

Accounting for Convertible Bonds

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Abstract

First, various views of convertible bonds (CBs) are analyzed along with current professional standards of accounting. Present rules are found to be flawed because they do not properly: (1) measure the interest cost of the CB and the total financing cost resulting from the issuance of debt and conversion commitments inherent in the CB; (2) classify the commitments arising from the CB; and (3) account for the conversion of the CB. Based on deductive reasoning and theoretical and empirical evidence, an accounting methodology for CBs is proposed that: (1) recognizes separately the debt and conversion commitments of the CB at date of issuance; (2) recognizes the total financing expense on the CB arising from the interest cost and in the increases in the fair value of the conversion commitment; and (3) accounts for the conversion under the market value method.

Introduction

Accounting for convertible bonds (CBs), as promulgated by the Opinions of the Accounting Principles Board (APB) and Statements of Financial Accounting Standards (SFASs) of the Financial Accounting Standards Board (FASB), has been a source of controversy for more than two decades. The main question relates to the nature of CBs--are they; 1) debt; 2) equity; 3) hybrid securities having both debt and equity characteristics; or 4) securities that change from debt to equity when their common stock equivalent value exceeds their value as debt? These disagreements involve the definition of many of the financial statement elements and fundamental concepts of accounting measurement, recognition, and reporting promulgated by the FASB's Statement of Financial Accounting Concepts (SFAC) numbers 5 and 6.

Thus, it is warranted to investigate whether current accounting procedures for CBs misclassify the original issue proceeds, understate borrowing costs, do not portray economic reality, and omit information from financial statements that can be important in evaluating managerial performance. The FASB had the opportunity to address these controversies when SFAS No. 84 was issued but chose not to do so (FASB 1985a, par. 21). The creation of new and more complex financial instruments to raise capital has made the resolution of the controversies urgent. Moreover, the issues debated have direct bearing on current FASB agenda items such as accounting for stock compensation plans and financial instruments, and distinguishing between liabilities and equities (FASB 1990).

The main premise of this study is that current pro-

cedures of accounting for CBs are flawed and different approaches to measuring, recognizing, and reporting events related to CBs are required in order to enhance the usefulness of financial statements to external users. The issuance of CBs creates two separate and distinct liabilities. One is a liability for the straight debt feature of the CB and the second is an obligation to issue common stock at the option of the bondholder at a set price. Proper measurement of the first liability would necessitate separating the debt and conversion option values of the CB at the date of issuance. Recognition of the second liability would require revisions in the definitions of certain elements of financial statements.

The sections that follow include discussions of: (1) the nature of CBs and accepted and alternative views of accounting for their issuance, financing costs, and conversion; and (2) a recommended method of accounting for CBs and of the theoretical concepts that form the basis for the recommendation.

The Nature of and Accounting for CBs: Accepted Procedures and Alternative Views

There are two main reasons for the existence of different views of CBs: (1) disagreements on whether the conversion feature should be given separate accounting treatment; and (2) disagreements on whether CBs are basically debt, basically equity, hybrid instruments having both debt and equity characteristics, or either debt or equity depending on the market value of the underlying common stock. Including the accounting procedures sanctioned by current professional standards, ten separate views and, consequently, ten different

accounting treatments can be derived from these two main disagreements.

Most of the articles reviewed on this subject do not illustrate the journal entries that would give accounting recognition to the various views of CBs, but are mainly concerned with only one facet of the accounting process; that is, recording the issuance of the CBs. In this section, the various views are discussed and illustrative journal entries are presented in Table 1 using a CB issued by Occidental Petroleum during the 1970s. For the sake of brevity, journal entries are illustrated only for the date of issuance, 1972, 1975, and the date of conversion.

The most important benefit of this exercise in accounting procedure is the identification of recognition, measurement, and reporting issues and controversies that exist for every facet of accounting for CBs. Table 2 presents data concerning this CB, relevant common stock market value information, and computations supporting the amounts used in the illustrative journal entries.

Professional Standards (Book Value Conversion) - Panel A

Current accounting standards view CBs as debt until conversion. The conversion feature, which constitutes a contingent obligation to issue stock, is neither given separate accounting recognition upon issuance nor during the period the CBs are outstanding. However, the CB is generally treated as equivalent to equity upon conversion, and no gain or loss is recognized due to the conversion. Thus, the difference between the carrying value of the debt and the market value of the stock issued is ignored. These generally accepted procedures form the basis of the book value method of accounting for conversions of CBs (APB 1969, 1972, and 1973).

These procedures were contrary to a previous position taken by the APB in Opinion No. 10 that required separation of the value of the conversion option at date of issuance (APB 1966). The APB's suspension and subsequent reversal of the APB Opinion No. 10 approach was due to two arguments: (1) the conversion and debt features are inseparable; and (2) it is impossible to measure the dollar value of the conversion feature with sufficient accuracy (APB 1967).

Professional Standards (Market Value Conversion) - Panel B

Current professional standards do not prescribe any particular accounting method for conversion (APB 1973, pars. 11-15 and 21). An acceptable alternative to using the book value method is the market value method. This method was an early recommendation of the

American Accounting Association (AAA 1957). Accounting under this view differs from the preceding view only in the method of accounting for CB conversions.

Under this method the difference between the carrying value of the debt and market value of the stock issued at the time of conversion is recognized as gain or loss. Since the use of this method will generally result in losses, it is seldom, and perhaps never, used.¹ Indeed, an analysis of selected bond conversions that occurred during 1987 revealed no instances where the market value method was used.² For all conversions included in the sample, the carrying values of the CBs were lower than the market value of the stock issued. Thus, the use of the market value method would have resulted in loss recognition in all observed conversions.

Nonrecognition of the value of the conversion option upon issuance of CBs coupled with use of the market value method of accounting for the conversion results in a "straight bonded indebtedness view" of convertible bonds. While paragraph 2 of APB Opinion No. 26 does not apply to debt converted pursuant to existing conversion privileges of the holder, and conversion of CBs by the holder does not constitute an "early extinguishment," the recognition of gain or loss through application of the market value method is the same accounting prescribed for early extinguishments. The two primary arguments supporting this straight debt view are that; (1) the conversion feature has no separate existence; and (2) the CB is the legal liability of the issuer until conversion (see, for example, Poensgen 1965 and 1966).

Debt With a Separable Right (Interest Cost) - Panel C

Under this view a CB is considered a hybrid security having both debt and equity characteristics. Proceeds of the CB issue represent the sum of two distinct elements: (1) the value of the straight debt; and (2) the value of the conversion feature. Separate accounting for the value of the conversion option causes the recognition of a bond discount, thus increasing reported interest expense (King and Ortegren 1988).

The principal argument made by supporters of this view is the assertion that prevailing practices (pursuant to APB Opinion No. 14) understate the true interest cost because the value of the conversion option is ignored (Ford 1969; Imdieke and Weygandt 1969). They view true interest cost as interest paid plus amortization of original issue discount. The discount is computed as the difference between the CB proceeds and the present value of future cash flows discounted using the yield on straight debt issued by the same firm or firms with similar risk characteristics (King, Ortegren, and King 1990). Supporters of this view also argue that techniques exist to assign separate values to the debt and conversion option features with sufficient reliability

Table 1
Illustration of Accounting for CBs Under Current Standards, The Nine Alternative Views,
and the Procedure Recommended in this Study (in millions)

	Issuance		1972		1975		Conversion	
	<u>Dr.</u>	<u>Cr.</u>	<u>Dr.</u>	<u>Cr.</u>	<u>Dr.</u>	<u>Cr.</u>	<u>Dr.</u>	<u>Cr.</u>
A. Professional Standards: Book Value								
Cash	125.00		-		-		-	
Interest Expense	-		9.38		9.38		-	
Bonds Payable		125.00		-		-	125.00	
Cash		-		9.38		9.38		-
Contributed Cap.		-		-		-		125.00
B. Professional Standards: Market Value								
Cash	125.00		-		-		-	
Interest Expense	-		9.38		9.38		-	
Loss on Conversion	-		-		-		69.60	
Bonds Payable		125.00		-		-	125.00	
Cash		-		9.38		9.38		-
Contributed Cap.		-		-		-		194.60
C. Debt With a Separable Right - Interest Cost								
Cash	125.00		-		-		-	
Interest Expense	-		10.50		10.50		-	
Loss on Conversion	-		-		-		62.88	
Discount on Bonds	28.00			1.12		1.12		21.28
Bonds Payable		125.00		-		-	125.00	
Cash		-		9.38		9.38		-
Contributed Cap.-								
Conversion Opt.		28.00		-		-	28.00	
Contributed Cap.		-		-		-		194.60
D. Debt With a Separable Right - Full Cost								
Cash	125.00		-		-		-	
Financing Expense	-		17.51		21.56		-	
Bonds Payable		125.00		-		-	125.00	
Cash		-		9.38		9.38		-
Contributed Cap.-								
Conversion Opt.		-		8.13		12.18	69.60	
Contributed Cap.		-		-		-		194.60
E. Straight Equity								
Cash	125.00		-		-		-	
Dividend Declared	-		9.38		9.38		-	
Contributed Cap.-								
Convert. Bonds		125.00		-		-	125.00	
Cash		-		9.38		9.38		-
Contributed Cap.		-		-		-		125.00

Table 1 (continued)

**Illustration of Accounting for CBs Under Current Standards, The Nine Alternative Views,
and the Procedure Recommended in this Study (in millions)**

F. Equity With a Separable Right

Cash	125.00	-	-	-
Dividend Declared	-	9.38	9.38	-
Contributed Cap.- Convert. Bonds	97.00	-	-	97.00
Contributed Cap.- Conversion Opt.	28.00	-	-	28.00
Cash	-	9.38	9.38	-
Contributed Cap.	-	-	-	125.00

G. Equity Or Debt Depending on Underlying Stock Value

Cash	125.00	-	-	-
Interest Expense	-	9.38	-	-
Dividend Declared	-	-	9.38	-
Bonds Payable	125.00	-	125.00	-
Contributed Cap.- Convert. Bonds	-	-	125.00	125.00
Cash	-	9.38	9.38	-
Contributed Cap.	-	-	-	125.00

H. Equity Or Debt With a Separable Right Depending on Underlying Stock Value

Cash	125.00	-	-	-
Interest Expense	-	10.50	-	-
Dividend Declared	-	-	9.38	-
Discount on Bonds	28.00	1.12	24.64	-
Bonds Payable	125.00	-	125.00	-
Contributed Cap.- Convert. Bonds	-	-	100.36	100.36
Contributed Cap.- Conversion Opt.	28.00	-	-	28.00
Cash	-	9.38	9.38	-
Contributed Cap.	-	-	-	128.36

I. Claim on Equity

Cash	125.00	-	-	-
Interest Expense	-	9.38	9.38	-
Financing Expense	-	6.16	17.30	-
Bonds Payable	125.00	-	-	125.00
Conversion Liab.	-	6.16	17.30	91.65
Cash	-	9.38	9.38	-
Contributed Cap.	-	-	-	216.65

J. Procedure Recommended in This Paper: Two Separate Obligations

Cash	125.00	-	-	-
Interest Expense	-	10.50	10.50	-
Discount on Bonds	28.00	1.12	1.12	21.28
Financing Expense	-	-	11.92	-
Bonds Payable	125.00	-	-	125.00
Liab. under Commit.	28.00	-	11.92	90.88
Cash	-	9.38	9.38	-
Contributed Cap.	-	-	-	194.60

Table 2
Data and Calculations Supporting the Illustrative Entries in Table 1

A. Data on the CB and Common Stock

1. Face Value: \$125,000,000.
2. Issue Price: At par (\$125,000,000).
3. Date: June 15, 1971 (25-year maturity).
4. Call Price: Declining Gradually; 106 on the average.
5. Conversion Data: Convertible into \$.20 par value common stock at \$20 per share (50 shares per \$1,000 CB); 6,250,000 shares.
6. Stated Rate: 7.5 percent (annual payments assumed in computations).
7. Rated: Ba.
8. Comparable Risk Straight Bond Rate: 10 percent on the average. This rate is an educated guess, given all available information.
9. The CB was called, forcing conversion on June 15, 1977.
10. The common stock value, call price, and market value of the bond issue on June 15 (in millions):

Year	1972	1973	1974	1975	1976	1977
C/S Value	114.00	84.40	91.40	141.40	153.10	194.60
Call Price	132.50	132.50	132.50	132.50	132.50	132.50
CB Value	130.00	118.80	113.80	140.50	152.50	193.80

11. Other relevant information:

Year	1972	1973	1974	1975	1976	1977
Price ^(a)	18.25	13.50	14.63	22.63	24.50	31.13
# of C/S	55.10	55.10	55.10	55.90	56.80	59.00
Net Income	8.40	60.50	277.20	172.00	183.70	217.90

(a) These prices are annual highs and were chosen to dramatize the effects. They are assumed to occur on June 15 of each year. Net Income and Number of Common Shares are in millions.

Table 2 (continued)
Data and Calculations Supporting the Illustrative Entries in Table 1

B. Computations (Amounts are rounded and taxes are ignored):

1. Present Value = (85,500,000) + (11,500,000) = \$97,000,000
2. Discount = (125,000,000 - 97,000,000) = \$28,000,000.
3. Assume straight-line amortization of discount: \$1,120,000
4. Amount of the commitment liability and annual changes (loss contingency) in it :

Year	1972	1973	1974	1975 ^(b)	1976	1977
Amount	28.00	28.00	28.00	39.92	50.50	90.88
Change	-	-	-	11.92	10.58	40.38

(b) Computation for 1975: (141.4) - (125 - 23.52) = 39.92

5. Calculation of the "full cost" discount rate, given a forecast of June 15, 1977 common stock value of \$194.60 million:

$$\text{Given, } 125,000,000 = \sum_{t=1}^6 9,375,000 (1 / (1 + i)^t) + 194,600,000(1 / (1 + i)^6);$$

$$i = 14 \text{ percent}$$

Full financing costs for: 1972 - \$17,500,000 = [(0.14 x 125,000,000)];
 1975 - \$21,560,000 = [(0.14 x 154,000,000)]
 [125,000,000 + 8,000,000 + 10,000,000 + 11,000,000]

6. Claim on earnings (financing costs) in Panel I:^(c)

Year	1972	1973	1974	1975	1976	1977
Claim	.86	6.16	28.24	17.30	18.22	20.87

(c) Computation for 1975: $\frac{6,250}{(6,250 + 55,900)} \times 172,000 = 17.3 \text{ million}$

and that inseparability of these features does not deny their existence (American Accounting Association 1993).

Debt With a Separable Right (Full Cost) - Panel D

This view would recognize the full economic cost of a CB issue over the period the CB is outstanding. Total

periodic financing expense would be the nominal interest paid on the CBs plus an accrual for a portion of any loss expected upon conversion. One approach bases the loss estimate on the long-term expected rate of growth in the value of the issuer's common stock or, alternatively, the estimated long-term dividend growth rate (Stephens 1971, p. 60). The periodic interest

expense accrual is based on the effective interest method (14% in this case). A portion of the accrual for the estimated conversion loss is credited to a paid-in capital account. The illustrative journal entries for this view assume that management's original estimate of the conversion loss is precisely realized and the date of conversion is exactly forecasted (see Table 2, item B-5).

Straight Equity - Panel E

This view assumes that CBs are equity upon issuance and remain equity unless the CBs are redeemed for cash. The primary basis for this view is the assertion that the reason entities issue CBs is to ultimately raise equity capital (Brigham 1966). Cash interest payments would be accounted for as tax deductible dividends. Upon conversion, the original proceeds would be reclassified within the stockholders' equity section and no gain or loss recognized.

Equity With A Separable Right - Panel F

Like the straight equity view, this view would consider the entire proceeds of a CB issue as equity, and cash interest payments as tax deductible dividends. The difference from the straight equity view is that proceeds would be classified into two capital accounts, one relating to the value of the conversion feature and the other to the value of the straight bond feature.

Equity or Debt Depending on the Underlying Stock Value - Panel G

McCullers analyzed eight debt-equity distinctions found in accounting, finance, and legal literature (McCullers 1971). Based on these analyses, he concluded that separate accounting for the debt and conversion features of CBs was not necessary. In his opinion, CBs are wholly debt when they are first issued. But when the conversion value (market value of shares underlying the bond) exceeds the call price, the CB should be reclassified as equity that pays tax deductible dividends. Since the CB would be reclassified as equity prior to conversion, no gain or loss would be recognized upon conversion (see, also, Purdy 1990).

Equity or Debt with a Separable Right Depending on the Underlying Stock Value - Panel H

This view has received the most attention in the past fifteen years, especially after the research in valuing contingent claims and computing earnings-per-share (see, for example, Bierman 1986; Givoly and Palmon 1981; Ingersoll 1977). These studies show that as the market-based stock-equivalent value of the bond approaches and exceeds the call price, the capital markets change their view of CBs from essentially debt to essentially equity. In addition, the observed difference

between the market value of the CB and the market value of stock underlying it is indicative of the existence of a conversion privilege.

The underlying reason for the accounting illustrated for this view is the same as given for Panel G except that the conversion value at issuance is separately accounted for as a discount on the debt feature of the CBs. Thus, interest expense is higher so long as the bonds are classified as debt.

Claim on Equity - Panel I

Under this view, the conversion privilege represents a potential claim on equity that should be given recognition in determining income during the period the bonds are outstanding (Falk and Buzby 1978). The total periodic financing cost of the CBs would consist of two components: (1) interest expense based on the nominal interest rate stated on the CB; and (2) the claim on earnings that CB holders would have on an "as if converted" basis. The interest expense component would be no different from current practice. The second component would result in a charge to expense and a credit to a liability account. This component reflects the holding rights to convert the CBs and is computed as follows (Table 2, item B-6):

$$\text{Net Income for the year} \times \frac{\text{number of shares from the CB}}{\# \text{ of shares from the CB} + \# \text{ of shares outstanding}}$$

Upon conversion, the amounts accumulated in the liability account would represent a historical cost measure of the transfer of equity between pre-conversion stockholders and stockholders who receive stock in exchange for the CBs. A historical cost measure of the conversion cost is considered by advocates of this view to be more in keeping with generally accepted accounting principles than a measurement based on the market-based stock equivalent value of the CB issue. This method is also consistent with the computation of primary earnings per share when outstanding CBs are considered common stock equivalents. It would be unnecessary to include the common stock equivalence of convertible bonds in EPS computations since reported earnings would be periodically charged with the dilutive effects. In the event the bonds are redeemed at maturity, the balance in the conversion liability account would be recognized as a gain.

Issues and Controversies: A Proposal for Accounting for Convertible Bonds

The discussion of the procedures illustrated in Panels A-I of Table 1 identifies various controversies at each of the three phases of accounting for CBs: at issuance; while outstanding; and upon conversion. At the date of issuance, decisions have to be made concerning whether:

(1) the CB is debt or equity; (2) the conversion feature should be valued and separately reported; and (3) the conversion feature, if separately reported, is in substance equity or debt. In addition, the method of valuing the conversion feature must be selected.

During the time period when the CB is outstanding, three major items need to be addressed: (1) the computation of periodic interest costs, which may involve amortizing the original issue discount if the conversion feature is separately reported; (2) whether some measure of a change in the value of the commitment to issue stock should be recognized; and (3) whether the CB should be reclassified from debt to equity and, if so, the determination of the timing of the reclassification.

Finally, a choice between book and market value methods needs to be made when accounting for the conversion. In the remainder of this section, the accounting method proposed in this study is presented, followed by a detailed examination of the accounting concepts underlying the method.

Proposed Method: Panel J of Table 1

Under current professional standards, CBs are treated as liabilities upon issuance and until conversion into stock takes place. One recommendation of this study is that proceeds of issuing CBs be classified into two liabilities: (1) bond indebtedness, and (2) commitment to issue stock at a set price. Assigning a portion of the proceeds to a separate liability account results in a discount being recognized on the bonds which, in turn, increases the periodic interest expense recognized on the bonds. Crediting a separate liability account with the value of the commitment to issue stock is a major departure from accepted parameters of debate in this area. Those who have advocated separating the value of the conversion feature at the time of issuance have recommended crediting the value to an equity account.

A second recommendation is that increases in the fair value of commitments to issue stock be periodically recognized as additional financing costs with accompanying increases in the commitment liability. Together with the periodic interest cost, this increase in the fair value of the commitment to issue stock represents the total financing cost of the CB. Recognition of this additional financing cost would be implemented as soon as the market value of the underlying stock exceeds the call price of the bonds (Knauf and Vasarhelyi 1987). The amount of the accrual would be the excess of the market value of the underlying stock over the sum of the book values of the two liabilities (bonds payable less discount plus commitment liability). In this manner, the total liability for CBs will reflect the cash-equivalent sacrifice (i.e., the amount that the stock would have been sold for).

A third recommendation of this study is that the use of the market value method should be the only available procedure for accounting for bond conversions. Currently, both the book value and market value methods of accounting for bond conversions are acceptable accounting practices. The existence of two radically different accounting methods for a given transaction or similar transactions of one or more entities violates the comparability principle, especially when there are no differences in the circumstances and characteristics of these transactions that can be used to select the more suitable alternative. If the second recommendation of this study is followed, and increases in the value of the commitment to issue stock are fully accrued to the date of conversion, no gain or loss will be recognized upon conversion from use of the market value method.

Accrual as an expense and liability of any periodic increases in the fair value of the commitment to issue stock commences when economic losses attributable to the conversion commitment become probable and the amount can be reasonably estimated. However, for this probable economic loss to be considered a liability within the framework of current accounting concepts, it must embody a present responsibility to transfer or use assets in the future. Thus, a fourth recommendation of this study is that the definition of liabilities in SFAC No. 6 be expanded to include as sacrifices the fair value of those obligations that commit the entity to issue previously unissued stock at a set price (FASB 1985b, pars. 251-253). The FASB uses a similar argument to justify the recognition of losses on purchase commitments. In the next section of this study arguments in support of these four recommendations will be presented.

Theoretical and Empirical Basis of the Recommendations

Basic Concepts

There are certain basic concepts of accounting that form the framework of the discussion presented in this section. First, in SFAC No. 1, the FASB states that "financial reporting should provide information about how management of an enterprise has discharged its stewardship responsibility to owners (stockholders) for the use of enterprise resources entrusted to it (FASB 1978, par 50)." Thus, an accurate reflection of how management has discharged its stewardship responsibility is an important criterion in selecting an accounting procedure.

Second, accounting for investors and creditors of an entity must not be confused with accounting for the entity itself. This concept has not been adhered to in several studies that advocate the reclassification of CBs as equity on the investee's financial statements as soon as investors start to value CBs based on the market

value of the underlying stock. The market's view of the value of a debt instrument can be used to provide pro forma information or forecasts in financial statements, as is done in the calculation of various EPS amounts or in adjusting the amount of an element under consideration. However, the market's view of an investment should not change the classification or nature of that element from a liability to equity on an investee's financial statements.

Third, CBs can be viewed as partially executed contracts. In return for cash received from an investor, the management has committed the entity to a set amount of periodic cash outflows and to the issuance of stock on demand. Specifically, the investor has transferred to the entity the risk of losing the value of future price increases in the entity's common stock by accepting a lower interest rate and the risk of decreases in stock prices. The full execution of the contract will not occur until either: (1) the entity calls the CB; (2) investors demand conversion; or (3) the CB matures.

Economics of CBs

The firm loses the gamble inherent in the conversion option if its CBs are converted prior to maturity and the underlying stock value of the CB exceeds the call price because the firm could have sold the stock and retired the bonds (if they were straight bonds), keeping the excess cash. Creditors or investors obtain higher than anticipated levels of return on their CBs (for example, a 14 percent return as opposed to the market rate of 10 percent on June 15, 1971 on straight debt in the Occidental Petroleum case).

Ideally, convertible bondholders should pursue an optimal conversion strategy while CB issuers should pursue an optimal call strategy, thereby balancing the stock price risk against the interest rate risk (Gaumnitz and Thompson 1987). However, many CBs are not called as soon as the underlying stock value exceeds the call price. In fact, management often delays conversion and incurs substantial increases in the cost of its commitment to issue stock (Brennan and Schwartz 1977). In doing so, management causes a decrease in the existing stockholders' wealth.

Do accounting procedures influence management's behavior and its selection of financing alternative? Perhaps management's behavior in this case can be partially attributed to the manner of accounting for CBs that allows the management to obscure the true cost of this transaction. That is, the full economic costs of CBs are not recognized as part of the periodic operating results, but are accounted for as decreases in contributed capital.³

If the commitment to issue stock could be defined as

a liability, then increases in its cost could be regarded as a contingent loss of the entity, given the weight of empirical evidence pointing to a high probability of conversion when the underlying stock value starts to exceed call price. In this manner, the full financial impact of management's actions would be measured and reported if an optimal call strategy is not pursued.

Are Commitments to Issue Stock Liabilities?

In SFAC No. 5 the (FASB 1984, par. 63) stated that for a financial statement item to be recognized the item must: (1) be reliable; (2) be relevant; (3) be measurable; and (4) meet the definition of a financial statement element. First, to insure reliability, it is necessary that no material information, including total financing costs, be left out of the financial statements. Second, the recognition of all costs associated with CBs is relevant to financial decisions. Obtaining external financing is a management function and any cost associated with carrying out that function should be reflected in the financial statements in order to provide information about how management has discharged its financial management responsibilities. Third, the original and subsequent values of the commitment to issue stock can be reasonably measured (King and Ortengren 1988, p. 530).

Undoubtedly, the method of accounting for CBs recommended in this paper depends on an analysis of the definition of liabilities. The FASB in its SFAC No. 6 (1985b, par. 35) defines a liability as:

....probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events.

SFAC No. 6 also states (1985b, par. 36) that a liability has three essential characteristics: (1) it embodies a present duty or responsibility to one or more other entities that entails settlement by probable future transfer or use of assets at a specified or determinable date, or occurrence of a specified event, or on demand; (2) the duty or responsibility obligates a particular entity, leaving it little or no discretion to avoid the future sacrifice; and (3) the transaction or other event obligating the entity has already happened.

In the case of a CB, characteristics (2) and (3) above definitely exist. However, the existence of the first essential characteristic would depend upon whether or not pledging previously unissued stock that will be issued on demand under various commitments could result in a sacrifice by the entity. Since something of value (i.e., lower interest rate) is received in exchange for the commitment, it could be argued that the commitment itself has value, and the subsequent execution of

the commitment results in a sacrifice.

Essential characteristic (1) can be re-worded as follows: (1) it embodies a present duty or responsibility to one or more other entities that entails settlement by (a) probable future transfer or use of assets...and (b) probable transfer of the entity's own equity securities for consideration less than fair market value at the date of transfer.

The definition of liabilities could then be changed as follows:

....Liabilities are probable future sacrifices.... arising from present obligations....to transfer assets or provide services or transfer equity securities for consideration less than their fair value to other entities in the future....

This issue (definitions of liabilities and equity) is at the core of many other accounting controversies involving commitments to issue stock (especially accounting for various stock option plans) and the FASB (1990, 1991, p. 5, and 1993) has indicated that it is aware of the need to re-study these definitions.

Analysis of Accounting for Issuance

At the date of issuance the proceeds represent the best initial estimate of the present values of the debt and the commitment to convert the debt into stock. The cost of the conversion commitment can be estimated by separate valuation or in relation to the yield on straight debt with comparable risk.

Under either approach a discount on the debt commitment is created, resulting in an increase in periodic debt financing expense compared to that which would be incurred for comparable straight debt. In this manner the financing cost of the straight debt component of the total commitment is reflected in financial statements, partially fulfilling the reporting requirement of the stewardship function and providing useful information (Clark 1993).

None of the views of accounting for convertible bonds presented in Panels A through I advocated the classification of the conversion feature as a liability when this feature is separately valued upon issuance. The prevailing argument is that the value of the conversion feature is paid to the corporation for its commitment to issue common stock. Therefore, proceeds received for the commitment represent an equity interest. As previously discussed, this study proposes to include such commitments among liabilities.

The straight debt feature of the CB should be reported as a liability upon issuance and remain a liability until extinguished. Bonds, whether convertible or

straight, are legal obligations of the issuer as long as they are outstanding. Even though an enterprise may issue CBs with the intention of ultimately increasing equity capital, as long as the conversion has not taken place, the enterprise has a creditor obligation on which interest payments must be made and which will have priority over stockholder interests in the event of financial failure. Management's expectations concerning the ultimate manner of extinguishing the CBs does not change the bonds from debt to equity. Such evidence can only be used to adjust the amount of the item (as is done under the lower-of-cost-or-market rule) or the classification of the item between short and long-term categories (as is done in relation to marketable securities).

Analysis of Accounting for Financial Costs

The preceding discussion rejects the reclassification of debt into equity and reasons that the initial measurement of the cost of the conversion commitment should be classified as a liability until the CB is converted and the commitment is discharged. Until the underlying stock value of the CB equals or exceeds its call price, the liability for the conversion commitment remains at its original value and this amount is not adjusted. Once this probable conversion point is exceeded, the difference between (1) the sum of the carrying value of the CB and the commitment liability, and (2) the underlying stock value measures the cost of the speculative gamble undertaken by management. Thus, in addition to the interest cost of the straight debt component of the transaction, another financing expense becomes probable due to the increase in the amount of the contingent liability. Naturally, management could avoid this additional expense by calling the CB as soon as the probable conversion point is reached.

A reasonable periodic measure of this additional financing expense would be the periodic increase in the market value of the commitment to issue stock over the value of the commitment at the issuance date of the CB. This increase could be caused by one or a combination of the following factors: (1) changes in value, and/or market perceptions of future value, of the underlying stock; (2) changes in market rates of interest; and (3) changes in the market's perception of risks associated with securities of the issuer. Regardless of the cause(s) of the change, the result is the probable future issuance of stock with a value in excess of the carrying value of the debt converted.

This additional expense should be periodically accrued and reported in the income statement as dictated by the comprehensive income concept and the stewardship objective of financial reporting (FASB 1984, pars. 39-41). Basically, the accounting process will indicate that the existing stockholders have lost a claim on income

that is greater than the periodic interest payment because management did not pursue an optimal call strategy.⁴

Analysis of Accounting for Conversion

The argument that both the debt and conversion commitment are liabilities leads to the use of the market value method to account for the conversion. Advocating the use to the book value method at this point would be contrary to the internal consistency of the methodology developed in the previous sections. Ample external evidence exists to support the use of the market value method. First, the substance of the exchange is a debt-for-equity swap. Debt-for-equity swaps are generally measured at fair market value and result in recognition of gains or losses for any difference between the market value of the stock issued and the book value of the debt extinguished. A pre-existing agreement to swap securities, as is the case for CBs, is not a sufficient condition for different accounting treatment of transactions that have the same ultimate effect.

Second, in induced conversions of CBs, when additional shares of stock are issued as inducement, the additional shares are valued at market prices and recorded as expenses (FASB 1985a, par. 3). Thus, in the journal entry that recognizes conversion, a paradoxical situation arises as two different values are assigned to the same class of stock.

Concluding Comments

Commitments to issue stock at set prices carry economic costs and changes in these costs are economic events. Since these costs are the consequences of management decisions, they should be periodically estimated and reported in the financial statements. In this manner, one of the objectives of financial reporting is fulfilled in that data useful in evaluating management's stewardship function is included in the financial statements. An improved measure is also provided for evaluating managerial efficiency in obtaining external financing.

The recommended definitional change of liabilities would add conceptual validity to recognition of expenses and losses for the excess of the fair value of commitments to issue stock over the price received for the commitment. It would appear that the FASB encountered similar definitional difficulties when they suspended work on the stock options project in order to re-examine the definitions of liabilities and equities.

Including the fair value of commitments to issue stock as sacrifices in the definition of a liability would lead to standardized accounting for CBs, stock options, warrants, and stock appreciation rights along with other

hybrid debt-equity instruments. Management's commitment is not completed in any of these cases until the commitments are satisfied or they lapse.

During the period the commitments are outstanding, the entity has assumed the risk of value increases in those commitments. It would seem to accord with economic reality that economic losses that are attributable to the risks assumed by the entity would be of interest to financial statement users in evaluating both the managerial and economic performance of the entity.

Suggestions For Future Research

The treatment of a call option written by a corporation on its own stock is one of the most controversial issues of the decade. Whether such an option is considered to be an equity or a liability is significant in determining the balance of expenses, revenues, net profit, assets, liabilities, and equities. Future research is needed to address the impact of the accounting solutions recommended in this paper on accounting for employee options, convertible preferred stock, and other commitments to issue common stock. The answer to expense and liability recognition and measurement questions will impact all key financial ratios concerning managerial performance and firm profitability. ■

*****Endnotes*****

1. An entity could recognize a gain upon conversion. For example, a CB with a book value of \$1,000 may have a stock equivalent value of \$900 but may be worth only \$800 as a debt instrument because of rises in the market interest rate. A conversion under this circumstance would result in a recognized gain of \$100.
2. Accounting for every third bond conversion identified from the 1987 *Moody's Bond Record* was analyzed using the relevant annual reports and *Moody's Industrial Manuals*.
3. The credit to contributed capital will be less than the market value of the stock issued.
4. Haim Falk and Stephen L. Buzby suggested periodically accruing an expense and crediting a liability account related to the conversion feature. Their measurement of the periodic expense, however, would be in the amount of the dilutive effect on earnings applicable to common stockholders on an "as if converted" basis. See Panel I of Table 1.

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