Economic Entity Theory: Non-Controlling Interests and Goodwill Valuation

Mei-Lung Chen
Northeastern Illinois University

Ring D. Chen
Northeastern Illinois University

Abstract

FASB recently adopted the economic entity theory for the consolidation of goodwill and non-controlling interests. The proposed economic entity theory recognized the fair value of the acquired company as a whole, not just the parent portion. This paper shows that companies allocate less amount to goodwill in the consolidation process can have results close to the abolished pooling-of-interests method and get better performance indicators. The empirical test was conducted for three years to compare the performance of companies without goodwill and companies with large goodwill. Results of the test show that companies with large goodwill are not necessarily getting better earnings as indicated by the goodwill definition. If goodwill does not suggest excess earnings in the company, then the immediately expense approach tends to be more consistent with the accounting policy for Research and Development (R&D) cost. Such consistency not only provides better quality of accounting information but also reduces earnings management opportunities.

Keywords: non-controlling interests, economic entity theory, parent company theory.

Introduction

The newly issued Financial Accounting Standard Board (FASB) standards 141R and 160 made the most significant changes in accounting for business combinations and consolidated financial statements in decades. The principal requirements of the new standards for non-controlling interests and goodwill valuation are to (1) classify non-controlling interests as equity in the balance sheet with related effects in the income statement, and (2) to recognize the fair value of acquired company to its entirety and allocate a portion of the fair value including goodwill to the non-controlling interests at the time of acquisition [5, 6].

Non-controlling interests arise when a parent company holds less than one-hundred percent but more than fifty percent ownership of a subsidiary. In the new standards, the Board adopts the economic entity theory to measure non-controlling interests which has not been received much support in accounting practice. A much more widely accepted parent company theory is based on the parent company's interests because users of financial statements such as analysts and lending institutions generally are more interested in financial information from the parent company's view, thereby not considering transactions with non-controlling shareholders as transactions among owners [1, 7]. There would have to be significant reeducation of investors and creditors in order for them to understand the change from parent company theory to economic entity theory and its related effects in the income statement. In essence, the economic entity approach focuses on the measurements of transactions and events that do not involve the parent company; hence the valuation and the corresponding market effects should be analyzed from different perspectives.

The presence of earnings management makes it even more difficult for analysts to determine a company's recurring earnings - those likely to continue in the future. The proposed economic entity theory recognized the fair value of the acquired company as a whole, even for partial acquisitions or acquisitions that are achieved by steps. For a less than 100 percent acquisition, the implied value for the entire company is imputed based on the purchase price and the acquisition percentage. If a business combination has been stock transaction, the fair value of the stock can be inflated hence generates unrealistic implied value and results in large amount of goodwill. Subsequent allocation of goodwill impairment charges based on accounting estimates could also be arbitrarily overstated or understated. Analysts accordingly face the problem of potential earnings management. Since distortions can be manipulated not only in the current period's income statement but also those of subsequent periods, the interpretation of financial information becomes a challenge for the users of financial statements.

In this paper, we address the issues surrounding the Board's new standards with ratio implication and empirical test. We demonstrate the earnings management and related market valuation results. The following section of the paper provides a review of the literature for goodwill and non-controlling interests valuations. Section 3 develops research concept. The potential impact to the financial statements is analyzed with a real-world problem that many practitioners are likely to encounter while implementing the new approach. Section 4 provides the empirical test results. Section 5 presents summary and conclusions.

Literature Review

Many studies concern about the reliability of the methods for company's fair value estimation. Holthausen and Watts (2001) argue that many fair-value estimates cannot be verified hence make accounting unreliable and create opportunities for manipulation. Research studies argue that it can be difficult to estimate the fair value of patents, trademarks, and brands and separate those amounts from goodwill [11]. In addition, companies are permitted to use their own assumption; a slight change in the assumptions used in the valuation model can significantly affect estimated fair value.

Watts (2003) identifies the unreliable nature of fair-value goodwill accounting in Statement of Financial Accounting Standards (SFAS) No. 142 and indicates these fair-value estimates can even lead to fraud. In many instances, it may not be possible to distinguish the acquired goodwill from the internally developed goodwill. Managers can arbitrarily assign assets and liabilities among reporting units in efforts to maintain particular accounting

treatment. In large companies, managers can use transfer-pricing and corporate reorganizations to create goodwill in different reporting units. In addition, managers can use overhead allocation or major outsourcing agreements to reallocate assets and liabilities to acquired companies and manipulate goodwill.

Ramanna (2006) examines whether the firm's motivation potential determines its position to support or to oppose the goodwill impairment proposal in SFAS No.142. The results suggest that opponents of abolishing pooling-of-interests method (pro-pooler) tend to support goodwill impairment because the paradigm of the fair value estimates facilitates manipulation opportunity.

Research studies suggest that managers can manage earnings and control the timing of goodwill impairment charges [13, 14]. Such manipulations will not be perceived as important by non-controlling shareholders because market values in general are not connected to the non-controlling interests. McCarthy and Schneider (2004) examine the association between non-controlling interests and the market value of the firm and find no significant relationship between non-controlling interests and market value when all firms reporting non-controlling interests are included in the sample. When only firms that reported non-controlling interests in excess of five percent of total assets are included in the test, the result is negative and significant only for two of the five years examined. They suggest that the market sometimes perceives non-controlling interests as an interest in the total assets of the firm when the small size non-controlling interests are excluded from the sample.

Prior GAAP and New Standards

Economic entity theory adopted by the FASB Statement No. 141R and 160 measures the acquired company's fair value for all of its shareholders by the price paid for the controlling interests portion. The magnitude of such implied value could significantly inflate the book value and generate higher goodwill. The following two tables simulate results of a business combination where A Company paid $3,600 million for 60% of B Company and allocated the excess of cost over book value to fixed assets and goodwill accounts. Table 1 compares the company's consolidated report on the date of acquisition under the prior GAAP requirement and the new standards.

Table 1 Individual Company Balance Sheet Immediately Before And Consolidated Balance Sheet Immediately After The Business Combination Under The Prior GAAP Requirements And The New Standards (in million dollars)

	A Co. before combination Jan 1, 2009 Balance Sheet	B Co. before combination Jan 1, 2009 B/S	Immediately after A Co. paid $3,600 to acquire 60% of B Co. B/S-prior GAAP	**Immediately after A Co. paid $3,600 to acquire 60% of B Co. B/S- new standards**
Cash	5,000	500	1,900 (1)	**1,900**
Fixed Assets (10yrs life)	5,000	2,500(fair value 4,000)	8,400 (2)	**9,000 (5)**
Goodwill	0	0	1,500 (3)	**2,500 (6)**
Total	10,000	3,000	11,800	**13,400**
Liabilities	4,000	1,000	5,000	**5,000**
Common Stock	4,000	500	4,000	**4,000**
Retained Earnings	2,000	1,500	2,000	**2,000**
Non-controlling Interests			800 (4)	**2,400 (7)**
Total	10,000	3,000	11,800	**13,400**

(1) 1,900=A Co. 5,000-A Co. acquisition payment 3,600+B Co. 500

(2) 8,400=A Co. 5,000+B Co. 2,500+ (fair value 4,000-book value 2,500)*60%

(3) 1,500=purchase price 3,600-(B Co. book value 2,000+B Co. increase in fixed assets 1,500)*60%

(4) 800=B Co. book value 2,000*40%

(5) 9,000=A Co. 5,000+B Co. fixed assets under fair value 4,000

(6) 2,500=purchase price 3,600/60%-(B Co. book value 2,000+B Co. increase in fixed assets 1,500)

(7) 2,400=purchase price 3,600/60%*40%

The fixed assets, goodwill and non-controlling Interests under the new standards are higher because the entity theory concept adopted by the new standards recognizes the fair value of the entire entity not just the portion acquired by parent. Higher assets will result in higher future expenses. Virtually all firms link their operating performance to financial performance. If managers' incentive schemes are tied to the earnings of the company, they will certainly be motivated to manipulate their financial performance.

In the subsequent periods, the acquired company's fair value is estimated by the discounted present value of future earnings. If the fair value gets lower than the book value, SFAS 142 requires the company to assess impairment charges. To avoid future impairment loss, managers can allocate less value to goodwill or take a big bath in early years to eliminate goodwill.

Table 2 shows the consolidated balance sheet two years after the date of acquisition for companies taking big bath and without big bath both under the prior GAAP and the new standards. Companies taking the big bath significantly reduce the total assets hence the denominator of the return on assets ratio. By using less resource to achieve higher earnings, these companies may be perceived by the market as better performers. Higher earnings can be reported in subsequent years because there is no impairment charge after the big bath. In essence, such financial reports will be closer to the result generated from the abolished pooling-of-interests method.

Table 2 Consolidated Balance Sheet Two Years After The Business Combination With And Without Big Bath In The First Year Under Prior GAAP Requirements And The New Standards (in million dollars)

	Two year after taking big bath 12/31/2010 B/S Prior GAAP	**Two years after taking big bath 12/31/2010 B/S New standards**	Two years after without big bath 12/31/2010 B/S Prior GAAP	**Two years after without big bath 12/31/2010 B/S New standards**
Cash	5,500	**5,500**	5,500	**5,500**
Fixed Assets (10yrs life)	6,720(1)	**7,200**(3)	6,720	**7,200**
Goodwill	0	**0**	1,500	**2,500**
Total	12,220	**12,700**	13,720	**15,200**
Liabilities	2,500	**2,500**	2,500	**2,500**
Common Stock	4,000	**4,000**	4,000	**4,000**
Retained Earnings	4,720	**4,048**(4)	6,220(6)	**5,548**(7)
Non-cont. Interests	1,000(2)	**2,152**(5)	1,000	**3,152**(8)
Total	12,220	**12,700**	13,720	**15,200**

(1) 6,720=1/1/09 fixed assets of A Co.5,000*8 year remaining life/10 year total life + B. Co. 2,500*8/10+(B Co. fair value 4000- book value 2,500)*60%*8/10

(2) 1,000=12/31/10 B Co. book value 2,500*40%

(3) 7,200=1/1/09 A Co. 5,000*8/10+B. Co. fixed assets fair value 4,000*8/10

(4) 4,048=Retained earnings under prior GAAP 4,720-(additional depreciation from the difference in fixed assets 9,000/10years*2years-8,400/10years*2years)*60% - (additional impairment loss from the difference in goodwill 2,500-1,500)*60%

(5) 2,152=1/1/2009 non-controlling interests 2,400+ (B Co. book value increase 2,500-2,000 on 1/1/2009)*40% - (additional depreciation and impairment loss in (4) above)*40%

(6) 6,220= Retained Earnings with big bath 4,720+prior year impairment loss with big bath 1,500

(7) 5,548=Retained Earnings with big bath 4,048+prior year impairment loss with big bath 2,500 *60%

(8) 3,152= non-controlling interests with big bath 2,152+prior year impairment loss with big bath 2,500*40%

Under the new standards, the return on asset ratio divides the current year asset by 12,700 millions with the big bath and it's divided by 15,200 millions without the big bath. The return on assets will be much higher for company taking the big bath given the 2,500 million dollar difference in the denominator. The new standard motivates such manipulation because the total asset for companies taking big bath in table 2 under the new standard is only increased a little compared to the amount under the prior GAAP (12,700-12,220=480 millions) but the difference between the two groups, new standard and the prior GAAP, without big bath is three times higher (15,200-13,720=1,480 millions). Such a boost of

assets will encourage more companies to manipulate goodwill due to the highly significant impact to the denominator of performance ratios. Managers can manipulate values by controlling goodwill valuation estimates. Since the write-off is not reversible under the FASB rules, temporary fluctuation of interest rates would create a permanent impairment for the present value calculations and justify future measurement. Managers may significantly reduce the earnings in the year of the write-off but they will be better off with lower future depreciation, amortization or impairment charges.

In summary, the write-down of goodwill provides more significant differences between companies with big bath and without big bath under the new requirements. Taking a big bath in earlier years will make it appears that managers are using lower economic resources to generate higher future earnings.

Empirical test

Goodwill is defined as better earnings power of the company. Firms with large goodwill should have higher returns compared to those without goodwill under the implication of goodwill. We analyze the financial performance between companies with goodwill over $1 million and those without goodwill for three consecutive years in order to examine whether goodwill indicates better earnings performance. To be included in the sample, a company has to report non-controlling interests in the consolidated financial statements. We obtained the data from the Compustat data base from 2002 to 2004. We use 2002 as the starting period because goodwill impairment test becomes effective for financial statements issued after December 15, 2002. Our data contain 352 firms that have non-controlling interests but no goodwill for three consecutive years and 905 firms that have non-controlling interests and goodwill over 1million dollars. The sample size may vary a little for different variables and years due to missing data.

The performance improvements from 2002 to 2003 and 2003 to 2004 were compared with paired T-tests. The following table shows the analyses of the company's return on assets ratio.

Table 3 Paired T-test for Return On Assets Growth Between Companies with Large Goodwill and No Goodwill

	Goodwill over 1 million				No goodwill			
	Mean	Standard Deviation	t-value	p-value	mean	Standard deviation	t-value	p-value
2003	4.53	38.78	3.51	0.000***	123	2229	1.03	0.302
2004	0.38	36.16	0.31	0.753	10.10	88.45	2.14	0.033**

*** Significant at 1% level ** Significant at 5% level

The return on assets is computed as the income before extraordinary items divided by total assets. The improvement of 2003 is significant for companies with large goodwill but insignificant for firms without goodwill. However, the average increase of return on assets for companies without goodwill in 2003 is higher than those companies with large goodwill. Even though companies without goodwill are showing higher performance in 2003, the result is insignificant because of the big variations across firms as indicated by the large standard deviation in the no goodwill group. Such variations come from the result of big bath taking by companies in 2002 in the no goodwill group.

The improvement of 2004 is better for firms without goodwill. The average increase of return on assets for firms without goodwill is higher and more significant than the performance for firms with large goodwill.

. We performed another two-sample t-test for the return on assets to see whether the result will be different. Table 4 shows higher p-value but similar result.

Table 4 Two-sample T-test for Return On Assets Growth Between Companies with Large Goodwill and No Goodwill

	Goodwill over 1 million			No goodwill		
	mean	t-value	p-value	mean	t-value	p-value
2003	4.54	3.15	0.002***	123	1.03	0.303
2004	0.38	0.24	0.807	10.10	1.76	0.079*

*** Significant at 1% level *significant at 10% level

Both tests for return on assets indicate companies with large goodwill do not get better earnings improvement relative to their assets scale used in operations. The average performance improvement of firms without goodwill is higher for both years and significant in 2004.

We also examine the market perception of company's performance in tables 5 and 6. The market value growth for 2003 is calculated by the increase of the three year compound average market growth rate from 2002 to 2003 and the growth of 2004 is computed by the difference between 2003 and 2004. Companies without goodwill appear to have better market value growth relative to those with large goodwill. The result is indicated in table 5.

Table 5 Paired T-test for Average Market Value Growth Rate Between Companies with Large Goodwill and No Goodwill

	Goodwill over 1 million				No goodwill			
	mean	Standard deviation	t-value	p-value	mean	Standard deviation	t-value	p-value
2003	-20.4	1110.6	-0.51	0.613	28.36	54.33	8.73	0.000***
2004	3.01	43.75	1.94	0.053*	8.92	70.66	2.15	0.032**

*** Significant at 1% level ** Significant at 5% level *significant at 10% level

The increase of average market value growth for companies without goodwill is significant for both 2003 and 2004 at 1% and 5% level. However, companies with large goodwill have smaller growth rate with insignificant decrease for 2003 and less significant increase for 2004. Companies without goodwill are perceived by the market to have better performance than companies with large goodwill. The result of a two-sample T-test in table 6 supports the above analyses.

Table 6 Two-sample T-test for Average Market Value Growth Rate Between Companies with Large Goodwill and No Goodwill

	Goodwill over 1 million			No goodwill		
	mean	t-value	p-value	mean	t-value	p-value
2003	-19.1	-0.48	0.634	30.92	6.13	0.000***
2004	3.79	1.59	0.112	12.16	2.10	0.036**

*** Significant at 1% level ** Significant at 5% level

The result of these tests suggests that companies with large goodwill do not get better market value growth in their stock returns. The mean of market value growth rate is consistently higher for firms without goodwill.

Summary

This paper shows the impact of new FASB standards 141R and 160 to the financial statements and the goodwill implication to performance measurement. Purchased goodwill is different in nature than a company's other assets. The result of our study suggests that companies with large purchased goodwill do not appear to be better than companies without goodwill. Since the purchased goodwill does not represent better earnings performance, an immediate write-off of purchased goodwill will be consistent with the accounting policy for Research & Development (R&D) cost.

Generally Accepted Accounting Principles (GAAP) requires the internally developed intangibles such as R&D cost to be expensed but allow the internally developed intangibles to be assigned to goodwill in the subsequent impairment valuation. Such inconsistencies present a challenge to an analyst trying to compare company's performance. Capitalizing purchased goodwill with implied exchange price under the new standards may further inflate the goodwill value and make it more difficult to identify the revenues generated specifically by the goodwill. Since impairment loss is not reliable and it opens the window for earnings management, the immediate expense method at least creates a degree of consistency between internally developed and purchased goodwill and increases the comparability across firms.

FASB states that the new proposal would "Improve the relevance and transparency of information provided to investors, creditors, and other users of financial statements." However, utilizing fair value measurements for goodwill and non-controlling interests to improve the relevance of financial information may significantly decrease the reliability of accounting measurement. Issues such as the ability of preparers to reliably estimate fair value and the possibility of facilitating manipulations need to be addressed. Consolidated financial statements are primarily intended for the benefit of the external users who have no other access to the financial information. Any distractions from this objective dilute the relevance benefits of financial information.

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