

# On the conceptual foundations of financial reporting

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**Abstract:** Standard setters advocate a balance sheet approach to financial reporting, which views assets and liabilities as primary, and income as just the change in net assets. This paper argues that income is conceptually and practically better described as “adjusted net cash flows,” where the adjustments are the accounting accruals. One proof of that is seen in the existence of whole accounting systems like tax accounting and NIPA accounting, which emphasize the determination of income but have no balance sheets. Another comes from the observation that income drives changes in net assets, and not the other way around. The paper also argues that an income-based approach to financial reporting is better suited to reflect the success of advancing cash to earn more cash, which *defines* what for-profit entities do. There are two main features of the income-based approach. One is attention on the cash flows as the natural foundation for financial reporting because they are precisely determined, and provide a clear link to firm valuation. The other is attention on the accounting accruals, which serve to adjust the raw cash flows to better show the current success of investing cash to ultimately earn more cash. Specifically, it argues for revenue recognition which is close to current practice, and for expense recognition which is aligned with the matching principle.

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## **On the conceptual foundations of financial reporting**

### *Introduction*

Conceptual foundations matter because they organize and drive the more specific rules that govern financial reporting, especially over long horizons. The search for a formal conceptual framework is a relatively recent development, mainly through the effort of U.S. and international standard setters during the last 40 years. Standard setters have championed a balance sheet approach to financial accounting, which emphasizes the valuation of assets and liabilities as primary, and views income as the derivative change in net assets (Bullen and Crook 2005).

This study argues for a renewed emphasis on an income-based model of financial reporting. Investors, analysts, and managers view income as the most important accounting number, and so it makes sense to have the most important number as the organizing force of how to do the accounting. It also argues that income is better described as “adjusted cash flows”, where the adjustments are the accruals. This point is readily seen from the existence of whole accounting systems like tax accounting and NIPA accounting, which emphasize income but have little recourse to balance sheet concepts and measurements.

There are two defining features of the income-based model. One is anchoring on the cash flows as the bedrock facts of business performance, where cash flows are both the starting point and the final check on reported income. The other one is attention on the accruals as devices that solve timing and mismatching problems in the cash flows by moving the recognition of cash flows into income across reporting periods. For revenues, that means recognition when cash flows are relatively certain, and goods or services have been delivered, which is close to current practice. For expenses, the study advocates for the primacy of the matching principle, which is

the accounting reflection of the cost-benefit considerations that pervade every business decision. Ultimately, accounting has to reflect the success of investing cash to earn more cash, which is what businesses do, and is at the heart of income accounting.

### *Background and observations on the current conceptual model*

I start with a brief timeline of existing standard-setting efforts on the conceptual foundations of accounting, with an emphasis on recent events.<sup>1</sup> The FASB succeeded earlier and less-structured standard setting efforts in the U.S. in the 1970's, and from early on placed great emphasis on the importance of conceptual foundations. Concept Statements 1-6 were issued over the years 1978 to 1985, with Concept Statement 7 added in year 2000.<sup>2</sup> In 2004, the FASB and the IASB started work on a joint conceptual framework, and in year 2010 they issued two chapters as part of Concept Statement 8 "Conceptual Framework for Financial Reporting," with the expectation of more chapters further down the road. But the FASB and the IASB suspended work on the joint conceptual framework later in that year. Eventually, the IASB resumed work on the conceptual framework on its own in 2012, and issued an Exposure Draft in 2015, projecting a finalized version in 2016. The FASB also resumed separate deliberations in 2014 but with no clear timetable for further progress or completion. For brevity, this study mostly refers to the FASB experience in standard setting, with limited references to the IASB side, where warranted. In any case, the positions of the FASB and the IASB are reasonably similar for the topics investigated here.

While it is difficult to draw strong generalizations over this expansive and evolving material, it is fair to say that both the FASB and the IASB favor a "balance sheet" approach in

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<sup>1</sup> The interested reader is referred to Storey and Storey (1998) and Camfferman and Zeff (2007) for a much more complete history on the U.S. GAAP and the IAS/IFRS side, respectively.

<sup>2</sup> Concept Statements 1-3 have been superseded by later statements.

their conceptual foundations, which views the firm primarily through the prism of accounting for its assets and liabilities (Storey and Storey 1998, Bullen and Crook 2005). The essence of the balance sheet approach is captured in the familiar expression:

$$\text{Assets} = \text{Liabilities} + \text{Owners Equity} \quad (1)$$

The focus in the balance sheet approach is on the correct determination of the value of the assets and liabilities, with other relevant measures following suit. Equity value at a point in time is equal to the excess of assets over liabilities (or net assets), and earnings for a given period is equal to the change in net assets. Specifically, the preferred measure of earnings for the FASB is defined as:

*Comprehensive income is the change in equity of a business enterprise during a period from transactions and other events and circumstances from nonowner sources.*<sup>3</sup> SFAC No.6

The emphasis on the balance sheet approach in standard setting has been strengthened over time. The earliest Statement of Financial Concepts No.1 (SFAC 1) staked a clear priority for earnings information:

*The primary focus of financial reporting is information about an enterprise's performance provided by measures of earnings and its components. Investors, creditors, and others who are concerned with assessing the prospects for enterprise net cash inflows are especially interested in that information.*

Later revisions eliminated this position. First, the term “earnings” was replaced by “comprehensive income”, which is not just nomenclature.<sup>4</sup> Most importantly, SFAC 8 clearly

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<sup>3</sup> FASB Statement of Financial Accounting Concepts No. 6, Elements of Financial Statements, here and hereafter SFAC No. 6.

<sup>4</sup> Earnings results from the primary, ongoing operations of the firms, and comprehensive income is essentially earnings plus various revisions in asset values. Thus, shifting the emphasis to comprehensive income is

backs away from the importance of earnings information, now listing it at the same level as asset information. Tellingly, SFAC 8 does not even use the terms “earnings” and “income,” instead using the label “changes in economic resources and claims.” In other words, earnings are now merely the change in net assets, and even warrant no separate term for their existence.

Some sense of history helps to explain the origins and driving forces of this evolution. A review of relevant sources leaves little doubt that at the very dawn of FASB’s life, standard setters felt an acute conceptual tension between the income-based and the assets-based views of financial reporting (Storey and Storey 1998). They also felt that it would be difficult to make lasting progress without a clear decision between these two alternatives. At the time, it was far from certain which side would prevail. The income-based perspective had widespread support in the practitioner community, for example, with practitioner responses favoring it over the balance sheet approach by a margin of 11:1 (Chakravarthy 2014). Ultimately, standard setters decided in favor of the balance sheet approach, and this watershed choice has shaped standard setting to this present day.

The relevant sources are also clear that the search for solid conceptual foundations was the single most important factor on the minds of standard setters in making this choice (Storey and Storey 1998). The standard setters argued that the income approach is based on ill-defined notions like “matching” and “non-distortion of income”, and resulted in the creation of conceptually suspect accounting assets and liabilities that do not really meet the definition of economic assets and liabilities. In contrast, they felt that starting with an accounting notion of assets that has a strong correspondence to the economic notion of assets is the only possible solid conceptual foundation for financial reporting. Specifically, a proper determination of the assets

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consequential because it shifts the attention away from the evaluation of ongoing earnings power and to the importance of asset revisions, consistent with a balance sheet orientation.

and liabilities allows one to compute shareholders' equity, which is a measure of level of shareholders' wealth. And proper determination of net assets allows one to compute the change in net assets, which is income. The decisive argument in this viewpoint is that it is logically impossible to define and compute changes in value (income) without first defining and computing levels of value (assets and liabilities), see Storey and Storey (1998), pp.78-80.

While there is appealing logic to this argument, closer scrutiny raises some troubling questions. If accounting is to have solid conceptual underpinnings, then one would expect that its most fundamental concepts are the most solid. In the balance-sheet approach, the cornerstone concept is "asset" (Storey and Storey 1998, p.79). The problem is that in the current framework the concept of assets is vague, and appears somewhat circular in definition (Dichev 2008). The FASB Conceptual Framework defines assets as:

*Assets are probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events. SFAC No.6*

Looking at this definition, the key is that assets are defined as "future economic benefits." The problem is that the term "benefits" is vague, and can mean many things. But if one reflects on the nature of such benefits for operating assets like PPE and Inventory, the likely meaning is some sort of benefits net of the costs of using the asset, which essentially implies something close to "income." In other words, there is an uncomfortable circularity if we choose to favor the assets-based approach over the income-based approach because assets are conceptually and logically prior to income – but then proceed to define assets in terms of something like income.

The accounting concept of "assets" is not only slippery theoretically but is quite elusive in practice, which is the more serious problem. For example, what are the "assets" for a company like Facebook or Google? Such companies have some familiar assets like cash,

accounts receivable, and PPE. But the vast discrepancy between the value of their accounting (net) assets and their market valuations suggests that the accounting system is somehow missing most of drivers of “future benefits” that the market apparently sees. Of course, one can make an appeal here to the notion of hidden intangible assets like brands, network effects, synergies, human capital, and maybe even attempt to value them and add them to the store of existing tangible assets, similar to what is done in the accounting for mergers and acquisitions. The problem is that creating such valuations commonly relies on projections of future benefits like abnormal earnings or monopoly rents from having these intangibles. And so such exercises are clearly circular from a conceptual point of view – if we want to use assets to tell us about income, why are we using income-based notions to compute the value of the assets?

As is well-recognized, however, criticizing is the easy part. But criticism can be misplaced and even counter-productive unless it offers a viable alternative. We should also keep in mind that the balance sheet approach has managed to be a workable model of financial reporting over a long period of time, gaining great popularity and institutional support around the world. Thus, criticisms and calls for change have to be made with care and respect. With these qualifications in mind, this study argues that an income-based approach provides a better conceptual and practical foundation for financial reporting.

*What can we learn from other accounting systems?*

The first argument for an income-based approach is along the lines of history and evolution. Existing research provides ample evidence that accounting naturally arose and developed as a way to organize information in response to increasing sophistication in the division of labor and forms of economic exchange (Waymire and Basu 2007, Soll 2014). Just

like with any other historically-evolved institution, the need for better accounting spurred various innovations, and successful innovations survived and became mainstream accounting features, while unsuccessful innovations withered away. Thus, over long histories and for different economic environments we can see the surviving features of existing accounting systems as successful and well-adapted, and as a possible blueprint in the design of new accounting systems.

To use this evolutionary argument, one needs to look for other accounting systems, which are roughly comparable to the financial reporting system. Several alternatives come to mind, among them tax accounting, government accounting for corporate profits in GDP, and the evolutionary models in financial accounting itself. Starting with tax accounting, as anyone who has done a tax return can attest, it is heavily oriented towards deriving a bottom-line taxable income. On the one hand, this income orientation is partly by definition, because the government taxes income. But on the other hand, that is precisely the point, government is content to measure and tax income *directly*. Notice that tax accounting is not only income-oriented, it is to a large extent devoid of balance sheet considerations except for keeping track of some deferred costs like depreciation. In other words, tax accounting does not view income as “change in net assets”, and certainly does not try to compute tax income by constructing successive tax balance sheets, and taking their net change in assets as taxable income.

So, how does tax accounting compute income? Without getting into details, by producing a tax income statement, i.e., by specifying tax revenues and tax expenses, and defining income as the difference between them. Tax revenues are defined as cash inflows plus some adjustments, which can be viewed as tax accruals. Tax expenses are cash outflows plus some other accruals, e.g., tax depreciation expense is a deferral of cash spent on PPE, allocated over the statutory-specified useful life of the asset. Thus, taking the difference between tax revenues

and tax expenses, tax income is essentially net cash inflows plus some tax accruals. The main takeaway is that tax accounting defines and computes income on the basis of cash flows and cash flow adjustments, with little recourse to balance sheet concepts and measurements.

The accounting for GDP is only the best-known part of the much larger effort to provide a consistent accounting of value at the national level, known as the National Income and Product Accounts (NIPA) system. The U.S. Bureau of Economic Analysis has been developing and implementing NIPA accounting since the 1930s, including a measure of aggregate corporate profits, which corresponds to the notion of income in GAAP accounting. NIPA numbers are widely reported and used, including in the official definition of economic recessions and expansions. An examination of the theory and practical measurement of NIPA accounting reveal clear evidence that the determination of corporate profits is income-oriented. Conceptually, the notion of income in NIPA accounting is defined as relevant “revenues – expenses” (NIPA Handbook 2012). On the practical level, NIPA income is computed based on tax income data, with numerous NIPA adjustments.<sup>5</sup> There is entirely no notion of balance sheets in NIPA accounting. The point is, again, that NIPA accounting manages to define and measure income with little need to measure net assets or their changes.

There is also a strong income-based tradition in financial accounting itself. In fact, the income orientation dominated theory and practice for most of the 20<sup>th</sup> century until the FASB’s ascent in the 1970’s. Paton and Littleton (1940) is often considered the defining early text on income-based accounting, and is perhaps extreme in that almost the entire book is devoted to income concepts and measurement, with scant reference to balance sheet notions.

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<sup>5</sup> Measurement of NIPA corporate profits actually relies on different sources and estimation procedures for early vs. late estimates, where final estimates are based on tax data. The interested reader is referred to the NIPA Handbook for more detail.

### *Discussion and implications*

As mentioned above, standard setters believe that the determination of assets and liabilities logically precedes the determination of income because assets represent levels of value, and income represents changes in value. The consideration of alternative systems of accounting reveals that there is something amiss with this argument. These systems not only derive income *directly* but they make only limited reference to assets and liabilities, with full and formal balance sheets entirely missing. The implication is that there are other ways to define income, which are not rigidly tied to the notion of enterprise assets.

The solution to this puzzle is simple, and really quite familiar to accountants. Income is first and above all “adjusted net cash flows” rather than “change in net assets.” This is a long-lived intuition in accounting, and it is succinctly summarized in the expression:

$$\text{Income} = \text{Cash Flows} + \text{Accruals} \quad (2)$$

which can be considered the fundamental relation of the income-based approach in financial reporting.

The main thrust of this expression is that net cash inflows are the principal driver of income, where accounting introduces various adjustments (accruals) because the physical receipt and disbursements of cash may not be the best representation of securing the claims to such cash, and of the causal relation between advancing cash to earn more cash. The different systems of accounting can be thought as different philosophies about the need and scope of recording accrual. For example, tax accounting places high value on the objectivity and verifiability of cash disbursements and receipts, and accordingly its accrual adjustments are fairly limited in number and magnitude. In comparison, financial accounting views deriving the “right” income as more important, and accordingly takes a more pro-active approach in the use of accruals.

To be clear, defining income as the change in equity or change in net asset is not “wrong”. Looking at the right-hand side of expression (2), since net cash flows are equal to the change in the cash account, and accruals are the changes in all non-cash assets and liabilities, it follows that income is equal to the change in net assets. This is simply a confirmation of the articulation between the income statement and the balance sheet. Holding net dividends constant, income is the change in shareholder equity, which is equivalent to the change in net assets. Thus, there is no argument that defining income as the change in equity or the change in net assets is technically correct.

The problem is that this definition is a tautology, it obtains by construction but it has little real meaning. Holding dividends constant, ending equity is equal to beginning equity plus income, so of course the FASB definition that “comprehensive income is the change in equity” is correct. But the meaningful interpretation of this relation is that ending equity obtains from taking beginning equity and adding income. And then this interpretation leads to the meaningful question “Where does income come from?”, which has the meaningful answer “from earning more cash than what was invested”.<sup>6</sup>

The real problem is in trying to use the “income as a change in net assets” tautology as a guide to doing the accounting. The logic of accounting should follow the logic of the business it reflects. And the *definition* of a for-profit business is an entity that invests cash into a business model, hoping to ultimately earn more cash. Note that assets and asset growth are just implements in executing the business model, and not really the goal of business activities. Thus, the focus on assets is distracting because it saps the attention away from the importance of business activities, where value is really created or lost. In contrast, viewing income as adjusted

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<sup>6</sup> For an extreme example of a technically correct but meaningless definition, note that one can re-state the same relation as defining current equity to be “next year’s equity, adjusted for next year’s income”. This definition will be technically correct – but is also absurd.

cash flows rightly focuses the attention on the ultimate goal of producing positive net cash flows, where the adjustments are necessary because the receipts and disbursements of cash may not properly reflect the securing of the claims to such cash or sacrificing the value of invested cash, which are the consequential economic events.

Viewing income as the change in net assets is also problematic because it reverses the business causality of these two variables. Companies do not grow their asset base hoping that the increase in net assets represents income. On average, growth in asset base tends to produce more income because of the expanding scale of operations. But growing assets does not guarantee an increase in income. In fact, everything else equal, a company would prefer to increase income but *shrink* assets because assets are just costly inputs into company operations. In contrast, controlling for net dividends, having income guarantees an increase in net assets. A company that is successful in earning more cash than it invests is bound to have an increase in net assets.

Summarizing, the main point is that these two views of income are both technically correct. So, the choice between them cannot be made on “correctness” but on some other attribute. And the suggestion here is that this other attribute should be closer correspondence to the business logic of for-profit enterprises, and the income model naturally dominates on that dimension.<sup>7</sup>

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<sup>7</sup> It is perhaps useful to offer an analogy here. The choice discussed here is similar to the choice to value a firm using the dividend discount model vs. the residual income model. Both of these valuation models are correct, and are in fact tautologically equivalent because one is algebraically derived from the other (Dechow, Hutton, and Sloan 1999). So, the choice between them cannot be made on correctness but on some other attribute like business or practical usefulness. The problem with the dividend discount model is that it tells you that firm value arises from distributing dividends to shareholders – but it does not tell you anything about where these dividends come from, while the hard part is really the earning of dividends, not their distribution. The rise of the residual income model can be traced to its focus on value creation in company operations, which is what users really want to know in attempting company valuation. Taking this same analogy to its conclusion, both the asset and the income model of accounting are correct – but the income model is more useful because it is more closely aligned with how companies operate and create value.

### *Other arguments favoring the income model of financial reporting*

Perhaps the simplest and most important reason to have income as the organizing force of financial reporting is that users heavily favor it over all other accounting data. Surveys of investors, financial analysts, and managers consistently point to income as the single most important output of the financial reporting system (Graham, Harvey, and Rajgopal 2005). If income is the focal interest of users, it makes sense that the determination of income should be the central concern and the organizing principle of financial reporting.

Another key point in favor of an income-based conceptual model of accounting is that to a large extent the accounting for operating activities *already works that way*. In other words, adopting an income-based model of financial reporting is more about embracing and extending its existing logic rather than about grafting on some new and untested theoretical constructs. The reason is that accounting has always been a pragmatic discipline, so even though standard setters have championed the asset-based approach, in practice we have always had a mixed model, with crucial elements of the historically developed income-based approach continuing in current practice. To illustrate this point, it is instructive to contrast the income and the asset-based views of the accounting for PPE, perhaps the most important operating asset.

Starting with the asset-based model, the key question to consider is: Is PPE an asset? Let's follow the FASB definition, that assets are sources of future benefits. Note that it is not even clear whether PPE will bring "future benefits" – it usually does but that is not assured, for example equipment can turn out to be worthless or even have negative value because of technical obsolescence or hidden contamination. Critically, note that even when these benefits exist, it is

close to impossible to quantify them, which presents a serious problem if accounting wants to be a quantitative guide to asset and firm value.

The problem is that the benefits of PPE do not unspool in a clearly identifiable stream that can be properly traced back to PPE. Rather, the benefits of owning PPE combine with other factors of production (direct labor, management, raw materials) to produce goods and services aimed at customers. While such goods and services attract a price and therefore have quantifiable benefits to the firm, it is well-known that unbundling and tracing these benefits back to the underlying ingredients is difficult to impossible. Thus, following the FASB definition, the impression is that PPE is probably an “asset” but the value of this asset is rather unclear.

Interestingly, whether PPE leads to future benefits or not, note that it will surely lead to future *expenses*. And, while there may be some uncertainty with respect to their timing, there is iron-clad certainty with respect to their total magnitude. For example, assume that PPE is listed at \$100 at inception, and there is no salvage value. There are bound to be cumulative expenses of \$100 over the life of the asset regardless of whether the asset follows its initially-determined schedule of depreciation, whether the estimates of useful life change over time or there are writedowns or disposals along the way. Since future expenses are conceptually the opposite of “future benefits”, and the aggregate expenses pertaining to PPE are a whole lot more precisely determined than the potential future benefits, it is questionable whether PPE is truly an “asset,” at least not in the way FASB conceptualizes assets. Similar considerations apply to other operating assets like inventory, prepaid expenses, and even intangible assets like patents, trademarks, and customer lists.

The solution to the PPE conundrum is of course familiar to all accountants. PPE is a *deferred cost*, meaning it represents a past investment which still has some utility to the firm, and

thus not all its initial cost has been amortized to depreciation. This concept of an operating asset as a deferred cost is very different from FASB's notion of assets as freestanding vessels of value that bring in future benefits. And conceptualizing PPE as a deferred cost makes much more sense given that PPE is an *input* into the firm's production function, i.e., PPE is used to produce goods or services for customers, and so the input is a cost to the firm. It also has much historical support in the existing literature, e.g., Paton and Littleton (1940) memorably observed that "Inventories and plant are not 'values,' but cost accumulations in suspense, ..., awaiting their destiny."

Summarizing, the accounting for operating assets like PPE is already largely along the lines of the income model. Thus, adopting the income model is more about formalizing and extending its existing logic, and not about a radical departure from existing practices.

#### *Anchoring on the cash flows*

A crucial advantage of the income-based model is its natural anchoring on the cash flows, clear from the cash flow term in expression (2). This advantage is crucial because cash flows represent the bedrock facts of business performance. Unless there is fraud, the fact that a company received or paid a cash amount of X at time t is well-documented and precisely determined.<sup>8</sup> This is the kind of solid foundation that is needed in establishing a model for financial reporting. This basic strength shows in a number of ways. Perhaps the most important one is that the value of cash is always clear, and so there is a reliable link from the cash flows to

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<sup>8</sup> The astute reader will point out that there is much evidence of "real earnings management" (Graham, Harvey, and Rajgopal 2005, Roychowdhury 2006), which seems to imply that cash flows cannot be relied on as the bedrock facts of business performance. This is a good point, and there may be a need to adjust for this effect depending on the nature of what one is doing. But the point here is more basic. The point is simply that one can establish with a high degree of certainty and accuracy that a cash flow of amount X occurred in period t as a basic evidential fact. The interpretation of this fact is another matter.

firm value. Another is clarity and shared meaning. Even for parties that disagree on much else, there is likely to be a strong consensus on the definition of a “cash flow,” and there is unlikely to be a slippage between the theoretical conceptions and practical measures of cash flows.

In contrast, using assets as the foundation for financial reporting is dicey. As discussed above, the very definition of “asset” seems suspect because it involves some circularity with income, and most importantly because it is a poor guide to how to actually measure the value of an asset. In addition, the actual assets on the balance sheet are a poor reflection of firm value because many of the most important assets like intangibles and the synergy of using other assets are simply missing from the balance sheet. This problem is exacerbated in the knowledge economy, where the (operating) assets that we see on the balance sheet are a poor guide to the value of companies like Facebook or Google. Notice also that this problem is not resolved over time. If anything, the passage of time may worsen such problems because some intangibles take time to build (customer loyalty, network effects), and thus even more is missing from the balance sheet.

Anchoring on the cash flows, however, solves such problems with ease. If a company has hidden intangibles, they will show up in the observable cash flows. We may not quite understand the nature of Google’s intangibles but the presence of bountiful cash flows is enough to alert us that the company is doing well. And if the nature of Google’s intangibles is changing over time, that will also be reflected in the cash flows, where the magnitude of such cash flows has a strong quantifiable connection to the value of the firm.

A critical advantage of putting the attention on the cash flows is that it provides a natural representation of the fundamental fact that what businesses do is essentially invest cash to ultimately earn more cash (Bezold 2009). Businesses do not aim to grow assets *per se*, growth in

assets is only tolerated to the extent that it is the unavoidable “collateral damage” on the way of scaling up operations and earning more cash flows and income. Thus, viewing income as growth in assets is tautologically true – but it is at odds with business logic. In contrast, spending cash to make short and long-term operating bets on delivering more goods and service to customers, and ultimately earning more cash describes the very essence of for-profit business. Thus, anchoring on the cash flows is a natural starting point in capturing business performance.

Anchoring on the cash flows is also attractive because cash flows are the reality check on the output of the accounting system. Whether over the life of the firm or over the life of any transaction, by design income has to true up to the cash flows. This is a strong built-in discipline on what income is, and should be. In contrast, defining assets as sources of future benefits has theoretical appeal but is a poor guide to the actual valuation of assets. Even when a transaction or the whole life of the firm is complete, arguments about what assets were or could have been or should have been are bound to remain speculative.

Anchoring on the cash flows also provides a natural connection to the primary goal of financial reporting, as expressed in the existing conceptual framework. Specifically, SFAC No.8 provides the following definition:

*The objective of financial reporting is to provide information about an entity’s future net cash inflows.*

If the objective is to provide information about the future cash flows, the most natural way to start is by placing the emphasis on the existing cash flows.

Finally, anchoring on the cash flows provides a bridge to the academic and practice fields of finance and investments, which are populated by the primary users of financial reports per SFAC 8. Although variations and nuances exist, these fields have a primarily cash-flow view of

the world, and are somewhat wary of financial reporting numbers. Most MBAs seem to leave our programs with only a hesitant understanding of the value-added of accounting, and often their first instinct in dealing with accounting numbers is to “unravel the accounting distortions to get to the underlying cash flows.” It does not help that much of our own teaching is along the lines of finding and unraveling accounting problems, with not enough appreciation of the benefits. It would be nice to have a coherent framework where these same MBAs enter practice with a solid understanding that “accounting income is just like net cash flow, only better.”

### *The role of accruals*

The fundamental relation of the income model in expression (2),  $\text{Income} = \text{Cash Flows} + \text{Accruals}$ , is valid for all components of income, including revenues and expenses, gains and losses, and various combinations of these items like gross margin, operating income, and pretax income. It is also valid for all levels of within-firm aggregation, starting at the level of the individual transaction and progressing to the level of the account, and the whole firm. It also covers all time horizons. It is thus the guiding light to both the theory and the practical application of the income model.

As noted above, the business foundation in this expression is the realized cash flows, representing the objective facts of business performance. What is the role of accounting then? This question has an obvious and satisfying answer in the accrual term of expression (2). The role of accounting is to record accruals, which are temporary and reversible adjustments shifting the recognition of cash flows over time. For example, assuming no problems of collectability, opening an accounts receivable of \$500 at time  $t$  and closing it at time  $t+1$  would shift the recognition of the \$500 collected at time  $t+1$  to time  $t$ . The task of accounting then can be

defined as recording accruals to produce income, i.e., a “better” measure of business performance than raw cash flows.

The difficult word here is “better” because that could mean different things depending on context and desired goals. But there is a natural solution to this problem. The essence of the firm as a for-profit entity is that it continually makes various operating bets, hoping to ultimately earn more cash than it spends.<sup>9</sup> Therefore, the natural measure of firm success is the excess of cash earned over related cash spent.

The application of this idea for cash flow accounting is straightforward. Cash flow income is simply total cash inflows minus total cash outflows (adjusted for equity cash flows). The advantage of cash flow accounting is easy application and objectivity, and it works perfectly well over the complete life of the firm, and reasonably well over periods with long duration. But cash flow accounting has serious performance measurement problems over durations of quarters and years, the usual horizons for financial reporting. The problem is that the actual cash collections and payments in a given period can be more of a procedural formality, while securing the claims to cash or committing to the payments of cash are the important economic events, and they occur in other periods. In addition, using net cash inflow as a measure of performance essentially implies that the cash spent in a given period has a causal relation with the cash collected during that period, which is often unwarranted, especially with longer operating and investment cycles. These problems are well-known in the literature discussing “timing and mismatching problems” in the cash flows (Dechow 1994).

Since such problems relate to timing, their solution also relates to timing, accomplished by introducing accruals. The main guideline is that in measuring performance over a given

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<sup>9</sup> Many others have made similar arguments, including Bezdol (2009) using the term “cash conversion cycle” to describe the investment of cash into non-cash assets, which are used in a business activity to deliver goods and services to customers, hoping to ultimately earn more cash than what was invested.

period, we want to know how much cash was “earned” and how much cash was “sacrificed” to earn the cash during that period, where the difference between these two numbers is “income”, the summary focal measure of firm performance. To illustrate, let’s consider more specifically the main components of income, revenues and expenses, and how their treatment differs between the asset model and the approach advocated here. FASB defines revenues and expenses as:

*Revenues are inflows or other enhancements of assets of an entity or settlements of its liabilities (or a combination of both) from delivering or producing goods, rendering services, or other activities that constitute the entity’s ongoing major or central operations. (SFAC No.6)*

and

*Expenses are outflows or other using up of assets or incurrences of liabilities (or a combination of both) from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity’s ongoing major or central operations. (SFAC No.6)*

Following the arguments above, the income-based model of reporting would provide definitions along these lines:

*For a given period, revenues are received or expected cash inflows earned from delivering goods and services in the entity’s primary business during that period.*

and

*For a given period, expenses are paid or expected cash expenditures incurred in earning the revenues for that period.*

An inspection of the two sets of definitions reveals some congruity across the FASB and the income model but also some important differences. The main difference is that the FASB

definitions are driven by the values and changes in values of assets and liabilities, while the income model emphasizes tracking and modifying the recognition of the cash flows. This is a consequential distinction. The income model emphasizes that in a market economy transactions are done in money, and it is ultimately in these transactions where it becomes apparent whether the company is successful in its operations in that it makes money or not. And this emphasis pays off in that the value of cash is clear, and so we have a strong guide to the value of revenues and expenses. In contrast, in the FASB definitions the valuation of assets (“future benefits”) and liabilities is problematic, and these problems bleed into the valuation of revenues and expenses.

In addition to these general observations, it is worth outlining some specifics in applying the income model in practice. On the revenue side, things are relatively straightforward. The income model says that you have revenue if i) you already have the cash or are reasonably certain to get it, and ii) the revenue is earned, meaning the requisite goods or services have been provided to the customer. In other words, this is pretty much the existing GAAP definition of revenue from SFAC No. 5, para 83. The asset model and the income model will have some differences in how they frame revenue events, e.g., the asset model considers credit sales as revenues because there is an “increase in the Accounts Receivable asset”, while the income model would say that credit sales can be booked as revenue when you are reasonably certain that you will get the cash, and therefore you can use an Accounts Receivable accrual to record the recognition of a future cash flow today. But overall, in practical terms the two models do not differ that much with respect to revenue recognition.

The more serious differences are in the definition of expenses. Apart from the emphasis on the cash flows, the income model is a lot more specific about mapping out a causal relation between the revenues and expenses for a given period. In other words, the income model

emphasizes the “matching” of expenses to revenues, as the most important theoretical and practical guide to recognizing expenses. This is probably the biggest difference between the FASB and the income model. Over the years, FASB has repeatedly declined to assign any significance to the matching concept (Storey and Storey 1998).

FASB’s disregard of the matching concept seems unwarranted for two reasons. First, the concept of matching in accounting is simply the accounting acknowledgement of the cost-benefit considerations that pervade every decision in business. For profit-seeking entities, every single decisions boils down to some version of “will the benefits exceed the costs”? Since accounting is supposed to reflect business reality, it only makes sense that the fundamental features of business are reflected in the fundamental features of the accounting. And since matching is the accounting recognition of the fundamental and pervasive cost-benefit considerations in business, it follows that matching should be a central feature of financial reporting.

Second, top financial managers do consider matching a central feature of good accounting. In a survey of U.S. CFOs, Dichev, Harvey, Graham, and Rajgopal (2013) finds that matching tops the list of desirable accounting policies by a considerable margin, with 92% of respondents agreeing that using matching leads to better quality earnings. This stark contrast between strong CFO support and FASB’s indifference to matching is nothing short of remarkable.

Note that there are substantial practical problems in the implementation of the matching principle. While some costs are naturally and easily traced to revenues (cost of goods sold, sales commissions, shipping expenses, warranty expense), and others are at least reliably associated with reporting periods (lease expenses, utilities), many expenses have only a weak and indirect link to generating period revenues (depreciation, investment-type expenses like R&D and

advertising, etc.). Thus, there will be compromises and difficulties in implementing the matching principle. Making difficult choices, however, is a hallmark of the value-added of a true profession, and accounting strives to be a true profession. A low-cost start would be to provide more clarity about the degree of matching success for the main costs of the business, either in the presentation of the income statement or in new footnote disclosure.

*Some further points*

Creating an alternative conceptual framework of accounting is a huge task, and this study is only one stab at what such an alternative might look like. Thus, a lot of the features of the proposed model need to be worked out, and in truth they will not be worked out until the model is engaged more specifically with the everyday problems of accounting. But the general thrust here is to propose at least an outline. The main thought is that if the conceptual framework is not in the right neighborhood, attempts at the specifics will always fall short, no matter the effort.

Some of such possible specifics are perhaps clear from the preceding general material. For example, the income perspective would encourage defining and emphasizing some sort of sustainable earnings as the primary earnings metric, with a clear delineation and separation between ongoing earnings and gains/losses from the effect of external factors like market prices. Balance sheets will be more clear about the inclusion and nature of deferred and accrued costs. There will be more information and specific reconciliations of how accrual amounts true up to the underlying cash flows for all major accruals.

Two points are worth discussing in more detail. One concerns the key distinction between operating and financial-type assets and liabilities, which has been recognized in many sources (e.g., Nissim and Penman 2007). Operating assets like PPE are acquired to be primarily

used in company operations, where selling them on the open market is incidental and infrequent (Dichev 2008); thus, their principal value to the firm is value-in-use. Financial-type assets like marketable securities have an existence and value, which are largely independent from company operations. Their primary value is value-from-exchange, eventually realized on some external markets.<sup>10</sup>

Since operating and financial-type assets have different business functions, the accounting for them has to be different as well. Most of the preceding discussion relates to operating assets, and so the advocated emphasis on the cash flows and the accruals solving timing problems is well-suited to their function as inputs into the company's operations. In contrast, the value of financial assets is mostly divorced from the operating fortunes of the company, and is much more tied to economy-wide factors. Thus, the "assets as freestanding vessels of value" accounting promulgated by the FASB is a good choice for these assets, where asset values are continually revised based on market indicators, and value changes are included as a separate and clearly delineated component of (comprehensive) income.

The second point is about the need to encourage more "bottom-up" rule making. While current standard setting is subject to extensive input from constituents, its essence remains top-down, with a handful of standard setters entrusted with making the rules, which then become required for the rest of the profession. To be clear, this is not about the standard setters themselves, there is no doubt that they are hard-working and well-meaning professionals. But the nature of standard setting is such that no wise council may hope to be up to the task, with all its conflicting incentives and inputs, political pressures, path dependencies, and unclear objective function (Chakravarthy 2014).

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<sup>10</sup> Some assets can be both operating and financial-type, depending on how they are used. For example, accounts receivable are usually an operating asset but can be used as a financial-type asset if sold or securitized.

By now, we know that there is great wisdom in the collective outcomes of complex systems with dispersed decision-making. The seemingly chaotic and messy proceedings of markets handily beat the edicts of the best central planners in organizing business activity. And so, something along these lines is worth exploring for accounting rule making as well. It is telling that in the Dichev, Graham, Harvey and Rajgopal (2013) CFO survey the #1 recommendation for improving earnings quality (out of 12 choices) is “Issue fewer rules”, and the #3 is “Allow reporting choices to evolve from practice”. Thus, the most important users and implementers of accounting rules are against activist standard setting, and are for more “bottom-up” reporting.

More “bottom-up” reporting is also desirable because it incorporates the critical unseen factor of context. The point is that all deliberations and decisions on “what is the best accounting” critically depend on a whole host of interlocking factors like legal system, degree of market development, securities regulation and enforcement, degree of development of the accounting profession, various path dependencies, political factors, etc. Properly taking into account all these factors is a Herculean task. Facing such a daunting task it is better to avoid leaning strongly on attractive but potentially fragile systems of reasoning, and to harness the “wisdom of the crowds”, i.e., the ceaseless energy and experimentation of the everyday practitioners of accounting (Taleb 2013).

### *Conclusion*

An asset-based model of financial reporting has dominated standard setting in the U.S. for the last 40 years. This model emphasizes the valuation of assets and liabilities, and views income as a derivative concept, defined as the change in net assets. Thus, accounting in the

asset-based model is essentially a valuation of assets exercise. This study argues that this approach is problematic, and suggests an income-based approach as the foundation for financial reporting.

The main flaw of the asset-oriented model is that it does not reflect how firms run their operations and create business value. The definition of a for-profit entity is that it invests cash in a business model, hoping to attract customers and sell enough goods and services, so that it ultimately earns more cash than what was invested. The asset-based model is a poor fit for this reality because most assets are just inputs into operations, while the success is determined by output.

In contrast, an income-based model is naturally suited to reflect the success of spending cash to earn more cash. The emphasis in the income-based model is on tracking the cash flows, and modifying their recognition as income as prompted by the logic of the business. For revenues, this implies recognition when cash is either received or reasonably estimable, and the relevant goods and services have been delivered. For expenses, this implies recognition when there is a reasonable match between cash spent and cash earned. Since income is revenues minus expenses, the implication is that income is not “change in net assets” but adjusted net cash flow, reflecting the current success of spending cash to earn more cash.

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