

American Accounting Association’s Financial Accounting Standards Committee
Response to FASB Request to Comment on
Goodwill Impairment Testing using the Residual Income Valuation Model

Stephen G. Ryan, Chair; Robert H. Herz; Teresa E. Iannaconi;
Laureen A. Maines; Krishna Palepu; Katherine Schipper;
Catherine M. Schrand; Douglas J. Skinner; Linda Vincent

The Financial Accounting Standards Committee of the American Accounting Association (hereafter the “Committee”) is charged with responding to requests for input from standard setters on issues related to financial reporting. The Committee is pleased to respond to a request from Todd Johnson of the FASB staff to comment on a presentation on the accounting for goodwill by a group of representatives (hereafter the “Group”) from investment banks (Goldman Sachs and Morgan Stanley Dean Witter) and accounting firms (Arthur Andersen , Deloitte Touche Tohmatsu, and PricewaterhouseCoopers), led by Trevor Harris of Morgan Stanley Dean Witter and Columbia Business School. This presentation is entitled “Accounting for Business Combinations: A Workable Solution”, and it was presented to the FASB in May 2000 as part of the FASB’s redeliberations of its December 1999 exposure draft of the proposed standard *Business Combinations and Intangible Assets* (hereafter the “exposure draft”). The comments in this letter reflect the views of the individuals on the Committee and not those of the American Accounting Association.

The Group’s “Summary of Recommendations” slide states:

- “Capitalize goodwill
- No systematic amortization of goodwill
- In general, do not split the acquisition premium (excess of purchase price over tangible net asset value) into separate intangible assets
- Goodwill impairment test based on residual income valuation to prevent overstated asset value”.

The last three of these recommendations basically oppose proposals made by the FASB in its exposure draft. In the exposure draft, the FASB proposes testing goodwill for impairment following the rules for impairment of long-lived assets in SFAS No. 121, but does not propose eliminating amortization of goodwill. In fact, the FASB proposes shortening the maximum amortization period for goodwill from 40 to 20 years. The FASB also proposes splitting the acquisition premium into all reliably measurable identifiable assets and liabilities, including intangibles, and goodwill, so that goodwill reflects only intangibles that are either not reliably measurable or not identifiable.

In this letter, the Committee assesses and comments on the Group’s recommendations based on academic research as well as our experience teaching valuation methods. We focus on two related issues. The first is whether the accounting for goodwill proposed by the Group is

appropriate, that is, whether goodwill should be recognized as an asset at acquisition and, more controversially, whether goodwill should periodically tested for impairment rather than systematically amortized. The second issue is whether the residual income model (RIM) proposed by the Group for testing acquisition goodwill for impairment is both adequate and preferable to alternative valuation methods. These issues are related because if the answer to either of the questions in the first issue is no, then the second issue is moot. Moreover, the adequacy of the best available method for assessing impairment naturally bears on the relative desirability of impairment testing versus systematic amortization of goodwill. We briefly summarize our conclusions on these issues below.

Regarding the first issue, the Committee believes that the fundamental difficulty in impairment testing of acquisition goodwill is that acquisition goodwill cannot in general be measured separately from other components of total enterprise goodwill subsequent to the date of acquisition. In the absence of balance sheet recognition for all internally developed goodwill, we believe that impairment testing for acquisition goodwill would likely lead to non-comparable reporting. We believe this difficulty must be resolved before assessing the relative advantages of alternative valuation models for impairment testing.

Regarding the second issue, we disagree with the Group's conclusion that the residual income model (RIM) dominates other valuation methods, particularly the discounted cash flow (DCF) model, for such impairment testing. Specifically, the RIM and DCF model are theoretically equivalent and should yield similar valuations if they are both properly applied using a consistent set of pro forma financial statements at the individual firm level. There is no evidence of which we are aware that documents the superiority of the RIM for valuing individual firms. Accordingly, we believe that the decision about accounting for goodwill should be based on criteria other than the claimed superiority of the RIM over alternative valuation models for impairment testing.

This comment letter is limited to issues directly raised in the Group's presentation, not to the broader and difficult issues raised by the accounting for goodwill. Specifically, we do not attempt to comprehensively articulate and assess the relative merits of systematic amortization versus periodic tests for impairment of goodwill. Furthermore, we address only acquisition goodwill, not internally developed goodwill outside of the context of a business combination.

This comment letter includes eight sections. The first two sections discuss the Group's proposed accounting for goodwill. Section 3 provides a brief background and context for discussing valuation models. Section 4 discusses the comparative advantages and limitations of alternative valuation models. Section 5 summarizes related empirical research. Section 6 discusses the specifics of testing goodwill for impairment. Section 7 focuses on the advantages and limitations of the RIM for valuing acquisition goodwill. Section 8 summarizes our recommendations.

1. Recognition of acquisition goodwill at the time of the business combination

The Group recommends that acquisition goodwill be capitalized as an asset. Academic research provides consistent evidence that the market values acquisition goodwill as an asset, on average, although not always on a dollar for dollar basis. The Board's current position is to value acquisition goodwill as an asset, which the Committee supports.

Current accounting rules measure goodwill at acquisition as the difference between the price paid for the target and the fair value of the target's net assets, that is, as a residual. If goodwill is subsequently measured as the total value of the acquired equity using a valuation model (such as the RIM proposed by the Group) less the fair value of net assets, then it would continue to be measured as a residual. Thus, both at acquisition and subsequently, goodwill is not a separable asset and so measuring it as a residual is inevitable using either current accounting standards or the Group's approach. The residual nature of the calculation of goodwill complicates interpretation of its value. Specifically, any measurement error in the computation of the fair value of net assets affects the imputed value of the goodwill. Likewise, at the acquisition date, any overpayment or underpayment for the target is reflected in the calculation of goodwill.

There is currently no generally accepted method for measuring acquisition goodwill independently of the fair value of net assets. However, there have been attempts to decompose acquisition goodwill. For example, Henning, Lewis, and Shaw (1998) propose valuing the portion of acquisition goodwill attributable to synergies as the difference between the acquisition price and the target's pre-bid market value of equity. Since this calculation requires the pre-bid market value of equity to be observable, Henning, et al.'s approach can be applied only to acquisitions of stand-alone firms and not to subsidiaries of another firm or to private firms, eliminating a large percentage of acquisition transactions. Moreover, their approach assumes that investors correctly value the synergistic portion of goodwill at the time of the announcement of the business combination. Their approach is not inconsistent with that proposed by the Group, although the measurement method is different.¹

Although the Group proposes that acquisition goodwill not be split into separate intangible assets, the Group does not provide supporting evidence for their contention that allocating goodwill "to separately identifiable components rarely enhances relevance, and is unreliable and unverifiable." Therefore the Committee does not have sufficient information to comment on this recommendation.

In summary, acquisition goodwill is an asset and should be recognized at the time of the business combination. Regardless of the method used to determine the initial value of acquisition goodwill, it is a residual, the amount remaining after comparing the fair value of identifiable net assets to the purchase price.

¹ Henning, et al., (1998) rely on market prices whereas the Group's proposal uses management forecasts to estimate equity value.

2. Systematic amortization versus impairment testing of acquisition goodwill

In contrast to the consistent findings that investors value acquisition goodwill as an asset, research results are mixed and inconsistent on whether goodwill amortization is perceived as an expense by investors. These inconsistent results could be interpreted as providing indirect support for a periodic impairment test for goodwill rather than systematic amortization. However, Francis, Hanna, and Vincent (1996) find that the announcement of goodwill write-offs elicits no unusual investor reaction, suggesting that investors do not perceive the announcement of write-offs as economic events. The authors also find no evidence that investors anticipate these write-offs; such anticipation could explain the lack of investor reaction to the write-off announcements. Although proponents of impairment testing believe that appropriate models for estimating impairment exist, we are aware of no research results directly supporting impairment testing over systematic amortization, or vice-versa.

Post-acquisition date measurement of goodwill (or its components) is difficult for at least two reasons. First, target firms are often merged into the parent firm or with subsidiaries of the parent, making separate performance evaluation and accounting measurement infeasible. In these cases, it is essentially impossible to measure acquisition goodwill separately from enterprise goodwill after the date of the business combination. The Group's examples assume that the target remains a separate income-generating unit within the consolidated entity. This simplifying assumption is critical to the subsequent calculations in their proposal and the Group does not provide alternative procedures for goodwill impairment testing in the absence of such separation.

Second, even if the target retains its independent existence (as assumed in the Group's examples), changes in acquisition goodwill are indistinguishable from changes in post-acquisition internally-generated goodwill, precluding separate measurement and impairment testing of the two types of goodwill. If GAAP were completely fair value-based, then such separation would not be as important because both acquisition goodwill and internally generated goodwill would be fair valued. But under current GAAP, the proposed impairment test would potentially contribute to the current inconsistent treatment between acquired (costs are recognized as assets) and internally developed (costs are immediately expensed) intangible assets. Not only would purchased goodwill be capitalized, but subsequent tests for impairment could implicitly capitalize internally generated goodwill, whereas firms with no externally acquired goodwill would continue to expense expenditures for internally generated goodwill as incurred.

One of the Group's arguments against systematic goodwill amortization is that security analysts' earnings forecasts are more accurate without goodwill amortization than they are with amortization. This is a rather surprising claim because acquisition goodwill is generally amortized on a straight-line basis, making it quite predictable after the initial year; perhaps their results reflect changes in goodwill amortization in acquisition or divestiture years. Although predictive value is one of the characteristics of relevant accounting information and securities analysts represent one type of user of financial information, we do not believe that improved

accuracy of security analysts' earnings forecasts is an appropriate criterion on which to base accounting standards.²

Likewise, although equity analysts may play an important role in securities markets, we do not believe, in contrast with the Group's stated views, that their treatment of goodwill and goodwill amortization should be a key consideration in setting accounting policy. Analysts are not homogeneous in either skills or incentives, and their incentives and below market average investment performance have come under considerable scrutiny recently.

In summary, one of the impediments to testing acquisition goodwill for impairment is that after the acquisition date it is often impossible to measure acquisition goodwill separately from total enterprise goodwill. There are two reasons for this. First, the acquired firm is often merged with other subsidiaries or operations of the acquirer. Second, measures of post-acquisition goodwill will generally include changes in total enterprise goodwill, not just acquisition goodwill.

3. Background on valuation models

The dividend discount model (DDM) of Williams (1938) provides the basis for most valuation models. In the DDM model, the value of the firm's equity, V , is equal to the present value of all expected future dividends, DIV , discounted at the cost of equity capital, r , which is assumed constant for simplicity:

$$V_0 = \sum_{\tau=1}^{\infty} \frac{E_0(DIV_{\tau})}{(1+r)^{\tau}}. \quad (\text{DDM})$$

Time periods are subscripted and the current period is denoted 0. The key ingredients to apply the DDM are forecasts of DIV and an estimate of r . Academics and practitioners generally agree that the DDM provides the appropriate conceptual basis for all valuation models.

Despite its theoretical appeal, the DDM is difficult to apply, since firms may not pay significant dividends over long horizons. As a result, alternative forms of the DDM have been developed with the goal of improved practical implementation. These models are applied by both practitioners (e.g., investment bank fairness opinions) and academics in their research and teaching. The most common model has been the discounted free cash flow (DCF) model because of its direct link to the finance theories of Modigliani and Miller (1958). Free cash flows (FCF) are the cash flows available for distribution to a defined set of providers of capital after all operating and investing needs of the firm have been met. The DCF model has many variants. In the most commonly used DCF model, FCF is defined as the cash flow available for distribution to both debt and equityholders and the weighted-average cost of capital is used as the discount rate. This model provides the value of the net debt and equity of the firm; to value only the

² There is no consensus in the literature that the forecasts of security analysts are more accurate than the forecasts of mechanical statistical models. Additional evidence on the relative predictive ability of mechanical models with and without goodwill amortization might be appropriate.

equity of the firm, the value of the net debt must be separately measured and subtracted from the value of the net debt and equity.

Users of DCF models recognize the inherent difficulty of projecting FCF indefinitely into the future, and so they typically forecast FCF only through a specified terminal date, which implies that the terminal value of the net debt plus equity, i.e., $V_T + \text{net debt}_T$, must be estimated:

$$V_0 + \text{net debt}_0 = \sum_{\tau=1}^T \frac{E_0(\text{FCF}_\tau)}{(1 + r_{wa})^\tau} + \frac{E_0(V_T + \text{net debt}_T)}{(1 + r_{wa})^T}. \quad (\text{DCF})$$

It is common to assume that the firm has reached steady state by the terminal date, and to compute the terminal value as $\frac{E_0[\text{FCF}_T (1 + g)]}{(r - g)}$, i.e., as the value of a perpetuity of FCF_T

growing at rate g . The key ingredients to apply the DCF model are forecasts of FCF and an estimate of r_{wa} , the weighted-average cost of capital. Corporate finance texts discuss the issues involved in estimating r_{wa} .

The residual income model, RIM, can be derived from the DDM and the assumption of clean surplus accounting. Clean surplus accounting holds when all effects on the book value of equity during the period other than those associated with transactions with equity holders are fully recognized on the income statement in the same period.³ Residual income, RI, is defined as net income less a charge for equity capital equal to the cost of equity capital times the beginning of period book value of equity. In the RIM, net income and book value can be measured under any clean surplus accounting system, and so this model admits an infinite number of variations. On the other hand, reported book value and net income numbers under U.S. GAAP do not perfectly obey clean surplus, and so adjustments to these numbers are often necessary to apply the RIM.

In the RIM, the market value of equity is the sum of the firm's current book value of equity, BV, plus the discounted present value of the future RI. As with the DCF model, users of the RIM typically forecast RI only through a specified future terminal date, which implies that the terminal difference of the market and book value of equity, i.e., $V_T - \text{BV}_T$, must be estimated:

$$V_0 = \text{BV}_0 + \sum_{\tau=1}^T \frac{E_0(\text{RI}_\tau)}{(1 + r)^\tau} + \frac{E_0(V_T - \text{BV}_T)}{(1 + r)^T}. \quad (\text{RIM})$$

It is common to assume that the firm has reached steady state by the terminal date, and to compute the terminal value as $\frac{E_0[\text{RI}_T (1 + g)]}{(r - g)}$, i.e., as the value of a perpetuity of RI_T that

grows at rate g . The key ingredients to apply the RIM are forecasts of BV and net income (or equivalently RI) and an estimate of r . In order to forecast book values, net dividends (both

³ The RIM is also referred to as the Edwards-Bell-Ohlson (EBO) model and as the abnormal earnings (AE) model. We consistently refer to it as the RIM.

inflows of contributed capital and outflows of retained earnings as dividends) must also be forecasted; thus the application of the RIM requires all the information that is needed to apply the DDM. One of the perceived desirable features of RIM is that the terminal value is the difference between V_T and BV_T , which is typically smaller than V_T or $V_T + \text{net debt}_T$, the terminal values in the DDM and the DCF model, respectively.

Because of their theoretical equivalence, the DDM, DCF model, and RIM all provide the same valuations when the flows are projected consistently to infinity and consistent discount rates are applied. However, in practice, horizons over which cash flows can be reasonably projected are limited and discount rates can only be estimated with error. These practical considerations drive the expressed preferences by some academics and practitioners for one valuation model over another.

4. Differences between the RIM and DCF model

The DDM usually is treated as the core theoretical model but is subject to less empirical testing than the DCF model or RIM. Both the DCF and RIM have variants, as noted above, and each variant has its adherents who perceive practical advantages of one model over the other. While the DCF model has been more popular both in the MBA classroom and on Wall Street, the RIM is gaining acceptance in both venues.

The claimed conceptual advantages of the DCF model are based on its corporate finance roots with its emphasis on cash flows (Brealey and Myers, 2000). Practically, valuation ‘handbooks’ such as Copeland, Koller and Murrin (1995) maintain that cash flows dominate accounting earnings for valuation purposes and thus advocate the DCF model over accounting-based models.

The claimed practical advantages of the RIM are articulated by, among others, Penman and Sougiannis (1998). They conclude that one of the limitations of the DCF model is the subtraction of long term investment cost from operating cash flow to compute FCF. For growing firms, the result is often negative FCF for many years. RIM adherents maintain that accrual accounting eliminates the distorting effect of investment cost by placing it on the balance sheet as an asset. Depreciation and amortization then allocate this investment cost to expense over time, in principle matching it against the revenues that it generates. Penman and Sougiannis believe that accrual accounting facilitates valuation using the RIM compared to the DCF model, by allowing reasonable valuation from forecasted payoffs over a relatively short horizon.

The Group takes the view that the RIM is more appropriate than the DCF model and, furthermore, that the RIM can provide sufficiently accurate and justifiable estimates of the value of acquisition goodwill to serve as the basis for an accounting standard for goodwill amortization. The Group advocates that standard setters abandon systematic amortization of goodwill at least in part because of the attributes of the RIM. As discussed further in sections 7 and 8, the Committee does not agree with the Group’s conclusions on these points.

5. Academic research on valuation models

Several recent research studies compare the attributes of the dividend, cash flow and residual income models. These studies generally compare the relative performance of two or more models using statistical measures computed for large samples and compare the models with observed share prices in order to assess accuracy and bias. Results consistently indicate that the RIM is more highly associated with stock price, which is assumed to reflect the intrinsic value. However, there is no evidence that these large sample results would also hold for the firm level assessments necessary for implementing financial reporting standards.

In one of the first of the recent empirical studies of the RIM, Bernard (1995) estimates intrinsic value for a large sample of firms over the period 1978-1993 using Value Line earnings forecasts for four years, in part to demonstrate the validity of the model over short horizons. Bernard reports that the RIM explains, on average, 68% of the variation in share price. Bernard advocates the model because of its direct ties to earnings and book values, intuitive concepts for accountants, and for its reliance on predicting earnings and book values over relatively short time periods.

Penman and Sougiannis (1998) compare the three valuation models (DDM, DCF, and RI) using realizations of dividends, free cash flows and earnings as proxies for the forecasts. They report that the RIM yields lower valuation errors than either the DDM or DCF model. They form portfolios of firms to reduce the effects of the unpredictable component of ex post realizations and to average out the effects of any market inefficiency in the pricing of individual securities. Their benchmark for computing the valuation error is the current stock price.

Lee, Myers, and Swaminathan (1999) do not compare models but use the RIM to estimate the intrinsic value of the Dow over the period 1963-1996. They use security analysts' consensus earnings forecasts after 1979 when they became available and time series projections of earnings before that. Their estimates of intrinsic value are able to predict the future value of the Dow as well as the future stock returns to the Dow. Based on these results, Lee, et al. advocate use of the RIM over alternative valuation models.

Lee and Frankel (1998) use the RIM and security analysts' consensus forecasts to estimate the intrinsic value of stocks cross-sectionally (rather than over time as in Lee, Myers and Swaminathan). Their estimate of intrinsic value is highly correlated with contemporaneous stock prices and the ratio of computed intrinsic value to actual stock price is a good predictor of long-term cross-sectional returns. The estimated intrinsic values from the RIM explain more than 70% of the cross-sectional variation in stock prices over the period of their study, 1975-1993.

Francis, Olsson, and Oswald (2000a) compare the accuracy of all three models (DDM, DCF, and RIM) using Value Line forecasts five years into the future for firms during the period 1989-1993. Similar to Lee and Frankel (1998), they find that the RIM explains about 71% of the variance in stock prices. The RIM significantly outperforms both the dividend and the FCF valuation models in their tests. Their valuation benchmark is stock price, thus assuming market efficiency. They hypothesize that the greater accuracy of the RIM may be due to the sufficiency of book value of equity as a measure of intrinsic value. They find no support for claims that

aspects of accounting principles (e.g., expensing R&D, flexibility in accrual estimation) result in inferior estimates of market value.

Dechow, Hutton and Sloan (1999) test the RIM on a large sample of firms from 1976-1995 using analysts' earnings forecasts. They find that a simple valuation model that capitalizes analysts' short-term earnings forecasts as a perpetuity provides greater explanatory power for current stock prices than does the RIM. Dechow, et al. do not claim that the earnings capitalization approach is superior to other valuation models, just that their simple benchmark model outperforms the RIM in explaining current stock prices.

With the exception of Penman and Sougiannis (1998), studies of the RIM or comparisons of the three valuation models use security analysts' forecasts for the projected values of the flows. Francis, Olsson and Oswald (2000b) compare the results of the DDM, DCF model, and RIM when security analysts' earnings forecasts are used to results when mechanical earnings forecasts (that is forecasts generated by statistical models based on past earnings patterns) are used. They find that the RIM with mechanical forecasts dominates the DCF model and DDM, explaining about 70% of the variation in observed stock prices for the period 1976-1997. They also find analysts' forecasts are significantly less biased but no more accurate than mechanical forecasts and that analysts' forecasts do not explain more of the variation in prices than do mechanical forecasts.

The above studies are based on large samples of firms and provide an average result across firms and/or through time. The proposed testing for goodwill impairment using the RIM would be accomplished at the individual firm level. The only research of which we are aware that examines the accuracy of any of the three models at the firm level is Kaplan and Ruback (1995). They compare the accuracy of the DCF model to the method of multiples (market to EBITDA) in valuing 51 highly leveraged transactions during the period 1983-1989 and find that the DCF valuations based on management forecasts of cash flows are within 10% of the realized transaction value and superior to the multiples approach.

In summary, many empirical academic studies conclude from large sample average results that the RIM does a better job of explaining stock prices and stock returns than do alternative valuation models. These results are not directly applicable to the proposed test for goodwill impairment because such a test would be at the individual firm level. Furthermore, the academic studies do not claim the general superiority of any model but rather that the RIM does a better job explaining stock prices for firms with multi-year security analysts' forecasts of both earnings and dividends than other valuation models, which need not be representative of all firms. The studies quoted above use current stock price as the benchmark for assessing the explanatory power of the valuation models, implicitly assuming that stock prices reflect intrinsic value. If the Group believes that the ability to match current stock price is the key criterion for judging superiority of a valuation model for use in assessing goodwill impairment, then the most direct approach would be to base goodwill impairment testing on the firm's current stock price (when it exists) rather than on an estimate of the intrinsic value of equity provided by the RIM or any other valuation model.

6. Testing acquisition goodwill for impairment

Assume for the sake of illustration that testing goodwill for impairment is the preferred accounting treatment, subject only to measurement issues, and furthermore that the two main candidates for measurement of impairment are the DCF model and RIM. As discussed above, the two models share a common heritage in the DDM. They also employ a common procedure for estimating either residual income or free cash flows in that the key ingredient in a valuation analysis is a complete set of pro forma financial statements. Pro forma financial statements incorporate, among other things, the strategy of the firm, expected investment (both current and noncurrent), and anticipated changes in capital structure. This information may be provided by the firm's management; alternatively, security analysts may generate the pro formas. A complete set of pro forma financial statements includes sensitivity analysis (e.g., the impact of a change in gross margins due to unanticipated competitive pressures) and scenario analysis (e.g., the development of a new product or the acquisition of a competitor). Analysts use these detailed, firm level projections to estimate the intrinsic value of equity. The goal of the valuation process is not a point estimate but a range of reasonable prices with a larger range indicating greater uncertainty. The valuation process is disciplined and structured but ultimately imprecise, and remains more art than science. Furthermore, firm valuation is often prompted by concern that the current stock price does not reflect intrinsic value, in contrast to the cited academic studies that use stock price as the benchmark for their large samples.

Because the DCF model and RIM have the same theoretical basis and because the valuation estimates should be generated using the same set of pro forma financial statements, both models should provide reasonably consistent results at the firm level. This is, of course, an empirical issue. An advantage of the RIM for goodwill impairment testing is that it relates the book and market values of the firm's equity directly rather than indirectly through discounted cash flows. This direct link is consistent with the measurement of goodwill at the acquisition date as the excess of market price paid over the fair value (new book value) of net assets. However, subsequent tests for impairment of acquisition goodwill, under current accounting rules, will not have fair values of net assets for comparison with the total estimated equity value.

In summary, the Committee believes there are more similarities than differences between the DCF model and RIM, a point also made by Lundholm and O'Keefe (2000). The key question is whether the process of valuation, performed using the best tools available, provides sufficiently relevant and reliable estimates to serve as the basis for goodwill impairment tests and the abandonment of systematic amortization.

7. Appropriateness of RIM in valuing acquisition goodwill

Although the Group claims that periodic impairment testing is preferable to systematic amortization for goodwill, we are not sure how the Group's examples support this view. In the high ROE example on pages 12-13, the RIM produces different results (i.e., the present value of the residual income is 4064 without goodwill amortization and 2 with goodwill amortization) depending on whether or not goodwill is amortized. Does this support the Group's position that non-amortization of goodwill is the preferred alternative? One claimed practical advantage of the

RIM (Penman and Sougiannis, 1998; Lundholm, 1995; Francis, et al., 2000a) is that accounting choices as such as conservatism, expensing of R&D, amortization and depreciation, do not affect the computations of value, provided that clean surplus accounting is used. Likewise, the Group maintains (page 40) that the RIM is not sensitive to understated net asset value “as long as net asset value and earnings are internally consistent.” These statements imply that whether or not acquisition goodwill is amortized is irrelevant to the RIM. (If this is true, then we do not understand the point of the high ROE examples on pages 12-13.) Thus the Group claims that accounting does not matter to the RIM, whereas the purpose of the Group’s presentation is to encourage the FASB to change the accounting rules for goodwill from systematic amortization to periodic impairment testing using the RIM.

We do not consider the Group’s presentation of the claimed advantages of the RIM to be even-handed. The accounting for depreciation and amortization, for example, likewise has no effect on the DCF models because they are non-cash expenses. Both models can be affected negatively by improper forecasts of future flows. For example, if the forecast understates the company’s doubtful accounts neither net income nor discounted cash flow forecasts will reflect the future uncollectible accounts (Palepu, Healy, and Bernard, 2000) and both will overstate the intrinsic value of equity. The Group’s other criticisms of the DCF model apply equally to the RIM; that is, the appropriate specification of the numerator in the valuation equation, computation of the terminal value, and determination of the appropriate discount rate are challenges for any valuation model. Instead of predicting a free cash flow at the horizon date for computation of the terminal value perpetuity as the DCF model requires, the RIM requires predicting the firm’s net income and book value at the horizon date together with a projected ROE in perpetuity.⁴ The Committee believes that conceptually there may be an advantage to forecasting ROE rather than free cash flows because ROE better links strategy with valuation. However, a complete set of pro forma financial statements should serve as the basis for both free cash flow and residual income forecasts which must, therefore, be consistent and reflect results of both accounting and industrial organization research on ROE.

In summary, we believe that the common source of all calculations, a complete set of pro forma financial statements as described in section 6 above, mitigates most claimed differences between the DCF model and RIM. The Committee believes that the key considerations for testing goodwill for impairment rather than systematically amortizing it lie with issues other than the claimed advantages of the RIM over the DCF model.

8. Concluding comments

To summarize our conclusions, the Committee believes that the inability to separate acquisition goodwill from total enterprise goodwill in the post-acquisition period constitutes a serious impediment to the adoption of an impairment testing approach to goodwill. Furthermore, we believe that neither the RIM nor the DCF model is significantly superior to the other in application at the firm level. Thus, we do not support the Group’s claim that superiority of the RIM should drive the adoption of an impairment standard for goodwill. Our position is based on

⁴ Francis, et al. (2000a) find that the terminal value (TV) is not well-specified in any of the three valuation models (DDM, DCF, RI) that they test.

the inherent theoretical equivalence of the two models and their common source of data (pro forma financial statements) at the firm level. We believe that both academics and practitioners would agree that if the RIM and DCF model used internally consistent discount rates, growth rates, and steady states, then the values based on the DCF model or RIM would be similar for any entity. The only issue is whether one or the other model has characteristics that result in its being preferable to the other in practical situations for individual firms. Thus far, there is no evidence that we know of on this issue. The academic evidence to date is based on large samples and is inappropriate for conclusions about individual firm valuation. Furthermore, the cited researchers do not claim that inferences about model superiority can be drawn from their work. Research into valuation theory and model specification continues. For example, neither the DCF model nor RIM explicitly incorporates the valuation of real options, and the acquisition premiums in many business combinations could be driven by the value of real options.

We recommend that the FASB's decision on whether to test goodwill for impairment instead of systematically amortizing it, or in addition to systematic amortization, be based on criteria other than the claimed advantages of the RIM over the DCF model. Both models are based on estimates and both can provide a reasonable basis for estimating the value of *aggregate* goodwill, not acquisition goodwill, acknowledging the limitations imposed by the residual nature of goodwill, the inherent uncertainty of projecting pro forma financial statements, and the lack of precision in estimating discount rates and required rates of return.

We support the Board's position that acquisition goodwill is an asset and should be recorded as such at the date of the business combination. The valuation of acquisition goodwill as a residual, the difference between the acquisition price paid and the estimated fair value of net assets, has support from both historical cost and fair value accounting concepts.

If GAAP moves toward fair value accounting for intangibles, some of the goodwill valuation issues disappear. Under fair value reporting, measuring enterprise goodwill, including internally generated goodwill, at fair value would be consistent with the accounting for other assets. The Committee believes that the proposal to value enterprise goodwill using the RIM is a substitute for fair value accounting and, as such, could set a precedent.

References

- Bernard, Victor, 1995. "The Feltham-Ohlson Framework: Implications for Empiricists," *Contemporary Accounting Research* 11(Spring), 733-747.
- Brealey, Richard, and Stewart C. Myers, 2000. Principles of Corporate Finance, 6th Edition, The McGraw-Hill Companies.
- Copeland, T., T. Koller, and J. Murrin, 1995. Valuation: Measuring and Managing the Value of Companies, 2nd Edition. New York: John Wiley and Sons.
- Dechow, Patricia M., Amy P. Hutton, and Richard G. Sloan, 1999. "An Empirical Assessment of the Residual Income Valuation Model," *Journal of Accounting and Economics* 26, 1-34.
- Francis, Jennifer, J. Hanna, and Linda Vincent, 1996. "Causes and Effects of Discretionary Asset Write-offs," *Journal of Accounting Research* 34, 117-134.
- Francis, Jennifer, Per Olsson, and Dennis Oswald, 2000a. "Comparing the Accuracy and Explainability of Dividend, Free Cash Flow, and Abnormal Earnings Equity Value Estimates," *Journal of Accounting Research* 38, 45-70.
- Francis, Jennifer, Per Olsson, and Dennis Oswald, 2000b. "Using Mechanical Earnings and Residual Income Forecasts in Equity Valuation," Duke University Working Paper.
- Harris, T. and representatives from Arthur Andersen, Deloitte Touche Tohmatsu, Goldman Sachs, Morgan Stanley Dean Witter, and Pricewaterhouse Coopers, "Accounting for Business Combinations: A Workable Solution", presentation to the FASB on May 31, 2000.
- Henning, Steven, Barry Lewis, and Wayne Shaw, 1998. "Valuation of Components of Purchased Goodwill Using Market Measures," Working Paper, July.
- Kaplan, Steven, and Richard Ruback, 1995. "The Valuation of Cash Flows Forecasts: An Empirical Analysis," *Journal of Finance* (September), 1059-93.
- Lee, Charles M.C., and Richard Frankel, 1998. "Accounting Valuation, Market Expectation, and Cross-Sectional Stock Returns," *Journal of Accounting and Economics* 25, 283-319.
- Lee, Charles M.C., James Myers, and Bhaskaran Swaminathan, 1999. "What is the Intrinsic Value of the Dow?" *Journal of Finance* 54 (October), 1693 – 1742.
- Lundholm, Russell, 1995. "A Tutorial on the Ohlson and Feltham/Ohlson Models: Answer to Some Frequently Asked Questions," *Contemporary Accounting Research* 11 (Spring), 749-761.
- Lundholm, Russell, and Terry O'Keefe, 2000. "Reconciling Value Estimates from the Discounted Cash Flow Value Model and the Residual Income Model," Working Paper (April).

Modigliani, Franco, and Merton Miller, 1958. "The Cost of Capital, Corporation Finance, and the Theory of Investment," *American Economic Review* 48, 261-297.

Palepu, Krishna, Paul Healy, and Victor Bernard, 2000. Business Analysis and Valuation Using Financial Statements. Cincinnati, Ohio: South-Western College Publishing.

Penman, Stephen H., and Theodore Sougiannis, 1998. "A Comparison of Dividend, Cash Flows, and Earnings Approaches to Equity Valuation," *Contemporary Accounting Research* 15 (Fall), 343-383.

Williams, J.B., 1938. The Theory of Investment Value. Cambridge, Massachusetts: Harvard University Press.