

Accounting For Convertible Bonds: An Alternative Approach

Dr. Joseph C. Rue, Management Research Center, Management, Syracuse University
Dr. William T. Stevens, Accounting, University of Mobile
Dr. Ara Volkan, Accounting, West Georgia College

Abstract

Accounting for convertible bonds (CBs) has been a source of controversy for more than two decades. The main question relates to the nature of CBs. Should they be defined as: 1) debt; 2) equity; or 3) hybrid securities having both debt and equity characteristics? The disagreements revolve around the definition of several financial statement elements and fundamental concepts of accounting measurement. We believe that current procedures in accounting for CBs are flawed and alternative measures of reporting and recognizing CBs are required in order to provide useful information to external users of financial statements. After a review of alternative methods of accounting for CBs, we conclude that a CB is a partially executed contract which has equity characteristics. The purchaser has committed to buy stock at a fixed price in a future time period. The seller is committed to issue stock in the future and is committed to provide a cash dividend at a fixed rate (i.e. "interest") until the stock is issued. The issuance allows the buyer to receive a return of the subscription price in the future if he fails to exercise his right or if the issue is called by the seller. Our approach of accounting for CBs emphasizes the economic reality of the situation rather than accounting by recording a liability which is replaced by equity when the issue is "converted."

Introduction

Since the accounting profession is committed to presenting fairly the financial position of the firm, a transaction should be recorded in a manner which provides users of financial statements with an undistorted picture of the economic impact of the event. However, a dilemma arises when the nature of a transaction cannot readily be determined, and thus the applicable method of reporting is uncertain. Accounting for convertible bonds (CBs) creates such a dilemma.

The FASB has issued a Discussion Memorandum (DM) "Distinguishing Between Liability and Equity Instruments and Accounting for Instruments with Characteristics of Both" (FASB 1990), that addresses these issues. It is therefore appropriate to investigate whether current accounting procedures for CBs misclassify the original issue proceeds, understate borrowing costs, distort economic reality, and omit information from financial statements that can be important to users evaluating performance.

The creation of new and more complex financial instruments to raise capital has made the resolution of these controversies urgent. The issues debated have direct bearing on current FASB agenda items such as accounting for stock compensation plans and financial instruments. Moreover, the debate involves 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.

The main premise of this paper is that current procedures of accounting for CBs fail to measure the economic consequences of the transaction, 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 sections that follow include discussions of: (1) the nature of CBs and alternative views of accounting for

them; and (2) a proposal for accounting for convertible bonds which focuses on the economic consequences of issuing convertible securities.

Alternative Views of the Nature of CBs

Current Standards

Current accounting standards view CBs as debt until conversion. The conversion feature is neither given separate accounting recognition upon issuance nor during the period the CBs are outstanding. Generally, upon conversion no gain or loss is recognized (book value method). Thus the difference between the carrying value of the debt and the market value of the stock issued is ignored. An acceptable alternative to using the book value method is the market value method. Under the market value 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 if ever used. Indeed in a sample of selected bond conversions, we did not observe one instance where the market value method was used. 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.

A Hybrid Security?

An alternative view is that a CB may be considered a hybrid security having both debt and equity characteristics. Proceeds of the original CB issue represent the sum of two distinct elements: (1) the value of the debt; and (2) the value of the conversion option. In most cases, separate accounting for the value of the conversion option causes the recognition of a bond discount. As a result, the effective interest rate on the debt is higher than the face or stated rate.

The principal argument made by supporters of this view is the assertion that prevailing practices (pursuant to APB 14) understate the "true interest cost" because the value of the conversion option is ignored (Ford, 1969; Imdieke and Weygandt, 1969). They view true 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 and that inseparability of these features does not deny their

existence (American Accounting Association, 1993). This approach is consistent with the APB No. 14 (AICPA, 1969) requirements for debt with warrants attached.

An Equity Security?

A second alternative views CBs as equity upon issuance and they remain as equity unless the CBs are redeemed for cash. The primary basis for this view is the assertion that entities issue CBs to 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 with no gain or loss recognized. Since a high percentage of all CBs are converted into stock, this approach considers the future economic consequences of a CB, rather than its current features.

A variation on this view would allow CBs to first be classified as debt but then be reclassified as stock based on market factors. McCullers (1971), for example, analyzed eight debt-equity distinctions found in accounting, finance, and legal literature. 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). Any time the conversion value of bonds exceeds the call price, the issuer of the debt can force conversion by simply "calling" the bonds. Therefore, when this conditions exists, the debt becomes equity, since the conversion is "controlled" by the issuer and not the holder.

A Proposal for Accounting for Convertible Bonds

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 ("interest") for a period of time and to the issuance of a fixed number of shares of stock to the investor on demand. The issuing company has "sold" these shares at a price which is generally considerably higher than the current price. 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.

In SFAC No. 5 (FASB, 1984, par. 63) the FASB 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.

Since the first three characteristics underlying recognition are met, the method of accounting for CBs 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 (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 characteristic (1) is not met since under current GAAP unissued stock is not considered an asset. Therefore, it can be argued that the purchase of a CB can be viewed as an equity transaction (issue 4.1a in the DM) in which the purchaser is committed to buy stock at a fixed price in a future time period. The seller is committed to issue stock in a future period and is committed to provide a cash dividend at a fixed rate until the stock is issued, at which time normal dividend rates will prevail.

In essence, the CB is a stock subscription plan in which the buyer pays the subscription price up front and receives stock in the future. The CB allows the buyer to receive money back in the future if the buyer fails to exercise this right or if the issue is called (at which point the buyer receives a premium above the purchase price). The CB represents a stock subscription with limited downside risk with unlimited upside gain plus guaranteed dividends during the "holding" period.

To the issuer, the CB stock subscription allows equity capital to be raised at significantly higher stock prices than currently exist. Therefore, the CB allows for less shares of stock to be issued to raise a given amount of capital. In addition, periodic dividend payments (in the form of "interest payment") are given favorable tax treatment. If favorable market conditions for issuing the subscribed stock are not reached, the issuer simply returns the

subscribed price at the end of the subscription period, which is normally twenty years.

This approach in accounting for CBs emphasizes the economic reality of the situation rather than accounting by establishing a liability and then replacing the liability with equity (subissue 4.1.d in the DM). It further results in resolving several other accounting problems which result from the current treatment of CBs. For example, if we consider CBs as equivalent to stock subscriptions, the shares to be issued on exercising the subscription (conversion) are included in computing earnings per share (EPS) since the existing capital structure of the firm reflects a commitment to issue these shares. We thus avoid the common stock equivalency test for CBs in computing primary and fully diluted EPS. Most CBs are exercised, yet very few are classified as common stock equivalents for purposes of computing EPS, causing "primary" earnings per share to overstate EPS (Rhodes and Snavely, 1973).

Further, the suggested method of accounting eliminates the need for SFAS No. 84 (1985a), "Induced Conversions of Convertible Debt." This pronouncement requires recognition of an expense in induced conversions for the difference between the fair value of all securities issued and the fair value of securities issuable under the original conversion term. If we classify CBs as equity immediately at issue date, there is no loss when the terms are changed, since we have merely changed the subscription price to reflect current market conditions (subissue 4.1.3 in the DM). More shares will be issued since the subscriptions will not be exercised under current market conditions. This is consistent with GAAP for stock subscriptions.

Market Tests and Economic Consequences

In order to support our assertion that CBs are issued to raise equity capital, a study was undertaken to determine the number of convertible securities that were converted during several time intervals. We compared the 1983 and 1993 Moody's Bond Records for CBs to determine how many securities were converted over the ten-year period. As of December 31, 1983, Moody's listed 416 CBs outstanding with maturities after December 31, 1993. Of these, 343 were converted by December 31, 1993 (82.5%). Similarly, we compared the bonds for the five-year period from December 31, 1983 to December 31, 1988. Of the 590 bonds maturing after December 31, 1988, 465 were converted (78.8%). Thus, our assertion that convertible debt is issued for equity reasons is supported.

If CBs were classified as equity at issue date, the impact on the debt to equity ratio of a firm could be significant.

In order to provide a worst case measure of this effect, a sample of companies with substantial convertible debt outstanding as of December 31, 1993 was selected. The sampling process included all firms listed on the Moody's Bond Record with about \$100,000,000 or more of convertible debt outstanding for which there was data on the December 31, 1993 Compustat tapes, thus enabling us to determine the total debt and stockholders' equity of

these firms. The existing debt-to-equity ratio was then computed. A "new" debt-to-equity ratio was also computed by subtracting convertible debt amounts from total debt and by adding it to stockholders' equity. As Table I illustrates, for these selected companies the percentage change in the debt-to-equity ratio tends to be quite large (range from 3% to almost 500%).

Table 1

Company Name	Tl. Debt (in millions)	Stckhldrs' Equi. (in millions)	Tl. Con Debt (in millions)	D/E Ratio	New D/E Ratio	Prcnt. Chng
AIR & WATER TECH CL A	254	210	115	1.21	0.43	65
ALASKA AIRGROUP INC	581	167	219	3.48	0.94	73
AMERICAN STORES CO	2168	1742	175	1.24	1.04	16
ANHEUSER BUSCH COS IN	3032	4255	237	0.71	0.62	13
ARROW ELECTRONICS IN	320	457	125	0.7	0.34	52
ASHLAND OIL INC	1558	1455	142	1.07	0.89	17
BAKER HUGHES INC	944	1611	237	0.59	0.38	35
BROWNING FERRIS INDS	1175	1533	745	0.77	0.19	75
CHEMICAL WASTE MANAG	1379	695	182	1.98	1.36	31
COMCAST CORP CL A SP	4428	870	742	5.09	28.8	466
CONNER PERIPHERALS	704	209	575	3.37	0.16	95
CONSOLIDATED NATURAL	1614	2176	250	0.74	0.56	24
CRAY RESEARCH	108	779	105	0.14	0	98
DELTA AIR LINES INC	3764	1995	575	1.89	1.24	34
DISCOVERY ZONE INC	116	98	116	1.18	0	100
FIELDCREST CANNON	303	193	125	1.57	0.56	64
FISHER SCIENTIFIC INTL IN	129	181	125	0.71	0.01	98
FREEMONT MCMORAN INC	1332	1	559	1332	1.38	100
GENERAL INSTRUMENT C	840	389	500	2.16	0.38	82
HASBRO INC	266	1277	150	0.21	0.08	61
HECHINGER CO CL A	411	494	123	0.83	0.47	44
HOME DEPOT INC	884	2814	805	0.31	0.02	93
INCO LTD	1059	1666	173	0.64	0.48	24
KROGER CO	4206	2460	370	1.71	1.84	7
LOMAS FINANCIAL CP	1048	324	140	3.23	1.96	40
LOWE'S COS	644	874	252	0.74	0.35	53
MASCO CORP	1451	1998	178	0.73	0.59	19
MOTOROLA INC	1915	6409	603	0.3	0.19	37
NOBLE AFFILIATES INC	549	415	230	1.32	0.49	63
NOVACARE INC	196	284	175	0.69	0.05	93
OFFICE DEPOT INC	370	555	350	0.67	0.02	97
ORYX ENERGY CO	1769	676	200	2.62	1.79	32
OWENS CORNING FIBRGL	1004	869	173	1.16	1.19	3
PETRIE STORES CORP	145	1365	125	0.11	0.01	87
POTOMAC ELECTRIC POW	3056	2228	184	1.37	1.19	13
RITE AID CORP	644	955	176	0.67	0.41	39
ROGERS COMMUNICATION	2092	441	412	4.74	1.97	58
ROHR INC	532	182	115	2.92	1.4	52
RPM INC OHIO	234	314	155	0.75	0.17	77
SEAGATE TECHNOLOGY	550	1328	538	0.41	0.01	98
SERVICE CORP INTERNAT	1087	885	201	1.23	0.82	34
SOLETRON CORP	144	261	127	0.55	0.04	92
STORAGE TECHNOLOGY	468	1017	146	0.46	0.28	40
SYSCO CORP	504	1137	93	0.44	0.33	25
TURNER BROADCASTING	2297	1	229	2297	9.07	100
UNISYS CORP	2056	2695	345	0.76	0.56	26
USX CORP CONSOLIDATE	5924	3864	830	1.53	1.09	29
WHIRLPOOL CORP	2000	1648	137	1.21	1.04	14
WITCO CORP	500	713	150	0.7	0.41	42
ZENITH ELECTRONICS CO	205	152	170	1.35	0.11	92

Thus, our approach would significantly change the debt-to-equity ratio for firms with substantial amounts of convertible debt. However, since a high percentage of CBs are converted within five years of their issue date, the initial classification as equity reflects the economic reality of a high probability of conversion.


Concluding Comments

Classifying CBs as a liability rather than an equity can substantially affect the debt to equity relationship of some firms. The subsequent re-classification from debt to equity upon conversion similarly distorts comparability between balance sheet dates. Since a high percentage of convertible debt securities are converted, current practices ignore economic reality. As Brigham (1966) and others have previously indicated, few convertible securities are ever redeemed since the call feature of convertible securities can be used to force conversion.

Corporations issue convertible securities for one main reason - the desire of the issuing corporation to raise equity capital. Generally more capital can be raised by selling convertible securities than by selling a similar number of shares of common stock. This is because the buyer pays a premium for the loss protection offered by a convertible. Studies of convertible bonds (see, for example, Brigham) indicate that the intent in issuing these securities is to obtain common stock financing at lower rates.

The method we suggest for accounting for convertible securities emphasizes the economic reality of the issuance (i.e., the sale of common stock under more favorable conditions) while current accounting does not. It is time for the FASB to reconsider this issue.

Suggestions For Future Research

Whether a call option written by a corporation on its own stock is considered to be an equity or a liability is significant in determining all key financial ratios concerning managerial performance and firm profitability and the balance of expenses, revenues, net profit, assets, liabilities, and equities. The importance of this issue was demonstrated by the trials of the FASB as it surrendered economic reality to political expediency in the case of employee stock options. Thus, 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. 

*** References ***

1. American Accounting Association's Financial Accounting Standards Committee, "Response to the FASB Discussion Memorandum: Distinguishing Between Liability and Equity Instruments and Accounting for Instruments with Characteristics of Both," *Accounting Horizons*, (September 1993), pp. 105-113.
2. _____, Accounting for Convertible Debt and Debt Issued with Stock Purchase Warrants, *Opinion No. 14*, AICPA, 1969.
3. Brigham, E.F., "An Analysis of Convertible Debentures: Theory and Some Empirical Evidence," *Journal of Finance*, (March 1966), pp. 35-54.
4. FASB, Recognition and Measurement in Financial Statements of Business Enterprises,
5. *SFAC No. 5*, FASB, 1984.
6. _____, Induced Conversions of Convertible Debt, *SFAS No. 84*, FASB, 1985a.
7. _____, Elements of Financial Statements, *SFAC No. 6*, FASB, 1985b.
8. _____, Distinguishing Between Liability and Equity Investments and Accounting for Instruments with Characteristics of Both, *Discussion Memorandum*, FASB, 1990.
9. Ford, N.A., "Should Cost be Assigned to Conversion Value," *The Accounting Review*, (October 1969), pp. 818-822.
10. Imdieke, L.F., and J.J. Weygandt, "Classification of Convertible Debt," *The Accounting Review*, (October 1969), pp. 798-805.
11. King, T.E., and A.K. Ortegren, and R.M. King, "A Reassessment of the Allocation of Convertible Debt Proceeds and the Implications for other Hybrid Financial Instruments," *Accounting Horizons*, (September 1990), pp. 10-19.
12. McCullers, L.D., "An Alternative to APB Opinion No. 14," *Journal of Accounting Research*, (Spring 1971), pp. 160-164.
13. Purdy, D.E., "Towards A Comprehensive Accounting for Convertible Debt," *Accounting and Business Research*, (Summer 1990), pp. 245-252.
14. Rhodes, Lola and H.J. Snaveley, "Convertible Bonds and Earnings Per Share," *The CPA Journal*, (December 1973), pp. 1116-1119.