subsequent years.

Several favorable performance reports could follow a big bath and more than compensate for its initial negative effect. Managers can choose the timing of the big bath so that it can be blamed on a poor year for the industry as a whole or on some disaster for the individual firm. The big bath can then readily be explained
to outsiders as a consequence of factors outside management’s control. The installation of a new management team is an attractive time to take the big bath, so that it can be blamed on the outgoing management. Finally, if the managerial compensation consists of a flat salary plus a nonnegative bonus based on the income of the firm, the manager can increase total compensation by loading the expenses into a single year when the firm’s income is below the point that entitles the manager to a bonus. In other words, the convexity of the compensation schedule induces the big bath.

Income smoothing and the big bath complement each other in one sense, and contradict in another. If the raw, unsmoothed income follows a random walk, the variance of the cumulative sum of smoothing adjustments increases over time, and the probability that this adjustment will exceed the bounds of accounting discretion also increases with time. When the breaking point is reached, managers are forced to get back to the original path of the random walk by taking a big bath. In this sense, income smoothing of the random walk causes occasional big baths. A big bath is frequently accompanied by a change in management and the smoothing–big-bath cycle may repeat itself. Management may present smooth,
moderately rising income for the years between the big baths. Thus, the smoothing motive is implicit in the big bath action, and the big bath is the likely consequence of smoothing in a random walk environment.

Management takes a big bath when it can avoid being blamed for it, thus excluding the loss of welfare involved in the large negative deviation and capturing the gain in welfare due to smaller period-to-period variations. If management can avoid the blame by appropriately timing the big bath, it can increase its welfare by the judicious use of smoothing and housecleaning actions within the framework of a broader policy of income management. If the tenure of a management team lasts the length of the interval between consecutive big bath actions, the loss of welfare caused by it is not imposed on the incoming management. From the point of view of the incoming management, it is best to clean house immediately after taking charge.

**Instruments of Income Management**

Instruments of income management can be divided into five classes: discretionary accounting treatment of transactions, selection of accounting principles, adjustment of accounting estimates, transfer prices, and substantive economic decisions. Let us look at each of these classes.

The accounting treatment of certain transactions, such as the repair and overhaul of equipment, the timing of recording a sale, and the write-down of inventories and equipment, is chosen by management. An outside observer cannot readily detect when such discretion is used with the intention to manage income.

Generally accepted accounting principles allow many transactions to be given one of two or more alternative accounting treatments. For example, choices can be made in accounting for inventory (LIFO, FIFO, average cost), depreciation (straight-line, accelerated), oil and gas exploration costs (full cost and successful efforts), and long-term contracts (completed-contract, percentage-of-completion). The initial choices and the changes in accounting principles are observable to outsiders. Most of the empirical work on income management concerns this type of instrument. However, as we have already discussed, accounting principles are not flexible instruments for income management: They cannot be put to repeated use, and the income shift effected through accounting methods tends to catch up with the manager over time.

Adjusting accounting estimates gives more flexibility to management. The allowance for bad debt, the economic life for depreciation, and the discount rate for pension obligations are some of the traditional instruments managers have used for many years. Massive restructuring charges, a relatively recent phenomena, also fall into this category for now, although they deserve a category of their own.

Firms that operate in multiple tax jurisdictions subject to progressive taxation have reason not only to transfer income from high-tax to low-tax jurisdictions, but also to smooth income within each tax jurisdiction. Transfer prices for goods and
services exchanges among the subsidiaries of the firm provide an attractive instrument for this purpose.

Substantive economic decisions such as advertising, cash payments to pension plans, executive compensation, research and development, acquisition and divestiture of business segments, and the sale of property or investments may be motivated by considerations of their effects on short-run income. To find out whether and to what extent these decisions are affected by considerations of managing income, the "normal" decision of each type must be explicitly modeled and compared to the data. The difficulty of such modeling has been a major obstacle to obtaining unambiguous evidence on hypotheses about income management.

Although most individual research studies focus on only one or two of these instruments of income management, firms use many of these instruments at once. For example, most publicly held corporations in Japan work under the "main bank" system, in which they maintain a close relationship with their bank. These banks not only lend to highly leverage the firm, but also may hold substantial equity in the firm. They not only influence the dividend policy of their clients, but they also limit their discretionary decisions to manage their earnings through real transactions or accounting changes.⁹

**Summary of Empirical Findings**

The results of empirical investigation into income management have been weak and often inconsistent. A sampling of this literature is summarized below.

1. Gordon, Horwitz, and Myers examined the income series of the U.S. Steel Corp., using an exponential smoothing model, and concluded that the firm did not use the investment tax credit accounting as an instrument to smooth income.°

2. Archibald, Copeland, Copeland and Licastro, and White did not find evidence of income-smoothing.¹¹

3. Cushing examined 666 instances of reported accounting changes for the period 1955–66 and found that material changes in accounting principles tended to smooth earnings.¹²

4. Dascher and Malcom found that discretionary smoothing variables were used in the chemical industry.¹³

5. Beidlerman examined five variables and found that compensation, pension, research and development, and sales and advertising expenses are used as smoothing variables. Earnings remitted from the subsidiaries and plant retirements were not used in this manner.¹⁴

6. Moore found that management changes often coincided with income-reducing discretionary accounting decisions.¹⁵

7. Horwitz and Kolodny found that smaller companies tended to reduce their research and development outlays in response to FASB Statement No. 2, which
requires immediate expensing of such amounts. Dukes, Dyckman, and Elliot found no evidence of such reaction among larger firms.

8. Haselkorn found that the issuance of APB Opinion No. 8, specifying rules for expensing of pension costs, did not reduce the variability of pension expense.

9. Sunder found no difference between short-run income response to new investments by the manager- and owner-run firms.

10. Liberty and Zimmerman examined whether firms deliberately depressed reported income when labor negotiations were on-going and did not find evidence supporting this hypothesis. (See also DeAngelo and DeAngelo.)

11. DeAngelo provided evidence that dissident shareholders take an immediate “bath” following a proxy contest to lay blame on prior management.

12. DeAngelo examined whether managers systematically understated income prior to a management buyout. Evidence was not supportive.


15. Cahan offered evidence that managers responded to antitrust investigations by adjusting their discretionary accruals.

16. Pourciau provided evidence that when there are nonroutine executive changes, incoming executives managed accruals in a way that reduced income in the year of the change and increased income in the following year.

On the whole, evidence in favor of the income-smoothing hypothesis is weak and inconsistent. This is not surprising, for four reasons.

1. Data are lacking to test a hypothesis about the relationship between two unobservables—raw or premanagement income and the managed component. Their surrogates, obtained mostly from their observable sum (the reported income) are not reliable enough.

2. Managers use many instruments (e.g., accounting methods, accounting estimates, production–investment–sales transactions, transfer pricing, tax planning) to manage income. Virtually all empirical studies of income management focus on one instrument, or type of instrument at a time.

3. As we have argued, income smoothing and the “big bath” are two sides of the same coin of income management, and we should expect them to coexist. Smoothing is too narrow an interpretation of income management.

4. If managers left obvious tracks of their income management activity in publicly available data, their contracts would be modified to discourage them from doing so. It is not surprising that they cover their tracks reasonably well.
Summary

Income to shareholders, being a residual, carries information valuable to all agents who participate in a firm or have an interest in doing so. Besides defining the entitlement of the shareholders, income to shareholders is often used to motivate managers by making their compensation dependent on it. This income also carries valuable clues to the future viability of the contract set and, therefore, plays an important role in agents’ planning and renegotiation of the contracts.

Managers have special access to information about income and seek to manage income using instruments such as discretionary accounting treatment of transactions, choice of accounting principles, and substantive economic decisions. The use of substantive economic decisions to manage income helps to make the relationship between accounting and economic reality a reflexive one. When considerations of the appearance of accounting reports influence the objects that are reported upon, the reporting system can no longer be evaluated in terms of its representational faithfulness to those objects.

The smoothing and big bath hypotheses of accounting have received much attention from researchers. A premise of these efforts is that the income actually reported by firms gets corrupted by the self-serving actions of managers and, if we could define and identify this corruption, we could arrive at a more representationally faithful approximation of “economic income.” The meaning and significance of representational faithfulness are doubtful in view of a reflexive relationship between accounting and its environment.

The contract model of the firm suggests that accounting is a system for producing mutually observable data for the purpose of settling exchanges and conflicts. Perhaps we could assess the value of alternative definitions of accounting income by focusing on how efficiently each measure serves that function, and not worry about its representational faithfulness per se to economic or any other concepts, especially if the latter are not defined in operational terms.

Notes


Additional Reading


