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Debt vs. Equity:
Accounting for Claims Contingent
on Firms' Common Stock
Performance
with Particular Attention to
Employee Compensation Options

White Paper Number One

Center for Excellence in Accounting & Security Analysis

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**DEBT VS. EQUITY:
ACCOUNTING FOR CLAIMS CONTINGENT ON FIRMS'
COMMON STOCK PERFORMANCE
WITH PARTICULAR ATTENTION TO EMPLOYEE COMPENSATION OPTIONS**

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January 2005

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Overview

This paper lays out a comprehensive solution to the problem of accounting for claims based the performance of a firm's stock price. The accounting covers employee stock options, stock appreciation rights, put and call options, convertible debt and preferred stock, warrants, and other hybrid securities. This issue has vexed the Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) who have approached the problem on a piecemeal basis, leading to inconsistent treatments of claims that in substance are very similar.

Settlement of contingent equity claims results in gains and losses to shareholders. The proposed accounting presumes that financial reports are prepared for reporting to common shareholders, the owners, and is organized around a feature that is common to all contingent equity claims: Issuing shares at less than their fair value – when an option or warrant is exercised, for example -- results in a loss to current shareholders, as does the repurchasing of shares at more than their fair value – when a put option on the shares is exercised. The proposed accounting recognizes these losses and also the gains to shareholders when contingent claim holders do not exercise their right to convert into common shares.

Contingent claims are liabilities to issue or repurchase shares at prices different from fair value. The accounting also recognizes that, prior to settlement of the claim, a contingent liability exists for the shareholders to surrender value to the claimants. Accordingly, a liability should be booked when the claim is initiated, measured at the fair value of the claim. So, for example, the cash received for the issue of a warrant or put option on the firm's stock – the fair value at initiation – is effectively a borrowing to be repaid by the issue of shares should the claim be exercised. Consequently the accounting also recognizes interest expense on the borrowing over the life of the outstanding claim.

Timely reporting requires liabilities to be continually updated to fair value. In order to provide timely information to shareholders about how their interest in the firm is affected, the accounting requires that the carrying value of the liability to be periodically adjusted to fair value. Accordingly, the financial statements report the gradual truing up to the final settlement of the claim.

Timely reporting requires that gains and losses on outstanding claims be continually updated. Adjusting outstanding liabilities to fair value results in unrealized gains and losses to shareholders. These gains and losses are reported as part of Comprehensive Income but outside Net Income -- in Other Comprehensive Income or similar income category that distinguishes them from normal income from business activities.

Particular attention to employee compensation options. Compensation options have features that differ from other contingent claims: They involve an exchange for services rather than cash. So, consistent with current FASB and IASB prescriptions, deferred compensation is recognized at the grant date of the option and amortized over a service life. However, inconsistent with FASB and IASB prescriptions, a liability is also recorded at grant date, but with a netting against the deferred compensation such that the net liability (and net asset) is zero. The accounting

further reports the effect of the final settlement on equity value, along with a continual reporting of the likely settlement effect by a periodic updating of the net liability.

Debt vs. equity. The proposed accounting draws a clear distinction between debt and equity, an issue that has vexed the FASB for over a decade. In so doing, it revises the definition of a liability under generally accepted accounting principles (GAAP), and resolves the inconsistencies in GAAP that lead to similar claims being classified as both debt and equity. The GAAP definition requires the firm to distribute assets to settle the obligation. With a focus on reporting to shareholders, the paper takes a shareholder’s view, and shareholders see a liability as an obligation for them to surrender share value. To the shareholder, cash settlement and a settlement in shares are economically equivalent; if management chooses to reduce their share value to settle claims, rather than paying cash, they lose. A clear equity concept emerges: Equity applies solely to the claim of the current common shareholders (and all other claims are debt).

Faithfully reporting to shareholders. The proposed accounting satisfies the demand for “faithfully” and transparently reporting to shareholders. Shareholders are notified, with continual updating, of the gains and losses they bear from issuing claims on their share value, and also of the liabilities they face for claims still outstanding. “Option overhang” – off-balance sheet under current GAAP – is booked as a liability.

Accounting principles are consistently applied to recognize substance over form. By providing a comprehensive and unified treatment for all contingent equity claims, the proposed accounting meets the standard of applying accounting principles on a consistent basis to instruments that are in substance the same. Accordingly, it finesses the structural engineering—to achieve a desired accounting outcome -- that is prompted by the inconsistent approaches currently available under GAAP; the accounting enforces substance over form. The accounting for warrants and options corresponds to that for convertible debt, for example, and the accounting for borrowing by issuing warrants accords with that for borrowing by writing put options (and indeed regular borrowing). Inconsistencies between the accounting prescribed for specific hybrid securities in the recent FASB Statement 150 and that for other hybrid securities (including employee options) are resolved, unambiguously. As to measurement, the proposed accounting presents no substantial difficulties over those presented by recent FASB pronouncements on contingent claims and share-based compensation, and the truing-up features of the accounting discourage earnings management.

I. Introduction and Summary of Principles

This paper presents an accounting for claims whose payoffs depend on the performance of a firm's stock price, e.g., warrants, convertible bonds and compensation options. The accounting provides a comprehensive and unified treatment for all such performance-contingent claims. We argue that the accounting rests on appealing principles. We also view the accounting as practical, with implementation issues about the same as those in recent pronouncements on performance contingent claims issued by the Financial Accounting Standards Board and the International Accounting Standards Board.

Prescribing principles that support an accounting always poses a challenge. But a solid foundation is necessary to guide the details, and, more importantly, to provide a cohesive whole. We develop the proposal using a variety of ideas which individually are familiar to most accountants. However, certain principles, working in tandem, are particularly central to achieve the desired cohesion. These deserve emphasis at the outset.

Two broad principles underpin our accounting for performance-contingent claims. First, the financial statements are framed from the perspective of the pre-existing common shareholders. This approach leads to a focused equity concept: On the balance sheet's right-hand side, every dollar is either part of liabilities or part of equity (there can be no mezzanine) and, more importantly, the Equity line refers *solely* to equity held by the common shareholders. Comprehensive Income, therefore, is potentially affected by all transactions except for those involving common shareholders, ie., common dividends and net capital contributions from common shareholders¹. Second, we predicate the accounting on the concept that Other

¹ Accordingly the comprehensive income concept of FAS 130 is invoked, albeit only with respect to the pre-existing common shareholders. See Financial Accounting Standards Board, Statement No. 130, *Reporting Comprehensive Income* (Norwalk, Conn.: FASB, June 1997).

Comprehensive Income, as distinct from Net Income, should pick up unexpected and unrealized changes in common shareholders' equity. In sum, the two precepts imply that Comprehensive Income and Net Income pertain solely to common shareholders, and the two measures of income differ because Net Income excludes certain unpredictable gains and losses².

Given this common shareholders perspective, outstanding performance-contingent claims cannot be part of Equity; instead they are recognized as Liabilities, measured at their fair value. We identify the "windfall" gains and losses due to changes in fair values of performance-contingent claims as part of Other Comprehensive Income. With respect to Net Income, there is an expense-component due to the "normal" cost associated with the Liability. That is, one can interpret the issuance of a claim as an activity that finances the firm's operations which in turn implicitly leads to a borrowing cost.

The outline of the paper is as follows. Section II identifies the class of transactions and claims covered by the proposed accounting. It also discusses aspects of GAAP that relate to the accounting for performance-contingent claims. Section III outlines the proposed accounting, while Section IV develops the details, including implementation issues. A part of this section deals with the idiosyncrasies of compensation options. Section V elaborates on the merits of the first principle enunciated above, i.e., the concept of common shareholders' interest as defining a firm's equity. It also points out the ways in which authoritative documents underlying GAAP often contradict this principle. The section further argues that the lack of clarity concerning the equity concept is at the root of problems pertaining to the accounting for performance contingent

² The distinction between Net Income and Comprehensive Income is made in FAS 130, *op.cit.*, and Financial Accounting Standards Board, Statement of Financial Accounting Concepts No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises* (Stamford, Conn.: FASB, December 1984). We are not particularly wedded to the terminology; FAS 130 allows use of the term "Earnings" rather than "Net Income." The distinction is similar to one under discussion at the International Accounting Standards Board. See Barker, R. , "Reporting Financial Performance," *Accounting Horizons* 18 (June 2004), 157-172. In the United Kingdom, a Statement of

claims. Section VI deals with claims that fall somewhat outside the scope of the proposed framework, namely own-stock forward contracts and restricted stock. Section VII illustrates the accounting with textbook-like numerical examples. Section VIII summarizes the critical features of the proposed accounting and lists its advantages and disadvantages.

II. **Background: Securities Contingent on Common Stock Performance and Their Accounting**

A. *Description of the Claims and Related Transactions*

To finance operating activities, corporations can issue a claim/security with the characteristic that the payoff depends, at least partially, on the stock's price. Such performance-contingent claims (PCCs, henceforth) comprise an element of "debt" in the sense that the legal and economic rights differ from those inherent in the ownership of common shares. But such claims also contain an element of "equity" because the claims' payoffs correlate with the stock price-performance. The financial community accordingly often refers to these claims as debt and equity "hybrids."

Major, well-known, examples of PCCs are:

- (i) Convertible bonds
- (ii) Convertible preferred stock
- (iii) Warrants (or call options)
- (iv) Put options
- (v) Options granted to employees

Total Recognized Gains and Losses distinguishes gains and losses from Profit and Loss. See Accounting Standards Board, Financial Reporting Standard No. 3, *Reporting Financial Performance* (London, ASB, 1992).

(vi) Stock appreciation rights granted to employees

As a common feature, these claims allow for an option-like right that the owner of the claim may, or may not, take advantage of. The actual transactions scenario is thus contingent on the conditions that lead to an exercise of the option-like right. By making the economic value of the right dependent on the stock's market value, the claim can indeed be described sensibly as a PCC.

The embedded rights refer to the right either to buy or to sell the firm's stock, or some other security, and these rights differ across the different kinds of PCCs. Correlations between the stock's and the claim's values can be positive or negative depending on the option-like rights embedded in the PCC. Out of the six PCCs listed, the case of put options is generally the only one with a negative correlation.

Transactions that take place at the issuance do not necessarily involve cash. In the first four cases, the firm receives cash at the issuance date, but in the last two the firm receives a commitment from employees to render labor services. For later reference, the distinction cash vs. no-cash (future services) can be of significance. As to the settlement, if the option-like right is not exercised then (i) and (ii) require a cash payment to the claimants; in the remaining cases the claims will be worthless. If the option is exercised, then (i), (ii), (iii) and (v) require the firm to issue shares; (vi) requires a cash payment; and (iv) may be settled in cash or shares. These aspects may potentially influence any accounting for PCCs. Again for later reference, note how the form of settlement can differ -- shares issued vs. cash payment.

Our listing of PCCs includes the two compensation-related PCCs, (v) and (vi). We view this inclusion as appropriate because the value distributed to the claimants (the grantees/employees) depends on the stock's price. The non-cash transaction at the inception

causes no problem per se, because the related asset (Deferred Compensation Expense) can be accounted for in its own way, with or without any reference to the accounting for the claims after the inception (grant) date. That is, the subsequent compensation expense, implied by the debit at the issuance date, can be distinguished from the total value distributed to the claimants ex post. This distinction simply suggests that it makes no substantial difference whether the PCC is issued in exchange for labor services as opposed to cash. A sub-section that deals extensively with the accounting for compensation options elaborates on the subtleties.

In many respects the various PCCs differ markedly, but we will argue that one can devise a practical accounting for *all* PCCs without having to delve into the specifics of how and why these payoffs correlate with stock prices. Nor will the details of the options features introduce complexities such as the need to slice a claim into component parts³. This generality is of considerable importance, because specific PCCs embed their own idiosyncratic features. Conversion rates and strike prices can be variable and contingent on firm-specific or economy-wide factors (e.g., profitability measures or interest rates). PCCs sometimes also allow for more than one exercise right, e.g., so-called “Contingent Convertible Bonds” which often include a put-option right as well as the regular conversion-to-stock right. Such multiple-options features, which are often combined with complex conversion conditions, suggest that it would be futile to try to partition PCCs into distinct sub-categories, each with its own idiosyncratic accounting

³ The issue of slicing instruments into component parts arises in Accounting Principles Board Opinion No. 14, *Accounting for Convertible Debt and Debt Issued with Purchased Stock Warrants* (New York: AICPA, March 1969) that overrode APB *Omnibus Opinion* No. 10 of 1966. APB 14 concluded (with significant dissent) that no part of the proceeds from issuance of convertible bonds should be treated as equity, except in the case where stock purchase warrants are detachable. The issue is discussed at length in Financial Accounting Standards Board Discussion Memorandum, *Distinguishing between Liability and Equity Instruments and Accounting for Instruments with Characteristics of Both* (Norwalk, Conn.: FASB, August 1990). In 2000, the FASB proposed to split compound instruments into liability and equity components if certain conditions are met, overriding APB Opinion No. 14. See Financial Accounting Standards Board Exposure Draft, *Proposed Statement of Financial Accounting Standards, Accounting for Financial Instruments with Characteristics of Liabilities, Equity, or Both* (Norwalk, Conn.: October 2000)

rules. One could always invent a PCC with characteristics such that it would not belong to any one of the pre-specified sub-categories of PCCs, making it unclear how one should account for the hard-to-classify PCC⁴.

A PCC occasionally arises as an asset rather than as an issued claim. That is, a firm can acquire a financial instrument with the attribute that the payoff depends explicitly on its stock price. Such assets are relatively rare; the only clear-cut example occurs when a firm acquires an option to buy, or sell, its own stock. As to the accounting for PCCs as assets, they introduce no unique problems because one can apply the same concepts whether the PCC is an asset or an issued claim. To streamline the subsequent exposition, we will make no references to the accounting for PCCs when they occur as assets.

Ordinary preferred stock (redeemable or non-redeemable) could perhaps also be classified as a type of PCC, since the payment of preferred dividends depends on factors tied to the firm's performance. We do not view such a classification as appropriate unless the payment of preferred dividends depends explicitly on the common stock's price (which never seems to be the case). That said, the premises we rely on to account for PCCs also bear on the accounting for ordinary preferred stock. A subsequent section comments on these broader implications.

Two additional sets of claims can potentially be classified as PCCs: (i) When a firm executes a forward contract (long or short) in its own stock and (ii) When a firm issues restricted stock for compensation purposes. While these claims do not embed a regular option-like feature,

⁴ An example of perverse outcomes under the current GAAP accounting for bonds that contain both a call and put option is highlighted in the case of STMicroelectronics in a piece by Floyd Norris in *The New York Times*, August 8, 2003, page C1. With generous options features, the bond specified a negative interest rate, allowing the (borrowing) firm to recognize interest income rather than interest expense. See also, "The Latest Magic in Corporate Finance: How Contingent Convertible Bonds Blindside Shareholders," *Business Week*, September 8, 2003, p. 88. Reserach shows that firms structure convertible bond transactions to manage diluted earnings per share and incur additional costs with these transaction to yield perceived financial reporting benefits. See Marquardt, C and Wiedman, C., "Earnings Management Through Transaction Structuring: Contingent Convertible Debt and Diluted EPS" unpublished paper, New York University and University of Western Ontario.

their values depend directly on the stock's price. Using the later as a criterion, one can reasonably classify these as PCCs. However, the economics of such cases barely differs from transactions in common stock. (The economics of an own-stock forward contract is effectively a treasury stock transaction combined with borrowing/lending). From this perspective, the claims can be viewed as in substance common stock. While we are on the whole agnostic with respect to these claims classifications, we will argue in a subsequent section that a PCC accounting is preferable.

B. *Some Observations Concerning Performance Contingent Claims and GAAP*

The FASB has approached the accounting issues related to PCCs on a piecemeal basis. With respect to the six listed types of PCCs, each has its own more-or-less unique history as to how it must be accounted for, and these histories have typically evolved independently of each other. As a consequence, GAAP for PCCs lacks clear underlying integrating concepts. To illustrate, the accounting for convertible bonds is as unrelated to the accounting for warrants as it is for convertible preferred stock. Such independence can be viewed as unsatisfactory, insofar as the three securities build in similar economic characteristics, namely, an option to convert to common stock. Why does the conversion event result in no loss for warrants and convertible preferred stock, while the "market value method" for convertible bonds permits the recognition of such a loss? (The "book value method," almost universally practiced, at least maintains consistency of treatment.) No authoritative document we are aware of identifies the core ideas that justify the accounting for these three claims, as a totality. As yet another example, the controversial accounting for compensation options in FAS 123, IFRS2, and the 2004 FASB

Exposure Draft on stock-based compensation does not deal with the issue by addressing how to account for PCCs more broadly⁵.

The most recent Standard covering some PCCs, namely FAS 150⁶, also illustrates how a piecemeal approach to rule-making results in confusing outcomes. This Standard covers the accounting for put options, but not warrants. It goes almost without saying that one would expect the FASB to address the accounting for these two securities at the same time. FAS 150 implicitly recognizes this natural scope by noting that the accounting for warrants needs to be addressed in the future. The question arises whether the accounting for warrants will be consistent with the accounting for puts, i.e., whether warrants outstanding must be shown as a fair value liability, which is what FAS 150 requires for put options outstanding. It seems possible that the accounting for warrants will remain part of Equity, as GAAP currently requires. An accounting for puts and warrants along these discordant lines is likely to be perceived, at best, as confusing. Why is it a Liability in one case (puts) and part of Equity in the other (warrants)? What should then be the correct accounting if a contingent convertible bond with a zero coupon includes both a put and a (regular) conversion option? Should the accounting for a PCC depend on how it correlates with stock's price, or should some other criterion be invoked to distinguish between Liability and Equity? Questions like these are unlikely to be resolved satisfactorily, as long as the standard-setting process does not take a broader perspective on the accounting for PCCs.

⁵ Financial Accounting Standards Board, Statement No. 123, *Accounting for Stock-Based Compensation* (Norwalk, Conn.: FASB, October 1995); International Accounting Standards Board, International Financial Reporting Standard No. 2, *Share-Based Payment* (London: IASB, February 2004); Financial Accounting Standards Board, Exposure Draft: Proposed Statement of Financial Accounting Standards, *Share-Based Payment, An Amendment to FASB Statements No. 123 and 95* (Norwalk, Conn.: FASB, March 2004).

⁶ Financial Accounting Standards Board, Statement No. 150, *Accounting for Certain Financial Instruments with Characteristics of Both Debt and Equity* (Norwalk, Conn.: FASB, May 2003).

FAS 150 suggests that part of the problem of establishing accounting standards for some PCCs (i.e., puts and warrants) relates to the “proper” conceptual definition of what constitutes a liability. In this regard FAS 150 refers to CON 6⁷. According to CON 6 a liability exists only if it will be discharged by an asset transfer; it excludes cases when the claim is discharged by issuing stock. Hence the current accounting for puts and warrants may seem reasonable. The conclusion, alas, lacks the clarity one would like: FAS 150 states that the current definition of a liability needs to be revised⁸. While this task might well serve a useful purpose to figure out how to account for PCCs, it causes confusion about how to account for warrants in the future. If a liability can be settled by issuing shares, why should warrants outstanding not be shown as a liability? And what about the case where the warrant is settled in either cash or shares depending on the stock’s price? It should further be noted that resolving the how-to-define-a-liability issue by itself is insufficient to resolve the accounting for PCCs; concepts of income measurement – how to account for non-recurring events, in particular – will need to play a role as well.

Overall, GAAP does not articulate the economics and accounting for PCCs in a cohesive fashion. Nor does it appear likely to do so in the foreseeable future because of the current rule-by-rule approach to the promulgation of accounting standards. As the history of the accounting for compensation options illustrates, rule making bodies have had difficulties in settling on

⁷ Financial Accounting Standards Board, Concepts Statement No. 6, *Elements of Financial Statements* (Stamford, Conn.: FASB, December 1985).

⁸ The FASB Exposure Draft, Proposed Amendment to FASB Concepts Statement No. 6 to Revise the Definition of Liabilities, *An Amendment to FASB Concepts Statements No. 6* (Norwalk, Conn.: FASB, March 2001) proposes a change in the CON 6 liability definition to include “an obligation that can or must be settled by issuance of the issuer’s equity shares and, to the extent that value that must be conveyed to the holder of the financial instrument upon settlement of the obligation at its maturity changes, the change is attributable to, equal to, and in the same direction as the change in fair value of the issuer’s equity shares.” However, the Board has not followed this proposal in the 2004 Exposure Draft, *Share-Based Payment*, preferring to draw a distinction between “liability-based awards” and “equity-based awards.” The Board recognizes the confusion in FAS150; the preamble (on page 7) says, “the Board expects to amend Concepts Statement 6 to eliminate that inconsistency (with CON6) in the next phase of this project.”

consistent core principles. Perhaps the current institutional setup makes inconsistencies across the various PCCs inevitable.

We believe that a broader perspective on the accounting for PCCs can be helpful in the rule-making process. With this objective in mind, we spell out what we view as a comprehensive, conceptually appealing approach to accounting for all the different types of PCCs. The context leads us to also address the accounting for preferred stock, own-stock forward contracts, and restricted stock issued for compensation purposes.

We stress that the proposed framework encompasses all of the PCCs listed. Knowing how to account for one or two of these ought to imply clear directions as to how any other PCC should be accounted for. To have all sorts of qualifications or mutations for individual PCCs would be a recipe for logical inconsistencies and a lack of conceptual cohesion. And, as the experience with contingent convertible bonds shows, *ad hoc* accounting rules facilitate the issuance of form-over substance claims designed to achieve a desired accounting result. As always, economically equivalent transactions ought to have in essence the same accounting. We will argue that the proposed framework does indeed satisfy this crucial requirement.

III. Outline of a Proposed Accounting for Performance Contingent Claims

This section outlines the proposed accounting for PCCs. Two subsequent sections will be more specific in describing the accounting rules, and how those can be refined in various directions. These sections also discuss why we believe the accounting appeals, with an emphasis of the soundness of a common shareholders equity approach. Yet another section provides numerical examples which demonstrate how the accounting is supposed to function, minimizing any ambiguities as to how it works.

1. *Effects on the Balance Sheet.* All PCCs must be recognized as part of a firm's Liabilities. They cannot be viewed as part of Equity, unless, in fact, common shares have been issued. Their values in the balance sheet should be their fair values. Fair values correspond to market values if the PCCs are traded.⁹
2. *Effects on Income.* All PCCs lead to two income components. One goes into the measurement of Net Income, the other becomes part of Other Comprehensive Income ("OCI"). The Net Income component is identified as an imputed, "regular," expense/cost component due to there being a recognized liability outstanding at the beginning of the period. In other words, an implicit cost of financing must be recognized. The OCI component, on the other hand, picks up windfall gains or losses due to changes in the fair values of liabilities.¹⁰ The two-component income measurement scheme ensures that, at the end of a PCC's life, the accounting "trues up" the total effect on equity value: The sum of the two income components, accumulated over all periods, determines this "trueing up"

⁹ The idea of options as liabilities has been entertained by the FASB in the 1990 Discussion Memorandum, *Distinguishing between Liability and Equity Instruments and Accounting for Instruments with Characteristics of Both*, op. cit. and in FAS 150, *Accounting for Financial Instruments with Characteristics of Liabilities, Equity, or Both*, op. cit. A number of papers advocate the liability classification; see, for example, Balsam, S., "Extending the Method of Accounting for Stock Appreciation Rights to Employee Stock Options," *Accounting Horizons* 8 (December 1994), 52-60; Penman, S. "The Quality of Financial Statements: Perspectives from the Recent Stock Market Bubble," *Accounting Horizons* 17 (Supplement 2003), 17-96; and Kirschenheiter, M., Mathur, R., and Thomas, J., "Accounting for Employee Stock Options," *Accounting Horizons* 18 (June 2004), 135-156. Indeed, the liability treatment appears in accounting texts of yesteryear.

¹⁰ The distinction between persistent (core or sustainable) income and transitory income has a long standing in the accounting literature and is certainly embraced by analysts. The 1997 AAA committee discussion of the FAS 130 emphasizes that comprehensive income reporting goes hand in hand with the segmentation of income to separate transitory items from core income. See American Accounting Association Financial Accounting Standards Committee, "Comprehensive Income," *Accounting Horizons* 11 (June 1997), 120-126. For a formal treatment of transitory earnings in the context of equity valuation, see Ohlson, J., "On Transitory Earnings," *Review of Accounting Studies* 4 (June 1999), 145-162.

value¹¹. As an equivalent interpretation, this total equals the net value that has been accumulated by an investor who has owned the PCC throughout its life.

3. *The Cash Flows Effects.* Cash flows from or to holders of PCCs at the inception and settlement dates should be part of the Financing Section of the Cash Flow Statement. Effects on the Income Statement should be treated analogously to interest expense in the Cash Flow Statement.

In the following discussion, most of the focus will naturally be on points 1 and 2. The Cash Flow Statement is of subordinated interest; classifications in that statement tend to be relatively uncontroversial given a complete balance sheet and income statement accounting.

We underscore that this approach requires that *all* PCCs - - including convertible preferred stock, warrants, and compensation options - - must be recognized as Liabilities in the balance sheet. In other words, no PCC can be treated as being part of Equity. It makes no difference whether the PCC can be settled via the issuance of common stock as opposed to cash. These points go to the core of what motivates the accounting; our subsequent discussion elaborates.

¹¹ The idea of trueing up is, of course, not new. In particular, the market value method for the conversion of convertible debt honors the principle. Trueing up is the essence of “exercise-date accounting” that has been proposed as an alternative to “grant-date accounting” for employee stock options. A recent American Accounting Association committee recommends exercise-date accounting in a response to IFRS2. See American Accounting Association Financial Accounting Standards Committee, “Evaluation of the IASB’s Proposed Accounting and Disclosure Requirements for Share-Based Payment,” *Accounting Horizons* 18 (March 2004), 65-76. A minority of the 1994 AAA committee recommended exercise-date accounting. See American Accounting Association Financial Accounting Standards Committee, “Response to the FASB Exposure Draft ‘Accounting for Stock-Based Compensation’,” *Accounting Horizons* 8 (June 1994), 114-116. In 1999, the U.K. retailer, Boots Group PLC adopted a practice of effective exercise date accounting, by expensing the difference between the price of shares issued in exercise of options and the price of shares repurchased to provide for the issue. Rubinstein, M., “On the Accounting Valuation of Employee Stock Options,” *Journal of Derivatives* (Fall 1995) proposes exercise date accounting for employee options as an alternative to grant date accounting if fair value estimates at grant date are likely to be biased (as he conjectures), with the trueing up amount classified as a separate component of income (in extraordinary items).

IV. Detailed Accounting for Performance Contingent Claims

A. *The Nuts and Bolts*

Starting out with the balance sheet, all PCCs should be recognized and valued at their fair values at any given balance sheet date. For tradable securities, this measurement corresponds to mark-to-market. PCCs that do not trade - - compensation options and SARs in particular - - would require estimation of fair values. We believe this can be handled as a practical matter, just like FAS 123, IFRS2, and the 2004 Exposure Draft on share-based payment which presume that it can be done for compensation options. More generally, FAS 150 requires fair value measurements for put options, and the FASB seems to be moving increasingly towards the position that fair value measurement is not only desirable but also practical¹².

Turning our attention to income and expense flows for a period, a debits equal credits requirement implies directly that

Expense due to PCC in the Income Statement

Plus

Gain/Loss due to PCC in Other Comprehensive Income (OCI)

Equals

Change in fair value of PCC + Cash paid to holders of PCC

¹² While Financial Accounting Standards Board, Concepts Statement No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*, issued in 1984, does not refer to fair value as a measurement basis, the FASB Proposal, *Principles-Based Approach to U.S. Standard Setting*, issued in October 2002, sees this as a defect. The FASB recently issued an Exposure Draft on measuring fair values, with the aim of producing a Standard on the issue. See Financial Accounting Standards Board Exposure Draft, Proposed Statement of Financial Accounting Standards, *Fair Value Measurements* (Norwalk, Conn.: June 2004). The International Accounting Standards Board is engaged in a project on fair value accounting with the Canadian Accounting Standards Board.

All of the above components can be applied to any of the previously listed PCCs. But we note that cash paid to the holders of the PCC applies only for convertible bonds and convertible preferred stock (that is, interest and preferred dividends payments, respectively); in all other cases the dollar amount of cash paid is zero. Further note that the above framework readily extends to handle transactions that “initialize” or “terminate” the accounting for the PCC. (Numerical examples in section VII clarify this point).

It will be useful to state the above relation as an algebraic relation:

$$Exp_{IS} + Loss_{OCI} = FV(EP) - FV(BP) + CF$$

where

Exp_{IS} = The expense that is included in Income Statement

$Loss_{OCI}$ = The gain or loss that is included in Other Comprehensive Income

$FV(EP)$ = The fair value of the PCC at the end of the period (“ending balance”)

$FV(BP)$ = The fair value of the PCC at the beginning of the period (“beginning balance”)

CF = Cash paid by the firm to holders of PCC

Next, the accounting must split the left hand side of the equation into its two components, one in the Income Statement and the other in the Other Comprehensive Income. The approach here conforms to the traditional concept that OCI items typically involve non-recurring, unpredictable value changes that to some extent can be traced to events that take place in financial markets. GAAP reflects this OCI concept, as the accounting for Marketable Securities, Foreign Currency Translations, Pension Liability Adjustments and some Derivative Securities illustrates. Accordingly, the proposed accounting identifies unpredictable gains and losses due to changes in the fair values of the PCC, and includes them in OCI. Because of their presumed

unpredictability, we will refer to these gains and losses as Windfall Gains/Losses, or WGL for short.

The measurement of WGL depends on its anticipated value, which in turn depends on a PCC's expected return. To be precise,

$$WGL = \text{Actual } [FV(EP) + CF] - \text{Anticipated } [FV(EP) + CF]$$

where

$$\text{Anticipated } [FV(EP) + CF] = (1+r) \bullet FV(BP)$$

$$r = \text{Investors' expected market return on the PCC.}$$

A simple example illustrates the concept of WGL. Suppose a company issues \$100 million of Warrants Outstanding at fair value at the beginning of the quarter. Suppose further that, (i), investors holding the warrants expect to earn 2% per quarter, and (ii) the warrants have a fair value of \$110 million at the end of the quarter. It follows that the WGL for the quarter equals \$110 million – $(1 + 0.02) \times \$100 \text{ million} = \8 million .

Because WGL becomes part of Other Comprehensive Income, the Income Statement includes an Expense due to outstanding PCC, determined by $r \bullet FV(BP)$ ¹³. The mechanics of the scheme ensures that the books balance.

The Income Statement component, $r \bullet FV(BP)$, measures an imputed cost due to the PCC outstanding at the beginning of the period. One reconciles the concept with standard finance theory: A firm's outstanding claims finance its operating activities, and there is always a cost associated with a claim. And finance theory underscores that the proper cost is measured by investors' required (or expected) return times the market value - - as opposed to any historical

¹³ Strictly speaking, the implicit borrowing rate is investors' expected rate of return at the beginning of the period. See D. Gode and J. Ohlson, "Accounting-Based Valuation with Changing Interest Rates." *Review of Accounting*

value - - of the claims. Hence $r \bullet FV(BP)$ determines the period dollar cost. The rate, r can change from one period to the next because of changes in interest rates and the claim's risk.

For the above numerical example the imputed cost, $r \bullet FV(BP)$, equals 2% x \$100 million = \$2 million. Hence,

$$Exp_IS = \$2 \text{ million}$$

$$Loss_OCI = \$8 \text{ million}$$

$$FV(EP) = \$110 \text{ million}$$

$$FV(BP) = \$100 \text{ million}$$

$$CF = \$0$$

Of course, the sum of the two debits (2 plus 8) equals the credit (110 minus 100).

One can modify the example for a scenario in which the warrants have expired and become worthless by the end of the period. In this case Exp_IS remains \$2 million as before, but the OCI item now is a gain of \$102 million (i.e., $Loss_OCI = - \$102$ million).

This accounting has the advantage of excluding income statement gains/losses which are fundamentally unpredictable and have no bearing on what these gains/losses will be in future periods. That is, the measurement of Net Income should result in a number that provides a useful starting point when one tries to forecast future Net Incomes. If the WGL were part of the measurement of Net Income, then the users of the Income Statement would be likely to strip out this particular component to derive a much-targeted measure of "core" or "recurring" Net Income. There is, indeed, a constructive role for "dirty surplus" accounting in a context where (i) some liabilities are valued at their fair values and (ii) users of the financial reports prefer that

Studies 9 (December 2004, forthcoming). However, for applying the expected return to daily balances, the use of beginning-of-period or end-of-period rates is of little consequence.

unpredictable (mean zero) costs “bypass” the Income Statement to enhance the identification of a firm’s core Net Income.

B. *Comments Concerning Compensation Options*

In light of the controversy surrounding the accounting for compensation options – an issue that has long vexed the FASB -- some further discussion is necessary. Applying the general approach for PCCs, there will be a debit to Deferred Compensation Expense (an asset) at grant date and a credit to a Compensation-Option Liability, estimated at the fair value of the options granted. Subsequent to the grant date one can amortize the Deferred Compensation Expense in the usual fashion. This accounting suggests that the economics of compensation options is, in essence, equivalent to having the firm sell warrants to the employees and use the proceeds for future cash compensation. Thus the general approach recognizes that the owners of outstanding claims act as suppliers of non-equity capital. The fact that these owners also work for the company is viewed as not a concern for the accounting. Needless to say, this way of thinking differs from both GAAP and FASB’s 2004 Expense Draft, and significantly so.

While this application of the general accounting for PCCs to compensations options may seem reasonable enough, it can be questioned because compensation options differ in critical respects from the other PCCs. Given a common shareholder perspective, a *cash* exchange at the inception of a PCC means that the debit to cash determines a same-amount credit to the liability. In contrast, for a compensation option, the lack of a cash exchange implies that a more-or-less subjective estimate of the options liability must determine the debit to an “intangible” asset, Deferred Compensation Expense. This “soft” aspect of the inception/grant-date dollar amount raises the specter of measurement problems with their attendant manipulation opportunities. A

relatively small amount reduces the debt-to-equity ratio; further, it reduces the implicit financing cost in the income statement. Of course, this “softness” arguably reflects an all-too-contrived concept of separating the compensation (work) and the liability (providing capital).; in part, the liability is integral to the compensation arrangement.

The Deferred Compensation Expense does not tie in with anything remotely associated with property rights. Can it really be shown as an asset? Authoritative documents suggest that the answer to the last question is a resounding ‘no’. Ruling out Deferred Compensation Expense as an asset, we suggest that it should be treated as a contra-liability account, i.e., the balance in the Deferred Compensation Expense is netted against the Compensation Option Liability. We further suggest that the net of the two accounts cannot be a debit balance at any time during the life of the option. To handle this one simply accelerates the amortization of the Deferred Compensation Expense using contingent amortization schemes. That is, should the liability decline too fast relative to the carrying value of the Deferred Compensation Expense, this accounting recognizes an “impairment” of the Deferred Compensation Expense. One can interpret this impairment as consistent with relatively poor managerial performance that results in a declining stock price that, in turn, induces a decline in the fair value of the option.

With respect to the income statement presentation, we suggest that the amortization and the imputed cost components be combined into one, Compensation Expense due to Options Grants.

With these modifications in place, the suggested accounting is reasonably similar to that under FAS123 and IFRS2. At the grant date there’s no difference at all.¹⁴ Subsequent to the grant

¹⁴ Research shows that the FAS 123 net income number is valued as an “expense” by the stock market. See Aboody, D., Barth, M., and Kasznik, R., “SFAS No. 123 Stock-based Compensation Expense and Equity Market Values,” *The Accounting Review* 79 (April 2004), 251-275.

date, the balance sheet shows a net liability (possibly zero) but, due to the netting aspect, it often will be small. As to Net Income, the accounting will be the same, except for the additional implicit financing cost. That said, the proposed accounting also has an additional OCI component due to WGL, in sharp contrast to the FAS 123 and IFRS2 accounting.

We view the additional WGL component as an attractive feature because it contains a trueing-up ingredient that recognizes an economic cost to the common shareholders. After all, the *total* economic cost to the shareholders arises from the issuance of shares with a value in excess of the cash contributed at exercise date, and revisions in the estimated difference result in unrealized gains and losses prior to exercise date. The grant-date accounting proposed by standard setters provides some remedy but, by not accounting for the ultimate settling up, it does indeed bear the hallmark of violating the interest of the pre-existing shareholders.¹⁵

The accounting for SARs develops along the same lines as that for compensation options. Applying the same approach recognizes that the economics of the two compensation arrangements is in substance the same. In this regard, it is often observed that a firm can finance a SAR at settlement by issuing common stock for the amount paid to the employee. The presumed neutrality of this transaction stresses the economic equivalence of a SAR and a compensation option. In other words, as previously indicated, whether the firm settles the obligation by issuing shares or paying cash does not affect the form of the accounting.¹⁶

¹⁵The accounting is of immediate benefit to analysts. Accommodating the “option overhang” in valuing a common share imposes a task on the analysts, a difficult one without access to fine details of compensation plans. The proposed accounting fair values the option overhang on the balance sheet.

¹⁶ The equivalence of employee options and SARs, and the inconsistency in GAAP, has long been recognized in traditional accounting texts and commentaries, most recently in American Accounting Association Financial Accounting Standards Committee, “Evaluation of the IASB’s Proposed Accounting and Disclosure Requirements for Share-Based Payment,” *Accounting Horizons* 18 (March 2004), 65-76. See also Balsam, S., “Extending the Method of Accounting for Stock Appreciation Rights to Employee Stock Options,” op. cit. GAAP accounting for stock appreciation rights is specified in Financial Accounting Standards Board. Interpretation No. 28, *Accounting for Stock Appreciation Rights and Other Variable Stock Option Award Plans* (Stamford, Conn.: FASB, December 1978). The 2004 FASB Exposure Draft, *Share-Based Payment* endorses Interpretation No. 28 while proposing grant

C. *Comments Concerning Accumulated Other Comprehensive Income*

As the proposed accounting determines a periodic WGL via a revaluation of the outstanding liability, the equity account, Accumulated OCI (or Accumulated WGL), must be updated. The question then arises whether, at some subsequent point, the balance of this account should pass through Net Income. Should the balance of Accumulated OCI be transferred to a *realized* gain or loss when the PCC has been settled or liquidated? This ultimate realization approach is applied in GAAP's treatment of Accumulated OCI in what is sometimes referred to as recycling of gains and losses. GAAP accounting for available-for-sale Marketable Securities illustrates the point: If such securities are sold, then the Accumulated Unrealized Gain/Loss turns into a Realized Gain/Loss in the Income Statement.

The ultimate realization approach has the appealing feature that, over time, all losses, costs, and expenses true up to Net Income. This trueing up reduces the reporting incentive to minimize the imputed cost, $r \bullet FV(BP)$, by reporting as much windfall losses as possible. As the specter of manipulation tends to make its presence felt even in the best of circumstances, we feel that the trueing up to Net Income is an attractive feature.¹⁷

date accounting for employee options. As justification, the Exposure Draft classifies SARs as "liability-based awards" (consistent with the CON6 definition of a liability that requires settlement with an asset transfer) but options as "equity-based awards".

¹⁷ The experience of firms gaming the line between profit/loss and recognized gains and losses in the U.K suggests so, as do the recent abuses of estimated restructuring charges in the U.S.

The estimation required for compensation options and the ability of management to choose grant and exercise dates around stock price movements invite abuse. Evidence indicates that managements have tended to time option grants and exercise with the price level in mind. See, for example Yermack, D., "Good Timing: CEO Stock Option Awards and Company News Announcements," *Journal of Finance* 52 (June 1997), 449-476; Aboody, D. and Kasznik, R., "CEO Option Awards and the Timing of Corporate Voluntary Disclosures," *Journal of Accounting and Economics* 29 (February 2000), 73-100; Huddart, S. and Lang, M., "Information Distribution within Firms: Evidence from Stock Options Exercises," *Journal of Accounting and Economics* 34 (January 2003), 3-31. The recurrent repricing of options after a fall in the stock price has been seen as an abuse to which the FASB responded

An alternative to having the cumulative windfall gains or losses pass through income statements is to transfer the Accumulated OCI to Retained Earnings at the settlement date. In this approach, the windfall gains/losses never pass through the income statement. If the average Accumulated OCI approximates zero, the average Net Income will be about the same for the two schemes, in which case the two approaches do not differ much. However, if there is no ultimate realization of windfall gains or losses in the income statement, an approximate zero average hinges on there being an honest implementation of the accounting. The importance of having an ultimate realization of the Accumulated OCI is thus brought into focus.

The ultimate realization approach has the disadvantage of introducing a non-recurring (unpredictable) item in the income statement. Analysts are likely to disregard this item, especially if it is material, which might well be the case if the PCC has been outstanding for a long time. At a minimum, such an item must be clearly disclosed in the Income Statement to avoid confusion. On the other hand, one can of course also argue that Accumulated OCI should be transferred directly to Retained Earnings, rather than Net Income, at the settlement date.

with a requirement to expense the repricing. See FASB Interpretation No. 44, *Accounting for Certain Transactions Involving Stock Compensation* (Norwalk, Conn.: March 2000). Rubinstein, M., "On the Accounting Valuation of Employee Stock Options," op. cit. explains the mischief that can be practiced with estimates of parameters for alternative option-pricing techniques, and evidence suggests that management systematically underestimate the FAS 150 grant date expense for compensation options. See Murphy, K., "Reporting Choice and the 1992 Proxy Disclosure Rules," *Journal of Accounting, Auditing and Finance* 11 (Summer 1996), 497-515; Baker, T., "Options Reporting and the Political Costs of CEO Pay," *Journal of Accounting, Auditing and Finance* 14 (Spring 1999), 125-146; Yermack, D., "Companies' Modest Claims about the Value of CEO Stock Options Awards," *Review of Quantitative Finance and Accounting* 10 (March 1998), 207-226; Aboody, D., Barth, M., and Kasznik, R., "Do Firms Manage Stock-Based Compensation Expense Disclosed Under SFAS 123?" Working paper, Stanford University, 2003; and Bartov, E., Mohanram, P., and Nissim, D., "Stock Option Expense, Forward-looking Information, and Implied Volatilities of Traded Options," Working paper, Columbia University and New York University, 2004.

Firms appear to structure the terms of contingent convertible bonds to manage diluted earnings per share. See Marquardt, C. and Wiedman, C., "Earnings Management Through Transaction Structuring: Contingent Convertible Debt and Diluted EPS," Working paper, Stern School of Business, New York University, April 2004.

On balance, we prefer an accounting that trues up to Net Income. To minimize the adverse effect of having a material non-recurring item in Net Income, we propose a compromise between the two accounting schemes dealing with Accumulated OCI: Avoid having the income statement pick up *all* of the cumulative WGL at the date of the claim's settlement and instead allow for cumulative unrealized WGL to gradually pass through the Income Statement. That is, one would devise a rule that picks up some portion of the beginning balance in Accumulated OCI and transfers it to the Income Statement. To accomplish this one might, for example, determine the portion as a fraction of the claim's remaining (expected) years of duration. WGL would thereby be "smoothed" over many periods into Net Income. This would maintain the usefulness of the bottom line in the Income Statement by precluding what otherwise would be potentially material non-recurring items, but would induce analysts to anticipate possible biases in the implementation. Section VII illustrates with journal entries.

Quite aside from the accounting for PCCs, one can criticize the use of OCI on general grounds. We do not take a position on this matter. But we note that one readily maintains the approach to the accounting for PCC as suggested here, even if one rules out the use of OCI. The debits and credits to OCI would simply show as "transitory" or "non-recurring" items in the Income Statement.

D. Comments Concerning Measurement of Expected Returns

With respect to the practical matter of measuring r , investors' expected returns on PCCs, we do not believe this is overly complex or burdensome. In principle, the recognition of implicit interest corresponds to the recognition of effective interest on a discount bond and in lease accounting, albeit with added measurement problems. Firms can develop their own schemes, as

long as they are reasonable and subject to broad constraints. This approach is akin to how firms develop some other parameters, e.g. when accounting for “capitalized interest” for “self-constructed plants.” More generally, GAAP often targets fair value measurements, which in turn means that the accounting is predicated on somewhat subjective yet acceptable discount factors or earnings rates. The accounting for pensions, for example, cannot be implemented without a discount rate. And the same is true in the accounting for put options under FAS 150, unless the put is traded. It is also possible for a firm to start from some appropriate risk-free rate and then adjust for risk relying on techniques developed by practitioners of modern finance theory¹⁸. These techniques do require estimates of risk premiums and betas, and the experience with expected-return estimates for pension plan assets during the 1990s gives some pause. So the estimation needs to be constrained. The rule making could specify *ad hoc* lower bounds such as “*r* cannot be less than the average yield for corporate bonds rated BBB”. These approaches would readily meet the requirement of conservative Net Income measurement, without impinging on measurements of subsequent periods’ Net Income.

E. Comments Concerning the Uses of Fair (Market) Values of a Performance Contingent Claim

Implementing the suggested accounting hinges upon the quoted or assessed market value of any PCC. This concept leads to a well-known circularity problem. Financial statements are supposed to aid the determination of market values, not the other way around. We do recognize this issue, though we do not view it as fatal in the present context. Our argument runs as follows. Over time a proprietorship concept combined with a “truing up” procedure, as suggested, means

¹⁸ See, for example, R. Brealey and S. Myers, *Principles of Corporate Finance*, 7th ed. (New York: McGraw-Hill, 2003), Chapters 8 and 9, and S. Ross, R. Westerfield, and J Jaffe, *Corporate Finance*, 7th ed. (New York: McGraw-

that the total value distributed to the holders of the PCC must be part of aggregate comprehensive income. The proposed accounting merely allocates this total expense/income across periods in a systematic fashion, so that investors can make appropriate inferences about firm's income from operations. The implied borrowing cost/expense attributable to financing activities is reasonable as well.

We do not wish to imply that market valuation should apply to all financial obligations, such as Bonds Payable or Preferred Stock more generally. Accordingly, our proposed accounting for convertible bonds and preferred stock requires some modification. Specifically, we suggest that the accounting for WGL should cease once the pricing of the convertible bond (or preferred stock) reflects default risk. In that case, the option's inherent value is essentially zero. Convertible bonds and preferred stock will thus be accounted for no differently than ordinary bonds and preferred stock whenever the embedded option is economically irrelevant.

V. The Concept of Common Shareholders as the Only Equity

The idea of treating all PCCs as part of a firm's liabilities acts as a crucial bedrock of the proposed accounting framework. We believe that accounting from the point of view of pre-existing common shareholders -- an accounting concept that is often referred to as the Proprietor perspective on Income and Equity -- makes a lot of sense in the case of PCCs. Any value created to the holders of a PCC lowers the value of the pre-existing shareholders equity; there can be "no free lunch" in this regard. The accounting needs to reflect, at least over the life of the PCC, that any wealth accruing to the holders of a PCC reduces Comprehensive Income pertaining to the pre-existing owners of common shares. The bottom lines, Comprehensive Income and Owners'

Hill, 2005), Chapters 10-12.

Equity, thus pertain to a hypothetical single individual who owns all the common stock but has no other claims on the firm's assets. All financial claims outstanding, other than common stock, cannot be included in Owners' Equity. Comprehensive Income therefore represents a practical attempt to measure the value created for the (single) hypothetical owner. This scheme has the advantage of permitting the hypothetical owner to focus on the value of the firm starting from the bottom lines in the Income Statement and the Balance Sheet. What could be more logical if one postulates that the accounting must have a pragmatic orientation? (All sorts of other information may, of course, be used by potential investors to value the firm, including line items extracted from the financial statements.)

This proprietorship theory of accounting stands in contrast to the so-called "entity-theory" of accounting¹⁹, which almost deliberately maintains an ambiguity as to liabilities vs. equity and as to what class(es) of investors income pertains. In other words, there is no clean concept that distinguishes liabilities from equity. GAAP obviously admits this ambiguity by referring to Shareholders' Equity rather than Common Shareholders' Equity as the category below Total Liabilities, a category that GAAP currently includes preferred stock (unless redeemable) and sometimes Minority Interest. Related issues arise in GAAP's income statement via the usage of before- and after-income categories (when dealing with preferred dividends, for example). And the accounting for these two items has, unsurprisingly, evolved over time in no apparent direction. Thus, one can reasonably assert that GAAP tends to conform to the entity

¹⁹ The distinction between the proprietorship and entity perspectives on accounting has long been central to discussions of accounting theory and practice. See E. Hendriksen, *Accounting Theory*, revised ed. (Homewood, IL: Irwin, 1970). For a discussion of the application of the proprietary and equity perspectives to the accounting for employee stock options, see Kirschenheiter, M., Mathur, R., and Thomas, J., "Accounting for Employee Stock Options," *op. cit.*

theory with its attendant blurred concept of equity, and to which classes of investors income actually pertains.

With respect to PCCs, current GAAP accounting for warrants is in the spirit of the entity theory because Warrants Outstanding are part of Owners' Equity. Examining GAAP as it bears on the list of PCCs in Section II, GAAP broadly conforms with the entity theory, with the exception of stock appreciation rights and put options. That said, GAAP acknowledges the limitations of the entity approach in the EPS calculation, especially diluted EPS: EPS makes an ad hoc attempt to "correct" for the problems associated with potentially dilutive securities, that is most PCCs²⁰. In contrast, the approach proposed in this paper already reflects the dilutive implications of PCCs in its determination of Net Income and Comprehensive Income. Thus, one can argue that there should be no need for adjustments of the numerator or denominator due to "potentially dilutive securities", i.e., outstanding PCCs.

Given the primacy of pre-existing common shareholders i.e., a proprietorship perspective, all PCCs outstanding should be accounted for as liabilities. The pre-existing common shareholders know that the PCC must be settled at their "expense," and in the process the firm is a mere legal vessel; whether a PCC is discharged in cash or common shares is of no relevance to them. The economic value of the transaction is what counts, not the means to convey the value. This way of looking at liabilities contrasts sharply with CON6, which is in the spirit of the entity theory²¹. CON6, as noted earlier, does not recognize a liability if the claim is settled by issuing shares. Yet FAS 150 requires a liability recognition if a debt can be settled by a (varying

²⁰ Kirschenheifer, Mathur and Thomas, op. cit., show how diluted EPS calculations are incapable of identifying wealth transfers between option holders and common shareholders.

²¹ Unlike CON6, the United Kingdom Accounting Standards Board's *Statement of Principles for Financial Reporting*, issued in December 1999, recognizes that gains and losses to preexisting owners arise if "fair value of contributions made does not equal the fair value of the rights granted in return."

number) of common shares, which is consistent with the proprietorship theory. This contradiction explains why the FASB expects to “revisit” the issue of how to define a liability. But if one takes FAS 150 as a starting point, the FASB faces quite a challenge unless it concludes that warrants - - like puts - - ought also to be treated as a liability rather than as equity.

The notion that all claims on a firm’s assets, except for common shares, should be classified as liabilities can be applied to (ordinary) preferred stock as well as PCCs from the pre-existing shareholders point of view; the related preferred dividends do not differ conceptually from interest expense. As yet another consequence, any early retirement of the preferred stock entails a gain or loss which cannot bypass Comprehensive Income. GAAP, of course, differs in its accounting for Preferred Stock; basically treating it the same way as Common Stock (the EPS calculation excepted). Similar comments can be made with respect to GAAP accounting for Minority Interest. At any rate, the merits of GAAP’s current accounting on these issues cannot be traced to any core constructs that spell out the meaning of a firm’s “equity.”

One can, of course, always create securities that are “very close” to regular common stock, yet different from common stock. Consider, for example, a common stock with a put option. Should such securities be part of “equity”? We believe the answer should be “yes”, only if the value-correlation with regular common stock is extremely high. This criterion is obviously somewhat arbitrary—and thus the proprietorship theory is not as pure as one would like—but we do not believe it will be much of a hindrance as a practical matter.

We believe that GAAP should move in the direction of a proprietorship perspective. Such an approach, after all, is the only one that frames a firm’s financial reports in terms of the informational needs of its owners.

VI. Proposed Accounting for Forward Contracts in the Equity and Restricted Stock Issued for Compensation Purposes

As noted earlier, the accounting for forward contracts (in a firm's own common stock) and restricted stock raises the question of the precise meaning of Performance-Contingent Claims (PCCs). Taking a proprietorship perspective as a given, one can reasonably argue that it is unclear whether these claims ought to be accounted for as liabilities – that is, treated like a PCC - or as equity. GAAP, of course, includes them in equity rather than accord them a PCC status. The PCC approach in our view is preferable, and to implement the related accounting introduces no particular problem. Specifically, these claims should not be part of Owners' Equity until a settlement so indicates. The case for this approach hinges on the observation that the claims actually differ from regular common stock transactions in many perhaps not-so-apparent respects.

Forward contracts generally do not have the same set of rights as those of pre-existing shareholders. Forward contracts have no voting rights, and they have no rights to cash dividends. Nor do they necessarily have to lead to a change in the shares outstanding at the maturity date, since the original transaction can be reversed prior to their maturity. As for restricted stock, such claims generally have a host of confining provisions prior to their vesting. Under certain circumstances, they can even be forfeited or significantly curtailed.

In light of our view that (own stock) forward contracts and restricted stock differ enough from regular common stock, their accounting ought to conform to our proposed accounting for PCC. But we do not view the issue raised in this section as central. The ambiguity about their proper accounting treatment does not substantively influence the quality of our argument in favor of the proposed accounting for regular PCCs. Claims like those listed in Section 2A are without

question economically distinct from common stock. Thus, under a proprietorship approach they must be recognized as liabilities at the date of their inception.

VII. Numerical Examples Illustrating the Proposed Accounting

The proposed accounting for various PCCs is demonstrated here with journal entries, omitting the associated accounting for taxes. Annotations amplify the accounting. In all examples, the implicit borrowing rate is set at 8%. For simplicity, transactions take place at the beginning or end of a period.

Warrants

Beginning of Period 1: Warrant issued for 200 with right to buy 20 shares at \$30 each

Cash	Dr.	200	
Warrant Liability	Cr.		200

End of Period 1: Fair value of warrant is 300

Implicit Interest (200 x 0.08)	Dr.	16	
Loss on Warrants - OCI	Dr.	84	
Warrant Liability	Cr.		100

[Liability recorded at fair value, with change in fair value divided between implicit interest on the effective borrowing and an unrealized loss. Implicit interest is included in Net Income and the unrealized loss in Other Comprehensive Income (OCI).]

End of Period 2: Warrant exercised with fair (market) value of common stock at \$40

Cash	Dr.	600	
Implicit Interest (300 x 0.08)	Dr.	24	
Warrant Liability	Dr.	300	
Gain on Exercise of Warrants	Cr.		124
Common Stock	Cr.		800

[Common stock is issued at market value, the liability is extinguished, and the difference divided between the implicit cost (of borrowing the amount in the beginning-of-period fair value) and a realized gain.]

End of Period 2 (alternative scenario): Warrant lapsed (fair value is zero)

Implicit Interest	Dr.	24	
Warrant Liability	Dr.	300	
Gain on Lapse of Warrants - OCI	Cr.		324

[The liability is extinguished and a realized gain is recorded, net of implicit interest.]

The above entries would be modified to record implicit interest on daily balances of the effective borrowing.

Convertible Bonds

Beginning of Period 1: Five year, 1,000 convertible bond with a coupon rate of 2% issued for 960

Cash	Dr.	960	
Convertible Bonds	Cr.		960

End of Period 1: Fair value of bond is 1,101, ex coupon.

Implicit Interest (960 x 0.08)	Dr.	77	
Loss on Convertible Bonds – OCI	Dr.	84	
Cash	Cr.		20
Convertible Bonds	Cr.		141

[The accounting differs from warrants only in the recognition of the coupon payment.]

End of Period 2: Bond converted at fair (market) value of common stock of 1,245 (which is also the ex-coupon fair value of the bond)

Implicit Interest (1,101 x 0.08)	Dr.	88	
Loss on Bond Conversion - OCI	Dr.	76	
Convertible Bonds	Dr.	1,101	
Cash	Cr.		20
Common Stock	Cr.		1,245

[Once again, the accounting differs from warrants only in the recognition of the cash transactions.]

End of Period 5 (alternative scenario): Bond matures (without conversion); fair value at beginning of period 5 is 1,144

Implicit Interest (1,144 x 0.08)	Dr.	92
Convertible Bonds	Dr.	1,144
Cash	Cr.	1,020
Gain on Convertible Bonds - OCI	Cr.	216

As with warrants, the above entries would be modified to record implicit interest on daily balances of the effective borrowing.

Employee Stock Options

As with convertible bonds, the accounting for employee stock options follows the prototype accounting for warrants. Complications arise only to the extent of allocating compensation expense over service periods to match with revenues potentially generated by the employees remunerated with the options.

*Beginning of Period 1 20 Options granted at the money; share price is \$30
Options exercisable after 5 years
Fair value at grant date = 200 (\$10 per option)*

*Service period is 5 years; deferred compensation amortized
straight- line over the service period*

Deferred Compensation Expense	Dr.	200
Compensation-Option Liability	Cr.	200

[Liability recorded at (fair) option value at grant date, with the value booked as compensation cost to be recognized as an expense in Net Income over the service period.]

Deferred Compensation Expense can be carried as an asset (a deferred charge) or as a contra to Compensation-Option Liability.

End of Period 1: Fair value of options is 300

Implicit Interest (200 x 0.08)	Dr.	16
Loss on Stock Options - OCI	Dr.	84

Compensation-Option Liability	Cr.	100
Compensation Expense due to Options	Dr.	40
Deferred Compensation Expense	Cr.	40

[Liability marked to fair value, with the change in fair value divided between implicit interest on the effective borrowing from the employee that is included in Net Income and an unrealized loss in Other Comprehensive Income. A share of compensation cost is recognized in Net Income.]

End of Period 2: Fair value is 250

Implicit Interest (300 x 0.08)	Dr.	24
Gain on Stock Options - OCI	Cr.	74
Compensation-Option Liability	Dr.	50
Compensation Expense due to Options	Dr.	40
Deferred Compensation Expense	Cr.	40

[Records the Period 2 marking of the liability to fair value and the effects of the claim on Net Income and Other Comprehensive Income.]

End of Period 5: Options exercised; fair value at beginning of period is 400; fair value at end of period (exercise date) is 480, equal to difference between the market price of the stock issued (1,080) and exercise price (600)

Cash	Dr.	600
Implicit Interest (400 x 0.08)	Dr.	32
Loss on Exercise of Stock Options - OCI	Dr.	48
Compensation-Option Liability	Dr.	400
Common Stock	Cr.	1,080
Compensation Expense due to Options	Dr.	40
Deferred Compensation Expense	Cr.	40

[The liability is extinguished and the stock is issued at fair value; compensation cost is fully amortized at the end of the service period.]

End of Period 5 (alternative scenario): Option lapses; Fair value at beginning of period is 400

Implicit Interest (400 x 0.08)	Dr.	32
Compensation-Option Liability	Dr.	400
Deferred Compensation Expense	Cr.	40
Gain on Lapse of Stock Options - OCI	Cr.	392

[The lapse of the option extinguishes the liability and results in a gain to common

shareholders after recognizing the implicit cost of borrowing in the beginning liability.]

At any time during the life of the option, the balance of Deferred Compensation Expense is impaired if the fair value of the liability is in excess of the balance of Deferred Compensation Expense (for an option well out of the money, for example), with the charge going to Net Income.

Accounting to Phase in Accumulated Other Comprehensive Income to Net Income

If fair value estimates are unbiased, or if market values used to mark to fair values are “fair game” efficient prices, average gains and losses booked to OCI will be zero and accumulated balances will tend to zero. Fair value estimates may be biased, however, in measuring option values at grant date, for example, or because managers choose grant (exercise) dates, based on their private information, when they deem the market price to be underpriced (overpriced). In such cases gains and losses will accumulate in OCI. Such biases are permanent losses (or gains) to shareholders. A settling up is achieved by phasing in balances of OCI to Net Income over the remaining life of each contract.

For the employee stock option example above, the balance of Unrealized Loss on Stock Options at the beginning of Period 2 is 84, and the remaining option life is four years. The journal entry at the end of Period 2 amortizes the beginning balance over the four years:

Amortization of Accumulated Unrealized Loss	Dr.	21	
Loss on Stock Options - OCI	Cr.		21

At the beginning of Period 3, the balance of Unrealized Loss on Stock Options is a credit of 11 (reflecting the accumulated gains and losses to that date, less the Period 2 amortization), and the remaining life of the option is three years. The journal entry at the end of Period 3 is:

Loss on Stock Options - OCI	Dr.	3.67	
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The periodic amortization may be netted to the income statement expense that arises from the instrument.

VIII. Summary: Virtues & Drawbacks

As we see it, the proposed approach to accounting for PCCs has a number of virtues and drawbacks. At least two drawbacks should be noted.

- The accounting requires fair value accounting for liabilities. Such measurements pose problems unless the PCC trades in a reasonably liquid market. Compensation options and SARs, in particular, would without question depend on fairly subjective assumptions. This issue is generic, of course; it applies no less for the compensation-option accounting suggested by the recent FASB Exposure Draft. In a similar vein, one can also argue that the use of fair values leads to a “circularity problem”, that is, the accounting impounds market values rather than the other way around.
- The accounting requires an estimate of the “expected return” of a PCC - - i.e., the parameter r - - which is also subject to implementation biases. Again, the possibility of “earnings management” cannot be easily dismissed. It further raises the question of whether the Accumulated OCI ought to be, at some point, part of Net Income.

As to virtues, consider the following points:

- The accounting relies on only a few core concepts, yet it can be applied to the complete set of PCCs.
- The accounting is straightforward without unpalatable implementation problems. There is no need to unbundle complex securities, such as convertible bonds, into parts (regular debt plus a call option) and then account for each part separately.

- The accounting relies on “fair values” in the balance sheet. This measurement approach is consistent with FAS 150 and the FASB’s endorsement of “fair values” more generally.
- The accounting ensures that economically equivalent transactions result in consistent treatments. In particular, stock appreciation rights and regular compensation options have in essence the same accounting.
- The accounting ensures that Net Income will not fluctuate unreasonably due to non-recurring events in the financial markets. Specifically, windfall gains or losses bypass the income statement and show up only in Other Comprehensive Income. Such accounting is consistent with analysts’ demand for “pro-forma,” “street,” or “core” earnings as a useful starting point in equity valuation. And it meets objections that fair value accounting introduces volatility into Net Income that obscures underlying, persistent income.
- The accounting conforms with standard concepts of finance theory. All sources of capital, including PCCs, incur a cost. And the expected return on the PCC times its market value determines this cost.
- The accounting maintains an uninterrupted focus on the paramount importance of value and value-creation as they pertain to pre-existing common shareholders. This framework should simplify the work of analysts in assessing the intrinsic value of a firm’s common equity.

With respect to the last point - - which indeed serves as a bedrock in developing the underlying accounting model - - one can potentially argue that it is a drawback because it “leaves out” the informational needs of creditors. While this supposition possibly has some merit, we believe creditors’ needs can be satisfied with relatively straightforward and minor disclosures about the

outstanding PCCs. At any rate, we do not believe that GAAP's current accounting for PCCs does a better job in serving the informational needs of creditors. And to the extent that one of the two user classes ought to be given preference, it is by no means apparent why the creditor's informational needs should prevail: The financial markets in the US (and the world at large) increasingly focus on equities, not debt.

As a final comment, note that the strengths of the accounting emanate almost entirely from the two basic premises, the common shareholders perspective and the concept that determines Other Comprehensive Income. These two premises can in principle be considered as independent. Within the context of PCC accounting, however, the windfall gains and losses in OCI will not come into play unless the PCC gives rise to a Liability in the first place. In this sense the common shareholders perspective is preeminent. It sets the stage for how to deal with liability values that fluctuate in an unpredictable fashion. Thus one sees that a common shareholder's perspective, combined with fair value liabilities, leads to windfall gains and losses that bypass the Income Statement. The bypassing is sensible since the windfall gains and losses differ intrinsically from operating expenses such as Cost of Goods Sold and Selling & Administrative Expenses: To add apples and oranges makes no sense if one wants to achieve an informationally useful bottom line, Net Income to Common Shareholders.

Acknowledgments

An earlier draft of this paper was a subject of a Round-Table Discussion on October 29th, 2004. CEASA thanks all of the discussants for their many detailed comments.

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