Hicksian Income in the Conceptual Framework

In seeking to replace accounting conventions by concepts in the pursuit of principles-based standards, the FASB/IASB joint project on the conceptual framework has grounded its approach on a well-known definition of income by Hicks. We welcome the use of theories by accounting standard setters and practitioners if theories are considered in their entirety, cherry-picking parts of a theory to serve the immediate aims of standard setters risks distortions. Misunderstanding and misinterpretation of the selected elements of a theory increase the distortion even more. We argue that the Boards have selectively picked from, misquoted, misunderstood and misapplied Hicksian concepts of income. We explore some alternative approaches to income suggested by Hicks and by other writers, and their relevance to current debates over the Boards' conceptual framework and standards. Our conclusions about how accounting concepts and conventions should be related differ from those of the Boards' Executive stock options (ESOs) provide an illustrative case study.

Key words: Asset, Conceptual framework; Conventions; Executive stock options; FASB; Hicks; IASB; Income; Interest rates.

The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) have undertaken a joint project to converge and improve their conceptual frameworks for financial accounting and reporting. The overall approach was outlined in an important paper, Revisiting the Concepts, in May 2005 (FASB/IASB, 2005) which emphasized that "to be principles-based, standards cannot be a collection of conventions but rather must be rooted in fundamental..."
HICKSIAN INCOME IN THE CONCEPTUAL FRAMEWORK

At the time of issue this was presented as an authoritative manifesto of how the two Boards intended jointly to undertake this convergence and improvement, based on and building on their existing frameworks even though there had not been any prior exposure to allow public comment as to whether some more radical approach would be appropriate (cf. Bromwich, 2001; Dean and Clarke, 2003; Wells, 2003; Potter, 2005; Dennis, 2006, 2008; Rayman, 2006; AAA, 2007, Penno, 2008).

Here we focus primarily on what appears to be—and was predicted in that 2005 paper to continue to be—the bedrock of the Boards’ ongoing development of the converged framework, namely the conceptual primacy of assets’ (p. 9) as elements of financial statements. We question the claim in the 2005 ‘manifesto’ that this primacy is derived from Professor Sir John Hicks’ (1946) definition of income (pp. 7, 18). We support the use of accounting theory by standard setters and practitioners, provided that the theories they choose are considered in their entirety, and do not have their elements cherry-picked opportunistically to suit standard setters’ immediate objectives. Moreover, theory is best understood as a whole, in spirit and nuance, instead of taking short quotations and interpreting them out of context. The main objective of this article is to indicate the dangers of the inappropriate use of theory and thereby to assist accounting policy makers to avoid reaching unsupported conclusions about measurement of income. We provide an analytical and critical case study of the use of income theory in accounting policy making.

1: THE FOUNDATIONS

Relevance of a conceptual inquiry into financial accounting and reporting depends on the assumed objective(s). We confine our analysis to the value perspective (where the financial statements report wealth and income [cf. Van Caunenberge and De Beulde, 2007]), as this is also the objective embraced by FASB/IASB (2005).¹ Starting with the overriding objective of ensuring the usefulness of accounting

¹ http://www.fasb.org/project/communications_paper.pdf (accessed 6 March 2010). This FASB/IAFSB ‘communications’ paper was written by staff members Halsey G. Bollen and Kimberly Crook. Originally it did not carry the usual disclaimer at the start of opinions irrespective of whether they appear on the FASB website or in the print version of the paper. We have included the disclaimer, which reads now appear on p. 16 of the version now available online, and the FASB website now directs its readers to it as a staff-authored article. While we focus here on what we believe to be the first appearance of an appeal to Hicks’ analysis in a joint FASB/IASB publication, Clarke (2010, following Clarke, 1948) shows that their 2003 paper’s approach marks the resurgence of a longstanding academic and policy literature, within which useful understanding and practical application of Hicks’ concepts to accounting policy issues has been rare.

² Page references are to reprint in Parket et al. (1946).

³ It is also consistent with the approach adopted in empirical studies of ‘value relevance’, for example, recently by Chambers et al. (2007) and Horton and Suresh (2008). We explore the conceptual issues arising therefrom, and not the implications of alternative approaches such as the information content of contracting schools (see, e.g., Bromwich, 1992; Christiansen and Domini, 2000; Sundem, 2007; and Christiansen, 2010; for further discussion of the former, and Sunem, 1997; Watts, 2008a, 2008b; Benson et al., 2008, and Whittington, 2008, for further discussion of the latter school). Nor do we extend the discussion to public sector and other not-for-profit organizations (see, e.g., Speckbacher, 2008; Laughlin, 2008). The history of how and why the FASB came to adopt this particular conceptual framework,
figures in making economic decisions, including assessment of cash flow prospects, the frameworks of the Boards focus on "enterprise resources, claims to those resources, and changes in them" (p. 3). This leads to definitions of the elements of financial statements, beginning with assets. It has been tentatively decided for the joint framework that, as a working definition, "an asset of an entity is a present economic resource to which the entity has a right or other access that others do not have".

The definition of assets, which is in substance similar to the definitions in the existing individual FASB and IASB frameworks, is offered in contrast to 'earlier efforts that included deferred debits among assets' (FASB/IASB, 2005, p. 6). It is then argued that all other elements in financial statements can be derived from the definition of assets, which gives assets 'conceptual primary' and leads to the 'asset/liability' view of income measurement, in which income is a measure of the increase in the net resources of the enterprise during a period, defined primarily in terms of increases in assets and decreases in liabilities' (p. 7).

The Boards' objection to 'deferred debits' (Sprouse's 'what-you-may-call-it')—Storey, 2003, p. 64—is that they are allegedly indefinable without circularity, being simply the result of the revenue and expense, or matching, approach to measuring income. However, at least in principle, the assertion that traditional accounting conventions allow into the balance sheet items that would not meet the FASB/IASB asset definition appears to be false. A traditional U.K. professional textbook such as Cropper (1930) explains in relation to items of deferred revenue expenditure that these 'must be carefully reviewed, and . . . . may be "held up" as an asset legitimately, if written off over a reasonable period. It is assumed in such cases that benefits will accrue in succeeding years from the expenditure, and so these years should bear their proportion of the burden' (p. 94). So the deferred debits resulting from matching, as traditionally understood, must also represent probable future economic benefits in the form of estimated future cash flows.

It is at this point that the Boards' framework purports to be 'grounded in a theory prevalent in economics: that an entity's income can be objectively determined from the change in its wealth plus what it consumed during a period' (FASB/IASB, 2005, p. 7). What Hicks (1946, pp. 178–9) called Income No. 1 is cited in support. He defined this on p. 173 as 'the maximum amount which can be spent during [a period] if there is to be an expectation of maintaining intact the capital value of prospective receipts (in money terms). The Boards' assertion of the conceptual primary of

and how the inner circle in the C4-1 group has influenced the IASB's ideas is also beyond this study (see, e.g., Deepch and Sunder, 1980; Macve, 1997; Zeff, 1999; Neben, 2006).


2. This formulation is technically incomplete, as there can be an increase in the net resources of the enterprise during a period, comprising decreases in assets outweighed by decreases in liabilities, or increases in liabilities outweighed by increases in assets.

assets, and of the superiority of the asset/liability view over the revenue and expense perspective in measuring a business's income, is based on this foundation (FASB/IASB, 2005, p. 7).

Although it does not specifically cite Hicks, the SEC's (2005) staff report on the Adoption... of a Principles-Based Accounting System supports the FASB's analysis, observing that

from an economic perspective, income represents a flow of, or change in, wealth during a period. Without first having an understanding of the change in wealth at the beginning of the period, it is not possible to determine the change in wealth during the period. The accounting equivalent to identifying wealth is identifying the assets and liabilities related to the class of transactions. This identification of wealth acts as a conceptual anchor to determining revenues and expenses that result from the flow of wealth during the period. Historical experience suggests that without this conceptual anchor the revenue/expense approach can become ad hoc and incoherent. (a. III.B)

The Boards' attempt to ground their converged framework for accounting principles on a sound economics foundation is to be welcomed. Unfortunately, their chosen foundation will not support the particular structure that the Boards propose to erect. Although Hicks (1946) was concerned only with an individual's income, his definition of Income No. 1 can be reformulated for a company as equal to the maximum amount that could be distributed to the equity shareholders in a period and leave intact the capital value of the company's prospective receipts as at the beginning of the period (e.g., Solomons, 1961). Ex ante, that will be based on what is expected about cash flows and interest rates at the beginning of the period, and ex post on what actually occurs during the period and on revised expectations about the future at the end of the period.

These ideas can be made precise and usefully defined for later using symbols. Adapting the notation in Bromwich (1992, chaps 3, 4): cash flow for period 1 as estimated at the beginning of period 1 (at time 0) = C_t0, and as realized during period 1 and known at time 1 = C_t1. The value of prospective cash flows arising in periods 2 and onwards, as forecast at time 0 = V_t0, and as forecast at time 1 in the light of up-to-date information and revision of expectations during period 1 = V_t1. Given an unchanged discount rate r, the value of prospective cash flows in periods 1 and onwards, as forecast at time 0 = V_t0 = (C_t0 + V_t0) / (1+r), and as re-estimated with hindsight at time 1 in the light of new knowledge and revision of expectations during period 1 = V_t1 = (C_t1 + V_t0) / (1+r)^1. Income No. 1 ex ante for period 1 = (C_t0 + V_t0) - V_t0 = rV_t0 and (Hicks') Income No. 1 ex post for period 1 = (C_t1 + V_t0) - V_t0. If the rate of interest is expected to remain constant, and all income and only income is distributed/consumed, future periods' income ex ante will also remain constant (at rV_t0), that is, it is the "permanent income" (e.g., Beaver, 1998).

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Income or profit has of course long been central in companies' financial statements (e.g., Yamey, 1977). While Hicks (1946) concluded income was a poor tool for economic analysis, he moderated this view in Hicks (1959) (see section 2 below). Although the first edition of Hicks' Value and Capital only appeared in 1939, his ideas about the meaning of income were not revolutionary; for example, Edwards (1984) advocated the increment-deduct theory of income.
alias on the skill with which management and the workforce exploit an enterprise’s resources and its markets, and its business, social and political opportunities—what Hicks labels human capital.

In general therefore an objective version of Hicks’ No. 1 ex post concept of the business income of a listed enterprise is more likely to be found in the measure of its shareholder return used in financial economics (dividend plus change in share price), that is the change in its capital value on the stock market, than in the change in the enterprise’s net assets. As discussed further in the next section, this view was later articulated by Hicks himself (1979). But if firms are merely to report their stock price return (plus dividends) as their income, their accounts are again redundant, at least for valuation and investment decisions.

2: ‘FIRM’ OR ‘NET ASSETS’?

In the real world of incomplete and imperfect markets, there is no justification for the FASB/IASB (2005) paper’s rendering (at p. 18) of Hicks’ capital value as ‘in accounting terms, its assets and liabilities’. There is of course an extensive academic literature exploring how far concepts and measures of asset and liability value that are consistent with (while not generally capturing all of) Hicks’ underlying model of capital value may be developed (including the literature on deprivation value, e.g., Eidey, 1974; Baxter, 1986; on current exit value, e.g., Chambers, 1996; Clarke and Dean, 2007; and more recently on ‘fair value’, e.g., Benston et al., 2006; Bromwich, 2007; Hitz, 2007; Sunder, 2008; and Dean et al., 2010), and how changes in such net asset values may be related to Hicks’ notion of Income No. 1 (e.g., Introduction to First Edition in Parker et al., 1986; a classic treatment in Edwards and Bell, 1961). Any such links require further substantial restrictive assumptions to handle inter alias what are identified in the FASB/IASB paper (2005, pp. 15–16) as the cross-cutting issues of uncertainty, unit of account and management intentions.

FASB/IASB (2005) cite Hicks (1946) who analyses income of individual persons, making no reference to firms. However, Hicks (1979) revisits the earlier analysis and begins by commenting that an early nineteenth-century mill-owner, in trying to estimate the profitability of his business, would be seeking to ascertain ‘the maximum that could be safely taken out of the business . . . without damaging the prospects of the business. But that, it is clear, would be a matter of judgement.’ He

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38 The authors of FASB/IASB (2005) may have been misled by previous academic literature which has similarly claimed (almost complete) objectivity for Hicks’ No. 1 ex post concept (e.g., Parker et al., 1986, pp. 1, 8, 17; Clarke, 1984, p. 41—although these sources are not in their references). The argument has not disappeared as much in subsequent statements from the Board’s joint conceptual framework project perhaps because we wrote to both the Boards almost immediately after the 2005 paper appeared, pointing out the lacuna in their quotation and argument.

argues that, with the advent of the income tax, and of the joint-stock corporation, there are other parties now interested in knowing the business’s profitability and ‘at this point the accountant enters’.  

Like Ijiri (1975), Hicks observes that the accountant’s approach needs to be as objective as possible to minimize disagreements, not measuring profit in the way the mill-owner himself might do. According to Hicks, the accountant’s approach naturally draws on the mercantile tradition long-familiar to accountancy, where by the problem of determining income from sales and trades that overlap across accounting periods can be solved relatively simply by carrying forward the inventory at cost.  

Industrialization required the determination of the periodic cost of using long-lived assets such as machinery in the form of depreciation. To Hicks:

It is just the same problem as the allocation of overheads, and to that, as is well known, there is no firm economic solution. Neither has the accountant found a solution—only a name and a set of essentially arbitrary rules ... There is thus no reason why there should be any simple rule which would cause the profits that are calculated by its use to have any correspondence with the income that would be assessed by the criterion with which we began—the maximum that can be safely taken out of the business. (pp. 4-5)

Hicks then turns to exploring what the depreciation for a period would have to be to satisfy this criterion. He is only able to do so by postulating a purchase of the whole business at time 0 and a sale of the whole business at time 1, to obtain an objective measure of (using our notation) \( \Delta V_{00} \) and \( \Delta V_{11} \).  

He notes (in our notation, not his terms) that:

There can, I think, be little doubt that an accountant, who was asked to do the accounts of a business with the peculiar history would refuse to do them in terms of \( \Delta V_{00} \) and \( \Delta V_{11} \), he would insist in doing them in terms of ... the values which 'stand in the books'. The economist, however, would find \( \Delta V_{00} \) and \( \Delta V_{11} \), much more interesting. . . it would be these market values which he would want to take as representing the initial and final capital. (p. 6)

So we can see that what Hicks here recognizes as an objective ex post measure of a firm’s income (the change in the firm’s market value) does not provide the foundation for a measure based on the change in a firm’s net assets sought by FASB/ASB (2015).

Hicks’ (1979) argument and analysis finally led him to regard as current profit that defined by Lindahl (1933); that is, \((C_{11} + V_{11}) - V_{01} = rV_{01}\). This is effectively what

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11 This picture of the accountant’s role is consistent with the contracting school (e.g., Sunder, 1997; Watts, 2003a, 2008; Beamon et al., 2004; Whinston, 2006).

12 In fact, once Hicks, there were theoretically tractable problems and not just in allocating common overheads even in the simple ‘mercantile’ practices for accounting for inventory and profit (e.g., Mace, 1977b; Yanney, 2000).

13 As Kaldor (1955) explains, what Hicks (1946) called Income No. 1, ex post is what American writers have generally called second income—i.e., consumption plus actual capital accumulation (in our notation, \( C_{11} + (V_{11} - V_{01}) \)). Ex post more normally refers to income calculated by reference to a revised estimate of what the opening capital would have been (in our notation \( V_{01} \)), if the knowledge and changes in expectations becoming available during the period had been there at the beginning.
Friedman would call the permanent income derived from the business' (Hicks, 1979, p. 11, assuming constant r). And although Hicks has been 'looking for a definition of current profit which, so far as possible, should register the performance of the business within the year, excluding what has happened before and what is to come after... Vt1... would appear to have a large part, even, in many cases, the dominant part, in determining the current profit' (p. 10). Moreover, it is the income of the proprietors, rather than of the business (p. 11). (Emphasis are in the original.) Thus Hicks accepts that his desired measure of income has to include major subjective elements.

In short, Hicks does not find a satisfactory, practical way of defining a business firm's income that could be used in accounting, whether ex ante or ex post.

3. HOW USEFUL IS INCOME: NO. 1 EX POST?

There is, however, an even greater problem with the FASB/IASB's (2005) reliance on Hicks' concept as the bedrock of its approach to the conceptual framework. This applies independently of the relation of accounting asset/liability measures to Hicks'.

A further decomposition of the terms into R (current receipts), E (current expenses), C (capital expenses) and D+t (economic, not accounting, depreciation) gives Hicks (assuming C = D+t) a reformulated expression for income as R-E-D+t which 'does look like a formulation which belongs to the current period, as Vt, which we have seem to be equivalent, apparently does not' (p. 10).

Professor W. T. Baxter wrote to Hicks on 8 June 1946 querying how an 'equivalent' reformulation could avoid 'induction by the future'. Hicks replied on 5 July that 'the passage on my p. 30 was not well put' and explaining that what he had really intended was to put the focus on things that had happened during the period, including changes in expectation during the period, avoiding the emphasis on the capitalisation which looks so artificial. 'Looks like' was meant to be taken literally: the avoidance is apparent. But he wished that he had put the point a bit differently. Hicks went on to agree with Baxter 'that Permanent Income was what I was fishing for in Chapter XIV of Value and Capital', and also pointed out that his negative conclusion there also the need for the concept of income for his purposes was overrated (referring to his Capital and Growth, 1946, Chapter VIII, especially the footnote on p. 69). So, unlike FASB/IASB (2005), Hicks accepted that the subjectivity of any useful notion of income is unavoidable.

Clarke (1984, pp. 42–7) observes that the 'double-take-over' model Hicks uses in his 1979 paper shows no support for the positions taken in the inflation accounting debate of the 1970s and provides no justification for replacement cost valuation of assets—not indeed, we would argue, for any particular valuation approach to how assets 'stand in the books'. Moreover, Hicks' analysis of his mill-owner's problem is clearly equally devastating of Bryant's (2008) supposedly 'market' claim that capitalists in the British Industrial Revolution successfully measured in their double-entry accounts and thereby successfully maximised, an objective 'Return on Capital Employed' (ROCE). We do not explore here what might be the possible implications of the substitution of an entity concept for the traditional proprietary concept in the FASB/IASB (2004a) Exposure Draft of the first stage of the Boards' revised conceptual framework, as the Boards' version of the entity concept is not yet well defined (cf. Paton, 1922, Rosenfield, 2003).
'capital value', and independently of whether Income No. 1 \textit{ex post} can be objective. In a subsequent paragraph, Hicks (1946) goes on to say: 'Ex post calculations ... have no significance for conduct. ... On the general principle of "bygones are bygones", it can have no relevance to present decisions.' This undermines the FASB's/LASB's attempt to use Hicksian income as the foundation for their asset-liability view to serve the 'overriding objective of decision usefulness'. Their structure is built on sand, as it is only the overall wealth available at the end of each period, not the \textit{ex post} income of the period, that is relevant for decision making about future investment and consumption, etc. So the only relevant decision-oriented aggregated information that can be provided by financial reports is information about the endowment of wealth available to the firm (e.g., Bromwich and Wells, 1985). That is, income figures cannot facilitate any decision making incremental to that which could be made from being told only the endowment at the end of the period—unless income can be shown to generate some information about the future that is not already contained in the endowment.

Hicks does concede some role for his Income No. 1 \textit{ex post}; such calculations 'have their place in economic and statistical history; they are a useful measuring rod for economic progress; but ... they have no significance for conduct' (1946, p. 109).

However, it may be argued that one cannot expect to be able to predict the future and income \textit{ex ante} without some knowledge based in past experience (e.g., as hypothesized in Friedman, 1957). Hicks discussed further the role of accounting in this regard in a book review for the \textit{Economic Journal} (Hicks, 1948). As explained by Biehl (1982), supported by extensive quotations, Hicks here endorsed what he thought to be an important argument (buried in the compilation of miscellaneous articles, etc., constituting the book being reviewed), namely the importance of the underlying objectivity of the 'statistics' that the accounts record; hence the justification for historical cost and the dubious value of introducing subjective adjustments (e.g., to the lower of historical cost and market value). So, for example, the bias introduced by historical cost in inflationary times is a matter for correction by \textit{seen} in their interpretation of the accounting numbers.

However, Hicks added his own observation that bare statistics are never sufficient: so what is to be done for external shareholders?17 The accountant 'has thus some public obligation to pack into his figures the maximum of information even if he can only do this, within the limits prescribed, by some sacrifice of objectivity. How ought this difficulty to be got over? Should it be laid down that companies must publish an audited report as well as audited accounts? Or would this make the accountant, more than ever, master of the destinies of us all?' (1948, p. 564, emphasis added).

So the main issue with Income \textit{ex post} is 'how much of the future is it useful to bring into accounts of the past if they are to be helpful in forming expectations about future Income \textit{ex ante}?' (cf. Barth, 2006). A considerable amount is inevitable, even in traditional accrual accounting that attempts to match revenues and expenses

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17 This book review was written long before the advent of U.K. accounting standards including disclosure of accounting policies. In the 1970s which began to provide additional context to assist users' understanding of the 'bare statistics' (e.g., Meeke, 1977).
HICKSIAN INCOME IN THE CONCEPTUAL FRAMEWORK

(Edye, 1970). How much more is useful must be primarily an empirical question, to which the answer may vary according to how far permanent and transitory elements can be distinguished. This varies according to different types of business activity (e.g., Penman, 2007; Bezdorf, 2009); while also being subject to different users' needs and trade-offs of relevance and reliability (cf. Sundem, 2007). There is no necessary merit in simply tracking Hicks' Income No. 1 ex post (Sunder, 1997, p. 79; cf. Schipper and Vretenski, 2003) even if this were possible using accounting numbers—except perhaps for comparing it with previous internal estimates of income ex ante in order to improve future estimations (e.g., Edwards and Bell, 1961; Bromwich, 1974; Goford, 1985). This is an information content approach to the conceptual framework and the usefulness of income measures (e.g., Christensen, 2010; cf. Marve, 2010).

In short, our fundamental objection to the FASB/IASB (2005) paper as a statement of the conceptual foundation that should underpin its framework is that, on Hicks' own assessment, ex post income, whether more or less subjective, is largely irrelevant to the Boards' decision useful and objective for financial accounting and reporting.

4: A ROLE FOR INCOME NO. 1 EX ANTE?

Some authors (e.g., Black, 1993) have argued that the primary focus of accounts (not just of their users) should be on estimating standard stream income. Given that stream and a (constant) discount rate one can directly derive the value of the firm by capitalization (e.g., Whittington, 1983, p. 53).14

The FASB/IASB (2005, p. 7) say that a concept of income founded ultimately on the definition of assets is necessary because, among the proponents of the alternative (the revenue and expense) view, some could meet the challenge of defining income directly, without reference to assets or liabilities or recourse to highly subjective terminology like proper matching' (emphasis in the original).15

Hicks himself could 'meet this challenge'. Dissatisfied with the adequacy of his 'No. 1' version when interest rates change, he offered Income No. 2, defined as the amount that an entity can consume in a period and still expect to be able to consume the same amount in each ensuing period (1946, p. 174). In the case of a joint stock

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14 This approach underlies the common practice among UK listed companies of presenting supplementary underlying or core EPS numbers.

15 IASB member James Lintnering has also asserted the same in his presentations on the conceptual framework and it is reflected in Barth (2008, pp. 1167-18). We do not pursue here the argument that the challenge itself is rigged. [For example, unless and until the B-words can find unambiguous valuation bases (e.g., by reference to current market prices) that are acceptable for all assets and liabilities, the asset/liability approach itself will in practice continue to require the use of accounting procedures such as inventory flow accounting and depreciation of non-financial fixed assets, which themselves include conventions for 'proper matching of costs and revenues' that are necessary in order to allow the measures of assets and liabilities needed for the construction of statements of financial position/balance sheets that is an imperfect and incomplete markets valuations of assets and liabilities inevitably require recourse to forms of matching (see illustration see, e.g., FASB/IASB, 2008, Chapter 3)].

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company this translates as 'the maximum dividend the company could pay this period to its current equity shareholders and expect to be able to pay them the same dividend in all future periods', which is equivalent to what financial analysts call its maintainable (or permanent) income. That is, Income No. 2 is the sustainable perpetuity based on the existing information set. Within Hicks' (1946) framework of analysis, Income No. 2 is, as he notes on p. 174, the same thing as Income No. 1 only when there is no expected (or actual) change over time in the rate of interest at which future cash flows are discounted to obtain the capital value (i.e., the yield-curve is flat).

If the company held only fixed interest irredemable government securities, this maintainable income would be objective. Otherwise uncertainty about future changes in the yield-curve, and about risk premia required on corporate bonds, equities and real property, would mean that maintainable income, even from frequently traded assets, would inevitably be subjective (Macee, 1984, Draper et al., 1993).

It was this No. 2 concept of income that underlay the proposals in the U.K.'s Sandilands Report (1975) for current cost accounting (an 'entry value' approach—e.g., Clarke, 1988). Sandilands (1975, p.47, para. 166) said: 'no accounting system can predict a company's future prospects. However, an accounting system can at least ensure that the profit figure reported is such that, if the profit for the year were fully distributed, it would not prejudice the ability of the company to continue to generate the same profit in future years.' Whereas Sandilands rejected general price level adjustments (i.e., for inflation), Scott (1984, p.205) argues for the importance of assisting users to estimate (real) standard stream income (alongside gain or change in value) and, while critical of much of the methodology proposed by Sandilands, suggests ways in which accounts can be best adapted under changing prices to achieve this, many of which must inevitably be subjective. Scott concludes

20 Under inflation, the expectation needs to be in real terms, that is adjusted by an appropriate general price index (Hicks' Income No. 3 [1946, p.174]). Clearly (including ex ante and end approaches to ex post formulations) the number of potential income concepts under the Hicksian umbrella multiplies rapidly—for example, Hendelken, (1985). We have already reached a total of 9 (= 3 x 3) and correspondingly a total of 6 versions of No. 1 (call this No. 4) would measure the real change in the value of wealth (brought up to 4 x 3 = 12 concepts). As Clarke (2000) points out, Chambers' (1976) letter to Hicks argues for No. 3; however his formulation on p. 3 in No. 4 (equivalent to the real version of Edwards and Bell's, 1941, realisable income) (When the real rate of interest does not change over time, No. 3 and No. 4 will be the same, but only ex ante and under Lindahl's, 1933, version of ex post.) Hicks himself (1946) doubted an appropriate general price index for his economic analysis could be constructed. In practice, outside hyperinflationary economies, the two concepts are generally regarded as most apparently relevant to business accounting are the version of Income No. 3, ex post that is the focus of FASB/IASB (2001) and that we have already discussed, and Income No. 2 ex ante that we are now discussing (but of Jamison, 2003).

21 An objective maintainable real income would require index-linked securities to overcome uncertainties about future inflation rates. For irredemable fixed-interest securities, the maintainable income up to the date of redemption would be objective of the security was to be held to maturity, and there were no discount or premium to be amortised, but thereafter it would depend on interest rates available for reinvestment/borrowing. Where the effective interest rate to maturity differs from the coupon rate, the need to estimate reinvestment/borrowing rates during that period in order to calculate the maintainable income renders it subjective too (cf. Morton and Macve, 1984; B absorb, 2003, Appendix).
HICKSIAN INCOME IN THE CONCEPTUAL FRAMEWORK

(drawing on his own experience as an investment trustee for a charity). First... there is a strong practical need for estimates of standard stream income and, second... useful estimates can be provided—but not, so far, or perhaps ever, by accountants' "true accountants" (p. 260). This conclusion appears close to Hicks' (1946) view that adjustment to the basic historical cost accounting records should be made, as far as possible, by those using and interpreting the accounts, rather than within the accounts themselves.

Given maintainable income one can, under further restrictive assumptions, also derive definitions and measures of assets and liabilities that would be consistent with this concept, but they are to be derived from income, not income from them. Thus, Ohlson (2006) argues that investors like to have a natural starting point in the income statement as they try to forecast subsequent periods' sustainable earnings. This concept of sustainable earnings is again consistent with Hicks' (1946) No. 2 Income. Ohlson therefore argues that reporting such maintainable earnings would require that assets and liabilities be derived from income and not vice versa.

Finally, given the conceptual tension between Hicks' Income No. 1 (expressed in terms of capital value) and Income No. 2 (expressed in terms of maintainable income), there are also grounds for believing that the most relevant income concept for users and their economic decisions will often vary with their individual circumstances and conditions (Pastin, 1940). Thus, someone facing a major expenditure (e.g., of a family wedding or an unexpected and uninsured illness) would be concerned more about its effect on their wealth (Income No. 1), while someone facing retirement might be more concerned with how much maintainable pension they are entitled to, or can obtain from their investments (Income No. 2). The two are at once complementary (in the sense that each provides a different but useful perspective on the firm) and opposed (with regard to methods of measuring enterprise

20 We use here the terms sustainable, maintainable and persistent interchangeably. For discussion of current operating profit as sustainable income, see Edwards and Bell (1961), Revance (1973) and Prakash and Sunder (1979).

21 With respect to the issue of changes in interest rates, Perlham and Ohlson (1989) have explored the effects of the generalization of the residual earnings valuation model to risk, a non-flat yield curve and stochastic interest rates demonstrating that the capital change in calculating residual (or abnormal) earnings requires multiplication of the start-of-period book value by the short-term riskless spot rate. But the clean surplus income in this model is still parallel to Hicks' No. 1 concept of income (i.e., change in value) and they did not explore the calculation of a No. 2 (or permanent) income, which Hicks regards as superior when interest rates are changing.

22 Within such a system, one could perhaps obtain balance sheet values that reflect actual current values and also preserve a clean surplus accounting. If value changes were initially reported directly in equity (other comprehensive income) and only reclassified to earnings according to some smoothing approach utilising the kind of accounting rules proposed by Ohlson. We do not explore these issues further here (c.f. Horton and Maye, 1996; Chambers et al., 2007; Van Cauwenberghe and De Berlode, 2007; cf. Ourold, 2009; Karthes et al., 2008; AAA, 2008).
Neither approach should therefore necessarily be preferred in principle over the other as the basis for accounting standard setting. In each case the relevant approach should be chosen on its merits in that context (consistent with the argument in Pennman, 2007; cf. Chisholm in Jones and Slack, 2008). Since neither perspective can perfectly measure either of the two underlying income concepts, it is important to recognize that in some cases stocks (e.g., of assets) are more readily measurable than flows (of revenues and expenses) while in other cases the converse holds. So the two approaches complement each other and accountants must learn to live with this duality.\(^5\)

In short, the FASB/IASB (2005) paper, in focusing solely on Hicks' Income No 1 ex post, ignores the conceptual and practical importance of Hicks' Income No 2 ex ante for decision making. (In the Appendix, we illustrate the differences between the two income approaches by exploring their distinction and the consequences for the accounting for stock option expense controversy.)

Since FASB/IASB (2005, p. 7) claim that income is not definable 'directly, without reference to assets or liabilities or recourse to highly subjective terminology like proper matching," it follows that neither can be its components such as revenue and expense. This has led the Boards into some difficulty, for example, in relation to depreciation expense (IASB, 2009, Basis for Conclusions BC54), and to revenue recognition (FASB/IASB, 2008b), where the Boards are stated (at para. 5.20) to be uncomfortable with the potential implication of valuing contract assets and liabilities at inception in that it could lead to recognition of Day 1 revenue and income ‘before the entity transfers to the customer any of the goods and services that are promised in the contract’. This discomfort illustrates the inevitable continuing power of conventions—in this case of matching—at the heart of conceptual debates, that we discuss further in the next section.

To summarize these arguments, Table 1 indicates briefly the differences between what Hicks actually says about income and what the Boards claim in their 2005 paper about his position. These differences, and the discussion above, indicate clearly the dangers of cherry-picking selected fragments of theory, particularly

\(^5\) Measurability of economic magnitudes varies by the nature of the resource and whether stock or flow is involved. Tons of rice in a warehouse or drilling machine capacity in a factory, both stock variables, are readily ascertainable. The flow of rice into and out of the warehouse is just as easily measured but this is not so for the depletion of the capacity of the drilling machine. In a third example, while the flow of oil or gas from an underground deposit is readily measured, measuring the stock that remains underground is not so easy. When neither stock nor flow is measurable with reasonable precision, we leave such resources—no matter how important—out of the books of account. Human capital (see section 1 above) is a good example of such exclusion in practice. When both magnitudes are measurable, measurement of both stocks and flows supplies the requisite redundancy for a reliable system of control as well easy articulation between the stock (balance sheet) and flow (income) statements. The real problems arise when one magnitude is measurable with significantly more precision than the other. Our common sense suggests that we use the variable—whether stock or flow—which is easier to measure in preference measurement, and derive the corresponding value of the other variable using the accounting identity. This method articulates the stock and flow statements but runs into trouble with the conceptual purists who insist that everything we do in accounting must be heard either on the primary of stock (asset-liability) or of flow (revenue and expenses matching) variables, which is the accounting version of squaring the circle. So the pursuit that the Boards have ventured through their 2005 document is a fruitless one. (For further discussion, see, e.g., Sanders, 1997.)
when the fragments are themselves misunderstood or misinterpreted in isolation from the whole. The chosen fragments of theory simply do not support the structure the Boards seek to erect on them.

5: CONVENTIONS VERSUS CONCEPTUAL PRINCIPLES

FASB/IASB (2005) see the conceptual framework project as a crusade against conventions: 'To be principles-based, standards cannot be a collection of conventions but rather must be rooted in fundamental concepts'. Economists writing about accounting have generally been very respectful of accounting conventions.26 As noted above, Hicks argued that the accountant's solution to the depreciation problem was a natural development from merchandise accounting. He also credited the accountant's view of capital as a fund with a profound influence on English classical economics,27 and noted that Marshall seemed content with the accountant's approach to depreciation (Hicks, 1976, p. 313). While twentieth-century inflationary pressures and tax policy changes put extant conventions under great strain (1976, p. 312), Hicks appeared to believe that the necessary adjustments could best be made by those using and interpreting the accounts rather than by expecting reform of the accounts themselves. Indeed this could interfere with the underlying, objective statistical record (Hicks, 1948; Brief, 1982).18

Kaldor too (1955, p. 123) noted that 'The accountant is rightly in search therefore of a concept of income ex post which is as near as a counterpart as can be found to the

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26 Alternative meanings of conventions and the role of social norms have been examined in accounting literature (e.g., see Chambers, 1984; Sundar, 1997, Chap. 9, 2005a, 2005b).

27 As he explains it: 'Even to this day, accountants are Pundits. It is not true, accountants will insist, that the plant and machinery of a firm are capital; they are not capital, they are assets. Capital, to the accountant, appears on the liabilities side of the balance sheet; plant and machinery appear on the assets side. Capital accordingly is a fund that is embodied in the assets' (Hicks, 1974, p. 330). Clarke (1988, pp. 321–4) argues that Hicks himself was a Pundit, so that proponents of 'physical capital maintenance' under Current Cost Accounting, such as Sandilands (1975), have no justification in appealing to the authority of Hicksian income. This conceptualization of capital is also in line with both traditional public sector accounting and with Communist accounting theory and practice (e.g., Solis and Aphan, 2008).

28 A related discussion between an accounting theorist (Chambers) and an economist (Shackle) is recounted in Dean (2006).
investor's income *ex ante*. In the light of the foregoing analysis it is not surprising that the accountant's definition of income *ex post* is based, as it can only be based, on a series of admittedly arbitrary conventions whose value depends, to a large extent, on their status as time-honoured conventions—i.e., on their steady and consistent application.*

There may of course also be value in sticking to agreed rules* for purposes of contractual and other settling up such as taxation, bonuses, partners' profit shares, loan covenants etc. (Lindahl's 'real elements with hindsight' (as adopted by Solomons, 1989, in his *Guidelines*) would never allow closure between contractual parties.

That is not to say accounting conventions cannot be improved: the quoted economists had, perhaps, an overindulgent view of accounting's achievements which may not be surprising given that they were generally writing before the advent of U.K. standards and the wider understanding of just how inconsistent many accounting practices are (although Clarke, 2010—following 1988, p. 416—notes Hicks' involvement in the late 1940s in a joint committee with ICAEW). But it is naive of FASB/IASB to overlook the power of conventions, and their surrounding expectations, in maintaining the ordinary fabric of social structure and interaction.*

The important questions to ask are: Does analysis of how conventions and social norms operate suggest that it is time to modify them? If so, how? Will the benefits outweigh the cost?

Solomons (1961) predicted the twilight of income measurement within twenty-five years, yet in 1989 he was still writing his *Guidelines* for the U.K.'s Accounting Standards Board (ASB) on how best to report income. Similarly, Ohlson (1987), in his commentary on Beaver and Denski (1979), argued that the reporting of income is too embedded in accounting tradition to be abandoned, despite the inescapable conceptual limitations.*

The logic derived from an imaginary perfect world is frequently insightful, but it cannot be applied to our imperfect world without adaptation. Even if we could agree on one of the twelve Hicksian, or any other, concepts of income, we know that the current accounting conventions cannot measure them precisely. Instead of seeking

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28 Kalves adds a footnote (1985, pp. 121-4): 'The nature of these conventions cannot be discussed here, but they can be made clear (in accordance with the general accounting principle that it is better to err on the conservative side) in bringing more of the gains and few of the losses into the windfall category than would properly be regarded as belonging to them. Thus the conventions for writing down assets are far more liberal than for writing them up. Occasionally, however, the conventions have the opposite result—a for example, the depreciation of fixed assets on the basis of historical costs, in times of inflation. Similarly Morgenstern (1941) observed how accountants weight the statistics in their accounts in order to give a trustworthy, usually prudent, estimate of the uncertain future. So in seeking to derive features or conventions from the desirable characteristics of financial reporting in their pursuit of 'neutral' (e.g. FASB/IASB 2004a, BC2.20-21), the Boards should be expected first to show that they understand what might be the reasons for the conventional conservatism in accounting (e.g. Watts 2003a, 2003b) and then explain why they think that these reasons are no longer valid. They do neither.

29 For a discussion of the merits of stability of financial reporting standards see, for example, Sundar, (1986, and 1997, Chap. 10). The continuing dominance of the QWERTY layout for keyboards provides an interesting parallel (Macaw, 2010).

30 See, for example, Sundar (2003a, 2003b).
to replace conventions with concepts, the Boards could seek a better understanding of how and why accounting conventions work, and which of them could be adapted to the current financial reporting environment in the light of relevant conceptual considerations.55

To argue, as FASB/IASB (2005) do, that income based on accounting conventions cannot measure Hicksian income does not give superiority to income based on the concepts of assets and liabilities. Since net asset values do not sum to equity value in incomplete and imperfect markets of our world, income based on net asset values does not equate to Hicksian income. Moreover the Boards’ related attempts to pin down the definitions of the elements of financial statements in their conceptual framework project are unlikely to be helpful in this endeavour, or even to be achievable.56

While much of the conceptual discussion reviewed here, including the FASB/IASB (2005) paper itself, appears to recycle arguments from more than fifty years ago (e.g., Dean, 2008), there have been interesting recent practical developments in alternative ways of setting income and value in accounting reports, given dissatisfaction with existing conventions. The most conspicuous of these at the present time are the developments in supplementary reporting of life insurance profitability according to a (market consistent) embedded value (MCEV) model. MCEV is a form of fair value accounting that was originally developed by actuaries for financial management and control of life insurance businesses, based on discounted present values. It has increasingly been adopted worldwide for supplementary reporting, to overcome the severe limitations of the traditional solvency approach to life insurance accounting in a new world, where there has been extensive restructuring of financial institutions together with changes in both their market opportunities and in their regulations. MCEV now uses available market prices as benchmarks, wherever feasible, to derive opening and closing ‘economic balance sheets’ for the in-force—that is, existing—business each period, and analysts the changes between them in terms of predicted return and variances from expectations. It thus bears structural similarity to a Hicks No. 1 ex ante-ex post cycle. However, so far it has been rejected by the IASB in their own project on insurance accounting. (For further discussion, see, e.g., Grofod, 1985; Horton et al., 2007.)

ASB (2007) has recognized that this new MCEV approach has potentially major implications for profit measurement and reporting in other industries. Standard setters could usefully design more effective prescriptive standards on the basis of such experiments to evaluate current concepts, practices and their consequences.

55 This is consistent with a Wittgensteinian approach to conceptual enquiry in the manner of Dennis (2008, p. 264). We are not agreeing for a na"ıve return to the view of the U.S. APB in 1971 that labelled all generally accepted accounting principles as conventions because they become generally accepted by agreement (often tacit agreement) rather than formal derivation from a set of postulates or basic concepts (see Sunder, 1997, Chap. 9) but rather for a new approach to how concepts and practices should be interpreted. Chambers (1984) also rightly criticized the derivation of ‘conventions’ as justifications for practice without asking why they have become established.

56 For fundamental scepticism about the effectiveness of any such attempts at necessary and sufficient definitions see, for example, Kitcher (1934), D’oppius and Sunder (1989), Dennis (2008, 2004) and Sunder (2007)
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Such an experimental approach, with due allowance for our state of ignorance, may be better than the attempts at abstract definitional refinement of concepts such as income or assets. This abstract approach becomes especially risky when it is based on fragments of theory(ies) conveniently selected to serve the objectives of standard setters in violation of the integrity of the theory(ies).

The Boards could fruitfully reorient their efforts in this direction. As the example of executive stock option compensation in the Appendix illustrates, improvements in financial reporting practice and standards are often driven by a recognition that current conventions may have outlived their practical usefulness, rather than by the logical implications of any underlying conceptual framework.

6. CONCLUSIONS

We have presented reasons why Hicksian concepts of income cannot be invoked to support the asset-liability perspective promoted in the FASB/IASB (2003) manifesto for the Boards' joint conceptual framework project. Firstly (as discussed in section 1) firms do more than just earn a return on their identifiable net assets. These assets may or may not have a readily available market value. There is also normally the element of what Hicks calls human capital in how firms exploit their opportunities, so even if asset markets are in competitive equilibrium, if they are not complete this creates internal goodwill. Measurement of this inevitably requires subjective estimation, precluding the feasibility of objective measurement even ex post, contrary to the objectivity claimed in FASB/IASB (2003).

Secondly (as discussed in section 2), Hicks has difficulty in arriving at a practical measure of business income that could be reflected in accounts, as he finds it necessary to conduct the analysis at the level of the change in the value of the firm itself, net assets, and this income is that of the proprietors rather than of the business. He finds that the measure of this income, even ex post, is largely driven by changes in expectations about the firm's future cash flows, rather than by the realized cash flows of the period just completed.

Thirdly (as discussed in section 3) our fundamental objection to FASB/IASB (2003) as a conceptual foundation for financial reporting is that Hicks' own assessment of any practical ex post measure of income, whether more or less subjective, is that it is irrelevant to decision making—and therefore it must be largely irrelevant to the Boards' decision usefulness objective for financial accounting and reporting.66 At best it can provide relevant statistics for prediction—but that may imply that adjusting the factual record about past transactions for changes in expectations about the future is best left to decision makers as users. Assistance from competing information intermediaries such as analysts, the press, and academic research based on

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66 Representing the present value of super-profits (or abnormal earnings/residual incomes), as measured by reference to the value of identifiable net assets.

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354
information from within and without the firm may also help. Adjusting the financial statements themselves for this purpose may therefore be unnecessary and it is up to the Boards to demonstrate what comparative advantage accountants have in adding value through bringing ever more of management’s and analysts’ estimates of the future into audited financial statements and reports (e.g., Christensen, 2010).

Fourthly (as discussed in section 4), if the focus were to shift primarily to income \textit{ex ante}, it may be argued that an equally important perspective on what the future holds is to consider not just the likely changes in future value (or gain), as captured by Hicks’ No. 1 \textit{ex ante} concept of income, but also the standard stream (No. 2 \textit{ex ante}) view of income, as useful in helping to triangulate the amount to be reported as a firm’s expected earnings. As Pash (1940) pointed out, there are legitimate economic motivations underlying interest in both views. Given the variety of user preferences and objectives, any choice between them can itself only be an accounting convention. Therefore, any measures to assist estimates along both these dimensions may usefully be reflected in general purpose financial reports. For example, as far as practicable, both the current value of net assets and changes in net assets may be reported, without requiring all the changes to be reported as earnings (e.g., Horton and Macve, 1996, 2000).

The conceptual framework project of FASB and IASB will not be able to eliminate either of the two income concepts; user preference may force them to retain both. In many situations the revenue/expense matching view of income/earnings is closer to the maintainable earnings concept than the asset/liability view (e.g., Beznos, 2009). It seems unlikely that the Boards’ attempt to eliminate the revenue/expense view in favour of the asset/liability view can succeed. Indeed, it is already in the process of being deconstructed in their Revenue Recognition and Fair Value projects (FASB/IASB, 2008b; IASB, 2009).

After exploring the dangers of standard setters misapplying selected fragments of misunderstood theories, the final section examined the role of conventions in measuring income. The Boards’ conceptual framework should seriously attend to the necessary interrelationship between concepts and conventions in practical affairs. Indeed, revisiting the concepts in this way will help the Boards as well as their constituents to understand why accounting practice has to include conventions and how those conventions, despite there being no clear framework for identifying what is optimal (e.g., Denski, 1973; Sunder, 1997; and Christensen and Denski, 2003) have become so powerful as calculations of performance, including business performance, in the modern world (e.g., Horton and Macve, 2000). We therefore suggest a revision of the key sentence we quoted at the beginning from p 1 of FASB/IASB (2005) to read: ‘To be principles-based, standards have to be a collection of (socially) useful conventions, rooted in fundamental concepts’.

In summary, Hicks’ (1946) analysis does not provide a conceptual basis for the FASB/IASB’s exclusive focus on a balance sheet approach to the financial reporting. Nor does it help address the difficult problem of measuring and reporting business performance and identifying drivers of value creation.

We have argued that the Boards should try to understand the practical roles of conventions in financial reporting and how and when they might be modified to
serve the legitimate interests of interested parties (e.g., by reducing apparent inconsistencies that no longer serve any purpose). However, the corporate structure of the Boards themselves, designed for debating technical issues may not necessarily equip them to address such challenges. The ultimately political nature of the social welfare issues may be better suited for broader social institutions reflecting social norms of the kind that the idea of generally accepted accounting principles was originally meant to encapsulate. How to construct useful, practicable, and broadly accepted financial reports may require evolution as well as design (e.g., Baru et al., 2009). Whether it is desirable for the Boards themselves to adopt makes one, monopolistic standard setter remains an open question (e.g., Bromwich, 1992, Dye and Sunder, 2001; Sunder, 2009, 2010). Clearly the Boards' unsuccessful appeal in FASB/ IASB (2005) to the claimed objectivity of Haskins income as an unambiguous foundation for financial accounting and reporting fails to resolve these issues.

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368

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HICKSIAN INCOME IN THE CONCEPTUAL FRAMEWORK


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349

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APPENDIX

EXECUTIVE STOCK OPTIONS—A CASE STUDY IN INCOME CONCEPTS AND THE ROLE OF CONVENTIONS

In this Appendix we explore through a highly simplified example how the arguments we have presented about the essential distinction between Hicks’ No. 1 and No. 2 versions of income might play out in the case of a controversial example like accounting for executive stock option (ESO) expense. We also examine how changes in the role of accounting conventions such as matching appear to be more relevant in understanding how practice has changed than concepts grounded in the standard setters’ asset/liability approach.84 We initially assume certainty (apart from the previously unannounced arrival of a new CEO) so there is generally no difference between income ex ante and income ex post, or between risks of investment. For simplicity we assume discrete compounding with cash flows arising at the end of each year throughout. Numbers are exaggerated to bring out the effects more clearly but it is assumed (unless otherwise stated) that all parties are price takers in perfectly competitive markets.

Under IFRS2 (IASB, 2004), which is essentially similar to the revised SFAS123 (SFAS123R) (FASB, 2004), when stock options are granted to executives they may no longer be accounted for simply at any difference between the exercise price and the current market price of the related shares (which may be zero), but must be recognized at their ‘fair value’ on the date of issue. In a perfect market the Black-Scholes option pricing model shows how an option will have both an intrinsic value and a time value (the latter reflecting the risk of how far the option may move into

84 We are grateful to Amanda R. Ganguly for suggesting we use this issue for illustration.

371
and out of the money as the underlying share price changes stochastically until the date of its exercise). However, in our simplified world of certainty there will be no such risk from share price volatility and the options will only have intrinsic value (assuming they can be exercised at any time). This is sufficient to illustrate the point at issue here about income.

Suppose Company A currently has 100 shareholders each owning an equal percentage of the 1,100 shares (11 shares each) traded on an exchange. Cash flow forecasts at time t0 are $2,200 p.a. If the rate of interest is expected to remain at 10% p.a. the value of the firm is $22,000, that is, $20 per share, with each shareholder having a holding of 11 shares worth $220 and an expectation of receiving dividends of $2 per share (equal to EPS) for the foreseeable future. H"uck's income ex ante (both No.1 and No. 2) totals $2,200 p.a. ($22 per shareholder) and is also the permanent income. For simplicity, assume no dividend is paid before the end of period 1 (t1).

At time t0, company A unexpectedly hires a new CEO to start work immediately and incentivizes her with stock options allowing her to purchase shares at any time at a strike price of $0. The stock market (including all current shareholders and the CEO) estimates that the effect of this CEO's arrival will be to increase the value of all expected cash flows by $300 p.a. to $2,500 p.a. (an increase worth $3,000), but executive labour market conditions mean that the CEO cannot extract any quantifiable and is only worth the going rate of $2,000. This raises the value of the firm to $25,000. The option grant must therefore be $2,000/25,000 * 1,102 = 88 shares.

Existing shareholders retain 1,012 shares (and are better off by $1,000 as the current share price rises to $25,000/1,012 = $24.69). The CEO receives 88 options worth $22.75 = $2,000. Each share will receive an extra $300/1100 dividend each year = $0.273, to give a total dividend of $2.273 per share, equal to the new EPS.

If no dividend is paid from the windfall gain at t0, the revised H"uck's income No.1 and No. 2 ex ante now totals $2,500 p.a. (to existing and potential shareholders)

\[
\text{No.1 } & \quad 1,012 \times \text{(current EPS)} + 88 \times \text{(dividend)} \\
\text{No.2 } & \quad 1,012 \times \text{(current EPS)} + 88 \times \text{(dividend)}
\]

For simplicity, we assume here that the $22,000 value is also equal to the current value of Company A's recognized net assets.

Deferring the successful impact on cash flows of the CEO's arrival and efforts to some later long-term date (one of the main economic reasons for using stock-option compensation as an incentive device) complicates the arithmetic but does not alter the fundamental point on here, given that we are working with discounted present values in a Medoff-Miller world.

\[
0.10 \times 22.73 = 2.273
\]

This assumes existing shareholders will have effectively surrendered 88 existing shares (0.8% each) to the new CEO for $0 per share, thereby lifting the share price to $20 per share, a total of $220. (In order that she may examine her return we assume she exercised the option immediately: the actual timing makes no difference to the main points at issue.) Alternatively, if the company will issue new shares to the CEO when the option is exercised, then the number of options granted will therefore have to be proportionally higher to counteract the dilution effect of the new share issue. As Childs has explained, such dilution causes problems with specifying the Childs (1993) residual income valuation model (the consequences are set out in, e.g. Van Caulenburg and De Beule, 2007)—since either scenario will illustrate the main points at issue here, we utilize the former throughout.

372
but as far as existing shareholders are concerned it is $2.300 p.a. (i.e., diluted by the effective transfer of 88 shares attracting a dividend of $2.500/1,100 = $2.275 p.a. each = $200 in total)

Under IFRS2 and SFAS123R, however, the additional internal goodwill and increase in the stock market value of the proprietors' shares will not be recognized; while the cost of the option grant of $2,000 will be treated as an expense, depressing year 1 reported income to $2,500 - $2,000 = $500. If investors were then to project this as Company A's permanent income, its stock market value would correspondingly fall from $22,000 to $5,000. While this would make the reported income 'value relevant' in the sense of association with stock market prices, it is clearly not 'value relevant' in the sense of adequately informing stock market prices (e.g., Macev, 1998). If the intangible asset were to be recognized then there would be a windfall gain totaling $3,000 (of which $1,000 accrues to existing shareholders), so that Hickson Income No. 1 for the firm becomes $2,500 + 3,000 = $5,500 and for its existing shareholders $2,300 + 1,000 = $3,300. 

Aboody et al. (2004a) and Landsman et al. (2006) document evidence that the stock market recognizes both the expense of executive stock-option compensation and the intangible asset of the additional future earnings to be generated by the CEO's arrival. So if the accounts were to be made fully value relevant (i.e., tracked the Hickson No. 1 income of the firm) what would be the effect of interest rate changes? Expected changes will be sufficient to demonstrate the point.

Now suppose that interest rates were expected to be 10% p.a. during the first year and then to rise to 20% p.a. thereafter. At t=1, the value of Company A would have

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4) Under SFAS123R a cost will be recognized over the period during which an employee is required to provide service in exchange for the award—the required service period (usually the vesting period). Home page expensing makes the example here simpler but it does not alter the fundamental position that accounting recognition of the expense is asynchronous with the delayed accounting recognition of the benefit, much of which may only be expected to arise in the long-term.

5) The Summary of SFAS123R points out: Employer services received in exchange for awards of share-based compensation qualify as assets, though only momentarily—when the entity receives and uses them—although their use may create or add value to other assets of the entity (http://www.fasb.org/jsp/FASB_Presentation,C=SummaryPageActive=S000000012385, accessed 24 July 2008). However, if the other assets are internal goodwill they will not be recognized, so the overall initial outcome is just the expensing of the fair value of the options (Macev, 1998).

6) Using our notation (with * indicating amounts attributable to/taken from existing shareholders) $V_t =$22,000; $V_t =$23,000; $V_t =*$24,000; $C =*$2,300; $C =*$2,300; $C =*$2,300. Income = $V_t -$V_t in total for the firm $[(2,500 + 2,300 + 2,000) - (1,100 + 1,100 + 1,100)] = $3,500; and for existing shareholders $[(2,000 + 2,300 - 2,300) - (1,100 + 1,100 + 1,100)] = $3,500. Note that because the overall effect of accounting for the ESO expense of 2,000 is by a debit to current earnings, offset by a credit to shareholder equity, the overall net assets of the firm change over the year only by the operating cash flow (now $2,000) and, if recognized, by the value increase from the CEO's arrival ($3,500) that is by $3,500 in total. The new CEO gets the value of the option grant ($2,000) plus her share of the first year's earnings ($200).

7) While repeated interest rate changes in both directions are normal, one change is sufficient to illustrate the main point at issue here. A simple numerical illustration of No. 1 to No. 2 in respect of a fixed interest security is given in Appendix XIII to Horton and Macev (1999), following Paish (1980); while the case of fixed interest liabilities is discussed in Horton and Macev (2000). See also Rayman (2007) and Bernold (2008).
been $12,000 before the unanticipated arrival of the new CEO and $13,636 afterwards. At the corresponding values (of all future cash flows) would be expected to be $11,000 and $12,500 respectively. This gives No. 1 incomes for year 1 of $1,200 and $1,568 respectively (both equal to interest at 10% on the revised opening value). Under IFRS2 and SFAS123R (expensing the stock options but not recognizing the intangible asset, i.e., the value of the anticipated future increase in annual earnings) income would fall by $1,091, together presumably with the impairment to the book value of existing net assets of $10,000 caused by the rise in interest rates.

Under Higgsian No. 2, the only economic change is the expectation of the increase in annual cash flows of $300 following the CEO’s arrival, so income rises from $2,200 p.a. to $2,500 p.a. (of which existing shareholders will get $1,012 * $2,273 p.a. to $2,500 p.a. [a net increase of $100 p.a.], and the new CEO $88 * $2,273 p.a. = $200 p.a. at before). Which is the more useful measure of income? There are two interrelated problems here: the unrecorded internal goodwill and the effect of changing interest rates.

At t, before new CEO: $2,200 / (2,200 - 2) / (1.1) = $12,000 — and, assuming perfect asset markets, the current value of Company A’s net assets, consistent with note 37, would also have been correspondingly lower. After new CEO: $2,500 / (2,500 - 2) / (1.1) = $13,636 ($12,000 per share).

At t + 1, before new CEO: $2,200 + 1,100; after new CEO: $2,500 + 1,200.

If the windfall gain of $1,686 at t, from the CEO’s arrival had been immediately distributed as dividend, its value would have been maintained at the original $1,200 and No. 1 income for this period would have been maintained at $1,200 (10% of $12,000) — but would now be expected to be $2,200 p.a. in future following the interest rate rise to 30%. Alternatively if all the windfall gains including any impairment to valuation resulting from the interest rate change, were to be regarded as part of the Year 1 income, the No. 1 income for this period would be $3,500 — $2,200 — $7,000 (which might be analyised as a fall in opening value due to the interest rate change of $2,200 — $2,000) — $1,000, offset by the increase in internal goodwill of $1,436, plus ‘normal’ income for the year at $1,686 (i.e., net total = $7,000). In our notation, original VA was $2,200; VA = $2,500; CVA = $2,900; No. 1 Income = $12,300 — $2,500 — $2,900 = $7,000. If this is made good to restore the initial capital value of $2,200 (i.e., before any of the changes in circumstances were known about), future expected income alone $1,436 (i.e., $VA = $2,900 — $2,500 — $1,000). The signals here to investors seem more confusing than those given by Higgs’ Income No. 2 below — although management interpretation and explanation in notes will clearly be needed in any case (e.g., Mason, 1987).

Assuming that the CEO’s market hiring price still reflects general executive market conditions (i.e., based on validating assumed normal CEO ability to increase earnings by $200 p.a. j/w would receive now be $1,000 / (200 — 2) / (1.1) = $1,019, satisfied by the issue as before of options on 88 shares, now worth $12.40 per share). Unrecorded internal goodwill at t is now valued at $1800 / (200 — 2) / (1.1) = $1,686, as in notes 37 and 45: book value is $2,000, which together with unrecorded internal goodwill gives the stock market value of $3,486, consistent with Olsson (1985). Although the stock option compensation of $1,091 will be expensed, the overall accounting book value of the firm at t is unchanged at $12,000, since no net assets leave the company and the grant is recorded by both reducing the retained earnings element of equity and increasing the paid-in capital element by $1,091.

If the cash flows are not regular perpetuities, changes in interest rates will affect No. 2 income calculations as well, as the opportunity for smoothing out the income over time to permanent income by utilizing the capital markets to borrow and lend will also change.

Note: that if there had instead been a fall in interest rate, for example, to 5% p.a., the accounting asymmetries would be even greater as the total value of the firm at t, after the arrival of the CEO at

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374
Given the FASB/IASB’s favoured asset/liability approach, recognizing only the impact of the latter on values (Hicks No. 1) increases the accounting asymmetry here. And even without this, the only partial recognition of the ISO impact (i.e., the expense without the intangible for the benefit) means that evaluation of any accounting choice, or of change in accounting standard, already faces the economic problem of the second best (Lipsey and Lancaster, 1956), that is, that fixing only one element of the problem may make the overall situation worse (e.g., Landsman et al., 2006).

Paradoxically there is actually no overall change in recognized net assets under IFRS2/IFAS123R as option expense is offset by increase in paid-in capital. So there appears to be some much more conventional notion of proper matching providing the justification for this treatment. As Warren Buffet famously said (see, e.g., Macc, 1998): “If options aren’t a form of compensation, what are they? If compensation isn’t an expense, what is it? And, if expenses shouldn’t go into the calculation of earnings, where in the world should they go?”

It is clear that the definitions of income, assets, and other such fundamental elements can serve as signposts but cannot provide definitive answers to practical questions. The opportunity for the IASB and the FASB finally to succeed in 2006 in requiring expensing of stock options probably had more to do with changes in attitude to business transparency following the Enron debacle (e.g., Gwilliam and Jackson, 2008). As the summary of SFAS 123R noted: “Over the last few years, approximately 750 public companies have voluntarily adopted or announced their intention to adopt Statement 123’s fair-value-based method of accounting for share-based payment transactions with employees.”

The cost (in lower reported earnings) to companies of adopting option expensing could thus be interpreted as a signal that companies’ accounting numbers were more credible overall (e.g., Morris, 1987). Of course, this also created new incentives for different kinds of firms to underreport that expense either as free-riders or because the immediate crisis of public confidence had abated before long (cf. Aboody et al., 2004b, 2006).

For our own conclusions, there would appear to have been changes in societal expectations of business legitimacy that made the new convention more useful and

\[
\text{cost would rise to } \$(2,300 \times (2,900 - 2,200)) = \$47,727 \text{ ( \$18.38 per share).} 
\]

Eighty-eight share options granted would now be worth \$47,727, representing the new marketwide price of CEOs (i.e., only generally expected to add value of \$1,000 \times (2,900 - 2,200) = \$700,000). In addition to not recognizing the internal goodwill of \$1,000 - (2,900 - 2,200) = \$5,000, the accounting rules would not generally recognize the rise in the market value of the company’s net assets to \$(2,200 \times (2,900 - 2,200)) = \$42,000. (If they are not financial instruments, valuation might be allowed under IFRS, but would not currently be allowed under US GAAP.) All that would be recognized would be the now higher option expense of \$5,000, further relaxing the overall value relevance of the accounts. Of course, Hicks No. 1 income remains unchanged at its new increased level of \$2,900 as before.

\[\text{92 Landsman et al. (2006, pp. 211–12) helpfully illustrate the alternative bookkeeping for different possible accounting methods. Although it has been argued that there is a creation of an asset accompanied by its instantaneous simultaneous expensing, thereby constituting a change in net assets (e.g., FASB SFAS123R, BCR fn. 10), this is essentially a metaphysical assertion from the perspective of the reporting process, as no time is this asset visible in the published accounts themselves.}\]
acceptable. The resulting political forces\textsuperscript{32} were probably more important than the conceptual niceties, which had been insufficient to resolve the controversy during the period leading to the issue of FASB's previous version of SFAS\textsuperscript{123} in 1998 (e.g., Zeff, 1997). That is not to say that the conceptual considerations are irrelevant; clearly the anomaly of the asymmetric recognition of the cost of the grant versus its anticipated future benefits (Mace, 1998) has added yet another factor (alongside other cases such as research and development) that undermines the consistency of the Boards' Conceptual Framework as an asset/liability based.

The Boards' 2005 manifesto wrongly claims that their proposed revision of their Conceptual Framework is supported by Hicks' analysis of income. This example of ESOs illustrates that the recognition of this mistake might be a useful first step towards making real progress.

\textsuperscript{32} Supporters of the 2004 revision to SFAS\textsuperscript{123} included US Federal Reserve Chairman Alan Greenspan and future Presidential candidate Senator John McCain (Batters and Walther, 2005).