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## Hicksian Income in the Conceptual Framework

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# Hicksian Income in the Conceptual Framework

## ABSTRACT

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 distortion. 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.

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# Hicksian Income in the Conceptual Framework

## 1. Introduction

The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) are undertaking a joint project to converge and improve their respective 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 emphasised that ‘to be principles-based, standards cannot be a collection of conventions but rather must be rooted in fundamental concepts’.<sup>1</sup> 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 & 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’s (1946) definition of ‘income’ (p.7; p.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

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<sup>1</sup> [http://www.fasb.org/project/communications\\_paper.pdf](http://www.fasb.org/project/communications_paper.pdf) (accessed 6 March 2010). This FASB/IASB ‘communications’ paper was written by staff members Halsey G. Bullen and Kimberley Crook. Originally, it did not carry the usual disclaimer as to the status of staff opinions, although the disclaimer does now appear on p.16 of the version now available online, and the FASB website now refers 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’s analysis in a joint FASB/IASB publication, Clarke (2010, following Clarke, 1988) shows that their 2005 paper’s approach marks the resurgence of a longstanding academic and policy literature, within which careful understanding and nuanced application of Hicks’s concepts to accounting policy issues has been rare.

measurement of income. We provide an analytical and critical case study of the use of income theory in accounting policy making.

In Sections 2 through 5 we explain each of the significant differences between the Hicksian analysis of income and that of the FASB/IASB. We argue that a fundamental reorientation of the conceptual framework project is needed: and in section 6 we tentatively explore how the Boards might begin to develop a more fruitful understanding of the respective roles of accounting conventions and concepts and of the interrelationships between them. Section 7 concludes and an Appendix illustrates the arguments with the example of the recent changes in accounting for executive stock options (ESOs).

## **2. The foundations**

Relevance of a conceptual enquiry 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 Cauwenberge & DeBeelde, 2007), as this is also the objective embraced by FASB/IASB (2005).<sup>2</sup> Starting with the overriding objective of ensuring the usefulness of accounting 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’.<sup>3</sup>

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

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<sup>2</sup> It is also consistent with the approach adopted in empirical studies of ‘value relevance’, e.g., recently by Chambers *et al.* (2007) and Horton & Serafeim (2008). We explore the conceptual issues arising therefrom, and not the implications of adopting alternatives such as the ‘information content’ or contracting schools (see for example, Bromwich, 1992; Christiansen & Demski, 2003; Sundem, 2007; and Christiansen, 2010 for further discussion on the former; and Sunder, 1997; Watts, 2003a; 2003b; Benston *et al.* 2006; and Whittington, 2008 for further discussion on the latter school). Nor do we extend the discussion to public sector and other not-for-profit organisations (see e.g. Speckbacher, 2003; Laughlin, 2008.) The history of how and why the FASB came to adopt this particular conceptual framework, and how the ‘inner circle’ in the ‘G4+1 group’ has influenced the IASB’s ideas, is also beyond this study (see e.g. Dopuch and Sunder, 1980; Macve, 1997; Zeff, 1999; Nobes, 2006).

<sup>3</sup> [http://www.fasb.org/project/cf\\_phase-b.shtml#summary](http://www.fasb.org/project/cf_phase-b.shtml#summary) (accessed 6 March 2010).

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 primacy' 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).<sup>4</sup>

The Boards' objection to 'deferred debits' (Sprouse's 'what-you-may-call-its' — Storey, 2003, p.44) 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 UK 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.<sup>5</sup>

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 primacy of 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).

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<sup>4</sup> 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.

<sup>5</sup> Barth (2008, p.1166) emphasises this proper understanding of 'matching'.

Although it does not specifically cite Hicks, the SEC's (2003) 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 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' (section III.B).

The Boards' attempt to ground their converged framework for accounting principles on a sound economics foundation is to be welcomed.<sup>6</sup> 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* this 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, chapters 3 & 4): cash flow for period 1 as estimated at the beginning of period 1 (at time 0) =  $C_{1t0}$ ; and as realised during period 1 and known at time 1 =  $C_{1t1}$ . The value of prospective cash flows arising in periods 2 and onwards, as foreseen at time 0 =  $V_{1t0}$ ; and as foreseen at time 1 in the light of up-

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<sup>6</sup> 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 (1965) [see section 3 below]. Although the first edition of Hicks's *Value and Capital* only appeared in 1939, his ideas about the meaning of income were not revolutionary; for example, Edwards (1938) advocated the increased-net-worth theory of income.

to-date information and revision of expectations during period 1 =  $V_{1t1}$ . Given an unchanged discount rate  $r$ , the value of prospective cash flows in periods 1 and onwards, as foreseen at time 0 =  $V_{0t0} = (C_{1t0} + V_{1t0}) (1+r)^{-1}$ ; and as re-estimated with hindsight at time 1 in the light of new knowledge and revision of expectations during period 1 =  $V_{0t1} = (C_{1t1} + V_{1t1}) (1+r)^{-1}$ . Income No.1 *ex ante* for period 1 =  $(C_{1t0} + V_{1t0}) - V_{0t0} = rV_{0t0}$  and (Hicks's) Income No.1 *ex post* for period 1 =  $(C_{1t1} + V_{1t1}) - V_{0t0}$ . If the rate of interest  $r$  is expected to remain constant, and all income and only income is distributed/consumed, future periods' income *ex ante* will also remain constant (at  $rV_{0t0}$ ), i.e., it is the 'permanent income' (e.g., Beaver, 1998).

FASB/IASB (2005, p.18) quote Hicks's observation that Income No. 1 *ex post* possesses 'one supremely important property. . . . [That kind of income] *ex post* is not a subjective affair, like other kinds of income; it is almost completely objective.' But the quoted words are selected to exclude a critical qualifying condition. The relevant full sentence reads (Hicks, 1946, p.178-9, with the missing part italicized for emphasis by us): '*So long as we confine our attention to income from property, and leave out of account any increment or decrement in the value of prospects due to changes in people's own earning power (accumulation or decumulation of "Human Capital")*', Income No. 1 *ex post* is not a subjective affair, like other kinds of income; it is almost completely objective'.

What does the critical omitted qualifying clause (which was worded slightly differently in the 1939 first edition—Clarke, 1988, p.423) imply? The concept of income as 'current cash flow plus increase (decrease) in the net present value of the entity's expected future cash flows' (excluding transactions with owners) or 'cash flow plus actual capital accumulation', has long been advanced by many leading academic accounting authors in writing for practitioners (e.g., by Edwards (1938) in the UK). However, this concept of income is fully determinable and objective only in the presence of complete and perfect markets (i.e., when every resource and claim on future cash flows has been commoditized into fully exchangeable assets and where everyone faces the same prices, including the discount rate (Beaver and Demski, 1979). Such fully exchangeable assets are what Hicks calls 'property' (referring presumably to land, traded investments, agricultural and mineral commodities, etc.). Under these circumstances, the capital value of the individual's property at the

beginning of the [period] is an assessable figure; so is the capital value of his property at the end of the [period]; thus, if we assume we can measure his consumption, his income *ex post* can be directly calculated' (1946, p.179). In this situation, there is indeed no doubt about the magnitude of wealth and therefore about the magnitude of changes in it.<sup>7</sup> But then the *reporting* of income is redundant; it adds nothing to the knowledge about wealth.

Since markets are rarely perfect or complete, the value of most if not all business enterprises includes significant cash flow prospects that are not reliably captured in the observable market prices of their net assets, no matter how liquid many individual markets are.<sup>8</sup> This 'internal goodwill' component of value (i.e., the value of super profits over and above the normal rate of return on net assets) depends *inter alia* 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's '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), i.e., the change in its 'capital value' on the stock market, than in the change in the enterprise's net assets.<sup>9</sup> 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

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<sup>7</sup> Of course, estimation of future income also requires a known future universal interest rate (and knowledge of how it will change over time), or ways of allowing for different risk classes of activity, e.g. through different risk-adjusted discount rates.

<sup>8</sup> The difference between net asset ('book') value and an enterprise's market value is its 'internal goodwill' which is not recognised in financial statements, except when an enterprise is taken over by another so that 'goodwill on acquisition' is recorded in respect of the subsidiary. Even then, the recognised goodwill may not equal the previous management's estimate of the internal goodwill, as the negotiated takeover price will reflect the interaction of the seller's and the purchaser's estimates and their relative bargaining power. Internal goodwill is modelled by Ohlson (1995) as 'the present value of abnormal earnings' so that firm value is likewise always the sum of this and accounting book values. This is known as the residual income model of firm valuation.

<sup>9</sup> The authors of FASB/IASB 2005 may have been misled by previous academic literature which has similarly claimed (*almost* complete) objectivity for Hicks's 'No.1 *ex post*' concept (e.g. Parker *et al.*, 1986, pp. 3, 8, 17; Clarke, 1988, p.418—although these sources are not in their references). The argument has not reappeared as such in subsequent statements from the Boards' 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.



price return (plus dividends) as their income, their accounts are again redundant, at least for valuation and investment decisions.

### 3. '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's capital value as 'in accounting terms, its assets and liabilities'.<sup>10</sup> 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's underlying model of capital value may be developed (including the literature on deprival value, e.g., Baxter, 1984; Edey, 1974; on current exit value, e.g., Chambers, 1966; Clarke & 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's notion of Income No.1 (e.g., 'Introduction to First Edition' in Parker *et al.*, 1986: a classic treatment is Edwards & Bell, 1961). Any such links require further substantial restrictive assumptions to handle *inter alia* 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 analyzes 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 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'.<sup>11</sup>

Like Ijiri (1975), Hicks observes that the accountant's approach needs to be as objective as possible to minimise disagreements, not measuring profit in the way the

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<sup>10</sup> The SEC's 2003 report (section III.B), Schipper & Vincent (2003, Introduction), Barth (2007, p.10; 2008, p. 1168), and Chambers (1976, p.2) also take a similar line.

<sup>11</sup> This picture of the accountant's role is consistent with the 'contracting school' (e.g., Sunder, 1997; Watts, 2003a; 2003b; Benston *et al.* 2006; Whittington, 2008).

mill-owner himself might do. According to Hicks, the accountant's approach naturally draws on the mercantile tradition long-familiar to accountancy, whereby 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.<sup>12</sup>

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]  $V_{0t0}$  and  $V_{1t1}$ .

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 this peculiar history, would refuse to do them in terms of  $V_{0t0}$  and  $V_{1t1}$ ; he would insist in doing them in terms of...the values which "stand in the books". The economist, however, would find  $V_{0t0}$  and  $V_{1t1}$  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 recognises 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/IASB (2005).

Hicks's (1979) argument and analysis finally lead him to regard as current profit that defined by Lindahl (1933): i.e.  $(C_{1t1} + V_{1t1}) - V_{0t0} = rV_{0t0}$ .<sup>13</sup> 'This is effectively what

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<sup>12</sup> In fact, *pace* Hicks, there were *theoretically* intractable problems, and not just in allocating common overheads, even in the simple 'mercantile' practices for accounting for inventory and profit (e.g., Macve, 1997; Yamey, 2000).

<sup>13</sup> As Kaldor (1955) explains, what Hicks (1946) called 'Income No. 1 *ex post*' is what American writers have generally called '*accrued income*—i.e., consumption plus *actual* capital accumulation' (in

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...  $V_{1t1}$  ... would appear to have a large part, even, in many cases, the dominant part, in determining the *current profit*' (p.10).<sup>14</sup> Moreover, it is the income of the proprietors, rather than *of the business* (p.11).<sup>15</sup> [Emphases 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*.

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our notation,  $C_{1t1} + (V_{1t1} - V_{0t0})$ ). *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  $V_{0t1}$ ), if the knowledge and changes in expectations becoming available during the period had been there at the beginning (i.e., income 'with hindsight' and 'excluding windfalls'). This latter version (as expounded by Lindahl, 1933) is therefore, in our notation,  $(C_{1t1} + V_{1t1}) - V_{0t1} = rV_{0t1}$ . Given constant  $r$ , permanent income is revised to  $rV_{0t1}$  (and will doubtless be revised again at the end of each subsequent period). It is this version of income, as given in Hicks (1979), that is emphasised by Jameson (2005) in his critique of FASB/IASB (2005). It is also the conceptual approach proposed by Solomons in his *Guidelines* (1989) for the UK's ASB: cf. Macve, 1997. For further analysis see e.g., VanCauwenberge & DeBeelde (2007).

<sup>14</sup> A further decomposition of the terms into  $R$  (current receipts),  $E$  (current expenses),  $C$  (capital expenses) and  $D^{**}$  (economic, not accounting, depreciation) gives Hicks (assuming  $C = D^{**}$ ) a reformulated expression for income as  $R - E - D^{**}$  which 'does look like a formulation which belongs to the current period, as  $rV_{0t1}$ , which we have seen to be equivalent, apparently does not' (p.10). Professor W.T. Baxter wrote to Hicks on 8 June 1984 querying how an 'equivalent' reformulation could avoid 'infection by the future'. Hicks replied on 5 July that 'the passage on my p.10 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 I wish that I 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 about the need for the concept of income for his purposes was overstated (referring to his Capital and Growth, 1965, Chapter VIII, especially the footnote on p. 86). So, unlike FASB/IASB (2005), Hicks accepted that the subjectivity of any useful notion of income is unavoidable.

<sup>15</sup> Clarke (1988, 426-7) observes that the 'double-takeover' model Hicks uses in his 1979 paper shows no support for the positions taken in the inflation accounting debates of the 1970s and can provide no justification for replacement cost valuation of assets—nor indeed, we would argue, for any particular valuation approach to how assets should "stand in the books". Moreover, Hicks's analysis of his mill-owner's problem is clearly equally devastating of Bryer's (2006) supposedly 'Marxist' 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 (2008a) 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, 2005).

#### **4. How useful is Income No.1 *ex post*?**

There is however an even greater problem with the FASB/IASB's (2005) reliance on Hicks's concept as the bedrock of its approach to the conceptual framework. This applies independently of the relation of accounting asset/liability measures to Hicks's 'capital value', and independently of whether Income No. 1 *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/IASB'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 *ex post* income of the period, that is relevant for decision making about future investment and consumption, etc. So the only relevant decision-orientated 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, 1983). 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 *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 *ex ante* without some knowledge based in past experience (e.g., as hypothesised in Friedman, 1957). Hicks discussed further the role of accounting in this regard in a book review for the *Economic Journal* (Hicks, 1948). As explained by Brief (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 *users* 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?<sup>16</sup> 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 *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 *ex ante*?’ (cf. Barth, 2006). A considerable amount is inevitable, even in traditional accrual accounting that attempts to ‘match’ revenues and expenses (Edey, 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; Bezold, 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’s Income No. 1 *ex post* (Sunder, 1997, p. 79; cf. Schipper & Vincent, 2003) even if this were possible using accounting numbers—except perhaps for comparing 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. Macve, 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’s own assessment, *ex post* income, whether more or less subjective, is largely irrelevant to the Boards’ decision usefulness objective for financial accounting and reporting.

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<sup>16</sup> This book review was written long before the advent of UK 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., Macve, 1997).

## 5. 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 capitalisation (e.g., Whittington, 1983, p.33).<sup>17</sup>

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, 'none 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].<sup>18</sup>

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 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's (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

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<sup>17</sup> This approach underlies the common practice among UK listed companies of presenting supplementary 'underlying' or 'core' EPS numbers.

<sup>18</sup> IASB member James Leisenring has also asserted the same in his presentations on the conceptual framework; and it is reflected in Barth (2008, pp.1167-8). We do not pursue here the argument that the challenge itself is 'rigged'. (For example, unless and until the Boards 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, in imperfect and incomplete markets valuations of assets and liabilities inevitably require recourse to forms of 'matching' (for illustration see, e.g., FASB/IASB, 2008b, Chapter 5).)

of interest at which future cash flows are discounted to obtain the capital value (i.e. the yield-curve is flat).<sup>19</sup>

If the company held only fixed interest irredeemable government securities, this maintainable income would be 'objective'.<sup>20</sup> 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 (Macve, 1984; Draper *et al.* 1993).

It was this 'No.2' concept of income that underlay the proposals in the UK'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

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<sup>19</sup> Under inflation, the expectation needs to be 'in real terms', i.e., adjusted by an appropriate general price index (Hicks's 'Income No.3' (1946, p.174)). Clearly (including *ex ante* and both approaches to *ex post* formulations) the number of potential income concepts under the 'Hicksian' umbrella multiplies rapidly—e.g., Hendricksen, (1989). We have already reached a total of 9 (=3 x 3) and correspondingly a 'real version' of 'No. 1' (call this 'No. 4') would measure the 'real' change in the value of wealth (bringing us to 4 x 3 = 12 concepts). As Clarke (2010) points out, Chambers' (1976) letter to Hicks argues for 'No.3'; however his formulation on p.2 is 'No.4' (equivalent to the 'real' version of Edwards & Bell's (1961) 'realizable' 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 that are generally regarded to be most apparently relevant to business accounting are the version of 'Income No. 1 *ex post*' that is the focus of FASB/IASB (2005) and that we have already discussed; and 'Income No. 2 *ex ante*' that we are now discussing (but cf. Jameson, 2005).

<sup>20</sup> An objective maintainable *real* income would require index-linked securities to overcome uncertainties about future inflation rates. For redeemable fixed-interest securities, the maintainable income *up to the date of redemption* would be 'objective' if 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. Horton & Macve, 1996; Bezold, 2009, Appendix).

achieve this, many of which must inevitably be subjective. Scott concludes (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 *qua* accountants’ (p.240). This conclusion appears close to Hicks’s (1948) 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.<sup>21</sup> This concept of sustainable earnings is again consistent with Hicks’s (1946) ‘No. 2 Income’.<sup>22</sup> Ohlson therefore argues that reporting such maintainable earnings would require that assets and liabilities be derived from income and not *vice versa*.<sup>23</sup>

Finally, given the conceptual tension between Hicks’s 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 (Paish, 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

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<sup>21</sup> We use here the terms ‘sustainable’, ‘maintainable’, and ‘persistent’ interchangeably. For discussion of current operating profit as sustainable income, see Edwards and Bell, 1961; Revsine, 1973; and Prakash and Sunder, 1979.

<sup>22</sup> With respect to the issue of changes in interest rates, Feltham & Ohlson (1999) have explored the effects of the generalisation of the residual earnings valuation model to risk, a non-flat yield curve, and stochastic interest rates, demonstrating that the ‘capital charge’ 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’s 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.

<sup>23</sup> Within such a system, one could perhaps retain 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 rule proposed by Ohlson. We do not explore these issues further here (c.f. Horton & Macve, 1996; Chambers *et al.* 2007; VanCauwenberge & DeBeelde, 2007; cf. Bezold, 2009; Kothari *et al.*, 2009; AAA, 2009).



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).

This insight can help relate to each other the underlying motivations of those who identify with the asset/liability approach to accounting income (more like Income No 1) and those who identify with the revenue/expense (or matching) view (generally involving more smoothing and thereby closer to 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 income) 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 Penman, 2007; cf. Chisman in Jones & Slack, 2008). Since neither perspective can perfectly measure either of the two underlying income concepts, it is important to recognise 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 to learn to live with this duality.<sup>24</sup>

In short, the FASB/IASB (2005) paper, in focusing solely on Hicks's 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

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<sup>24</sup> 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 machines. 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 2 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 amenable to more precise 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 based *either* on the primacy of stock (asset-liability) *or* of flow (revenue and expense matching) variables, which is the accounting version of 'squaring the circle'. So the pursuit that the Boards have restarted through their 2005 document is a fruitless one. (For further discussion see e.g., Sunder, 1997.)

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, e.g., 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 summarise 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.

*[Insert Table 1 about here]*

**Table 1: Hicks’ and FASB/IASB’s Views of Income**

| <i>FASB/IASB</i>      | <i>Hicks [absent general inflation]</i>          |
|-----------------------|--|
| Objective             | Largely subjective ( <i>section 2 above</i> )    |
| Net assets            | Firms ( <i>section 3 above</i> )                 |
| Income <i>ex post</i> | Income <i>ex ante</i> ( <i>section 4 above</i> ) |
| Income No. 1          | Income No. 2 ( <i>section 5 above</i> )          |

These differences, and the discussion above indicate clearly the dangers of cherry picking selected fragments of theory, particularly 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.

## 6. 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.<sup>25</sup> 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 economists;<sup>26</sup> and noted that Marshall seemed content with the accountant’s approach to depreciation (Hicks, 1974, p.313). While 20<sup>th</sup> century inflationary pressures and tax policy changes put extant conventions under great strain (1974, 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).<sup>27</sup>

Kaldor too (1955, p.123) noted that ‘[T]he accountant is rightly in search therefore of a concept of income *ex post* which is as near a counterpart as can be found to the 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.’<sup>28</sup>

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<sup>25</sup> Alternative meanings of ‘conventions’ and the role of social norms have been examined in accounting literature (e.g., see Chambers, 1964; Sunder, 1997, Chapter 9; 2005a and b).

<sup>26</sup> As he explains it: ‘Even to this day, accountants are Fundists. 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.310). Clarke (1988, pp.421-6) argues that Hicks himself was a Fundist, 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 conceptualisation of capital is also in line with both traditional public sector accounting and with Communist accounting theory and practice (e.g., Solas & Ayhan, 2008).

<sup>27</sup> A related discussion between an accounting theorist (Chambers) and an economist (Shackle) is recounted in Dean (2008).

<sup>28</sup> Kaldor adds a footnote (1955, pp.123-4): ‘The nature of these conventions cannot be discussed here, but their net result (in accordance with the general accounting principle that it is better to err on the conservative side) is to bring more of the gains and less of the losses into the windfall category than could properly be regarded as belonging there. Thus the conventions for writing *down* assets are far more liberal than for writing them *up*. Occasionally, however, the conventions have the opposite

There may of course also be value in sticking to agreed rules<sup>29</sup> for purposes of contractual and other settling up such as taxation, bonuses, partners' profit shares, loan covenants, etc.; Lindahl's 'restatement 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 UK standards and the wider understanding of just how inconsistent many accounting practices are (although Clarke, 2010—following 1988, p.416—notes Hicks's involvement in the late 1940s in a joint committee with ICAEW). But it is naïve of FASB/IASB to overlook the power of conventions, and their surrounding expectations, in maintaining the ordinary fabric of social structure and interaction.<sup>30</sup> 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 25 years, yet in 1989 he was still writing his *Guidelines* for the UK's Accounting Standards Board (ASB) on how best to report income. Similarly, Ohlson (1987), in his commentary on Beaver & Demski (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

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results—as for example, the depreciation of fixed assets on the basis of historical costs, in times of inflation.' Similarly Morgenstern (1963) observes 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 delete prudence or conservatism from the desirable characteristics of financial reporting in their pursuit of 'neutrality' (e.g., FASB/IASB 2008a, 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.

<sup>29</sup> For a discussion of the merits of stability of financial reporting standards, see, for example, Sunder, (1988; and 1997 Chap. 10). The continuing dominance of the QWERTY layout for keyboards provides an interesting parallel (Macve, 2010).

<sup>30</sup> See, e.g., Sunder (2005a and 2005b).

current accounting conventions cannot measure them precisely. Instead of seeking 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.<sup>31</sup>

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 achievable.<sup>32</sup>

While much of the conceptual discussion reviewed here, including the FASB/IASB (2005) paper itself, appears to recycle arguments from more than 50 years ago (e.g., Dean, 2008), there have been interesting recent practical developments in alternative ways of setting out income and value in accounting reports, given dissatisfaction with existing conventions. The most conspicuous of these at the present time is 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 business, 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 regulation. MCEV now uses available market prices as benchmarks, wherever feasible, to derive

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<sup>31</sup> This is consistent with a Wittgensteinian approach to conceptual enquiry in the manner of Dennis (2008, p. 264). We are not arguing for a naïve return to the view of the US 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, Chapter 9) but rather for a new approach to how concepts and practices should be interrelated. Chambers (1964) also rightly criticized the elevation of 'conventions' as justifications for practice without asking *why* they have become established.

<sup>32</sup> For fundamental scepticism about the effectiveness of any such attempts at 'necessary and sufficient' definitions see, e.g., Kitchen, 1954; Dopuch & Sunder, 1980; Dennis, 2006, 2008; and Sunder, 2007.

opening and closing ‘economic balance sheets’ for the ‘in-force’—that is, existing—business each period, and analyses 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 IASB in their own project on insurance accounting. (For further discussion, see e.g., Goford, 1985; Horton *et al.*, 2007.)

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

## **7. Conclusions**

We have presented reasons why Hicksian concepts of income cannot be invoked to support the asset-liability perspective promoted in the FASB/IASB (2005) manifesto for the Boards’ joint conceptual framework project. Firstly (as discussed in section 2 above) 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.<sup>33</sup> Measurement of this inevitably requires subjective estimation, precluding the feasibility of objective measurement even *ex post*, even though such objectivity is claimed in FASB/IASB (2005).

Secondly (as discussed in section 3 above), 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, not of its *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 realised cash flows of the period just completed.

Thirdly (as discussed in section 4 above) our fundamental objection to FASB/IASB (2005) as a conceptual foundation for financial reporting is that Hicks's 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.<sup>34</sup> 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 information from within and outwith 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 5 above), if the focus were to shift primarily to income *ex ante*, it may be argued that an equally important perspective on what the

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<sup>33</sup> Representing the present value of 'super-profits' (or 'abnormal earnings' / 'residual incomes'), as measured by reference to the value of identified net assets.

<sup>34</sup> One version of Income No. 2 *ex post* measures permanent income of the current and future periods, but given the future relevant interest rate(s) needed for its computation and end-of-period wealth, it is strictly redundant.

future holds is to consider not just the likely changes in future value (or gain), as captured by Hicks's No. 1 *ex ante* concept of income, but also the standard stream (No. 2 *ex ante*) view of income, as useful in helping to triangulate the amount to be reported as a firm's expected earnings. As Paish (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 & 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. Bezold, 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. Demski 1973; Sunder 1997; and Christensen & Demski, 2003) have become so powerful as calculations of 'performance', including business performance, in the modern world (e.g. Hoskin & 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's (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 these Boards, 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., Basu *et al.*, 2009). Whether it is desirable for the Boards themselves to converge towards becoming one, monopolistic standard setter remains an open question (e.g. Bromwich, 1992; Dye & Sunder, 2001, Sunder, 2009, 2010). Clearly the Boards' unsuccessful appeal in FASB/IASB (2005) to the claimed objectivity of Hicksian income as an unambiguous foundation for financial accounting and reporting fails to resolve these issues.

## **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's 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.<sup>35</sup> 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 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 1100 shares (11 shares each) traded on an exchange. Cash flow forecasts at time  $t_0$  are \$2200 p.a. If the rate of interest is expected to remain at 10% p.a. the value

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<sup>35</sup> We are grateful to Ananda R. Ganguly for suggesting we use this issue for illustration.

of the firm is \$22,000, i.e. \$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.<sup>36</sup> Hicksian 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 ( $t_1$ ).

At time  $t_0$  company A unexpectedly hires a new CEO to start work immediately and incentivises 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 \$3000), but executive labour market conditions mean that the CEO cannot extract any quasi-rent and is only worth the 'going rate' of \$2,000. This raises the value of the firm to \$25,000.<sup>37</sup> The option grant must therefore be  $\$2,000/\$25,000 * 1100 = 88$  shares. Existing shareholders retain 1012 shares (and are better off by \$1000 as the current share price rises to  $[\$25000/1100 =] \$22.73$ ).<sup>38</sup> The CEO receives 88 options worth  $\$22.73 = \$2000$ .<sup>39</sup> Each share will receive an extra  $\$300/1100$  dividend each year = \$0.273, to give a new total dividend of \$2.273 per share, equal to the new EPS.

If no dividend is paid from the 'windfall gain' at  $t_0$ , the revised Hicksian income No.1 and No.2 *ex ante* now totals \$2500 pa (to existing and potential shareholders) but as far as existing shareholders are concerned it is \$2300 p.a. (i.e. diluted by the effective transfer of 88 shares attracting a dividend of  $\$2500/1100 = \$2.273$  p.a. each = \$200 in total).

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<sup>36</sup> For simplicity, we assume here that the \$22,000 value is also equal to the current value of Company A's recognized net assets.

<sup>37</sup> 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 utilising stock-option compensation as an incentive device) complicates the arithmetic but does not alter the fundamental position here, given that we are working with discounted present values in a 'Modigliani-Miller' world.

<sup>38</sup>  $1012 * \$22.73 = \$23000$ .

<sup>39</sup> This assumes existing shareholders will have effectively to surrender 88 existing shares (0.88 each) to the new CEO for \$0 per share, thereby forfeiting \$20 of value each, a total of \$2000. [In order that she may maximise her return we assume she exercises 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, *ceteris paribus* the number of options granted will therefore have to be proportionally higher to counteract the dilution effect of the new share issue. As Ohlson has explained, such dilution causes problems with specifying the Ohlson (1995) residual income valuation model (the consequences are set out in e.g., VanCauwenberge & DeBeelde, 2007)—since either scenario will illustrate the main points at issue here, we utilise the former throughout.

Under IFRS2 and SFAS123R however the additional internal goodwill and increase in the stock market value of the proprietors' shares will not be recognised; while the cost of the option grant of \$2,000 will be treated as an expense, depressing year 1 reported income to  $\$2,500 - \$2,000 = \$500$ .<sup>40</sup> 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., Macve, 1998).<sup>41</sup> If the intangible asset were to be recognised then there would be a windfall gain totalling \$3,000 (of which \$1,000 accrues to existing shareholders), so that Hicksian Income No. 1 for the firm becomes  $\$2,500 + 3,000 = \$5,500$  and for its existing shareholders  $\$2,300 + 1,000 = \$3,300$ .<sup>42</sup>

Aboody *et al.* (2004a) and Landsman *et al.* (2006) document evidence that the stockmarket recognises 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 Hicksian No.1 income of the firm) what would be the effect of interest rate changes? Expected changes will be sufficient to demonstrate the point.

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<sup>40</sup> Under SFAS123R 'cost will be recognized over the period during which an employee is required to provide service in exchange for the award—the requisite service period (usually the vesting period).' Immediate expensing makes the example here simpler but it does not alter the fundamental position that accounting recognition of the expense is asymmetrical with the delayed accounting recognition of the benefit, much of which may only be expected to arise in the long-term.

<sup>41</sup> The Summary of SFAS123R points out: 'Employee services received in exchange for awards of share-based compensation qualify as assets, though only momentarily—as 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/Pronouncement\\_C/SummaryPage&cid=900000010235](http://www.fasb.org/jsp/FASB/Pronouncement_C/SummaryPage&cid=900000010235) (accessed 28.7.09). However, if the other assets are internal goodwill they will not be recognised, so the overall initial outcome is just the expensing of the fair value of the options (Macve, 1998).

<sup>42</sup> Using our notation (with \* indicating amounts attributable to/taken from existing shareholders):  $V_0 = \$22,000$ ;  $V_1 = \$25,000 - \$2,000 = \$23,000$ ;  $C_1 = \$2,500 - \$200 = \$2,300$ . Income =  $V_1 + C_1 - V_0 =$  in total for the firm  $\$(25,000 + 2,500 - 22,000) = \$5,500$ ; and for existing shareholders  $\$(23,000 + 2,300 - 22,000) = \$3,300$ . 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 shareholders equity, the overall net assets of the firm change over the year only by the operating cash flow (now \$2,500) and, if recognised, by the value increase from the CEO's arrival (\$3,000), i.e., by \$5,500 in total. The new CEO gets the value of the option grant (\$2,000) plus her share of the first year's earnings (\$200).

Now suppose that interest rates were expected to be 10% pa during the first year and then to rise to 20% pa thereafter.<sup>43</sup> At  $t_0$  the value of Company A would have been \$12,000 before the unanticipated arrival of the new CEO and \$13,636 afterwards.<sup>44</sup> At  $t_1$  the corresponding values (of all future cash flows) would be expected to be \$11,000 and \$12,500 respectively.<sup>45</sup> This gives No.1 incomes for year 1 of \$1,200 and \$1,364 respectively (both equal to interest at 10% on the revised opening value).<sup>46</sup> Under IFRS2 and SFAS123R (expensing the stock options but not recognising 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.<sup>47</sup>

Under Hicksian Income 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 pa to \$2,500 pa (of which existing shareholders will get  $1012 * \$2.273$

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<sup>43</sup> 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 vs. No. 2 in respect of a fixed interest security is given in Appendix XIII to Horton & Macve (1995), following Paish (1940); while the case of fixed interest liabilities is discussed in Horton & Macve (2000). See also Rayman, 2007; Bezold, 2009.

<sup>44</sup> At  $t_0$ : before new CEO:  $\$(2,200 + (2,200/.2))/1.1 = 12,000$ —and, assuming perfect asset markets, the current values of Company A's net assets, consistent with fn.36 above, would also have been correspondingly lower; after new CEO:  $\$(2,500 + (2,500/.2))/1.1 = 13,636$  (= \$12.40 per share).

<sup>45</sup> At  $t_1$ : before new CEO:  $\$2,200/.2 = 11,000$ ; after new CEO:  $\$2,500/.2 = 12,500$ .

<sup>46</sup> If the windfall gain of \$1,636 at  $t_0$  from the CEO's arrival had been immediately distributed as dividend,  $t_1$  value would have been maintained at the original \$12,000, 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 \$2,400 pa in future following the interest rate rise to 20%. Alternatively if all the windfall gains, including also the impairment to valuation resulting from the interest rate change, were to be regarded as part of the Year 1 income, the No.1 income this period would be  $\$15,000 - 22,000 = -\$7,000$  (which might be analysed as a fall in opening value due to the interest rate change of  $[\$22,000 - 12,000] = -\$10,000$ , offset by the increase in internal goodwill of \$1,636, plus 'normal' income for the year at 10% = \$1,364 [i.e., net total =  $-\$7,000$ ]). In our notation, original  $V_{0t_0}$  was \$22,000;  $V_{1t_1} = \$12,500$ ;  $C_{1t_1} = \$2,500$ ; so Income No.1 =  $\$12,500 + 2,500 - 22,000 = -\$7,000$ . If this is made good to restore the initial capital value of \$22,000 (i.e., before any of the changes in circumstances were known about), future expected income rises to \$4,400 (i.e.,  $rV_{1t_1} = .2 * \$22,000$ ). The signals here to investors seem more confusing than those given by Hicks' Income No.2 below—although management interpretation and explanation in notes will clearly be needed in any case (e.g., Macve, 1997).

<sup>47</sup> Assuming that the CEO's market hiring price still reflects general executive market conditions (i.e., based on rewarding assumed normal CEO ability to increase earnings by \$200 pa) it would likewise now be  $\$(200 + (200/.2))/1.1 = \$1,091$ , satisfied by the issue as before of options on 88 shares, now worth \$12.40 per share at  $t_0$ . Unrecorded internal goodwill at  $t_0$  is now valued at  $\$(300 + (300/.2))/1.1 = \$1,636$ ; as in fns. 36 and 44 above, book value is \$12,000, which together with unrecorded internal goodwill gives the stock market value of \$13,636, consistent with Ohlson (1995). Although the stock option compensation of \$1,091 will be expensed, the overall accounting book value of the firm at  $t_0$  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.

pa = \$2,300 pa (a net increase of \$100 pa), and the new CEO 88 \* \$2.273 pa = \$200 pa as before).<sup>48</sup>

Which is the more useful measure of income?<sup>49</sup> There are two interrelated problems here: the unrecorded internal goodwill and the effect of changing interest rates. Given the FASB/IASB's favoured asset/liability approach, recognising 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 ESO 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 & Lancaster, 1956), i.e., 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 recognised net assets under IFRS2/SFAS123R as option expense is offset by increase in paid-in capital.<sup>50</sup> 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., Macve, 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?’

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<sup>48</sup> If the cash flows are not regular perpetuities, changes in interest rates will have effects on No. 2 income calculations as well, as the opportunities for smoothing out the income over time to permanent income by utilising the capital markets to borrow and lend will also alter.

<sup>49</sup> Note that if there had instead been a *fall* in interest rate, e.g. to 5% p.a., the accounting asymmetries would be even greater as the total value of the firm at  $t_0$  after the arrival of the CEO at  $t_0$  would rise to  $\$((2,500 + (2,500/.05))1.1 = \$47,727 (= \$43.39 \text{ per share})$ . 88 share options granted would now be worth  $88 * \$43.39 = \$3,818$ , representing the new marketwide price of CEOs (i.e., only generally expected to add value of  $\$((200 + (200/.05))/1.1 = \$3,818)$ ). In addition to not recognising the internal goodwill of  $\$((300 + (300/.05))1.1 = \$5,727$ , the accounting rules would not generally recognise the rise in the market value of the company's net assets to  $\$((2,200 + (2,200/.05))1.1 = \$42,000$ . (If they are not financial instruments, revaluation might be allowed under IFRS, but would not currently be allowed under US GAAP.) All that would be recognised would be the now higher option ‘expense’ of \$3,818, further reducing the overall value relevance of the accounts. Of course, Hicks No. 2 income remains unchanged at its new increased level of \$2,500 as before.

<sup>50</sup> Landsman *et al.* (2006, pp.211-12) helpfully illustrate the alternative bookkeepings 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 BC88 fn.14), this is essentially a metaphysical assertion from the perspective of the reporting process, as at no time is this asset visible in the published accounts themselves.

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 2004 in requiring expensing of stock options probably had more to do with changes in attitudes to business transparency following the Enron debacle (e.g., Gwilliam & 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 perceived changes in societal expectations of business legitimacy that made the new *convention* now more useful and acceptable to society. The resulting political forces<sup>51</sup> 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 SFAS123 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 vs. its anticipated future benefits (Macve, 1998) has added yet another factor (alongside other cases such as Research & Development) that undermines the consistency of the Boards’ Conceptual Framework as asset/liability based.

The Boards’ 2005 manifesto wrongly claims that their proposed revision of their Conceptual Framework is supported by Hicks’s analysis of income. This example of

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<sup>51</sup> Supporters of the 2004 revision to SFAS123 included US Federal Reserve Chairman Alan Greenspan and future Presidential candidate Senator John McCain (Baviera and Walther, 2004).

ESOs illustrates that the recognition of this mistake might be a useful first step towards making real progress.

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