Goodwill/Intangibles Accounting Rules, Earnings Management, and Competition

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Abstract

Intangible assets account for 60%-75% of the market capitalization value in most developed stock markets around the world. The US GAAP and IFRS Goodwill and Intangibles accounting regulations (ASC 805, Business Combinations; ASC 350, Goodwill and Intangible Assets; IFRS-3R, Business Combinations; and IAS 38, Accounting for Intangible Assets) are inefficient and create potentially harmful psychological biases. These regulations facilitate earnings management and money laundering, reduce competition within industries, and are likely to increase the incidence of fraud and misconduct. This article introduces a new goodwill/intangibles disclosure/accounting model that can reduce the incidence of fraud, information asymmetry, moral hazard, adverse selection, and inaccuracy. The article also introduces new economic psychological theories that can explain fraud, misconduct, and non-compliance arising from the implementation of the Goodwill/Intangibles Accounting Rules.

Keywords: fraud, mergers and acquisitions, games economic psychology, regulation, goodwill and intangibles.

A Existing Literature

Under the past and present US GAAP and IASB accounting rules, it is possible to manipulate the accounting treatment of mergers, acquisitions, intangible assets, and 'investments' in order to falsify reported earnings, assets, goodwill, intangibles, and equity. The present US and international (IASB) accounting systems do not reconcile the differences between M&A premia/discounts (and thus goodwill and negative goodwill) and the market realities. Thus, accounting/disclosure for these items should be changed to reduce flexibility in applying the rules and to

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promote consistency and to reflect the economic realities of transactions.[1] There remains significant contention about goodwill impairment and required testing. Schultze,[2] Sevin & Schroeder,[3] and Henning & Shaw[4] found significant evidence that there is substantial information content in identification and reporting of goodwill impairments and in the selection of goodwill amortization periods. Petty & Guthrie,[5] Dunse, Hutchinson & Goodacre,[6] Sevin & Schroeder,[7] Henning & Shaw,[8] Schultze,[9] Shoaf & Zaldiva,[10] Mosca & Viscolani,[11] Davis,[12] and Churyk[13] found evidence that SFAS 142 (*i.e.* ASCs 805 & 350) is not consistent with market valuations.[14] Davis and Shoaf & Zaldiva found that SFAS 142 and the goodwill impairment calculations are not efficient or accurate.[15]

1 *See* M. Nwogugu, 'Corporate Governance, Legal Reasoning and Credit Risk: The Case of Encompass Services Inc.', *Managerial Auditing Journal*, Vol. 19, No. 9, 2003, also reprinted in *ICFAI Journal Of Financial Economics* (2004). The series of transactions done by Encompass Services illustrates various reasons for changing the disclosure rules for goodwill and intangibles; M. Nwogugu, 'Corporate Governance, Risk and Corporations Law: The Case of Jack-In-The-Box Inc.', *Managerial Auditing Journal*, Vol. 19, No. 1, 2004, pp. 29-67. Jack-In-The-Box Inc.'s financial statements and annual reports illustrate some of the problems encountered in proper classification of Goodwill and Intangibles in companies that incur marketing, product development and "location" costs. *See* also P. Leung & B.J. Cooper, 'The Mad Hatte's Corporate Tea Party', *Managerial Auditing Journal*, Vol. 18, No. 6/7, 2003, pp. 505-516.

2 W. Schultze, 'The Information Content of Goodwill-Impairments under FAS 142: Implications for External Analysis and Internal Control', *Schmalenbach Business Review*, Vol. 57, No. 3, 2005, pp. 276-296.

3 S. Sevin & R. Schroeder, 'Earnings Management: Evidence from SFAS #142 Accounting', *Managerial Auditing Journal*, Vol. 20, No. 1, 2005, pp. 47-55.

4 S. Henning & W. Shaw, 'Is the Selection of the Amortization Period for Goodwill a Strategic Choice?', *Review of Quantitative Finance & Accounting*, Vol. 20, No. 4, 2003, pp. 315-325.

5 R. Petty & J. Guthrie, 'Intellectual Capital Literature Review: Measurement, Reporting and Management', *Journal of Intellectual Capital*, Vol. 1, No. 2, 2000, pp. 155-176.

6 N.A. Dunse, N. Hutchison & A. Goodacre, 'Trade-Related Valuations and the Treatment of Goodwill', *Journal of Property Investment & Finance*, Vol. 22, No. 3, 2004, pp. 236-258.

7 Sevin & Schroeder 2005.

8 Henning & Shaw 2003.

9 Schultze 2005.

10 V. Shoaf & I. Zaldiva, 'Goodwill Impairment', *Review of Business*, Vol. 26, No. 2, 2005, pp. 31-36.

11 S. Mosca & B. Viscolani, 'Optimal Goodwill Path to Introduce a New Product', *Journal of Optimization Theory and Applications*, Vol. 123, No. 1, 2004, pp. 149-162.

12 M. Davis, 'Goodwill Impairment: Improvement or Boondoogle?', *Journal of American Academy of Business*, Vol. 6, No. 2, 2005, pp. 230-237.

13 N. Churyk, 'Reporting Goodwill: Are the New Accounting Standards Consistent with Market Valuations?', *Journal of Business Research*, Vol. 58, No. 10, 2005, pp. 1353-1363.

14 *See* also S. Henning, W. Shaw & T. Stock, 'The Amount and Timing of Goodwill Write-Offs and Revaluations: Evidence from U.S. and U.K. Firms', *Review of Quantitative Finance & Accounting*, Vol. 23, No. 2, 2011, pp. 99-121; and FASB, 'Intangibles–Goodwill and Other (Topic 350): Accounting for Goodwill – A Consensus of the Private Company Council', 2014, available at <www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176163744355&acceptedDisclaimer=true>.

15 Davis 2005; Shoaf & Zaldiva 2005.

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Wyatt and Wong and Wong found significant economic and behavioural effects from accounting recognition/non-recognition of intangibles.[16] Frankel, Seethamraju & Zach found that the use of tangible net-worth covenants and loan agreements increased after the enactment of SFAS 141/142 (*i.e.* ASCs 805 & 350), that covenant slack was not significantly related to the use of tangible net-worth covenants relative to net-worth covenants, and that recent changes in US GAAP have reduced the contracting usefulness of goodwill.[17]

In 2014, FASB (US)[18] issued a new release about Goodwill/Intangible accounting for private companies.

Beatty & Weber analysed companies' decisions to adopt SFAS 142 and particularly, the trade-off between recording certain current goodwill impairment charges 'below the line' and uncertain future impairment charges included in income from continuing operations. They found that firms' concerns about equity markets affect their preference for above-the-line vs. below-the-line accounting treatment of goodwill.[19] Beatty & Weber also found that firms' debt contracting, bonus, turnover, and exchange delisting incentives affect their decisions to accelerate or delay expense recognition.[20] Henning, Shaw & Stock analysed a dataset that consisted of 1,576 US and 563 UK acquisitions and found that a) there was little evidence that US firms managed the amount of goodwill write-off or that UK firms managed the amount of revaluations (write-ups of intangible assets) and b) US firms delayed goodwill write-offs and UK firms timed revaluations strategically to avoid shareholder approval linked to certain financial ratios – these actions are forms of earnings management, and in many instances, the absolute amount of revaluations/write-offs is much less important than the timing, which is often linked to and affects debt covenants, solvency, executive compensation, and stock market returns.[21] Hence, Henning, Shaw & Stock confirmed earnings management by manipulation of the goodwill account.[22]

Several researchers have noted that the Goodwill/Intangibles Rules cause and/or facilitate both 'accrual-based earnings management' and 'real activities

16 *See* N. Wong & J. Wong, 'The Investment Opportunity Set and Acquired Goodwill', *Contemporary Accounting Research*, Vol. 18, No. 1, 2001, pp. 173-183; A. Wyatt, 'Accounting Recognition of Intangible Assets: Theory and Evidence on Economic Determinants', *The Accounting Review*, July 2005, Vol. 80, No. 3, pp. 967-1003.

17 R. Frankel, C. Seethamraju & T. Zach, 'GAAP Goodwill and Debt Contracting Efficiency: Evidence from Net Worth Covenants', *Review of Accounting Studies*, Vol. 13, No. 1, 2008, pp. 87-118.

18 FASB 2014.

19 A. Beatty & J. Weber, 'Accounting Discretion in Fair Value Estimates: An Examination of SFAS 142 Goodwill Impairments', *Journal of Accounting Research*, Vol. 41, 2006, pp. 257-288.

20 Beatty & Weber 2006.

21 Henning, Shaw & Stock 2011, pp. 99-121.

22 *Ibid.*

earnings management'.[23] Martins acknowledged that the Goodwill/Intangibles Accounting Rules can create substantial litigation and concluded that the corporate income tax code, and related legislation, could have adopted a less-complex solution to deal with the impairment losses in goodwill.[24] Nwogugu also found that the goodwill/accounting rules can cause substantial litigation.[25]

The Altshuler & Grubert analysis of formula apportionment compared the current US system cited in Grubert in support of its conclusions and noted that a) income shifting by companies has two main sources, which are the excess returns attributable to intangibles and debt, b) a major goal of income division systems is preserving neutrality between arm's length and related party transactions, c) the shifting of income from intangible assets like patents and trademarks to low-tax countries is a major source of profitability differences across high- and low-tax countries; and d) formula apportionment (FA) has no clear advantage over separate accounts (SA).[26]

Ayers, Lefanowicz & Robinson[27] and Ayers, Lefanowicz & Robinson[28] analysed the effects of shareholder level taxation on the structure of acquisitions.

23 C. Chen, M. Kohlbeck & T. Warfield, 'Timeliness of Impairment Recognition: Evidence from the Initial Adoption of SFAS 142', *Advances in Accounting*, Vol. 24, No. 1, 2008, pp. 72-81; E. Comiskey & C. Mulford, 'Negative Goodwill: Issues of Financial Reporting and Analysis under Current and Proposed Guidelines', *Journal of Applied Research in Accounting and Finance (JARAF)*, Vol. 3, No. 1, 2008, pp. 33-42, available at <http://smartech.gatech.edu/bitstream/1853/19231/1/fal_ga_tech_neg_goodwill_2007.pdf>; N. Finch, 'Intangible Assets and Creative Impairment – An Analysis of Current Disclosure Practices by Top Australian Firms', *Journal of Law and Financial Management*, Vol. 5, No. 2, 2006, pp. 16-23; E. Garcia-Meca & I. Martinez, 'The Use of Intellectual Capital Information in Investment Decisions: An Empirical Study Using Analyst Reports', *The International Journal of Accounting*, Vol. 42, No. 1, 2007, pp. 57-81; E. Hake, 'The Appearance of Impairment: Verbelen and Goodwill-Financed Mergers', *Journal of Economic Issues*, Vol. 38, No. 2, 2004, pp. 389-396; Henning, Shaw & Stock 2011; C. Jordan, S. Clark & C. Vann, 'Goodwill Impairment to Effect Earnings Management during SFAS 142's Year of Adoption and Later', *Journal of Business & Economic Research*, Vol. 5, No. 1, 2007; E. Ketz, 'Negative Goodwill: An M&A "Fix" That Doesn't Work', *Journal of Corporate Accounting & Finance*, Vol. 16, No. 2, 2004, pp. 47-50; M. Massoud & B. Viscolani, 'Accounting for Goodwill: Are We Better Off ?', *Review of Business*, Vol. 24, No. 2, 2002, pp. 26-33; A. Seetharaman, M. Balachandran & A. Saravanan, 'Accounting Treatment of Goodwill: Yesterday, Today and Tomorrow: Problems and Prospects in the International Perspective', *Journal of Intellectual Capital*, Vol. 5, No. 1, 2004, pp. 131-143; A. Seetharaman, J. Sreenivasan, R. Sudha & T. Yee, 'Managing Impairment of Goodwill', *Journal of Intellectual Capital*, Vol. 7, No. 3, 2006, pp. 338-353; Sevin & Schroeder 2005.

24 A. Martins, 'Impairment of Goodwill and Its Fiscal Treatment: More Trouble for the Portuguese Firms and Tax Courts?', *European Journal of Management*, Vol. 11, No. 1, 2011.

25 *See* M. Nwogugu, 'Real Options, Enforcement of Goodwill/Intangibles Rules and Associated Behavioral Issues', forthcoming in *Journal of Money Laundering & Control*, 2015.

26 R. Altshuler & H. Grubert, 'Formula Apportionment: Is It Better Than the Current System and Are There Better Alternatives ?', *National Tax Journal*, Vol. 63, No. 4, December 2010, pp. 1145-1184, available at: <ftp://snde.rutgers.edu/Rutgers/wp/2011-23.pdf>, citing H. Grubert, 'Intangible Income, Intercompany Transactions, Income Shifting, and the Choice of Location', *National Tax Journal*, Vol. 56, 2003, pp. 221-242.

27 B.C. Ayers, C.E. Lefanowicz & J.R. Robinson, 'The Effect of Shareholder-Level Capital Gains Taxes on Acquisition Structure', *The Accounting Review*, October 2004, pp. 859-887.

28 B.C. Ayers, C.E. Lefanowicz & J.R. Robinson, 'Shareholder Taxes in Acquisition Premiums: The Effect of Capital Gains Taxation', *Journal of Finance*, December 2003, pp. 2785-2803.

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However, many of the above-mentioned empirical studies suffer from the methodological problems discussed in Nwogugu.[29] The gaps and omissions in the existing goodwill literature are as follows:

1 An analysis of the behavioural effects of ASCs 805 & 350; IASB-38 And IFRS-3R.
2 A new accounting model for goodwill and Intangibles that reduces information asymmetry; the propensity for fraud; and income-shifting and Transfer-pricing problems.

According to Salinas, intangible assets constitute 60% to 75% of the market capitalization value of the major stock indices in the world, and thus, changes in the disclosed values of intangible assets can affect individual and group psychology.[30] Other authors have also noted Intangible assets constitute 60%-75% of the stock market capitalization values in most developed countries[31] and an increasing percentage of the stock market capitalization values in developing countries like

29 M. Nwogugu, 'Decision-Making, Risk, and Corporate Governance: A Critique of Bankruptcy/Recovery Prediction Models', *Applied Mathematics & Computation*, Vol. 185, No. 1, 2007, pp. 178-196.

30 G. Salinas, *The International Brand Valuation Manual*, 1st edn, UK, John Wiley & Sons Ltd. 2009.

31 *See* J. Ballow, R. Thomas & G. Roos (Accenture), *Future Value: The $7 Trillion Challenge*, 2004, available at: <www.accenture.com/SiteCollectionDocuments/PDF/manage.pdf>, noting that "... Nearly sixty percent of the aggregate value of the US stock market is based on investor expectations of future growth. And because this future value tends to be concentrated in industries and companies that are built on intangible assets, it is critical to find better ways to recognize, report and manage these assets..." *See* also C. Hulten, 'Intangible Capital and the "Market to Book Value" Puzzle', 2008, available at <www.conference-board.org/pdf_free/workingpapers/E-0029-08-WP.pdf>; The conference Board – Economics Program Working Paper Series, available at <http://raw.rutgers.edu/docs/intangibles/Papers/Intangible%20Capital%20and%20the%20Market%20to%20Book%20ValuePuzzle.pdf>; and K. Hassett & R. Shapiro, 'What Ideas Are Worth: The Value of Intellectual Capital and Intangible Assets in the American Economy', 2012, available at <www.sonecon.com/docs/studies/Value_of_Intellectual_Capital_in_American_Economy.pdf>, noting that "...The value of the intangible assets – which includes intellectual capital plus economic competencies – in the U.S. economy totals an estimated $14.5 trillion in 2011...The ten industries whose intellectual capital represents at least 50 percent of their market value – the ten most intellectual-capital intensive industries -- are media; telecommunications services; automobiles and components; household and personal products; food, beverages and tobacco; commercial and professional services; software and services; healthcare equipment and services; pharmaceuticals, biotech and life sciences; and consumer services..."; *See* also S. Bond & J.G. Cummins, 'The Stock Market and Investment in the New Economy: Some Tangible Facts and Intangible Fictions', available at: <www.brookings.edu/~/media/Projects/BPEA/Spring%202000/2000a_bpea_bond.PDF>; Ocean Tomo 300® Patent Index, available at <www.oceantomo.com/pdf/OceanTomo300_PatentIndex_Brochure_Web> (noting that as of 2010, Intangible Assets accounted for about eighty percent of the stock market values of S&P 500 companies).

South Korea, Mexico, China, Brazil and Thailand. Hand & Lev,[32] Damodaran,[33] Bell, Landsman, Miller & Yeh[34] and Nakamura[35] noted that Equity based incentives (EBIs) create Intangibles that are often un-recognized in financial statements due to accounting rules. This relationship between EBIs and Intangibles is well established – in its ruling 2009, The US Court of Appeals For the Ninth Circuit (USA) held that the costs of EBIs were the costs of creating Intangibles[36] within the context of international operations and transfer pricing. In 2010, the same Court reversed itself but the 2010 decision applies only to a limited context – transfer pricing and international operations and R&D collaboration between two related companies, and the ruling applies to a US Treasury Department rule that was enacted in 2003.

32 J. Hand, 'Increasing Returns-to-Scale of Intangibles', *in* J.R.M. Hand & B. Lev (Eds.), *Intangible Assets: Values, Measures, and Risks*, Oxford Management Readers 2003, pp. 305-306. *See* also L. Nakamura, 'Intangibles: What Put the New in the New Economy?', *Federal Reserve Bank of Philadephia Business Review*, July/August 1999, pp. 3-16; and J. DeLong, *The Stock Options Controversy and the New Economy*, Competitive Enterprise Institute, Washington DC 2002. This article states in part "...As was recently noted, 'Without institutions to bring together people with resources and people with ideas, new ventures can be launched only by the narrow circle of people who have both.' Options are just such an institution, and an important one, and the proposals to treat them as expenses would meddle destructively with a complex financial and entrepreneurial ecosystem..."

33 A. Damodaran, *Valuing Companies With Intangible Assets*, Working Paper, NYU Stern School of Business, New York, September 2009, available at <http://pages.stern.nyu.edu/~adamodar/pdfiles/papers/intangibles.pdf>.

34 T. Bell, W. Landsman, B. Miller & S. Yeh, 'The Valuation Implications of Employee Stock Option Accounting for Profitable Computer Software Firms', *The Accounting Review*, Vol. 77, No. 4, 2002, pp. 971-996.

35 Nakamura 1999, pp. 3-16.

36 *See* Ernst & Young, *IRS concedes stock option issue in Veritas following Ninth Circuit's opinion in Xilinx*, July 2010, available at: <www.ey.com/Publication/vwLUAssets/ITA_26July2010/$FILE/ITA_IRS_concedes_stock_option.pdf>; Sullivan & Cromwell, *Court Addresses Employee Stock Option Expenses for Transfer Pricing Purposes – Ninth Circuit Overturns Tax Court and Holds That Expenses Attributable to Employee Stock Options Are "Costs" of Developing Intangibles for Transfer Pricing Purposes*, 29 May 2009, available at <www.sullcrom.com/files/Publication/1123f4bf-af4b-4d0b-a948-2e0cbf147a73/Presentation/PublicationAttachment/83790441-f801-4766-bfcc-2eabc306273e/SC_Publication_Court_Addresses_Employee_Stock_Option_Expenses_for_Transfer_Pricing_Purposes.pdf>; *Xilinx, Inc.* vs. *Commissioner*, 2009 WL 1459501 (USA; 9th Circuit, 2009); *Xilinx, Inc.* vs. *Commissioner* (2010 U.S. App. LEXIS 5795 (March 22, 2010)); Sullivan & Cromwell, *Court Addresses (Again) Employee Stock Option Expenses for Transfer Pricing Purposes – Ninth Circuit Overturns Tax Court and Holds That Expenses Attributable to Employee Stock Options Are "Costs" of Developing Intangibles for Transfer Pricing Purposes – Ninth Circuit Reverses Itself and Holds That the Arm's-Length Standard Controls in Determining if Employee Stock Option Expenses Must Be Shared Among Related Parties Under Pre-2003 US Transfer Pricing Rules*, 24 March 2010, available at: <www.sullcrom.com/files/Publication/68c25802-e2d4-483c-8662-102f0af7bdbf/Presentation/PublicationAttachment/b88f2c64-3d86-44d5-998c-1484ea00283a/SC_Publication_Court_Addresses_Employee_Stock_Option_Expenses.pdf>; D. O'Driscoll, 'Allocation of Employee Stock Options to Cost-Sharing Agreement', *The Tax Adviser*, 1 November 2005; US Internal Revenues Service, 'Cost Sharing Stock Based Compensation', *UIL 482.11-13*, 2008, available at <www.irs.gov/businesses/article/0,,id=180309,00.html>.

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Nwogugu noted some problems inherent in the identification, disclosure and financing of Intangible Assets.[37]

B Summary Comparison of US Intangibles/Goodwill Accounting Standards (ASC 850 and ASC 350 – Formerly SFAS 141R & 142), and IFRS/IASB Standards (IASB-38 And IFRS-3R)

In June 2001, the Financial Accounting Standards Board (FASB, USA) introduced two accounting standards: SFAS 141, *Accounting for Business Combinations* (<http://72.3.243.42/pdf/fas141r.pdf>), and SFAS 142, *Accounting for Goodwill and Intangible Assets*. Under these two standards, the pooling-of-interests accounting method for business combinations has been eliminated. SFAS 141R (<http://72.3.243.42/pdf/fas141r.pdf>) became effective on 15 December 2008 and completely replaced SFAS 141. SFAS 141R/142 replaced APB 16 & 17. In 2008, FASB issued a guideline named FSP FAS 141(R)-1, Accounting for Assets Acquired and Liabilities Assumed in a Business Combination that Arise from Contingencies.[38] This guidance became effective for business combinations in the first annual reporting period beginning after 15 December 2008. The new guidance:

- Applies to contingent assets and liabilities (as defined in FAS 5, *Accounting for Contingencies)* acquired in business combinations;
- States that when the fair value of a contingent asset or liability can be determined as of the acquisition date, it must be reported on the financial statements;
- States that even when fair value cannot be determined, if it is probable that a contingent asset or liability existed as of the acquisition date *and* the value can be estimated using existing FAS 5 standards and literature, the estimate must be recorded in the financial statements;
- States that where either the existence of a contingent asset or liability is not probable at the acquisition date (or even if probable, the value cannot be estimated), no asset or liability needs to be recorded in the financial statements.

37 M. Nwogugu, 'Legal, Economic and Behavioral Issues in Accounting for Stock Options', *Managerial Auditing Journal*, Vol. 19, No. 9, 2004, pp. 1078-1118; M. Nwogugu, 'Structural Changes in the US Retailing Industry: Legal, Economic and Strategic Implications for the US Real Estate Sector', *International Journal of Law & Management*, Vol. 47, No. 1/2, 2005 (*i.e.* companies that incur store-location, marketing/advertising and product development costs); M. Nwogugu, 'Employee Stock Options, Production Functions and Game Theory', *Applied Mathematics & Computation*, Vol. 181, No. 1, 2006, pp. 552-562; M. Nwogugu, 'Some Game Theory and Financial Contracting Issues in Large Corporate Transactions', *Applied Mathematics & Computation*, Vol. 186, No. 2, 2007a, pp. 1018-1030; M. Nwogugu, 'Equity-Based Incentives: Wealth Transfers, Disruption Costs and New Models', *Corporate Control & Ownership*, Vol. 5, No. 1, 2007b, pp. 292-304.

38 *See* FASB Staff Position 141(R)-1, 'Accounting for Assets Acquired and Liabilities Assumed in a Business Combination That Arises from Contingencies', *FSP 141R-1*, 1 April 2009, available at <www.fasb.org/pdf/fsp_fas141r-1.pdf>. *See* also <www.gibsondunn.com/publications/Pages/FASBVotestoIssueNewGuidanceonKeyFinancialReportingTopics.aspx>; Morgan Lewis Bockius, *Loss Contingencies: Will Companies Enhance Disclosures in the Future*?, 2009, available at <www.morganlewis.com/pubs/BF_LossContingencies_WhitePaper_Sept2009.pdf>.

During 2009, SFAS 141R and SFAS 142 were renamed Accounting Standards Codification 805 (ASC-805) and Accounting Standards Codification 350 (ASC-350) respectively. Under ASC 805/350, companies must use purchase accounting and cannot amortize goodwill. Any recorded goodwill will be subject to periodic reviews for impairment. Under ASC 805/350, acquiring firms are required to record goodwill whenever the purchase price of an entity/asset exceeds the fair market value ('FMV') of the entity/asset. Instead of amortizing goodwill on a regular basis, companies can retain goodwill on their balance sheets but are required to perform annual impairment tests, and in any reporting period that the goodwill becomes impaired, it must be amortized. Under ASC 805/350, a business combination is defined broadly to include most types of corporate change of control, and thus, most merger and acquisition transactions will be recorded using ASC 805 purchase price allocation methods.

Under ASC 805/350, the required periodic asset valuation and measurement of goodwill impairment is done in a two-stage process. Testing for goodwill impairment will require firms to identify Reporting-Units, allocate purchase prices of past acquisitions with existing goodwill to the assets and liabilities of Reporting-Units, and identify and separate other intangible assets from goodwill. ASC 350 defines a reporting unit as the same level as an operating segment or one level below an operating segment. The Financial Accounting Standards Board ('FASB') considers a reporting unit as one level below an operating segment under the following conditions:

1 Management evaluates the performance of one or more components of an operating segment at a level below the operating segment.
2 (i) There is discrete financial information about the component and (ii) the component's economic characteristics are different from those of the other components of the operating segment.

I Objections to the Implementation of SFAS 141, 141R & 142

When the Financial Accounting Standards Board (FASB; USA) was about to enact SFAS 141 and SFAS 142 (now ASCs 805 & 350), many financial statement users objected and petitioned the FASB. Lewis, Lippitt & Mastracchio; and the Corporate Executive Board explained some of these objections which were as follows.[39]

Petitioners stated that the principle of not amortizing goodwill on a regular basis contrasts with the IASB standards which allow some forms of pooling. Petitioners were also concerned that some parties may begin to push for non-amortization of intangibles that have the same characteristics as goodwill, such as acquired brands, purchased credit card relationships, and excess reorganization values for bankrupt entities. SFAS 141R/142 (ASCs 805 & 350) treats Negative Goodwill as an extraordinary gain provision for non-apportioned Negative Goodwill.

39 E. Lewis, J. Lippitt & N. Mastracchio, 'User's Comments about SFAS 141 and 142 on Business Combinations and Goodwill', *The CPA Journal*, 2001; Corporate Executive Board (Working Council for CFOs), *Key Findings – Accounting for Goodwill*, 2002. Available at <www.m-cam.com/downloads/01012002.pdf>.

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Many Petitioners suggested that Negative Goodwill should be recorded as an Intangible liability and amortized to non-interest income over some reasonable period.

While SFAS 141R/142 (ASCs 805 & 350) requires the apportionment of goodwill at the level of divisions or Reporting-Units, some petitioners indicated that goodwill should be allocated at the level of SFAS 131 Reporting-Units.

Many petitioners expressed concern about the reliability of the methods for testing for impairment of goodwill, and some questioned whether goodwill is a wasting or non-wasting asset. Under the FASB rules, goodwill write-downs are not reversible, and thus, for example, a temporary fluctuation of interest rates could cause a permanent impairment of goodwill, where the present value method is used to calculate asset values and goodwill impairment. This type of goodwill impairment does not reflect economic reality. Secondly, it can be difficult to estimate the market values of patents, trademarks, and brands. Thirdly, the fair market value (FMV) of other identifiable intangible assets cannot be measured with sufficient reliability to isolate the value of the goodwill residual amount. SFAS 142 (ASC 350) requires that the fair market value of the reporting unit be assigned to all assets in order to determine the residual value of the unit's goodwill, but this may result in the manipulation of Reporting-Units in efforts to protect goodwill.

Some petitioners stated that any impairment of goodwill that is measured at the initial impairment review should be treated as a change in accounting principle under APB-20 (Accounting Changes), which will result in a different impairment standard from what is required under SFAS 121 (Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of). The FASB standards permitted APB 20 treatment.

Under SFAS 141R/142 (ASCs 805 & 350), Reporting-Units that receive goodwill allocations will be subject to periodic goodwill impairment reviews. This will provide strong incentives to management to arbitrarily allocate goodwill based upon a reporting unit's ability to support specific elements of the company's future operations. Furthermore, a finding of 'unimpaired valuation of goodwill' may result in the creation of artificial 'goodwill support divisions', created solely to receive and maintain acquired goodwill.

Under SFAS 141R/142 (ASCs 805 & 350), companies have substantial incentives to allocate acquired goodwill to Reporting-Units that have significant unrecorded goodwill, rather than Reporting-Units that are most likely to benefit from the acquired goodwill. Under SFAS 141R/142(ASCs 805 & 350), only identified assets are used in allocating the fair market value of a reporting unit to which goodwill has been allocated, and thus, any unidentified asset (such as advertising, research and development, gain contingencies, and others assets whose capitalization is prohibited) that contribute to the company's market value will be included as a portion of the value ascribed to goodwill. Hence, it can be very difficult to distinguish the separate value of acquired goodwill from this collection of unidentified assets (which contribute to overall financial performance) and impossible to separate the value of said unidentified assets from internally developed goodwill. Thus, under SFAS 141R/142 (ASCs 805 & 350), unrecognized goodwill can shield

acquired goodwill from accounting impairment. This is because unrecognized goodwill will or can increase the expected present value of future cash flows that will be generated by the company without increasing the market value of the company's recorded assets.

Petitioners stated that under SFAS 141R/142 (ASCs 805 & 350), companies can manipulate transfer pricing mechanisms and corporate reorganizations in order to create and/or enhance 'goodwill havens' within large and complex organizations. The Goodwill/Intangibles Rules facilitate and provide substantial incentive for 'real activities' earnings management and income shifting through transfer pricing that pertains to both intangibles and goodwill. Bartelsman & Beetsma,[40] OECD,[41] Silberzstein,[42] Dischinger & Riedel,[43] Wills,[44] McDonald[45] and Lipsey[46] addressed some of the basic issues that pertain to earnings management from transfer pricing of intangibles/goodwill costs. Lipsey stated that as more intangible assets are used in production, the location of production by multinational firms and the associated allocation of product costs become increasingly ambiguous, partly because within the firm, these intangible assets have no clear geographical location, but only a nominal location determined by the firm's tax or legal strategies.[47] These location ambiguities and the resulting tax distortions are substantial – Lipsey notes that it is estimated that for US firms' affiliates in a few tax havens alone, the exaggeration of value added in those locations amounted, in 2005, to about 4% of worldwide affiliate sales and the exaggeration of sales to about 10% of worldwide affiliate sales. Lipsey described some methods for estimating the location of production that can replace the present dependence on accounting measures distorted by tax-saving policies.[48]

SFAS 121 and SFAS 142 had different standards for testing goodwill impairment – SFAS 121 used undiscounted future cash flows as a gross measure of impairment, while SFAS 142 used present values of future cash flows as a measure of goodwill impairment, and thus, there are now different impairment standards for different types of assets. An SFAS 121 review was one of the remaining

40 E. Bartelsman & R. Beetsma, 'Why Pay More? Corporate Tax Avoidance through Transfer Pricing in OECD Countries', *Journal of Public Economics*, Vol. 87, Nos. 9-10, 2003, pp. 2225-2252.

41 OECD, 'Special Considerations for Intangible Property', and Chapter IX – 'Transfer Pricing Aspects of Business Restructurings', *OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations*, OECD Publishing 2010.

42 C. Silberzstein, 'Transfer Pricing Aspects of Intangibles: The OECD Project', *Transfer Pricing International Journal, BNA*, available at <www.oecd.org/dataoecd/26/40/48594010.pdf>.

43 M. Dischinger & N. Riedel, 'Corporate Taxes and the Location of Intangible Assets within Multinational Firms', *Journal of Public Economics*, Vol. 95, Nos. 7-8, 2011, pp. 691-707.

44 M. Wills, 'The Tax Treatment of Intangibles in the Context of Transfer Pricing', *Revenue Law Journal*, Vol. 9, No. 1, 1999, available at <http://epublications.bond.edu.au/rlj/vol9/iss1/2> or <http://epublications.bond.edu.au/cgi/viewcontent.cgi?article=1101&context=rlj>.

45 M. McDonald, 'Income Shifting from Transfer Pricing: Further Evidence from Tax Return Data', OTA Technical Working Paper #2, Office of Tax Analysis (OTA), US Department of the Treasury 2008, available at <www.transferpricing.com/pdf/Income%20Shifting.pdf>.

46 R. Lipsey, 'Measuring the Location of Production in a World of Intangible Productive Assets, FDI, and Intra-Firm Trade', *Review of Income and Wealth*, Vol. 56, No. 1, June 2010, pp. S99-S110.

47 Lipsey 2010.

48 *Ibid.*

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triggers for an intra-period goodwill impairment review. There can be goodwill write-downs caused exclusively by SFAS 121 reviews, although other assets might not be written down because of the nature of its impairment test; and this creates significant inconsistency. Hence, in order to maintain consistency, SFAS 142 should have superceded SFAS 121 or vice versa.

SFAS 142 did not address the deferred tax issue that arises from not amortizing tax-deductible goodwill. Some users/petitioners stated that if goodwill has an indefinite life, rather than just different amortization schedules for book and tax purposes, then 'permanent difference' treatment will be appropriate.

A 2005 survey conducted by the American Business Conference, Grant Thornton LLP, and the NASDAQ Stock Market, Inc., asked CFOs how they would handle the valuation provisions of SFAS 142. Fifty-seven percent of CFOs said that they would be likely or almost certain to use third parties for valuation, and 71% of the CFOs indicated that they will use third parties when testing for impairment.

Petitioners expressed concern that goodwill-related valuation and testing will impose additional compliance costs on companies and yield only minimal benefits. FASB permits shortcut calculations if the goodwill in a reporting unit substantially exceeded the impairment threshold in the previous year and circumstances pertaining to the collection of net assets in the current year have not changed significantly.

Many credit unions and mutual banks are not-for-profit entities but are subject to SFAS 141R/142. When these entities merge with similar entities, typically, no consideration is exchanged. Since there is no purchase price, and no acquiring entity in many of these combinations, one entity's net assets must be treated as negative goodwill recorded at the market value of the assets, which will contravene FASB's transparency objective.

Petitioners and practitioners raised the issue of SFAS 141's and 142's effect on compliance with the mandatory capital requirements for banks that were created pursuant to Title 12 of the US Code (USC). These institutions must perform periodic checks of their mandatory minimum capital while complying with FASB standards for reporting their financial position and performance. Goodwill is treated as a special item in the USC calculations, and indefinite capitalization of goodwill (under GAAP) may adversely distort the minimum capital requirements, and simultaneous compliance with the SFAS and the USC can cause suboptimal capital management strategies.

Some practitioners noted that SFAS 141/142 required that the market values of all of a reporting unit's identifiable assets be established in order to adjust the value of its goodwill residual; but US GAAP does not permit the restatement of these other tangible, identifiable assets to their market values, presumably because of the inherent subjectivity of such restatements. They also noted that the approach has questionable benefits to financial services industry users (of financial statements) and potential high cost to the reporting entities.

II IASB-38 and IFRS-3R

IASB-38 governs disclosure for intangible assets. IASB-38 applies to financial assets, mineral rights, intangibles from insurance contracts, and intangibles that arise from other IASB rules. IASB-38 does not apply to goodwill.

Under IASB-38, intangibles are defined as assets that are identifiable (separable; arises from contractual or legal rights), have future earning power (revenues or reduced costs), and are controlled by the company (power to obtain benefits). Under IASB-38, intangibles arise from only five sources or types of transactions which are a separate purchase, an exchange of assets, a government grant, a business combination, or is internally generated. Under IASB-38, intangibles are to be recognized only if the cost of the intangible can be measured reliably and the intangible has probable future economic benefits. If not recognized as an intangible, the cost of the asset is expensed.

Under IASB-38, some costs must be expensed, and these include: start-up costs, training costs, internally generated goodwill, research costs, development costs for which commercial feasibility has not been established, relocation costs, advertising and promotion costs, and internally generated brands, mastheads, and customer lists.

With regard to measurement of the intangible asset after the acquisition, the firm must choose between the revaluation model and cost model. Under the cost model, intangibles are carried at cost less amortization or impairment. Under the revaluation model, intangibles may be carried at revalued cost less impairment or amortization, if FMV can be determined from an active market. Under IASB-38, there are different treatments for assets that have finite lives or indefinite lives. For finite-life intangible assets, the asset must be amortized by straight line method or according to the pattern of actual use; the amortization period should be reviewed annually; and the intangible asset should be assessed for impairment under IAS 36. For indefinite-life intangible assets, there is no amortization.

Under IASB-38, internally generated intangibles are not recognized as assets; and the following must disclosed about recognized intangible assets: i) useful life, carrying value, and amortization period; ii) accumulated amortization and impairment losses; iii) basis for finite/infinite life; iv) restricted intangibles; v) revalued intangibles; vi) R&D costs that were expensed; vii) description of material intangibles; and viii) reconciliation of changes in beginning and ending balances of intangibles.

IFRS-3R (Business Combinations) was enacted by the IASB and covers business combinations and goodwill. Under IFRS-3R, all combinations must be accounted for using the purchase method; however, under IAS 22, the pooling method is allowed 'where acquirer cannot be identified'. Under IFRS-3R, purchase price allocation is by residual method – the purchase price is allocated to acquired assets and liabilities, and residual is goodwill or negative goodwill. Purchased intangibles are recognized separately if a) the intangible is controlled by an acquirer, b) the intangible has future earning power, c) the FMV of the intangible can be estimated easily, and d) the intangible is separately identifiable.

Under IFRS-3R, goodwill is recognized as asset and is measured at cost. IFRS-3R prohibits the amortization of goodwill that is acquired in a business

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combination. Under IFRS-3R, goodwill should be assessed annually for impairment under IAS 36; and negative goodwill should be expensed immediately (in the accounting period that the business combination occurred). The required disclosure under IFRS-3R includes information that is sufficient to assess business combinations during the reporting period and after the balance sheet date but before the combinations and information that is sufficient to asses carrying value of goodwill.[49]

Table 1 Differences between US GAAP and IFRS[50]

	US GAAP	**IFRS**
Consolidation model	Focus is on controlling financial interests. All entities are first evaluated as potential variable interest entities (VIEs). If a VIE, the applicable guidance in ASC 810 is followed (below). Entities controlled by voting rights are consolidated as subsidiaries, but potential voting rights are not included in this consideration. The concept of 'effective control' exists but is rarely employed in practice.	Focus is on the concept of the power to control, with control being the parent's ability to govern the financial and operating policies of an entity to obtain benefits. Control is presumed to exist if parent owns more than 50% of the votes, and potential voting rights must be considered. Notion of 'de facto control' must also be considered.
Special-purpose entities (SPEs)	The guidance in ASC 810 requires the primary beneficiary (determined based on the consideration of power and benefits) to consolidate the VIE.	Under SIC 12, SPEs (entities created to accomplish a narrow and well-defined objective) are consolidated when the substance of the relationship indicates that an entity controls the SPE.
Preparation of consolidated financial statements – general	Required, although certain industry-specific exceptions exist (for example, investment companies).	Generally required, but there is a limited exemption from preparing consolidated financial statements for a parent company that is itself a wholly owned subsidiary or is a partially owned subsidiary if certain conditions are met.
Preparation of consolidated financial statements – different reporting dates of parent and subsidiary(ies)	The effects of significant events occurring between the reporting dates when different dates are used are disclosed in the financial statements.	The effects of significant events occurring between the reporting dates when different dates are used are adjusted for in the financial statements.

49 On the differences between IFRS 3R and ASC 805, *see* Deloitte, *A Roadmap to Accounting for Business Combinations and Related Topics*, 2009, available at <www.iasplus.com/dttpubs/0912buscombroadmap.pdf>; Price Waterhouse, *A Global Guide to Accounting for Business Combinations and Noncontrolling Interests Application of the U.S. GAAP and IFRS Standards*, 2010, available at <www.pwc.com/en_US/us/issues/business-combinations/assets/accounting-business-combinations-nci.pdf>.

50 Source: Ernst & Young 2010. Available at: (<www.ey.com/Publication/vwLUAssets/IFRS_vs_US_GAAP_Basics_March_2010/$FILE/IFRS_vs_US_GAAP_Basics_March_2010.pdf>).

Table 1 (continued)

	US GAAP	IFRS
Changes in ownership interest in a subsidiary without loss of control	Transactions that result in decreases in a partner's ownership interest in a subsidiary in either of the following situations without a loss of control are accounted for as equity transactions in the consolidated entity (that is, no gain or loss is recognized): (1) a subsidiary that is a business or a nonprofit activity, except for either (a) a sale of in-substance real estate or (b) a conveyance of oil and gas mineral rights, and (2) a subsidiary that is not a business or a nonprofit activity if the substance of the transaction is not addressed directly by other ASC topics.	Consistent with US GAAP, except that this guidance applies to all subsidiaries under IAS 27(R), even those that are not businesses or nonprofit activities and those that involve sales of in-substance real estate or conveyance of oil and gas mineral rights. In addition, IAS 27(R) does not address whether that guidance should be applied to transactions involving non-subsidiaries that are businesses or nonprofit activities.
Loss of control of a subsidiary	In certain transactions that result in a loss of control of a subsidiary or a group of assets, any retained non-controlling investment in the former subsidiary or group of assets is remeasured to fair value on the date control is lost. The gain or loss on remeasurement is included in income along with any gain or loss on the ownership interest sold. This accounting is limited to the following transactions: (1) loss of control of a subsidiary that is a business or a nonprofit activity, except for either of the following – (a) a sale of in-substance real estate or (b) a conveyance of oil and gas mineral rights; (2) loss of control of a subsidiary that is not a business or a nonprofit activity if the substance of the transaction is not addressed directly by other ASC topics; and (3) the derecognition of a group of assets that is a business or a nonprofit activity, except for either of (a) a sale of in-substance real estate or (b) a conveyance of oil and gas mineral rights.	Consistent with US GAAP, except that this guidance applies to all subsidiaries under IAS 27(R), even those that are not businesses or nonprofit activities or those that involve sales of in-substance real estate or conveyance of oil and gas mineral rights. In addition, IAS 27(R) does not address whether that guidance should be applied to transactions involving non-subsidiaries that are businesses or nonprofit activities. IAS 27(R) does not address the derecognition of assets outside the loss of control of a subsidiary.

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Table 1 (continued)

	US GAAP	IFRS
Equity-method investments	ASC 825-10 Financial Instruments (formerly FAS 159) gives entities the option to account for equity-method investments at fair value. For those equity-method investments for which management does not elect to use the fair value option, the equity method of accounting is required. Uniform accounting policies between investor and investee are not required.	IAS 28 generally requires investors (other than venture capital organizations, mutual funds, unit trusts, and similar entities) to use the equity method of accounting for their investments in associates in consolidated financial statements. If separate financial statements are presented (that is, those presented by a parent or investor), subsidiaries and associates can be accounted for at either cost or fair value. Uniform accounting policies between investor and investee are required.
Joint ventures	Generally accounted for using the equity method of accounting, with the limited exception of unincorporated entities operating in certain industries which may follow proportionate consolidation.	IAS 31 Investments in Joint Ventures permits either the proportionate consolidation method or the equity method of accounting.
Measurement of non-controlling interest	Non-controlling interest is measured at fair value, which includes the non-controlling interest's share of goodwill.	Non-controlling interest is measured either at fair value including goodwill or at its proportionate share of the fair value of the acquiree's identifiable net assets, exclusive of goodwill.
Acquiree's operating leases	If the terms of an acquiree operating lease are favourable or unfavourable relative to market terms, the acquirer recognizes an intangible asset or liability, respectively, regardless of whether the acquiree is the lessor or the lessee.	Separate recognition of an intangible asset or liability is required only if the acquiree is a lessee. If the acquiree is the lessor, the terms of the lease are taken into account in estimating the fair value of the asset subject to the lease – separate recognition of an intangible asset or liability is not required.

Table 1 (continued)

	US GAAP	IFRS
Assets and liabilities arising from contingencies – initial recognition	Assets and liabilities arising from contingencies are recognized at fair value in accordance with ASC 820 *Fair Value Measurement and Disclosures* (formerly FAS 157), if the fair value can be determined during the measurement period. If the fair value of a contingent asset or liability cannot be determined during the measurement period, that asset or liability should be recognized at the acquisition date in accordance with ASC 450 *Contingencies* (formerly FAS 5 and FIN 14) if it meets the criteria for recognition in that guidance. Contingent assets and liabilities that do not meet the recognition criteria at the acquisition date are subsequently accounted for pursuant to other literature, including ASC 450. (*See* "Provisions and Contingencies" for differences between ASC 450 and IAS 37.)	Liabilities subject to contingencies are recognized as of the acquisition date if there is a present obligation that arises from past events and its fair value can be measured reliably. Contingent assets are not recognized
Assets and liabilities arising from contingencies – subsequent measurement	If contingent assets and liabilities are initially recognized at fair value, an acquirer should develop a systematic and rational basis for subsequently measuring and accounting for assets and liabilities arising from contingencies depending on their nature. If amounts are initially recognized and measured under the contingencies guidance in ASC 450, the subsequent accounting and measurement should be based on the same guidance.	Liabilities subject to contingencies are subsequently measured at the higher of (i) the amount that would be recognized in accordance with IAS 37 or (ii) the amount initially recognized less, if appropriate, cumulative amortization recognized in accordance with IAS 18.
Combination of entities under common control	The receiving entity records the net assets at their carrying amounts in the accounts of the transferor (historical cost).	Outside the scope of IFRS 3(R). In practice, either follow an approach similar to US GAAP or apply the acquisition method if there is substance to the transaction (policy election).

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Table 1 (continued)

	US GAAP	IFRS
Development costs	Development costs are expensed as incurred unless addressed by a separate standard. Development costs related to computer software developed for external use are capitalized once technological feasibility is established in accordance with specific criteria (ASC 985-20). In the case of software developed for internal use, only those costs incurred during the application development stage as defined in ASC 350-40 ("Internal Use Software" – formerly SOP 98-1) may be capitalized.	Development costs are capitalized when technical and economic feasibility of a project can be demonstrated in accordance with specific criteria. Some of the stated criteria include: demonstrating technical feasibility, intent to complete the asset, and ability to sell the asset in the future, as well as others. Although application of these principals may be largely consistent with ASC 985-20 and ASC 350-40, there is no separate guidance addressing computer software development costs.
Advertising costs	Advertising and promotional costs are either expensed as incurred or expensed when the advertising takes place for the first time (policy choice). Direct response advertising may be capitalized if the specific criteria in ASC 340-20 Capitalized Advertising Costs (formerly SOP 93-7) are met.	Advertising and promotional costs are expensed as incurred. A prepayment may be recognized as an asset only when payment for the goods or services is made in advance of the entity having access to the goods or receiving the services.
Revaluation of intangible assets	Revaluation is not permitted.	Revaluation to fair value of intangible assets other than goodwill is a permitted accounting policy election for a class of intangible assets. Because revaluation requires reference to an active market for the specific type of intangible, this is relatively uncommon in practice.
Method of determining impairment – long-lived assets	Two-step approach requires a recoverability test be performed first (carrying amount of the asset is compared to the sum of future undiscounted cash flows generated through use and eventual disposition). If it is determined that the asset is not recoverable, impairment testing must be performed.	One-step approach requires that impairment testing be performed if impairment indicators exist.

Table 1 (continued)

	US GAAP	IFRS
Impairment loss calculation – long-lived assets	The amount by which the carrying amount of the asset exceeds its fair value, as calculated in accordance with ASC 820 (formerly FAS 157).	The amount by which the carrying amount of the asset exceeds its recoverable amount; recoverable amount is the higher of (1) fair value less costs to sell and (2) value in use (the present value of future cash flows in use including disposal value). (Note that the definition of fair value in IFRS has certain differences from the definition in ASC 820.)
Allocation of goodwill	Goodwill is allocated to a reporting unit, which is an operating segment or one level below an operating segment (component).	Goodwill is allocated to a cash-generating unit (CGU) or a group of CGUs which represents the lowest level within the entity at which the goodwill is monitored for internal management purposes and cannot be larger than an operating segment as defined in IFRS 8 Operating Segments.
Method of determining impairment – goodwill	Two-step approach requires a recoverability test to be performed first at the reporting unit level (carrying amount of the reporting unit is compared to the reporting unit fair value). If the carrying amount of the reporting unit exceeds its fair value, then impairment testing must be performed.	One-step approach requires that an impairment test be done at the cash-generating unit (CGU) level by comparing the CGU's carrying amount, including goodwill, with its recoverable amount.
Impairment loss calculation – goodwill	The amount by which the carrying amount of goodwill exceeds the implied fair value of the goodwill within its reporting unit.	Impairment loss on the CGU (amount by which the CGU's carrying amount, including goodwill, exceeds its recoverable amount) is allocated first to reduce goodwill to zero, then, subject to certain limitations, the carrying amount of other assets in the CGU are reduced pro rata, based on the carrying amount of each asset.
Reversal of loss	Prohibited for all assets to be held and used.	Prohibited for goodwill. Other long-lived assets must be reviewed annually for reversal indicators. If appropriate, loss may be reversed up to the newly estimated recoverable amount, not to exceed the initial carrying amount adjusted for depreciation.

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Table 1 (continued)

	US GAAP	IFRS
Recognition of deferred tax assets	Recognized in full (except for certain outside basis differences), but valuation allowance reduces asset to the amount that is more likely than not to be realized.	Amounts are recognized only to the extent it is probable (similar to 'more likely than not' under US GAAP) that they will be realized.
Calculation of deferred tax asset or liability	Enacted tax rates must be used	Enacted or 'substantively enacted' tax rates as of the balance sheet date must be used.
Classification of deferred tax assets and liabilities in balance sheet	Current or non-current classification, based on the nature of the related asset or liability, is required.	All amounts classified as non-current in the balance sheet.
Recognition of deferred tax liabilities from investments in subsidiaries or joint ventures (JVs) (often referred to as outside basis differences)	Recognition not required for investment in foreign subsidiary or corporate JV that is essentially permanent in duration, unless it becomes apparent that the difference will reverse in the foreseeable future.	Recognition required unless the reporting entity has control over the timing of the reversal of the temporary difference and it is probable ('more likely than not') that the difference will not reverse in the foreseeable future.

C Earnings Management and Misstatements under the Goodwill/ Intangibles Rules

Acquirers and acquirees have substantial discretion in interpretation of the Goodwill/Intangibles Rules, and some problems inherent in the implementation of these accounting rules are described as follows.

I Improper Definition of 'Reporting Unit'

SFAS 142's definition of a reporting unit (SFAS 142, paragraphs 30 & 31) is not sufficiently specific and creates opportunities (before or after a transaction) for the acquirer and/or acquiree to change the size, asset base, and structure of Reporting-Units in order to get more favourable accounting treatment.

II Lack of Specificity for the Criteria for Assignment of Assets and Liabilities to Reporting-Units/CGUs

ASC 350 is not sufficiently specific in defining the criteria for assignment of assets and liabilities to Reporting-Units. Thus, management can arbitrarily assign assets and liabilities to Reporting-Units in order to obtain specific and/or different accounting treatments. Management can use major outsourcing agreements (typically signed at the corporate level) to reallocate assets and liabilities to manage earnings and reported cash flow. In large companies, management can use transfer pricing and corporate reorganizations to create and enhance goodwill 'havens' in Reporting-Units and operating units. Management can use overhead

allocation to substantially reallocate assets and liabilities. Under ASC 350, management can manage earnings by allocating low values to acquired assets and correspondingly high values to goodwill and by creating a provision for future rationalization costs and using it to inflate reported goodwill. Management can also manipulate earnings by using different/alternative words (such as trademarks, brands, licences, titles, trade-area rights, concessions, etc.) to describe acquired intangibles and/or new internally generated intangibles and applying very different write-down criteria and by avoiding the creation of both goodwill and share premium, when structuring business combinations.

III Insufficient Triggers for Impairment Testing

The seven stated conditions (paragraph 28 of ASC 350) that can trigger an intra-period impairment test for any tangible or intangible asset do not include critical issues such as significant changes in government regulations, a significant technological breakthrough that affects products or services, or specific standards or severity levels for evaluation – for example, the magnitude of a change that will justify an interim impairment test and/or the type/scope/intensity of competition that is 'unanticipated'.

IV No Standard Assumptions for FMV of Goodwill/Intangibles: Use of Internal Estimates

In many instances, it is not possible to determine the accurate Fair Market Value ("FMV") of intangible assets with sufficient accuracy to isolate the value of the goodwill residual amount. It may not be possible to distinguish acquired goodwill from internally developed goodwill and from unidentified assets (which contribute to firm performance). Unrecognized goodwill can increase the value of an asset without increasing its FMV, and thus, under ASC 350 and IFRS-3R, management can use unrecognized goodwill to eliminate impairment of acquired goodwill.

Since companies are permitted to use their own assumptions, rather than 'marketplace' estimates to determine FMV of goodwill, companies can manipulate earnings and asset values. A slight change in the assumptions used in valuation can significantly affect estimated FMVs. Under ASC 350 and IFRS-3R, goodwill write-downs are not reversible, and thus, a temporary change in assumptions can cause a permanent impairment of goodwill. As a result, the estimated useful life of an identifiable intangible asset (especially those that have indefinite lives) can substantially affect an entity's financial statements.

V Substantial Incentives for Misallocation of Goodwill and for Manipulation of Reporting-Units/CGUs

Under ASC 350 and IFRS-3R, companies have strong economic and behavioural incentives to allocate acquired goodwill into Reporting-Units (ASC 350) or cash-generating units ('CGUs'; IFRS-3R; IAS 36) that have significant unrecorded goodwill rather than Reporting-Units that are most likely to benefit from the acquired goodwill. Also, companies now have substantial incentives to manipulate the defi-

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nition of Reporting-Units or CGUs in order to obtain desired accounting and tax results.

VI ASC 121 and ASC 350 Have Different Standards for Testing Goodwill Impairment for Different Assets and ASC 350 Does Not Supersede ASC 121

ASC 350 uses present values of cash flows, while ASC 121 uses undiscounted future cash flows as a gross measure of goodwill impairment. There could be goodwill write-downs solely due to ASC 121 reviews, although other assets might not be written down because of the nature of ASC 121's impairment test.

VII Newly Identified Unrecorded Intangibles Are Not Recorded in the Financial Statements

Under ASC 350, any newly identified unrecorded intangibles are not recorded in the financial statements, regardless of FMV calculations of assets and liabilities made in the impairment testing process. Thus, there is an issue of accuracy, identification, and representation.

VIII Limitations in Intra-Period Impairment Testing

ASC 350 and IAS 36 (IAS 36.12) list circumstances under which intra-period testing (distinct from year-end testing) of goodwill of a reporting unit/CGU is mandatory, but do not include the following types of triggers: a) cancellation of critical contracts (*e.g.* outsourcing and payment systems, data processing, third-party marketing, etc.); b) material changes in management, c) changes in insurance coverage; d) specific types of corporate reorganizations and dollar amount thresholds; e) specific types of changes in corporate control (ownership interests, membership of board of directors, contingent rights, etc.) that may affect the value of the company's equity and/or assets; f) labour problems and changes in union agreements; g) changes in transfer pricing policies; h) changes in effectiveness of marketing strategies/programs; i) changes in the quality of human capital and/or automated operations systems (distinct from obsolescence); j) changes in the value of business location, etc. Thus, there remains substantial management discretion about impairment testing that can result in earnings management. IFRS impairment testing can be done at any time.

IX Avoidance of Impairment Tests

Under ASC 350 and IFRS-3R, after the initial impairment test, a subsequent impairment test is not necessary under certain conditions (*e.g.* paragraphs 27-28 of ASC 350). Thus, management can completely avoid ASC 350 and IFRS-3R annual and/or intra-period goodwill impairment tests.

X Bargain Purchases and Negative Goodwill

ASC 805 defines a *bargain purchase* as a business combination in which the total acquisition-date fair market value of the identifiable net assets acquired exceeds the fair market value of the consideration transferred plus any non-controlling interest in the acquiree. ASC 805 requires the acquirer to recognize that excess in earnings as a gain attributable to the acquirer. Although IFRS-3R does not use

'negative goodwill', IFRS requires that any negative goodwill be immediately recognized in income. This is an error because there are circumstances where negative goodwill is not intentional (did not arise from arms-length bargaining) and/or is beyond the control of the acquirer. Also, the treatment of negative goodwill under US GAAP and IFRS reduces incentives to undertake acquisitions/combinations and provides substantial incentives for companies to misstate estimated values of assets, rather than being penalized by taxation of taxable gains.[51]

XI ASC 805 and IFRS-3R Do Not Apply to Joint Ventures and Strategic Alliances

ASC 805 and IFRS3R do not apply to joint ventures and strategic alliances, and this is a significant error. In many instances, one party to a joint venture typically has a controlling equity interest (more than 51%) in the JV entity and may have warrants/options to acquire more equity interests in the JV entity. The JV entity is akin to an acquired subsidiary, because typically, at least one party to the JV agreement has some operating control over the JV entity. Similarly, the JV entity is akin to a company that is acquired in a multiple-step acquisition. Many strategic alliances have the same or similar economic substance and economic benefits of a merger or acquisition, but without the attendant post-transaction integration problems or transaction costs. Often companies choose strategic alliances because of the implicit flexibility and the terminationoption, and because it is sometimes a first step towards a merger or acquisition. JVs and strategic alliances often create the same types of intangibles that arise solely and directly from acquisitions (such as goodwill and brand equity). For example, Goodwill and Brand Equity can be created in a JV when the JV partners contribute assets to the JV-entity, which are then recorded at FMV in the JV-entity's books. Similarly, Goodwill and Brand Equity can be created in a Strategic alliance when: i) the alliance agreement itself creates brand equity; ii) when an alliances partner's resources that are used to implement the alliance agreement are recorded at FMV. Hence, the Goodwill/Intangibles Rules should apply to joint ventures and strategic alliances.[52] ASC 805 and IFRS-3R provide substantial incentives for companies to classify or structure business combinations as joint ventures or strategic alliances and thus, avoid compliance with both accounting regulations – that is:

a Companies can use joint ventures to create synthetic mergers and acquisitions and thus avoid compliance with the Goodwill/Intangibles Rules. For example, the acquirer company and the target company can contribute most of, or their critical assets to, and assign most of their staff to a separate joint venture entity ('JV-entity'). Such contributed assets will then be recorded in the joint venture entity's books at book value (*synthetic merger*) or at market value (*synthetic acquisition*). The acquirer company and the target company

51 Comiskey & Mulford 2008; Ketz 2004.

52 C. Yeow, F. Yeo & C. Liu, 'Information Asymmetry and Accounting Disclosures for Joint Ventures', *The International Journal of Accounting*, Vol. 38, No. 1, 2003, pp. 23-39; M. Nwogugu, 'On the Choice between a Strategic Alliance and an M&A Transaction', *International Journal of Mathematics, Game Theory & Algebra*, Vol. 17, Nos. 5-6, 2009.

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can then conduct most or a substantial portion of their business through the joint venture entity.

b Companies can use joint ventures or strategic alliances to amend the size/scope/location/assets/revenues of 'Reporting-Units' (ASC 805) and 'cash-generating units' ("CGUs" in IFRS-3R). Companies can use joint ventures or strategic alliances to eliminate Reporting-Units/CGUs and/or reshuffle assets among Reporting-Units/CGUs in order to avoid compliance with the Intangibles/Goodwill Rules or in order to reallocate Goodwill and Intangibles.

c Companies can use strategic alliances to create synthetic mergers and acquisitions and thus avoid compliance with the Goodwill/Intangibles Rules. For example, the acquirer company and the target company will provide services to each other and/or share resources or jointly perform activities as if they had been combined and then record the costs at book value (*synthetic merger*) or at fair market value (*synthetic acquisition*).

XII ASC 805 and IFRS-3R Do Not Apply to 'Non-Business Entities'

ASC 805 and IFRS-3R do not apply to the acquisition of an asset or a group of assets that does not constitute a 'business'.[53] This rule is not well defined in ASC 805 and IFRS-3R and provides substantial management discretion in the classification of assets and significant incentives for companies to misclassify assets and/or reshuffle assets in order to avoid compliance with Goodwill/Intangibles Rules. Furthermore, non-qualifying assets can become qualifying assets once they are combined with other third-party assets. Hence, and on the contrary, the key criteria should be: i) what happens to the asset or group of assets when it is combined with the prospective acquirer's assets or human capital or other resources (if such combination results in a 'business' that is organized with a profit objective, then ASC 805 and IFRS-3R should apply and if not, then ASC 805 and IFRS-3R should not apply) and ii) the revenue-generating potential of the asset in various contexts.

XIII ASC 805 and IFRS-3R Do Not Apply to 'Strategic Business Real Estate'

ASC 805 and IFRS-3R do not apply to the acquisition of cash-generating strategic business real estate[54] that creates brand equity and other intangibles for the company and by itself, has unique business value – such omission is an error. Strategic business real estate are critical core revenue-generating assets in industries where location, accessibility, physical design/layout, size, or visual appeal of commercial buildings is important for generating revenues, such as hotels/lodging, retailing, restaurants, professional sports, leisure, etc.

53 *See* Ernst & Young, *IFRS for Real State: Current Issues and Financial Statements Survey*, January 2011, available at <www.ey.com/Publication/vwLUAssets/IFRS_for_Real_Estate_2011/$FILE/IFRS_for_Real_Estate_2011.pdf>.

54 *Ibid.*

XIV ASC 805 and IFRS-3R Do Not Apply to Affiliated Companies (Entities under Common Control)

ASC 805 and IFRS-3R do not apply to a combination of entities or businesses under common control – which is an error. It is important to maintain consistency and comparability among companies and within conglomerates, particularly where allocation of costs and goodwill requires the demarcation of Reporting-Units/CGUs. Companies regularly spin off subsidiaries, and the compensation and cost allocation systems of subsidiaries are often based on reported financial statements of such subsidiaries. Thus, ASC 805 and IFRS-3R should also apply to all combinations between entities or businesses under common control.

XV The Use of Fair Market Values in Acquisitions Provides Opportunities for Earnings Management

ASC 805 requires an acquirer to recognize the assets acquired, the liabilities assumed, and any non-controlling interest in the acquiree at the acquisition date measured at their fair market values (FMV) as of that date, with limited exceptions specified in the statement. However, this provides an opportunity to manipulate the amounts allocated to assets and liabilities. A more realistic approach will be to allocate the purchase price to assets based on a *greater-of-cost-or-FMV rule*. That will ensure that companies will not misallocate too much of the purchase price to goodwill (which does not have to be amortized, unlike some assets that must be depreciated).[55]

XVI The Accounting Treatment of Transaction Costs (for Mergers and Acquisitions) Provides Opportunities for Earnings Management

Unlike ASC 141, ASC 805 and IFRS-3R require that transaction costs (M&A fees, etc.) be recognized separately from the acquisition and be expensed in the period incurred. Applicable transaction costs include: a) professional M&A fees which are typically success fees (and in a few instances, are hourly billing rates); b) direct administrative costs, c) fees for permits and registrations, d) legal fees; e) fees for due diligence; f) post-merger/acquisition integration costs; and g) restructuring costs. Restructuring costs in business combinations are not expensed only if the target company was part of or committed to the restructuring plan before the acquisition. This provision is likely to create agency problems and significant

55 Beatty & Weber 2006; G. Benston, 'The Shortcomings of Fair-Value Accounting Described in SFAS 157', *Journal of Accounting & Public Policy*, Vol. 27, No. 2, 2008, pp. 101-194; Churyk 2005, pp. 1353-1363; J. Hitz, 'The Decision Usefulness of Fair Value Accounting – A Theoretical Perspective', *European Accounting Review*, Vol. 16, No. 2, 2007; R.J. Huefner & J.A. Largay III, *The Effect of the New Goodwill Accounting Rule on Financial Statements*, A Publication of the New York State Society of CPAs 2004; Institute of Chartered Accountants in England and Wales (ICAEW), *EU Implementation of IFRS and the Fair Value Directive, A Report for the European Commission*, October 2007, available at <http://ec.europa.eu/internal_market/accounting/docs/studies/2007-eu_implementation_of_ifrs.pdf>; H. Nurnberg, 'The Distorting Effects of Acquisitions and Dispositions on Net Operating Cash Flow', *Accounting Forum*, Vol. 30, No. 3, 2006, pp. 209-226; Sevin & Schroeder 2005; D. Skinner, 'Discussion of "The Implications of Unverifiable Fair-Value Accounting: Evidence from the Political Economy of Goodwill Accounting"', *Journal of Accounting and Economics*, Vol. 45, Nos. 2-3, 2008, pp. 282-288.

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information asymmetry in business combinations. The reason is that management and M&A advisors will have substantial incentives to manipulate transaction costs in order to reduce the impact of the acquisition on reported earnings and cash flow. Hence, management is more likely to: a) use contingent fees, contractually deferred fees, and equity compensation; and b) reclassify transaction costs (such as direct administrative costs and post-transaction integration costs) as ordinary expenses, shift transaction-related costs to future periods, or capitalize what should be treated as transaction costs. The rule about treatment of transaction costs is not useful or accurate for companies that are in the business of acquiring other companies or execute many partnerships, acquisitions, and JVs. The benefits of acquisitions typically continue for several reporting periods, and many acquisition costs are directly related to acquisitions. Hence, the direct costs associated with JVs, mergers, and acquisitions should be included in the purchase price.

XVII Multistep Acquisitions

In multistep acquisitions, ASC 805 requires the acquirer to recognize the identifiable assets and liabilities, as well as the non-controlling interest in the acquiree, at the full amounts of their fair values (or other amounts determined in accordance with this statement). Under ASC 141, an entity that acquires another entity in a series of purchases (a step acquisition) is required to identify the cost of each investment, the fair market value of the underlying identifiable net assets acquired, and the goodwill for each step. Application of ASC 141 results in recognizing and measuring assets and liabilities in a step-acquisition at a blend of historical costs and fair market values. Both ASC 805 and ASC 141 are likely to provide opportunities for companies to misstate and/or manipulate asset values. Thus, a more accurate approach is to allocate the purchase price (to all assets, liabilities, and prior non-controlling equity interests) based on a 'greater-of-cost-or-FMV' rule, which will ensure that companies will not misallocate too much of the purchase price to goodwill (which does not have to be amortized, unlike some assets that must be depreciated).[56]

XVIII Contractual Contingencies

Unlike ASC 141, ASC 805 and IFRS-3R require that an acquirer recognizes acquired assets and assumed liabilities that arise from *contractual contingencies* as of the acquisition date, measured at their fair market values as of the acquisition date. This rule is likely to provide opportunities for companies to misstate and/or manipulate the values of contingencies. A more accurate approach is to record contractual contingencies based on a *'greater-of-cost-or-FMV' rule*, where the cost is the forecasted expense to fulfil the company's obligations under the contract. This rule will ensure that companies will not misallocate too much or too little of

56 Beatty & Weber 2006; Benston 2008; Churyk 2005; Hitz 2007; Huefner & Largay 2004; Institute of Chartered Accountants in England and Wales (ICAEW) 2007; Nurnberg 2006; Sevin & Schroeder 2005; Skinner 2008.

the purchase price to goodwill (which does not have to be amortized, unlike some assets that must be depreciated) or to the contractual contingency.[57]

XIX Deferred Taxes

ASC 805 amends FASB ASC 109 (*Accounting for Income Taxes*) to require the acquirer to recognize changes in the amount of its deferred tax benefits that are recognizable because of a business combination either in income from continuing operations in the period of the combination or directly in contributed capital, depending on the circumstances. Such changes arise through the increase or reduction of the acquirer's valuation allowance on its previously existing deferred tax assets because of the business combination. Previously, ASC 109 required a reduction of the acquirer's valuation allowance because of a business combination to be recognized through a corresponding reduction to goodwill or certain non-current assets or an increase in so-called negative goodwill. Thus, the Goodwill/Intangibles Rules provide incentives for earnings management.

Furthermore, ASC 805 and IFRS-3R do not facilitate differentiation between traditional goodwill and goodwill that originates from deferred taxes. That causes or can cause significant misinterpretation of the subject company's risk and asset quality, particularly when such deferred taxes are substantial.

XX Leases

Under ASC 805 and IFRS, regardless of whether the acquiree company is the lessee or the lessor, the acquirer company shall determine whether the terms of each of an acquiree's operating leases are favourable or unfavourable compared with the market terms of leases of the same or similar items as of the acquisition date (but this requirement does not apply to capital leases). The acquirer company shall recognize an intangible asset if the terms of an operating lease are favourable relative to market terms and a liability if the terms are unfavourable relative to market terms. However, this provision introduces substantial subjectivity in valuations of leases and that is likely to result in manipulation of earnings. The same standards should also apply to both operating leases and capital leases, for uniformity. Many securities analysts and credit analysts treat operating leases as capital leases.

Companies can completely avoid compliance with the Goodwill/Intangibles Rules by structuring an acquisition as a lease agreement. For example, the acquirer company can lease the critical assets or all or most of the assets of the target company and then hire the employees of the target company (as consultants, regular employees or "leased employees"). This problem can occur because the US GAAP and IFRS accounting standards are not sufficiently specific about the differences between a sale and a lease; and sometimes, the GAAP/IFRS standards differ from the tax rules. The existing lease classification criteria include the lease term, whether the present value of lease payments exceeds 90% of current value, existence of option to purchase the leased asset, etc. To avoid such circumvention of Goodwill/Intangibles Accounting Rules, in addition to the existing

57 *Ibid.*

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lease-classification criteria, the Goodwill/Intangibles Rules must specify the criteria that distinguish a sale from a lease. Such criteria include the following: a) the value of the leased asset as a percentage of the tangible and intangible total assets of the company, the greater this percentage is, the more likely that the transaction is a disguised acquisition; b) the continuity of business operations, if the lessee continues the same business with the same assets, then it is more likely that the transaction is a disguised acquisition; c) the importance of the leased asset to the target company's or acquirer's business (regardless of the book value or market value of the asset – obviously, the greater the importance of the asset, the greater the likelihood that the transaction is a disguised acquisition; and d) the lease term, the greater the lease term exceeds 60% of the useful life of the asset, the more likely the transaction is a disguised acquisition.

Leases also generate intangible assets such as the following: i) leasehold interests, which are created by below-market lease payments; ii) location benefits, which are created when the firm leases space at a location that provides substantial visibility, high foot/vehicular traffic, competitive advantages, and proximity and/or substantially increases the firm's brand equity; iii) the option to renew a lease or to purchase the property at expiration of the lease; and iv) the option to change the designated use of the property. However, the Goodwill/Intangibles Rules do not address these types of 'real property intangibles' which are somewhat very different from all other intangibles and are much more difficult to distinguish from goodwill.

The use of the same lease classification criteria (*i.e.* operating leases versus capital leases) for both tangible and intangible assets is an error and facilitates earnings management. This is because both types of assets differ substantially in terms of a) the useful life of the asset, b) the appropriate discount rate (intangible assets are generally much more risky and have lower recovery rates (*i.e.* the liquidation values as a percentage of market value is lower than for tangible assets)), c) the ability to use the asset as collateral; d) depreciation/amortization methods and related tax consequences.

XXI Earnouts

Earnouts are typically used to reduce the risk of overpayment in acquisitions – which is often caused by a combination of various factors. These factors include information asymmetry, agency problems, misaligned incentives, regulation, availability of acquisition financing, inaccurate estimates of human capital, technological obsolescence, etc. The treatment of earnouts under ASC 805 and IFRS-3R reduces firms' propensity to structure acquisitions as earnouts, can increase the volatility of their share prices, and also provides opportunities for earnings management. DeAngelo *et al.*[58] and Barth *et al.*[59] noted that investors pay a premium for predictable earnings. The Goodwill/Intangibles Rules require

58 H. DeAngelo, L. DeAngelo & D. Skinner, 'Reversal of Fortune: Dividend Policy and the Disappearance of Sustained Earnings Growth', *Journal of Financial Economics*, March 1996, pp. 341-371.

59 M.E. Barth, J.A. Elliott & M.W. Finn, 'Market Rewards Associated with Patterns of Increasing Earnings', *Journal of Accounting Research*, Vol. 37, No. 2, 1999, pp. 387-413.

recognition of the earnout liability at FMV; and any gain or loss from periodic remeasurement of the earnout liability must be reported in the income statement. However, under ASC 805, earnouts are not subject to remeasurement and recognition of gains/losses if a) the earnout is paid by the issuance of a fixed number of the acquirer's shares and b) the performance benchmark for the earnout is based solely on the future performance of the firm. The earnings management issues are as follows:

i Management has substantial discretion in the estimation of the earnout liability amount, which becomes one more accrual that is subject to manipulation.

ii Companies can avoid compliance with the earnout rules by structuring the acquisition transaction as a joint venture or strategic alliance. For example, the target company will contribute its assets to the JV entity, the acquirer will contribute management staff, and the JV agreement will state that the target company will be paid a percentage of the JV entity's cash flow, pre-tax income, or sales revenues. Similarly, the acquisition can be structured as a strategic alliance wherein the target company will render services to or share resources with the acquirer company, in exchange for a share of acquirer's revenues, cash flow, pre-tax income, etc.

iii Companies can avoid compliance with the Goodwill/Intangibles Rules for earnouts by structuring an acquisition as a cash-out recapitalization. Such cash-out recap can be executed by issuing 'participating debt' to the selling shareholders wherein subject to usury laws, the company will pay each such debt holder a share of the target company's operating cash flow, net income, or sales revenues, and such payments will contain elements of both principal repayment and interest.

XXII The Effect of Goodwill/Intangibles Rules on Investors' Valuation of Debt

The Goodwill/Intangibles Rules require the creation and maintenance of various types of accruals (*e.g.* for goodwill, earnouts, contingent liabilities, etc.) for which management has substantial discretion. For periodic remeasurement of balance sheet items, these rules provide substantial incentives and opportunities for investors to manipulate the recorded values of debt of investee companies that own substantial goodwill/intangibles (especially manipulation by banks, insurance companies, and investment companies that own such debt). One good approach to limit such manipulation of investment values is to infuse monetary (euro/rouble/dollar) limits into accounting treatments in order to account for the often significant differences in the nature of the investee companies' industries, large and small firms, investors' holding periods, etc.

XXIII The Effect of Goodwill/Intangibles Rules on the Target Company's Shareholders' Classification of Acquisition Securities

Securities (such as bonds, convertible preferred stocks, warrants, etc.) and non-security 'interests' are sometimes issued as payment for acquisitions (hereafter, 'acquisition consideration'). The Goodwill/Intangibles Rules do not account for the differences among the legal and accounting classifications of such acquisition

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"consideration" by the recipients (*i.e.* shareholders of the target company). Such recipients have the option of classifying the received acquisition consideration as trading securities or available-for-sale securities or as 'held-to-maturity' securities. Such accounting classifications provide opportunities for earnings management by the target company's shareholders and can have substantial economic and psychological effects on perceived fairness of the acquisition, the recipients' future valuation of such acquisition consideration, and the recipient's perceived riskiness.

XXIV Compliance with Debt Covenants

The Goodwill/Intangibles Rules have created two types of huge schisms that have substantial effects on companies' propensity, ability, and/or willingness to comply with debt covenants; and the schisms are summarized as follows:

a Between profitable and unprofitable companies – Under the Goodwill/Intangibles Rules, profitable companies have much more earnings management opportunities because they can create tax shields and can afford 'big bath' earnings management (perennially unprofitable companies are more likely to incur lasting declines in their stock prices and/or credit ratings by engaging in big bath earnings management).

b Between large and small companies – All else held constant, large companies that can create more and larger accruals as a result of the Goodwill/Intangibles Rules have much more opportunities to manage earnings than small companies.

The Goodwill/Intangibles Rules make it much easier for firms to circumvent debt covenants and bond indentures because: a) more accruals are permitted and managers have substantial discretion about the calculation of the values of such accruals; b) management has greater flexibility to manipulate interest coverage ratios, by timing goodwill/intangibles impairment or earnout-liability impairments and by selective/discriminatory impairment decisions; c) management has greater discretion to manipulate tangible net worth and tangible assets, by reconfiguring Reporting-Units/CGUs, by timing goodwill/intangibles impairments, and by selective capitalization of costs; and d) companies that generate pre-tax income have more opportunities to generate tax shields.

XXV Effects of Substantial New Debt

The Goodwill/Intangibles Rules do not apply to significant new debt (*e.g.* debt whose face value is greater than 50% of the fair market value of the borrower's total assets or equity). Such new debt can provide the same or similar economic effects and validation of goodwill/intangibles values as a regular acquisition of all the equity or assets of a company. The net effects are that a) companies that have substantial valuable intangibles remain undervalued and find it more difficult to raise capital; b) companies that issue such debt can benefit from interest tax shields (that will not obtain otherwise) and intangibles impairment tax shields; c) companies can improve their asset-based financial ratios by not having to write up assets to FMV; and d) some companies can circumvent the Goodwill/Intangi-

bles Rules by structuring and disguising an acquisition as a recapitalization – that is, by issuing medium- or long-term debt that has a terminal or mandatory conversion feature.

XXVI Lack of Goal Congruence of the Goodwill/Intangibles Rules and Reorganization Statutes

In some jurisdictions, the goals of the reorganization statutes (such as sections 354, 355, 356 & 368 of the US Internal Revenue Tax Code) and the goodwill/intangibles accounting rules appear to diverge substantially. For example, in the USA, the wording and legislative intent of the IRS reorganization statutes seem to be more oriented towards the classification of transactions, rather than reflecting the economic and psychological effects of disclosure of the underlying transactions.

The market values, book values, and the liquidation values of goodwill and intangibles change or can change drastically as the typical firm enters different states (*i.e.* recapitalization, exchange offer, financial distress, restructuring, prepackaged bankruptcy, regular bankruptcy, etc.). However, the Goodwill/Intangibles Rules do not account for or reflect the significant economic consequences of these changes in values. For firms that are financially distressed or are in bankruptcy proceedings or are effecting some types of reorganizations, the values of the goodwill/intangibles decline substantially. The downward goodwill/intangibles impairment tests and adjustments carry negative information content about the firm's future prospects, which causes further decline of the firm's asset values. The Goodwill/Intangibles Rules do not distinguish between short-term and long-term impairments of intangible assets although such distinctions are critical in financial distress or bankruptcy.

Within the context of financial distress, and under the Goodwill/Intangibles Rules, it can be very difficult to identify that portion of goodwill that is closely associated with the firm's financial or operational distress – this creates opportunities for earnings management.

Within the context of prepackaged bankruptcies, exchange offers, and plans of reorganization, all else held constant, the changes in the values of the firm's debt and some types of preferred stock will affect the values of the firm's intangibles/goodwill. Within the context of prepackaged bankruptcies, exchange offers, and plans of reorganization, all else held constant, what was once goodwill is likely to decline to zero and evolve into negative goodwill which may subsequently evolve back into regular goodwill as the firm's financial stability and earning power improve; but the Goodwill/Intangibles Rules do not provide a detailed guidance about how to make adjustments for such changes.

XXVII Non-Controlling Interests (Minority Investments)

The Goodwill/Intangibles Rules do not apply to significant non-controlling interests (acquisition of 20%-49% of the target company's equity or assets without operating control of the target company), even though these investments provide the same or similar economic effects and validation of goodwill and intangibles values as a regular acquisition of all the equity or assets of a company. The net

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effects are that a) some companies can circumvent the Goodwill/Intangibles Rules by structuring the acquisition as a non-controlling interest while maintaining control of the target company by placing their trusted persons in middle/senior management, but without obvious control of the board of directors of the target company; b) companies can improve their asset-based financial ratios by not having to write up assets to FMV while benefiting from the earnings-increasing and cash-increasing effects of the quasi-acquisition; and c) investor-acquirer companies that are generating operating losses.

D Public Health Risks Inherent in Goodwill/Intangibles Accounting Rules

Nandi *et al.*,[60] Ma *et al.*,[61] and Guojonsdottir, Kristjansson & Olafsson[62] showed that sudden increases/decreases in the volatility of a stock or a noticeable change in overall regional or national economic conditions can cause severe illness and public health problems. Given that Intangibles constitute more than sixty percent of the stock market value in most developed countries, the Goodwill/Intangibles Rules constitute a substantial public health risk because they can cause depression or cardiac arrest due to the following reasons:

i Application of the Goodwill/Intangibles Rules can result in greater-than-normal creation of balance sheet accruals (in terms of both the number and size of accruals) and also greater-than-normal periodic changes in the values of accruals. All of these can substantially increase the volatility of stock prices of a company and its competitors in the industry. The criteria for creation of many of these accruals do not differentiate between temporary and permanent changes in values of the intangibles. Many accruals can be changed at any time during the fiscal year, and the net result can be substantially increased volatility of stock prices – a firm's reputation or brand equity can significantly deteriorate in a matter of hours or days. Similarly, the Goodwill/Intangibles Rules can result in manipulation of asset impairments which affects the income statement and thus, can increase stock price volatility.

ii The Goodwill/Intangibles Rules can substantially change and distort national income accounting data (*e.g.* corporate income, corporate taxes, values of intangibles, etc.). This in turn changes the government and private sector estimates of economic conditions of regions and countries, which can cause emotional distress. For example, when there are substantial expensing of impairments of intangible assets, reported corporate profits will decline and companies will tend to shrink their activities (*e.g.* reduce the hiring of new employees and corporate investment). That will tend to increase emotional

60 A. Nandi *et al.*, 'Economic Conditions and Suicide Rates in New York City', *American Journal of Epidemiology*, 2012.

61 W. Ma *et al.*, 'Stock Volatility as a Risk Factor for Coronary Heart Disease Death', *European Heart Journal*, Vol. 32, No. 8, 2011, pp. 1006-1011.

62 G. Guojonsdottir, M. Kristjansson & O. Olafsson, 'Immediate Surge in Female Visits to the Cardiac Emergency Department Following the Economic Collapse in Iceland: An Observational Study', *Emergency Medicine Journal*, 2011.

distress and depression among the population. Nakamura found that the economic theory and practice underlying measurement of intangible assets remains controversial and incomplete.[63]

iii The Goodwill/Intangibles Rules can cause significant reallocation of investment by the government and/or private sector investors and/or foreign investors.

iv In the present era, the Goodwill/Intangibles Accounting Rules can reduce the attractiveness of intangible assets from various perspectives – such as credit (difficult to value and monitor), collateral (low recovery value), etc.

E Economic Psychology and Behavioural Issues

Other than the above-mentioned issues raised by the users/petitioners in industry and academia, there are several relevant behavioural and psychological considerations that directly influence the incidence of fraud and misconduct.

I The Risk-Judgment Effect

ASC 805/350 and pre-ASC 805/350 goodwill accounting rules complicate the analysis of the 'risk' of goodwill and intangibles as a whole or its components – because under these regulations, a) goodwill and many intangibles remain opaque and cannot be meaningfully analysed; b) goodwill/intangibles amortization methods often have no relationship to true changes in asset values; and c) goodwill/intangibles impairment tests are arbitrary and can be biased. Thus, the opacity of goodwill creates substantial information asymmetry and psychological effects (such as greater perceived risk; more groupthink; more 'herding behaviour'; difficulty in comprehension of risk, short-sighted behaviour; and increased propensity of non-compliance). These effects are critical, particularly in an era where intangible assets constitute 40-60% of the values of many companies. Hence, ASC 805/350 increases transaction costs and cost of analysis. In reality, goodwill consists of various identifiable components such as human capital, brand power, current/future technological advantage, team cohesion, customer relationships, relationships with distribution channels, company culture, reputation, network effects, etc. By bundling all these arguably different assets/attributes into one opaque unit/account and then applying only one set of inappropriate (goodwill amortization and impairment) rules to them, regulators may have made financial statements more complicated, and this increases volatility of stock prices and employee/advisor propensity to commit crimes.[64] In 2002, Standard & Poor's stated that it would exclude the 'loss on goodwill impairment' from the determina-

63 L. Nakamura, 'Intangible Assets and National Income Accounting', *Review of Income and Wealth*, Vol. 56, No. 1, 2010, pp. S135-S155. Also available at <www.philadelphiafed.org/research-and-data/publications/working-papers/2008/wp08-23.pdf>.

64 H. Stolowy & A. Jeny-Cazavan, 'International Accounting Disharmony: The Case of Intangibles', *Accounting, Auditing & Accountability Journal*, Vol. 14, No. 4, 2001, pp. 477-497.

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tion of 'core earnings' used in the calculation of price-earnings ratios. Many acquirers/acquirees and prospective creditors use S&P data in valuations.[65]

The issue of how investors, financial statement users, and financial reporting staff judge the risk of non-amortizable goodwill cannot be realistically tested empirically because a) reported goodwill is opaque; b) under SFA 805/350, comparability across industries and across companies of various sizes is impossible; c) it is very difficult to measure the earning power generated by goodwill, acquisition premia are determined in part by market 'noise'; and d) it is almost impossible to determine the level of compliance in and standardization of impairment tests.

ASC 805/350 and IFRS-3R cause or can cause information asymmetry, adverse selection, and moral hazard. Perhaps the biggest problem inherent in the Goodwill/Intangibles Rules is that two very different groups (preparers and users of financial statements) that have traditionally different cultures, attitudes towards risk/disclosure, applicable regulations, supervision regimes, and control over capital will handle the recording and application of goodwill/intangibles. These two groups are the CPA firms and CFO offices on one hand and on the other hand, the financial services industry (bankers and analysts in banks, insurance companies, investment companies, and funds). ASC 350 &805 were not designed to and do not reduce a) the information asymmetry between the abovementioned two groups and b) the information asymmetry between management and shareholders or c) the moral hazard experienced by management when addressing goodwill (management has substantial discretion in applying ASC 350/805 and IFRS-3R). Furthermore, goodwill impairment decisions create adverse selection problems among managers. Therefore, because goodwill and intangibles are relatively opaque under current accounting regulations, the application of Goodwill/Intangibles Rules creates divergencies in the perceived risk and the perceived values of shares of companies that own substantial goodwill and/or intangibles. The Goodwill/Intangibles Rules are not consistent with market valuations and the methods that users of financial statements use in valuing companies.[66]

For companies in which goodwill/intangibles account for a substantial percentage of total assets (*e.g.* technology, biotech, retailing, Internet, etc.), ASC 805/350 and IFRS-3R reduce or can reduce companies' ability to raise capital and their perceived asset quality and market values. This is partly attributable to the

65 Nurnberg 2006.

66 Churyk 2005; O. Duangploy, M. Shelton & K. Omer, 'The Value Relevance of Goodwill Impairment Loss', *Bank Accounting & Finance*, Vol. 18, No. 5, 2005, pp. 23-28; Dunse, Hutchison & Goodacre 2004; J. Goodwin & K. Ahmed, 'Longitudinal Value Relevance of Earnings and Intangible Assets: Evidence from Australian Firms', *Journal of International Accounting, Auditing and Taxation*, Vol. 15, No. 1, 2006, pp. 72-91; H. Lander & A. Reinstein, 'Models to Measure Goodwill Impairment', *International Advances in Economic Research*, Vol. 9, No. 3, pp. 227-232; S. Sevin, R. Schroeder & S. Bhamornsiri, 'Transparent Financial Disclosure and SFAS No. 142', *Managerial Auditing Journal*, Vol. 22, No. 7, 2007, pp. 674-687; Y. Zang, 'Discretionary Behavior with Respect to the Adoption of SFAS No. 142 and the Behavior of Security Prices', *Review of Accounting and Finance*, Vol. 7, No. 1, 2008, pp. 38-68.

difficulty of measuring the value of intangibles – such uncertainty is likely to be reflected in lower stock prices. In many of these industries, the pooling method was the preferred method of accounting for combinations. The opacity of goodwill and intangibles under current Goodwill/Intangibles Rules and the associated information asymmetry make it difficult for parties to agree on asset values, asset sizes, liquidity, and asset durations. This in turn, complicates lending, capital budgeting, and financing decisions and makes it more difficult to finance companies in many countries. While there is theoretical and empirical evidence that components of goodwill have value that can be collateralized in lending,[67] goodwill accounting under ASC 805/350 and IFRS-3R does not facilitate such financing.[68]

II The Replication Bias

Under ASC 805/350 and IFRS-3R, companies can effectively use the purchase method to replicate the pooling method (for accounting for combinations). This can be done by making the purchase price exactly equal to the book value of the assets and liabilities of the of the company that is being purchased and by using other means to ensure that goodwill is not created from the transaction (for example, by assigning values to and specifically identifying all intangibles). This *replication bias* negates the objectives of ASC 805 and IFRS-3R and can lead to increased propensity for fraud and misconduct.[69] Also, under the Goodwill/Intangibles Rules, and as explained above, companies can use joint ventures and strategic alliances to replicate mergers and acquisitions of companies and thereby avoid compliance with the Goodwill/Intangibles Rules.

III The Tax-Shield Bias

Amortized or expensed (based on annual impairment tests) goodwill/intangibles produce tax shields. Thus, the limitations on the expensing/amortization of goodwill/intangibles that are caused by application of ASC 350 and IASB-38 reduce the subject company's reported and actual operating cash flow (by increasing taxable income). In periods of intense competition and low profitability, and/or financial distress, ASC 805/350 and IASB-38 provide significant incentives for misconduct. These include incentives for companies to record goodwill/intangibles impairments in order to reduce their taxable income, generate tax shields, and increase

67 *See* I. Rodov & P. Leliaert, 'FiMIAM: Financial Method of Intangible Assets Measurement', *Journal of Intellectual Capital*, Vol. 3, No. 3, 2002, pp. 323-336; T. Tollington, 'UK Goodwill and Intangible Asset Structuration: The FRS-10 Rule Creation Cycle', *Critical Perspectives in Accounting*, Vol. 17, No. 6, 2006, pp. 703-844.

68 Frankel, Seethamraju & Zach 2008 and Nurnberg 2006.

69 B.C. Ayers, C.E. Lefanowicz & J.R. Robinson, 'Do Firms Purchase the Pooling Method?', *Review of Accounting Studies*, No. 7, March 2002, pp. 5-32; Hake 2004, pp. 389-396; Nurnberg 2006; S. Moehrle & J. Reynolds-Moehrle, 'Say Goodbye to Pooling and Goodwill Amortization', *Journal of Accountancy*, September 2001.

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their operating cash flows. Hake,[70] Hayn & Hughes,[71] and Nurnberg[72] discussed some of the distorting effects of acquisitions and dispositions.

IV The Credit Contagion Effect

One of the major problems inherent in goodwill/intangibles impairment rules is that temporary impairments can be easily treated as permanent impairments and the treatment of impairments can have adverse macroeconomic effects. For example, in an industry where there has been active M&A activity and companies own substantial goodwill/intangibles, if some major companies recognize goodwill impairment and expense the associated amounts, more companies are likely to do the same. In such circumstances, the probability of 'big bath earnings management' by companies in the industry will increase substantially. Also, the lower earnings reported by companies in the industry will likely trigger downgrades of credit ratings of these companies, which in turn may reduce investment in the industry, reduce the volume of bank loans to such companies, cause underinvestment by companies in the industry, and also increase vendors' perceptions of riskiness of these companies, all of which will cause and exacerbate credit contagion in the industry.

V The Illusion Effects: 'Real Activities' Earnings Management and Accounting for Product Development Costs and Marketing Costs

ASC 805 and IFRS-3R permit only post-acquisition recognition of specific intangibles related to marketing (brand name, brand equity, etc.), customers (*e.g.* customer lists, etc.), contracts, and technology (*e.g.* patents, software, databases), but does not permit preacquisition recognition of internally generated marketing-related intangibles. As illustrated in Mosca & Viscolani,[73] Rodov & Leliaert,[74] Lim & Dallimore,[75] Tollington,[76] Australian Taxation Office,[77] Robinson & Sansing,[78] Lipsey,[79] and Thompson, Hoskins & Flesher,[80] under current accounting rules in most jurisdictions, 'goodwill' and 'brand equity' consist of 'quasi recoveries' of substantial portions of what is now classified as marketing expenses in income

70 Hake 2004.

71 C. Hayn & P. Hughes, 'Leading Indicators of Goodwill Impairment', *Journal of Accounting, Auditing and Finance*, Vol. 21, 2006, pp. 223-265.

72 Nurnberg 2006.

73 Mosca & Viscolani 2004.

74 Rodov & Leliaert 2002.

75 L.L.K. Lim & P. Dallimore, 'Intellectual Capital: Management Attitudes in Service Industries', *Journal of Intellectual Capital*, Vol. 5, No. 1, 2004, pp. 181-194.

76 Tollington 2006.

77 Australian Taxation Office (Australian Government), *International Transfer Pricing – Marketing Intangibles*, March 2011, available at <www.ato.gov.au/corporate/content.aspx?doc=/content/68495.htm>.

78 L. Robinson & R. Sansing, 'The Effect of "Invisible" Tax Preferences on Investment and Tax Preference Measures', *Journal of Accounting and Economics*, Vol. 46, Nos. 2-3, 2008, pp. 389-404.

79 Lipsey 2010.

80 J.H. Thompson, M. Hoskins & D.L. Flesher, 'Accounting for Advertising Costs: The Options Are Narrowing', *The CPA Journal*, August 1991, pp. 50-54.

statements of companies; and marketing expenses create intangible assets because sales and marketing expenses create multi-period revenues, earning power, and brand equity (such intangibles are typically not recognized until the company is acquired or merged; and thus, there can be substantial divergencies between book values and market values of companies). The current accounting classification of most 'marketing expenses' (which are expensed) does not reflect the true nature (of the resulting assets and expenses), behavioural effects, valuation effects, and economic consequences of such expenses. There are known components of marketing expenses that are used for building brand value, developing strategic alliances and partnerships, and creating other intangible assets that produce revenues in several accounting periods. Such components should be capitalized (as intangible assets) instead of being expensed in the period incurred. ASC 805/350 and IFRS-3R do not provide sufficient guidance or accurate reporting for internally generated intangibles and goodwill.[81] The broad and wholesale expensing of marketing costs facilitates earnings management through the manipulation of real activities. Several studies cited herein indicate that marketing expenses have substantial information content. Thus, expensing marketing costs increases information asymmetry and the probability that the values of the company's shares will be more volatile, all else held constant.

As illustrated in Mosca & Viscolani,[82] Rodov & Leliaert,[83] Lim & Dallimore,[84] Tollington,[85] Galbreath,[86] Dischinger & Riedel,[87] Robinson & Sansing,[88] Lipsey,[89] and Kramer, Marinelli, Iammarino & Diez,[90] intangibles and goodwill are critical elements of new product development, which involves several intangible assets such as brand value, human capital, franchise rights, group cohesion, etc. This has substantial implications for the accounting treatment of what is now classified as 'product development costs', some of which is treated differently from R&D costs. Under the present FASB and IFRS accounting rules (and current Goodwill/Intan-

81 C.-M. Chena & Y.-C. Lin, 'How Do Advertising Expenditures Influence Hotels' Performance?', *International Journal of Hospitality Management*, Vol. 33, 2013, pp. 490-493; K. Cleaver & P. Ormrod, 'The Economic Circumstances Surrounding the Decision to Capitalize Brands – A Comment', *British Journal of Management*, Vol. 5, 1994, pp. 303-306; C. Corrado, C. Hulten & D. Sichel, 'Intangible Capital and Economic Growth', *US Federal Reserve Board; Finance and Economics Discussion Series*, Vol. 2006-24, April 2006, available at <www.federalreserve.gov/Pubs/feds/2006/200624/index.html>; L.T. Hsu and S.C. Jang, 'Advertising Expenditure, Intangible Value and Risk: A Study of Restaurant Companies', *International Journal of Hospitality Management*, Vol. 27, 2008, pp. 259-267; C. Marston, 'Corporate Intangibles: Value Relevance and Disclosure Content', *Accounting & Business Research*, Vol. 34, No. 4, 2004, pp. 415-454.

82 Mosca & Viscolani 2004.

83 Rodov & Leliaert 2002.

84 Lim & Dallimore 2004.

85 Tollington 2006.

86 Galbreath 2000.

87 Dischinger & Riedel 2011.

88 Robinson & Sansing 2008.

89 Lipsey 2010.

90 J. Kramer, E. Marinelli, S. Iammarino & J. Diez, 'Intangible Assets as Drivers of Innovation: Empirical Evidence on Multinational Enterprises in German and UK Regional Systems of Innovation', *Technovation*, Vol. 31, No. 9, 2011, pp. 447-458.

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gibles Rules), product development costs are expensed in the accounting period in which they are incurred. Such accounting treatment does not reflect the true nature, behavioural effects, valuation effects, and economic consequences of such expenses. Product development costs create brand equity and generate revenues in future periods and thus, meet the standard definition of 'assets', and should be capitalized and classified as intangibles. Unlike 'expensing', the capitalization of product development costs as intangibles is in accordance with the 'matching' and 'going concern' accounting principles. Furthermore, expensing of product development costs encourages and facilitates earnings management through manipulation of real activities.

Hence, the current IFRS and FASB accounting regulations for product development costs and marketing expenses (and their exclusion from 'intangibles') are hereby conjectured to create the following material illusions:

i *Vertical symmetry* – that an increase in product development costs provides the same dollar value effect on sales revenues as a decrease in product development costs or that the same symmetry applies to marketing expenses.

ii *Proportionality* – that product development costs are directly proportional to revenues, gross margins, and brand equity and/or that the same relationship exists for marketing expenses.

iii *Incentive invariance* – that product development costs or marketing expenses by themselves have minimal or no effects on employee motivation and compensation. On the contrary, employees and independent sales reps monitor both types of expenses as measures of management commitment to product lines and operating divisions and as measures of brand equity and customer acceptance.

iv Some preparers and users of financial statements may believe that product development costs and marketing expenses have minimal effects on cash balances and the cash flow statement – on the contrary, both types of expenses trigger 'separate' and seemingly unrelated cash transactions – such as short-term debt (to fund samples and initial production runs), trade payables (to fund initial production), bad debt expense, refunds, capital expenditures for equipment, etc.

v *Proportionality and incrementality effects* – some preparers and users of financial statements may believe that incremental spending on product development and/or marketing always results in incremental sales revenues, and the lack or absence of such incremental revenues (after such expenditures are made) is evidence of poor performance. Some financial statement users believe that a certain minimum amount of marketing expenditures is needed to generate sales revenues that are equal to or exceed the long-run historical average sales revenues.

vi The *false comparability effect* – some users of financial statements tend to assign the same monetary value to each dollar/unit of marketing expense across firms and industries; but on the contrary, the nature and impact of marketing costs vary widely by channel, type of marketing, time frame, type of product/service, quality, follow-up, co-branding opportunities, etc. The same false comparability effect also applies to product development costs.

vii The *expense perception* or 'intangibles-deficit perception' – many users and preparers of financial statements perceive marketing costs and product development expenses as operating expenses, rather than as long-term enhancements or investments (similar to capital expenditures for real estate) and do not subconsciously or consciously associate marketing expenses and/or product development costs with any form of intangible assets, primarily because of the definition (as income statement item and as a cost) and classification (expense) of marketing expenses. The 'investment perspective' better reflects the true economic consequences of marketing and product development costs.

viii The *permanence perception* – many users and preparers of financial statements may perceive marketing expenses and/or product development expenses as 'permanent components' of operating costs, without which the firm will collapse. On the contrary, many modern firms use joint ventures, licensing, and strategic alliances extensively and are quite profitable even though they do not spend much on marketing or product development.

ix *Vertical non-additivity* – some financial statement users believe that the effects and benefits of marketing costs or product development costs are strictly or increasingly non-additive or minimally additive over time (and that marketing costs and product development costs affect operations and revenues primarily in the period that such costs are incurred).

x *Horizontal non-additivity – i.e.* the effects/benefits of marketing expenses and product development costs are strictly or increasingly non-additive or minimally additive as the dollar amount of such expenditures increases.

Jones found that failing firms (financially distressed companies) capitalize intangible assets more aggressively than non-failed firms particularly during the five-year period immediately before corporate financial distress, that managers' propensity to capitalize intangible assets has a strong statistical association with earnings management proxies, particularly among failing firms, and that voluntary capitalization of intangibles has strong discriminating and predictive power in a firm failure model, even after controlling for several other factors.[91] The Jones study is not accurate due to the following reasons:

i Managers of failing firms do not have much incentives to capitalize intangibles (such as overstatement of earnings, the understatement of leverage, and avoiding the reporting of net income losses and/or net asset deficiencies in the financial statements) because in many instances, loan officers are very familiar with such accounting gimmicks and the penalties and stigma for attempting to deceive loan officers far outweigh the benefits of attempting or doing such acts. Lenders maintain records of not just corporate borrowers' financial data but also of the conduct and reputation of financial managers at borrower companies.

91 S. Jones, 'Does the Capitalization of Intangible Assets Increase the Predictability of Corporate Failure?', *Accounting Horizons*, Vol. 25, No. 1, 2011, pp. 41-70.

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ii The Jones study used financial data from 1989 to 2004 which was before two critical events: 1) the widespread adoption of the IFRS Goodwill/Intangibles Rules and 2) the global financial crisis of 2008-2011 – which spurred enactment of substantial financial regulations in many countries and changes in the functioning of credit rating agencies and credit monitoring systems within banks/lenders. These two events drastically changed managers' propensity to participate in earnings management and to capitalize costs as intangibles.

iii For failing companies, in the short run (which is more important than the long run), intangibles typically have relatively low liquidation values, and the market values and liquidation values of their assets tend to converge. In such circumstances, managers of failing firms do not have substantial incentives to capitalize costs as intangibles.

iv The majority of sample firms in the Jones study were in industries in which most companies do not have significant intangibles – such as miscellaneous industrials (17.99% of the sample), other metals (10.44% of the sample), gold (16.10%), and energy (6.24%). In such industries, earnings management that pertains to goodwill/intangibles is more likely to be detectable and related to common financial ratios. Thus, capitalization of costs as intangibles for such companies is likely to create accruals that can be used for earnings management but are relatively insignificant in terms of size or effect, all of which will provide the wrong statistical association between earnings management and capitalization (such statistical analysis typically measures the presence of but not the magnitude or economic/psychological effect of earnings management).

v For failing firms, the information content of operating losses (income statement and cash flow statement) tends to decline as the firm's condition worsens primarily because investors and vendors incorporate such risks into their valuations and decisions before financial distress worsens. For failing firms, this trend will tend to a) reduce managers' incentives to engage in earnings management; b) reduce

vi Failing firms that have executive compensation plans have low incentives to capitalize intangibles as part of an earnings management strategy because such compensation is now typically based on a variety of factors (such as stock price, cash flow, net income, sales targets, efficiency targets, customer satisfaction, etc.), the combination of which makes earnings management much less rewarding.

vii Earnings management proxies are typically accruals.

Proposition 1: *Managers' propensity to capitalize intangible assets does not have a strong statistical association with earnings management proxies, particularly among failing firms; and voluntary capitalization of intangibles does not have strong discriminating and predictive power in a firm failure model.*

Proof: The apparently positive relationship between voluntary capitalization of intangible assets and the predictability of corporate failure (as capitalization is expected to be motivated primarily by financial statement misrepresentation) is

illusory because a) the Jones[92] empirical study did not find out exactly why managers of failing firms chose to capitalize costs; b) the failing firms could have been more prone to capitalization because of the nature of their industries (the study did not control for the nature of the industry); c) the financially distressed firms could have been more prone to capitalization because managers wanted to maintain or lift employee morale; d) since intangibles continue to be widely perceived as having low or moderate collateral value, managers of failing companies have little incentive to capitalize costs as intangibles and the failing company will probably not be perceived as more credit-worthy after capitalization of costs as intangibles; e) capitalization of costs does not necessarily make the failing firm more attractive for contracting with third parties if beliefs have converged and are negative (*i.e.* beliefs of investors, employees, and vendors about the opportunity set and solvency of the company) and/or transaction cancellation costs are relatively low; and f) the empirical study did not test for the information content of capitalization of costs (by analyzing changes in lenders', vendors', regulators', and investors' perceptions of riskiness of the failing company, etc.) compared to expensing – if capitalization of costs carries low information content among vendors, investors, regulators, and lenders, then it is a low-level predictor of corporate failure.

The indicators of corporate failure are typically financial ratios that are derived from financial statement accounts, and the process of capitalization of costs distorts these financial statement accounts substantially in ways that produce the illusory positive correlation, and this conjecture can be confirmed by testing for corporate failure without using financial ratios – for example, when costs are capitalized, the company's asset base (and sometimes its inventory) increases and asset-related financial ratios (which are used more often in default prediction models than interest-coverage ratios) such as return on equity (ROE), return on assets (ROA), asset turnover ratios, debt/asset ratio, days payables outstanding, and the inventory turnover ratio deteriorate which then gives the false impression that the failing company is worse than it really is.

The reality is that for failing companies (financially distressed firms), it is the cash flow that matters, and because such companies typically incur substantial operating losses (and thus, there are no tax shields), capitalization of costs (instead of expensing them) does not really have any material effect on cash flows in the short run and is just a matter of presentation. For healthy companies that are generating pre-tax income and have tax shields, capitalization of costs increases the asset base and results in deteriorating financial ratios (and hence deteriorating default-risk ratings); and capitalization can create the illusion of increasing financial distress if the default/bankruptcy prediction models use mostly asset-based financial ratios or if the effect of increased interest-coverage ratios is offset by greater income taxes which reduce the company's cash balances. Therefore, the default/bankruptcy discriminatory value of capitalization is minimal to non-existent.

92 *Ibid.*

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VI The Constrained Entrepreneurship/Intrapreneurship Effect

As illustrated in Mosca & Villani,[93] Holzl,[94] Kramer, Marinelli, Iammarino & Diez[95] and Robinson & Sansing,[96] the early stages of venture formation and growth involve many costs and elements of what is now classified as goodwill and intangibles. However, under the Goodwill/Intangibles Rules (US GAAP and IFRS rules), most start-up costs and development costs are expensed and in most cases, create operating losses. Hence, ASC 805/350, IASB-38, and IFRS-3R discourage acquisitions and mergers of emerging growth companies (particularly those companies in the technology, healthcare, business services sectors), where elements of goodwill/intangibles account for a substantial portion of firms' value and/or assets, because the purchaser company will be required to a) recognize substantial opaque goodwill in its balance sheet on a continuing basis (which creates uncertainty about the purchaser's liquidity and the value of its assets); b) occasionally disclose the allocation of goodwill among 'Reporting-Units' and divisions, which will compel disclosure of segment/division information that emerging growth companies are traditionally reluctant to disclose for competition reasons; c) incur additional costs for both internal and third-party valuations and impairment opinions; and d) recognize operating losses associated with expensing start-up and development expenses (that are really intangibles and should be capitalized). ASC 805/350 and IASB-38 do not distinguish between various sizes of companies.[97] Similarly, the Goodwill/Intangibles Rules discourage personal investment and capital investment in entrepreneurship and intrapreneurship because most costs associated with new ventures (which often result in revenues in future periods) are expensed and create substantial operating losses that often distort the true potential of emerging growth companies and start-ups. These distortions tend to have substantial negative effects on incentive systems, perceptions of prospective investors (who are typically reluctant to invest in companies that appear to be unprofitable and often cannot look beyond the 'accounting losses' to the core operations and potential markets of such emerging growth companies), and employee motivation.

VII The Reduced Comparability Effect

ASC 805/350 does not enhance or improve the comparability of financial statements across industries because goodwill can be allocated at below ASC 131/805 Reporting-Units; and under ASC 805/350 and IFRS-3R, there are no standard criteria for impairment tests of goodwill that will result in uniform comparable financial statements across industries – the feasibility and results of impairment tests can vary dramatically across industries depending on the nature of assets, the size of the company, quality of internal controls, control environment, finan-

93 Mosca & Villani 2004.

94 W. Hölzl, 'Tangible and Intangible Sunk Costs and the Entry and Exit of Firms in a Small Open Economy: The Case of Austria', *Applied Economics*, Vol. 37, No. 21, 2005, pp. 2429-2443.

95 Kramer, Marinelli, Iammarino & Diez 2011.

96 Robinson & Sansing 2008.

97 S. Kothari, A. Leone & C. Wasley, 'Performance Matched Discretionary Accrual Measures', *Journal of Accounting and Economics*, Vol. 39, No. 1, 2005, pp. 163-197.

cial stability of the company, incentives, structure of compensation, and nature of competition in the industry.

Furthermore, reported goodwill is typically a one-line item, and it is difficult to determine the sources of goodwill and the sources and potential impacts of impairment (of goodwill). When implementing ASC 805/350, managers have sufficient discretion to time the reporting of impairment of goodwill in order to achieve earnings targets.[98]

ASC 805/350 and IFRS-3R contravene the going concern principle, because ASC 805/350 and IFRS-3R assume a 'liquidation' approach to accounting for goodwill. Under ASC 805/350, the asset values that are used in calculating goodwill are derived in transactions that may or may not reflect true market values – such as sales/purchases that are completed under adverse conditions, purchases in non-arms-length transactions, and combinations that are the natural progression of prior investments. Secondly, under a 'going concern' approach, all expenses that create (purchased or internally generated) goodwill should be capitalized; and the different components of acquired goodwill and internally generated goodwill should be disclosed as various classes of assets – brand value, human capital, etc. Thirdly, transactions that are de facto combinations (such as certain joint ventures and equity investments) and otherwise should generate negative goodwill or goodwill or do not generate any goodwill.

ASC 805/350 and IFRS-3R contravene the recognition principle because most internally generated goodwill is not capitalized; and transactions that are de facto combinations (such as certain joint ventures and equity investments) do not generate goodwill. Furthermore, ASC 805/350 does not specify the types of transactions that will generate mandatory goodwill impairment tests (managers have sufficient discretion to avoid recognition of certain transactions that result in new goodwill or impairment of goodwill).

ASC 805/350 contravenes the matching principle, because most internally generated goodwill that arise from marketing expenses are not recorded as assets; and temporary changes in asset values and interest rates can cause permanent impairment of acquired goodwill. ASC 805/350 does not permit for reversals of impairment losses.

VIII The Asymmetric Returns-Volatility Effect

The Goodwill/Intangibles Rules are hereby conjectured to cause an asymmetric inverse aggregate returns-volatility effect wherein the returns of stock prices have a negative correlation with the magnitude of the volatility of the stock prices. This relationship is more pronounced when aggregate stock returns are negative than when they are positive (the greater the returns of stock prices, the lower the volatility of stock prices, and vice versa, and the negative correlation is stronger in the domain of aggregate losses than in the domain of aggregate gains). This effect of these Goodwill/Intangibles Rules can be attributed to the following hypotheses:

98 Hake 2004; Huefner & Largay 2004; Kothari, Leone & Wasley 2005; Marston 2004; Nurnberg 2006.

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1 The Options Hypothesis

As mentioned, 60%-75% of the market capitalization value of most developed stock markets is attributable to intangible assets. Also, historically, the stock prices of companies that have substantial intangible assets (*e.g.* biotech, environmental services, software, technology, and Internet companies) tend to have greater implied volatility than stock prices of other companies. Thus, intangibles can have substantial effects on both stock price returns and implied volatility. In most developed stock markets, companies that have large percentages of intangible assets and thus whose stock prices tend to have above-average implied volatility are more likely to have exchange traded options (see the rules of the Options Clearing Corporation in the USA), and greater volumes of options trading and greater volumes of outstanding put options compared to regular companies. Many of these exchange traded options are subject to automated trading orders. Thus, when the aggregate stock prices decline, the increased activity in the options markets and the increased volume of put trading (trading in index puts and single-stock puts) increase the implied volatility of the underlying stock prices; and when aggregate stock prices increase, then there is a substantial decrease in both the volume of new put options (the put/call ratio declines) and the prices of existing put options, all of which causes a decline in implied volatility. This hypothesis also explains one of the major flaws of the old and new VIX – *i.e.* since the VIX is based on the volume of outstanding put and call options, if there are more outstanding puts than calls in more trading periods (and this difference in option volume is attributable largely to human bias of being more sensitive to losses and not to the operational and market risk of the underlying companies), then the VIX is inaccurate as a measure of true aggregate volatility.

2 The Accounting-Change Hypothesis

Given that 60%-75% of the market capitalization values of developed markets consist of intangible assets, the disclosure of impairments of intangible assets or a change in accounting principles that involves intangible assets affects stock prices and aggregate implied volatility. When a company records an intangibles impairment charge, both the reported and the perceived values of intangible assets usually decline and the company's stock price will tend to also simultaneously decline. Kosaka reported that companies in the same industry are very likely to follow such major strategic moves and also report impairment and/or other charges.[99] In addition, companies in related industries (*e.g.* suppliers and customers of the subject industry and industries that provide complimentary goods or services) are also very likely to follow such strategies and disclose intangibles impairments or other charges. Such widespread declines in values of intangible assets will likely cause a greater volume of 'differences of opinion' about values of the intangibles and such uncertainty increases implied volatility. Differences of opinions about the values of intangible assets (and thus the inverse returns-volatility relationship) are much more pronounced in the domain of

99 H. Kosaka, 'Japanese Managerial Behavior in Strategic Planning Case Analyses in Global Business Contexts', *Journal of Business Research*, Vol. 57, 2004, pp. 291-296.

aggregate losses (negative returns) than in the domain of aggregate gains (positive returns) primarily because investors are usually more sensitive to losses than they are to gains. The changes in aggregate implied volatility are a direct effect of the changes in aggregate stock prices.

3 The Credit Opacity Hypothesis

When the values of many companies' reported intangible assets and associated accruals change either upwards or downwards in one or a few reporting periods (typically calendar quarters), uncertainty about the credit quality of the firms' assets increases. The Goodwill/Intangibles Rules are not very specific about the classification of and criteria for non-goodwill intangibles; and traditional goodwill is opaque. The collateral value and liquidation value of many intangible assets and especially goodwill are suspect to many lenders. The collateral value and liquidation value of many intangible assets and especially goodwill diverge more and are more volatile in the domain of aggregate losses (negative returns) than in the domain of aggregate gains (positive returns). This asymmetric uncertainty that is primarily attributable to opacity of credit quality of intangible assets causes the aggregate returns-volatility relationship that is stronger in the domain of aggregate losses than in aggregate gains. Note that the changes in the aggregate stock prices and the changes in aggregate implied volatility are both 'results' of asymmetric credit opacity, but do not necessarily cause each other.

4 The Belief Revisions Hypothesis

Because reported goodwill/intangibles values in financial statements can be revised at any time for impairments and the Goodwill/Intangibles Rules do not distinguish between temporary and permanent impairments, the mere possibility of rapid revisions of beliefs of investors/lenders about the company or companies in the industry makes the stock prices decline more rapidly in response to bad news and causes a simultaneous increase in implied volatility. That is, the speed and economic impact of revision of the beliefs of individual traders and lenders and aggregate beliefs (about the values of intangible assets) is much faster and larger in the domain of losses (aggregate losses) than in the domain of gains. This is because humans and many automated trading programs are more sensitive to losses than to gains; and the cost of belief revisions (including opportunity costs) is cheaper in the domain of aggregate losses than in the domain of aggregate gains; losses are magnified by the use of margin accounts and by continuing aggregate losses. Its established in the literature that the values of many disclosed intangible assets (*e.g.* brand equity, human capital, trademarks, contracts, etc.) decline when aggregate stock prices (and/or prices of single stocks) decline, but do not increase by the same percentage change when aggregate stock prices increase. Hence, regardless of the supply/demand of capital, there is a quasi-recursive 'snowball' effect wherein declines in aggregate stock prices precipitate and cause additional/incremental declines in the values of intangible assets, which in turn, causes additional/incremental declines in aggregate stock prices. This phenomenon increases uncertainty and aggregate implied volatility in the domain of aggregate losses (negative returns); and this inverse relationship is

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much stronger than the opposite inverse relationship that is conjectured to occur in the domain of aggregate gains (positive aggregate returns) primarily because increases in stock prices do not create an equal or greater percentage increase in intangible assets.

5 The Trading-Rules and Segmentation Hypothesis

The participants in stock markets can be segmented into various classes – such as amateurs, individual professional traders, pension fund traders, proprietary traders at institutions, day traders, etc. When aggregate stock price returns decline, only a small percentage of traders (the 'intangibles volatility traders') rebalance their portfolios and cause a disproportionate increase in implied volatility. The aggregate inverse return-volatility relationship is asymmetric and much stronger in the domain of aggregate losses than in the domain of aggregate gains because the intangibles volatility traders behave differently from the average market participant – the intangibles volatility traders are more sensitive to losses and risk and are more likely to use options and index futures/options compared to the regular investor; they are either very concerned about intangible assets and periodic changes in aggregate intangible assets or they own or control substantial amounts of shares or bonds of companies that own substantial intangible assets; they tend to have short-term horizons, prefer growth stocks, are risk takers, and are more likely to engage in arbitrage; and they are more likely to use the Goodwill/Intangibles Rules as part of their trading rules. Hence, the asymmetric return-volatility relationship can be largely attributed to the aggregate portfolio rebalancing and arbitrage activities of the intangibles volatility traders. As mentioned, 60-75% of equity market value consists of intangible assets. The Goodwill/Intangibles Rules discussed herein are conjectured to be actual or informal or subconscious trading rules for the intangibles volatility traders (and other individual and institutional investors). These investors try to predict periodic changes in intangible assets, as a leading indicator of stock price changes and aggregate implied volatility. Thus, when forecasted, intangible asset values or changes in intangible asset values decline, then 1) aggregate stock returns decline and aggregate implied volatility increases because of differences between the forecasts and the realization of reported intangible asset values or 2) aggregate implied volatility increases due to increased perceived risk of the market, and as a result, stock prices decline substantially.

6 The Index Re-Balancing Hypothesis

As mentioned, 60-75% of equity market value in developed markets consists of intangible assets. Furthermore, more than five trillion US dollars are invested in stock indices in the form of index funds, index ETFs, index options, and index futures – and this amount exceeds the total market capitalization of stock markets in developed countries. The index construction rules for most stock indices and bond indices require mandatory index rebalancing when the prices and/or returns of stocks or bonds in the index change substantially. This index rebalancing often causes index-tracking funds, index ETFs, and holders of index options/futures to also rebalance their portfolios by buying/selling securities. When these

intangibles-heavy companies experience operating losses or actual or apparent (but undisclosed) impairment of intangible assets or a change in accounting principles that involved intangibles, their individual stock returns and aggregate stock returns tend to decline (that is, changes in their stock prices also drag down stock prices of similar/associated/related companies), and the mandatory index rebalancing that often follows increases aggregate implied volatility; and also, the portfolio rebalancing (that is, the direct result of the index rebalancing) by individual and institutional investors increases aggregate implied volatility. This inverse aggregate returns-volatility relationship is stronger in the domain of aggregate losses (negative returns) than in the domain of aggregate gains (positive returns) because i) for many indices, index rebalancing is not required when stock prices and/or individual stock returns are increasing and ii) the losses that index-tracking funds, index ETFs, and holders of index options/futures incur when index rebalancing occurs in the domain of aggregate losses are much larger than losses incurred when index rebalancing occurs in the domain of gains, and such losses expands the scope of their portfolio rebalancing which in turn, increases aggregate implied volatility. Most of these intangibles-heavy companies that are included in indices are 'growth' stocks and do not pay dividends, and so their total returns consist of only changes in the stock prices, which in turn contains market noise. Investors' use of margin accounts at brokerage houses to purchase securities also amplifies these investors' actual and perceived losses. When these intangibles-heavy companies experience losses or actual or apparent impairment of intangible assets, their aggregate negative returns decline, and when investors that want to maintain their target returns switch to dividend-paying stocks or to fixed income securities, the associated portfolio rebalancing increases aggregate implied volatility.

7 *The Private-To-Public (PTP) Transaction Hypothesis*

In most developed countries, many (or most) companies that effect IPOs or are sold to publicly traded companies own substantial disclosed and/or undisclosed intangible assets. For such companies, undisclosed intangible assets are more important than for regular publicly traded companies or companies that are undergoing seasoned equity offerings – partly because there is an implicit revaluation of their intangible assets around the day of the IPO or the acquisition, and this implicit revaluation is not captured or recorded in the current regime of Goodwill/Intangibles Rules. Also, these private-to-public transactions (PTP) companies often dominate the financial news, and the offering and pricing of the IPO stocks (or acquisition price) carry substantial information content not only about the subject company but also the industry and relationships with suppliers and customers. When these private-to-public transactions (PTP) are effected in the domain of aggregate losses, the rules-induced uncertainty (the Goodwill/Intangibles Rules are not sufficiently specific about the classification of intangible assets and treatment of fluctuating values of intangibles) about the values of intangible assets causes a strong inverse aggregate returns-volatility relationship that is greater than the opposite inverse relationship that exists in the domain of aggregate gains. This asymmetry phenomenon is conjectured to occur because invest-

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ors are less concerned about such rules-induced uncertainty in the domain of aggregate gains (positive returns), and investors tend to be more sensitive to losses than to gains (positive returns).

Zang[100] found that i) more highly leveraged firms report lower goodwill impairment, while firms that have undergone a recent management change report greater goodwill impairment charges; ii) stock return is negatively associated with an unexpected intangibles impairment losses (IIL), and the correlation is stronger for highly leveraged firms; iii) after impairment losses, securities analysts revise earnings forecasts (for upcoming fiscal quarters) downward in response to the unexpected IIL; iv) managers strategically reduce goodwill impairment in order to avoid the violation of debt covenants; and iv) unexpected IIL has substantial information content that pertains to a negative expectations about the future earning power of the firm or an adverse impact on the firm's debt contracts.

Hibbert, Daigler & Dupoyet[101] identified the following theories that attempted to explain the inverse asymmetric returns-volatility relationship:

i The *leverage effect* – by Black[102] – states that negative returns increases financial leverage which makes stocks riskier and increases their volatility.

ii The *volatility feedback hypothesis* – by Poterba & Summers[103] and Campbell & Hentschel[104] – states that increases in volatility results in a decrease in returns.

iii The *behavioural factors hypothesis* – Hibbert, Daigler & Dupoyet found that behavioural factors (*e.g.* representativeness, affect, and extrapolation bias) cause the asymmetric inverse return-volatility relationship; and they also found that the *leverage effect* and the *volatility feedback hypothesis* were not supported by the data.[105] However, the Hibbert, Daigler & Dupoyet study was flawed because the VIX has been shown to be inaccurate, and Hibbert, Daigler & Dupoyet did not test for any effects of goodwill/intangibles and associated accounting rules or for differences among companies in different industries; and they also did not test for the effects of the concentration of IPOs in the sample data.

100 Zang 2008.

101 A. Hibbert, R. Daigler & B. Dupoyet, 'A Behavioral Explanation for the Negative Asymmetric Return-Volatility Relation', *Journal of Banking & Finance*, Vol. 32, 2008, pp. 2254-2266.

102 F. Black, 'Studies of Stock Price Volatility Changes', *in Proceedings of the Business and Economics Section of the American Statistical Association*, 1976, pp. 177-181.

103 J.M. Poterba & L.H. Summers, 'The Persistence of Volatility and Stock Market Fluctuations', *The American Economic Review*, Vol. 76, No. 5, 1986, pp. 1142-1151.

104 J.Y. Campbell & L. Hentschel, 'No News Is Good News: An Asymmetric Model of Changing Volatility in Stock Returns', *Journal of Financial Economics*, Vol. 31, 1992, pp. 281-318.

105 Hibbert, Daigler & Dupoyet 2008.

F Deferred Taxes, Goodwill/Intangibles, and the Financial Services Industry

Goodwill/Intangibles Rules create significant deferred tax assets/liabilities because the application of these accounting rules can result in substantial differences between the tax treatment and book treatment of amortization/expensing of goodwill/intangibles. There is no required retroactive restatement of financial statement when companies change the principles of their tax statements and/or book accounting. Hence, management can then use such deferred tax asset/liability accounts to manipulate earnings over time.[106] These deferred tax asset/liability accounts carry substantial information content (which has not been analyzed fully in the existing literature), which is likely to increase stock market volatility, because of its complexity and opaque nature.

The impact of ASC 805/350 and IFRS-3R on compliance with the statutory capital-reserve requirements for banking organizations (established under the Basel capital rules and Title 12 of the US Code) can be significant. Under present banking regulations, bank organizations are not permitted to include goodwill in their Tier-1 capital; and banks must perform periodic tests of their mandatory minimum capital. Banking organizations' compliance with ASC 805/350 has been primarily for financial reporting purposes. Since goodwill is treated as a special item in the Title 12 (of the US code) calculations, a change in accounting (such as ASC 805/350) that keeps goodwill on the banks' balance sheets indefinitely can provide significant incentives for banking organizations to manipulate the allocation of goodwill to Reporting-Units and to reduce acquired goodwill. This will result in suboptimal management decisions by banks regarding capital maintenance and may result in disclosure that does not reflect the true risk of banks.[107]

During December 2008, US government bank regulators approved a new accounting rule that requires the deduction/netting of certain deferred tax liabilities (that are associated with goodwill) from acquired goodwill that in turn, is

106 K. Chau, A. Leung, C. Yiu & S. Wong. 'Estimating the Value of Enhancement Effects of Refurbishment', *Facilities*, Vol. 21, No. 1/2, 2003, pp. 13-19; Chen, Kohlbeck & Warfield 2008; Dunse, Hutchinson & Goodacre 2004; Finch 2006; Marston 2004.

107 Marston 2004.

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deducted from banks' Tier-1 capital.[108] This new rule is critical (given consolidations in the global financial services industry) and will have the net effect of increasing the amount of goodwill that is included in banks' Tier-1 capital. The December 2008 banking rule (US) is likely to result in inadequate/inaccurate disclosure because goodwill will remain opaque, and banks' management will continue to have significant discretion about the impairment of goodwill and are very likely to have substantial incentives for manipulation of the goodwill-related deferred tax liability account. The deferred tax liability that is associated with goodwill is partly based on the estimated impairment and/or amortization of goodwill (and the applicable tax rate), which in turn, is affected by ASC 805/350.[109] The US government's contention that the deferred tax liability associated with goodwill does not represent a claim on the assets of the banking organization is wrong, because technically, goodwill-related deferred tax liabilities are future tax liabilities that are created by the differences between the banking organization's income under GAAP and its income for tax purposes, which in turn

108 *See* <www.forexhound.com/article.cfm?articleID=120795> which states in part: "...the federal banking and thrift regulatory agencies today approved a final rule that would permit a banking organization to reduce the amount of Goodwill it must deduct from Tier-1 Capital by any associated deferred tax liability. Under the final rule, the regulatory capital deduction for Goodwill would be equal to the maximum capital reduction that could occur as a result of a complete write-off of the Goodwill under generally accepted accounting principles (GAAP). The final rule is in substance the same as the proposal issued in September. The final rule will be effective 30 days after publication in the Federal Register. However, banking organizations may adopt its provisions for purposes of regulatory capital reporting for the period ending December 31, 2008...."

See also 'US Treasury Department and the Federal Deposit Insurance Corporation', *Minimum Capital Ratios; Capital Adequacy Guidelines; Capital Maintenance; Capital: Deduction of Goodwill Net of Associated Deferred Tax Liability*, 2008, available at <www.forexhound.com/Uploads/FEDREPORT.pdf>. Department of the Treasury (Office of the Comptroller of the Currency) 12 CFR Part 3, Docket ID OCC-2008-0025, RIN 1557-AD13. Federal Reserve System, 12 CFR Parts 208 and 225; Regulations H and Y; Docket No. R-1329. Federal Deposit Insurance Corporation, 12 CFR Part 325; RIN 3064-AD32. *See* also *US v. Winstar*, 518 U.S. 839 (1996).

109 The US Treasury information statement (<www.forexhound.com/Uploads/FEDREPORT.pdf>) states in part "...As several commenters stated, if goodwill becomes impaired or is derecognized under GAAP, a banking organization's maximum exposure to loss is equal to the carrying value of the goodwill less any associated deferred tax liability. The Agencies agree with commenters that, unlike most other liabilities, a deferred tax liability associated with goodwill does not represent a claim on or interest in the cash or assets of the organization. For these reasons, the Agencies believe that it is appropriate to permit a banking organization to reduce the amount of goodwill it must deduct from Tier-1 capital by the amount of any associated deferred tax liability, that is, the amount that reflects the banking organization's maximum exposure to loss if such goodwill becomes impaired or derecognized under GAAP....One commenter disagreed with the calculation of the maximum capital reduction that could occur as a result of the impairment of goodwill in the example in the NPR. This commenter asserted that the maximum capital reduction under GAAP should be equal to the carrying value of goodwill less the sum of tax benefits recognized as of the (*See* 12 U.S.C. 1828(n)) date of impairment and those tax benefits to be realized in future periods. The Agencies believe that current rules adequately address the treatment of deferred tax assets for regulatory capital purposes and that deferred tax assets that may be created for tax benefits to be realized in the future are beyond the scope of this NPR...."

arise from differences between GAAP accounting for goodwill (FASB and IASB) and tax rules for goodwill.

Proposition 3: *If goodwill becomes impaired or is derecognized under GAAP, then a banking organization's maximum exposure to loss is NOT equal to the carrying value of the goodwill less any associated deferred tax liability.*

Proof: the US government's contention that if goodwill becomes impaired or is derecognized under GAAP, then a banking organization's maximum exposure to loss is equal to the carrying value of the goodwill less any associated deferred tax liability is wrong, because the deferred tax liability represents a future tax claim on the company's assets, and the associated deferred tax liability is derived from and is less than the expensed/amortized goodwill.

Let:

G_a = total goodwill at beginning of period t.

G_t = Goodwill expensed/amortized under tax rules in period t.

G_g = Goodwill expensed/amortized under GAAP in period t.

T_t = the corporate income tax rate in period t.

D_{tl} = the deferred tax liability associated with expensed/amortized goodwill in period t.

D_{ta} = the deferred tax asset associated with expensed/amortized goodwill in period t.

I_g = the bank's taxable income after goodwill is amortized/expensed under GAAP.

I_t = the bank's taxable income after goodwill is amortized/expensed under tax rules.

L = the banking organization's maximum loss from the impairment/amortization of goodwill in period t.

I_i = the bank's pre-tax income before amortization or expensing of goodwill under either GAAP or tax rules.

Then:

$G_t, G_g \varepsilon G_a$

If all goodwill is expensed in period t, then $G_t, G_g = G_a$

$I_t, I_g \leq I_i$

$I_i - G_t = I_t$

$I_i - G_g = I_g$

$D_{ta} = (I_t - I_g)*T_t$; and substituting, $D_{ta} = [(I_i - G_t) - (I_i - G_g)]*T_t = [-G_t + G_g]*T_t$

$D_{tl} = (I_g - I_t)*T_t$; and substituting, $D_{tl} = [(I_i - G_g) - (I_i - G_t)]*T_t = [-G_g + G_t]*T_t$

Therefore, $D_{tl} \leq G_g, G_t$

Also, once G_t or G_g is expensed, D_{tl} has no continuing relation to G_a, and D_{tl} will change only if future estimated income tax rates change. Similarly, once G_t or G_g is expensed, D_{ta} has no continuing relation to G_a, and D_{ta} will change only if future estimated income tax rates change. D_{tl} and D_{ta} are not a 'reduction' of goodwill, but rather, are tax items that are derived from taxable income, and hence, D_{tl} and D_{ta} will vary as tax rates change due to changes in the banking organization's taxable income – *i.e.* if $T_t \neq T_{(t+1)} \neq .....T_{(t+n)}$. The goodwill-rela-

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ted deferred tax liability for prior periods was derived from goodwill that was already expensed/amortized in prior periods (*i.e.* t-1, t-2, t-3, etc.) and is not relevant for the calculation of the maximum loss in period t.

Therefore, $L = G_a$

Furthermore, the criteria for the calculation of goodwill-related deferred tax liabilities may not be based on the nature/permanence of underlying assets, financeability, or quality of assets or the type/structure/risk of the banking organization that generated the acquired goodwill.

G ASC 805/350, IASB-38, and IFRS-3R Limits Competition and Causes Collusion and Price Discrimination

Holzl found that sunk costs associated with investment in dedicated intangible assets function as mobility barriers, and such sunk costs are symmetrical with respect to entry and exit; and the influence of such sunk costs was robust to aggregation.[110] Hence, there is some indication that internally generated intangible assets affect firm strategies, the nature of competition, and entry/exit decisions.

The Goodwill/Intangibles Rules (ASC 805/350, IASB-38, and IFRS-3R) limits/restricts competition in industries by discouraging the acquisitions and mergers of established companies that have substantial goodwill and intangibles (particularly those companies in the technology, healthcare, business services sectors), because the purchaser company will be required to a) recognize substantial opaque goodwill in its balance sheet on a continuing basis (which creates uncertainty about the purchaser's liquidity and the value of its assets); b) occasionally disclose the allocation of goodwill among 'Reporting-Units' and CGUs, which will compel disclosure of segment/division information that emerging growth companies are traditionally reluctant to disclose for competition reasons; and c) incur additional costs for both internal and third-party valuations and impairment opinions. Goodwill and some intangibles are opaque and create uncertainty about the financial stability of the subject company and thus, tend to reduce its estimated value and credit ratings. For the same reasons, ASC 805/350, IASB-38, and IFRS-3R also limit competition in industries by discouraging the acquisitions and mergers of start-up companies and emerging growth companies that have incurred substantial start-up costs.[111] However, under US GAAP and IASB rules, most start-up costs and development costs are expensed.

ASC 805/350 and IASB-38 restrict/limit competition in industries because they do not distinguish between various sizes of companies – the one-size-fits-all approach does not work.[112] Large companies that have multiple units are more vulnerable to the adverse effects of the Goodwill/Intangibles Rules than small companies. ASC 805/350 and IASB-38 restrict/limit competition in industries because they do not distinguish between companies that have different economic

110 Holzl 2005.

111 Mosca & Villani 2004.

112 Kothari, Leone & Wasley 2005.

impact on industries and the overall economy. Thus, a company that has two million medium-sized customers and one thousand large suppliers faces the same rules as a company that has ten small suppliers and two thousand small customers. This creates distortionary effects in financial analysis and industry analysis and increases systemic risk. Small/medium companies that have substantial goodwill/intangibles are paying proportionately much more for professional valuation services to assess their goodwill/intangibles.

The Goodwill/Intangibles Rules (ASC 805/350 and IASB-38) restrict/limit competition in industries because the following three types of business reorganizations can result in actionable impairments: a) within-company business reorganizations, b) a merger or acquisition that is classified as a business reorganization under tax rules, and c) an acquisition of a company that is not classified as a business reorganization, but causes a business reorganizing of the acquirer company after the acquisition. In the USA, FASB has ruled that any restructuring will automatically trigger an impairment test. Hence, firms that own substantial intangibles/goodwill or who will own substantial goodwill/intangibles after any restructuring/reorganization will be very reluctant to effect any restructuring/reorganization that would otherwise improve their operations or improve overall public welfare.

The Goodwill/Intangibles Rules (ASC 805/350 and IASB-38) restrict/limit competition in industries because they can cause any two or three companies to collude to either merge, acquire each other, or enter into joint ventures in order to reduce their impairment charges or to reduce the number of 'Reporting-Units' or CGUs (for purposes of applying Goodwill/Intangibles Rules).

As illustrated in Mosca & Viscolani,[113] Rodov & Leliaert,[114] Lim & Dallimore,[115] Tollington,[116] Thompson, Hoskins & Flesher,[117] and Galbreath,[118] 'intangibles' and 'goodwill' consist of substantial portions of what is now classified as marketing expenses; and the classification 'marketing expenses' (which are expensed) do not reflect the true nature of the resulting assets and expenses. As explained in Kosaka, in many developed countries, companies tend to watch and copy their competitors' and vendors' accounting positions.[119] ASC 805/350, IASB-38, and IFRS-3R: a) provide strong incentives for companies to collude with their vendors to misclassify marketing expenses, in order to achieve desired accounting treatments, and b) provide strong incentives for companies in an industry to collude among themselves to misclassify expenses in order to achieve desired accounting treatments (this may be achieved through trade associations) with the knowledge that accounting/auditing practices and accounting records typically depend on what is 'generally accepted' in the industry.

113 Mosca & Viscolani 2004.
114 Rodov & Leliaert 2002.
115 Lim & Dallimore 2004.
116 Tollington 2006.
117 Thompson, Hoskins & Flesher 1991.
118 Galbreath 2000.
119 Kosaka 2004.

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Proposition 4: *ASC 805/350, IASB-38, and IFRS-3R can cause price discrimination.*

Proof: For example, a firm (F_a) that grows primarily through joint ventures and strategic alliances will typically record the cost of such JVs/alliances as intangibles and may record the estimated value of such JVs/alliances as intangibles (if another firm (F_b) acquires F_a, F_b will most likely record both elements as intangibles). Assume that F_a sells products to two categories of customers which are customers for which the transaction costs are high and the value of the JV/alliance is low (C_a) and customers for which the transaction costs are low and the value of the JV/Alliance is high (C_b). For each product that F_a manufactures and/or sells, there can be differences in quality. Also assume that for the founders and shareholders of F_a, the main exit is a sale to another company and that intangibles/goodwill generally increases the perceived risk of a company and reduces is market value. In these circumstances, ASC 805/350, IASB-38, and IFRS-3R provide very strong incentives for F_a to enter into JVs/alliances with C_b customers on terms that are less favourable than the same transactions with C_b customers – which would constitute price discrimination. In another example, assume that a firm F_c sells products to two categories of customers which are customers for which the marketing expenses per unit are high and the value of the resulting brand equity is low (C_c) and customers for which the marketing expenses per unit are low and the value of the resulting brand equity is high (C_d). For each product that F_c manufactures and/or sells, there can be differences in quality. Also assume that for the founders and shareholders of F_c, the main exit is a sale to another company; and intangibles/goodwill generally increases the perceived risk of a company and reduces its market value. In these circumstances, ASC 805/350, IASB-38, and IFRS-3R provide very strong incentives for F_c to sell the same product at lower prices to C_c customers than the prices that are offered to C_d customers. Hence, ASC 805/350, IASB-38, and IFRS-3R constrain the feasible set of distribution systems/channels for the typical firm, because of the potentially adverse accounting consequences associated with certain distribution channels.

Proposition 5: *The impairment rules in ASC 805/350, IASB-38, and IFRS-3R encourage collusion and tying among companies in an industry.*

Proof: Assume that the industry is an oligopoly and there are five major companies in the industry – F_a...F_e. Each company uses two main types of raw materials – R_1, R_2 – to create three types of products named P_1, P_2, and P_3. Each of R_1 and R_2 contain substantial amounts of Intangible Assets. Each of F_a...F_e incurs substantial amount of marketing expenses and product development expenses (which can be classified as Intangible Assets) to develop and build brands of P_1, P_2, and P_3. Each company carries substantial inventories of R_1, R_2, P_1, P_2, and P_3. Assume that a supplier creates a new raw material named R_3 which substantially reduces the values of R_1 and R_2 (and affects the values of P_1, P_2, and P_3). The industry is highly competitive, and customers and suppliers rely on financial reports of F_a...F_e, when deciding on whether to do business with any of the five firms – hence, any impairment write-down has substantial adverse information

effects not only on the subject company but also on other companies in industry.[120] The following are three possible scenarios that illustrate the negative effects of the Goodwill/Intangibles Rules on competition:

a $F_a...F_e$ have different auditing companies; and F_a chooses to write down the values of its inventory of R_1 and R_2 and P_1, P_2, and P_3 at year end, but none of the other four main companies ($F_b...F_e$) write down their inventory. F_a will face substantial loss of sales revenues and reported earnings due to the information effects of disclosure. This circumstance will force F_a and its auditor to seek (probably by illegal means) information about the cost accounting and financial accounting policies of $F_b...F_e$. One alternative for F_a will be to enter into tying arrangements wherein F_a will tie sales of pairs of P_1, P_2, and P_3 and offer one of the products at a substantial discount in order to essentially liquidate its inventory of R_1, R_2, P_1, P_2, and P_3 without recording impairment – or to generate more sales revenues to offset losses from recording impairments. F_a's second alternative is to collude with a smaller manufacturer in the industry to sell its inventory of R_1, R_2, P_1, P_2, and P_3 at inflated prices in exchange for market share or other consideration.

b $F_a...F_e$ have different auditing companies; and all of the five main companies ($F_a...F_e$) write down their inventory of R_1, R_2, P_1, P_2, and P_3. $F_a...F_e$ will face substantial loss of sales revenues and reported earnings due to the information effects of disclosure (disclosure of write-downs may discourage prospective customers, and will reduce earnings). This circumstance will force $F_a...F_e$ and their auditors to seek (probably by illegal means) information about each other's cost accounting and financial accounting policies – and this information can be obtained only by illegal means which will involve some collusion and illegal information sharing. In these circumstances, the Goodwill/Intangibles Rules can compel $F_a...F_e$ to illegally share information. Another result is that $F_a...F_e$ are more likely to enter into Tying arrangements wherein each company will tie sales of pairs of P_1, P_2, and P_3 and offer one of the products at a substantial discount in order to essentially liquidate their inventory of R_1, R_2, P_1, P_2, and P_3 without recording impairments – or to generate more sales revenues to offset losses from recording impairments. Another result is that all five companies will collude to fix minimum prices for P_1, P_2, and P_3 in order to maintain their sales revenues.

c Two or three pairs consisting of companies among $F_a...F_e$ have the same auditing companies; and one pair of companies among $F_a...F_e$ (F_a, F_b) choose to write down the values of their inventory of R_1, R_2, P_1, P_2, and P_3 at year end, while three main companies (among $F_a...F_e$) do not write down their inventory. (F_a, F_b) may incur substantial loss of sales revenues and reported earnings due to the negative information effects of disclosure. This circumstance will likely compel F_a and F_b and their auditor to seek (probably by illegal means) information about the cost accounting and financial accounting policies of F_c, F_d, and F_e, especially where as in this case, they all have the same auditor. One alternative for F_a and F_b is to enter into tying arrange-

120 *Ibid.*

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ments wherein they will tie sales of pairs of P_1, P_2, and P_3 and offer one of the products at a substantial discount in order to essentially liquidate their inventories of R_1, R_2, P_1, P_2, and P_3 without recording any impairment – or to generate more sales revenues to offset losses from recording impairments. A second alternative for F_a and F_b is to collude with a smaller manufacturer in the industry to sell their inventory of R_1 and R_2 at inflated prices in exchange for granting market share or other consideration to such manufacturer. A third alternative is for F_a and F_b to charge different prices to different customers. A fourth alternative for F_a and F_b is to enter into re-sale price maintainance agreements. A fifth alternative for F_a and F_b is to collude to set prices in order to maintain their sales revenues.

H A New Goodwill/Intangibles Accounting Model

Lev,[121] Sullivan,[122] Kaplan & Norton,[123] and Sveiby[124] introduced various methods for measuring intellectual capital or intangible assets,[125] but to date, no one method has solved all the disclosure and economic-psychology problems inherent in goodwill accounting, and there has not been any significant effort to standardize the measurement and reporting of indicators developed in these articles.[126]

121 B. Lev, *Intangibles: Management, Measurement and Reporting*, Brookings Institution, Washington 2001.

122 P. Sullivan & P.Sr. Sullivan, 'Valuing Intangibles Companies: An Intellectual Capital Approach', *Journal of Intellectual Capital*, Vol. I, No. 4, 2000, pp. 328-340.

123 R.S. Kaplan & D.P. Norton, 'The Balanced Scorecard: Measures That Drive Performance', *Harvard Business Review*, January-February 1992, pp. 71-79.

124 K.E. Sveiby, 'The Intangible Assets Monitor', *Journal of Human Resource Costing & Accounting*, Vol. 2, No. 1, 1997, pp. 73-97.

125 N. Bontis, W.C.C. Keow & S. Richardson, 'Intellectual Capital and Business Performance in Malaysian Industries', *Journal of Intellectual Capital*, Vol. 1, No. 1, 2000, pp. 85-100.

126 *See* Oldroyd 1994; Rodov & Leliaert 2002; Lim & Dallimore 2004; Tollington 2006; Galbreath 2000; T. Tollington, 'Separating the Brand Asset from the Goodwill Asset', *Journal of Product & Brand Management*, Vol. 4, 1998, pp. 291-304; Tollington & Liu 1998; Blanton & Christie 2003; Bontis 2003; Thompson, Hoskins & Flesher 1991; P. Banegil & S.R. Galvan, 'Intangible Measurement Guidelines: A Comparative Study in Europe', *Journal of Intellectual Capital*, Vol. 8, No. 2, 2007, pp. 92-204.

Spattdiscussed the regulation of financial markets and the complexity of financial stability.[127] William suggested ways to reflect "time" in financial statements.[128]

Table 2 Methods for measuring intangibles[129]

Approx. year	Label	Major Proponent	Category	Description of Measure
2009	ICU Report	*Sanchez 2009*	SC	ICU is a result of an EU-funded project to design an IC report specifically for universities. Contains three parts: (1) Vision of the institution, (2) Summary of intangible resources and activities, (3) System of indicators.
2008	EVVICAE™	*McMcCutcheon 2008*	DIC	Developed by the Intellectual Assets Centre in Scotland as a web-based EVVICAE toolkit based on the work of Patrick H. Sullivan (1995/2000).
2008	Regional Intellectual Capital Index (RICI)	*Schiuma, Lerro, Carlucci 2008*	SC	Uses the concept of the Knoware Tree with four perspectives: (hardware, netware, wetware, software) to create a set of inidicators for regions.
2007	Dynamic monetary model	*Milost 2007*	DIC	The evaluation of employees is done with analogy from to the evaluation of tangible fixed assets. The value of an employee is the sum of the employee's purchase value and the value ofinvestments in an employee, less the value adjustment of an employee.

127 C.S. Spatt, 'Regulatory Conflict: Market Integrity vs. Financial Stability', *U. Pitt. L. Rev.*, Vol. 71, p. 625, 2010, at 630-632 and C.S. Spatt, 'Complexity of Regulation', *Harv. Bus. L. Rev. Online*, Vol. 3, No. 1, 2012, available at <www.hblr.org/?p=2299>.

128 G. Williams, 'Capturing Time in Financial Statements', *Harv. Bus. L. Rev. Online*, Vol. 2, No. 150, 2012, available at <www.hblr.org/?p=2140>. This article states in part "...If capital must be repaid at a particular point in time, then to some extent it is not quite (regulatory) capital, at least if capital is considered to be assets over which no one has any claims except shareholders (or their equivalent).These differences in repayability also introduce a temporal factor into the nature of capital that is typically obscured by the standard company balance sheet. Time is furthermore implicit in the notion that capital must be available as a buffer to intermittent shocks and as a way of accommodating creditors at insolvency, meaning that capital must be reliably available over a range of times. While the standard balance sheet presumes by its structure that capital will be available at insolvency, in reality – at least for financial institutions – the time prior to insolvency or prior to a potential insolvency is perhaps even more crucial, because insolvency can be unpredictable[11] and because the time frames during which creditors and investors (and, in all likelihood, managers) believe they must act become increasingly abbreviated when insolvency appears likely.... The basic form of a balance sheet largely obscures all of the ways in which time plays a role in the state of a company's finances...."

129 K. Sveiby, *Methods for Measuring Intangible Assets*, 2010, available at: <www.sveiby.com/articles/IntangibleMethods.htm>.

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Table 2 (continued)

Approx. year	Label	Major Proponent	Category	Description of Measure
2004	IAbM	*Japanese Ministry of Economy, Trade and Industry.*	SC	Intellectual asset-based management (IAbM) is a guideline for IC reporting introduced by the Japanese Ministry of Economy, Trade and Industry. An IAbM report should contain: (1) Management philosophy. (2) Past to present report. (3) Present to future. (4) Intellectual-asset indicators. The design of indicators largely follows the MERITUM guidelines. Described in Johanson *et al.* (2009)
2004	SICAP		SC	An EU funded project to develop a general IC model specially designed for public administrations and a technological platform to facilitate efficient management of the public services. The model structure identifies three main components of intellectual capital: public human capital, public structural capital and public relational capital. Described in Y. Ramirez (2010)
2004	National Intellectual Capital Index	*Bontis 2004*	SC	A modified version of the Skandia Navigator for nations: National Wealth is comprised by Financial Wealth and Intellectual Capital (Human Capital + Structural Capital)
2004	Topplinjen/ Business IQ	*Sandvik 2004*	SC	A combination of four indices; Identity Index, Human Capital Index, Knowledge Capital Index, Reputation Index. Developed in Norway by consulting firm Humankapitalgruppen. <www.humankapitalgruppen.no>
2003	Public sector IC	*Bossi 2003*	SC	An IC model for public sector, which builds on Garcia (2001) and adds two perspectives to the traditional three of particular importance for public administration: transparency and quality. It also identifies negative elements, which generate intellectual liability. The concept of intellectual liability represents the space between ideal management and real management, one ofthe duties a public entity must fulfill for society. Described in Ramirez (2010)

Table 2 (continued)

Approx. year	Label	Major Proponent	Category	Description of Measure
2003	Danish guidelines	*Mouritzen, Bukh et al. 2003*	SC	A recommendation by government-sponsored research project for how Danish firms should report their intangibles publicly. Intellectual capital statements consist of 1) a knowledge narrative, 2) a set of management challenges, 3) a number of initiatives and 4) relevant indicators. <http://en.vtu.dk/publications/2003/intellectual-capital-statements-the-new-guideline>
2003	IC-dVAL™	*Bonfour 2003*	SC	"Dynamic Valuation of Intellectual Capital". Indicators from four dimensions of competitiveness are computed: Resources & Competencies, Processes, Outputs and Intangible Assets (Structural Capital and Human Capital indices). *Journal of IC*, Vol. 4, No. 3, 2003
2002	Intellectus model	*Sanchez-Canizares 2007*	SC	Intellectus Knowledge Forum of Central Investigation on the Society of Knowledge. The model is structured into 7 components, each with elements and variables. Structural capital is divided in organizational capital and technological capital. Relational capital is divided in business capital and social capital.
2002	FiMIAM	*Rodov & Leliaert 2002*	DIC/MCM	Assesses monetary values of IC components. a combination both tangible and Intangible assets measurement. The method seeks to link the IC value to market valuation over and above book value. *Journal of IC*, Vol. 3, No. 3, 2002
2002	IC Rating™	*Edvinsson 2002*	SC	An extension of the Skandia Navigator framework incorporating ideas from the Intangible Assets Monitor; rating *efficiency*, *renewal* and *risk*. Applied in consulting <www.icrating.com/>
2002	Value Chain Scoreboard™	*Lev 2002*	SC	A matrix of non-financial indicators arranged in three categories according to the cycle of development: Discovery/ Learning, Implementation, Commercialization. Described in book B. Lev, *Intangibles: Management, Measurement and Reporting*, 2005.

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Table 2 (continued)

Approx. year	Label	Major Proponent	Category	Description of Measure
2002	Meritum guidelines	*Meritum Guidelines 2002*	SC	An EU-sponsored research project, which yielded a framework for management and disclosure of Intangible Assets in 3 steps: 1) define strategic objectives, 2) identify the intangible resources, 3) actions to develop intangible resources. Three classes of intangibles: Human Capital, Structural Capital and Relationship Capital. The original Meritum final report can be found here. Meritum is also further developed by members of E*KNOW-NET. A summary is found on P.N Bukh's home page.
2001		*Caba & Sierra 2001*	SC	An IC measuring model for public sector based on the European Foundation Quality Management Model (EFQM). It integrates the elements from the EFQM model in three blocks which compose intellectual capital: human capital, structural capital and relationalcapital. Described in Ramirez (2010)
2001	Intangible assets statement	*Garcia 2001*	SC	An IC measuring model for public sector based on the IAM with Indicators of: growth/renovation efficiency and stability.
2001	Knowledge Audit Cycle	*Schiuma & Marr 2001*	SC	A method for assessing six knowledge dimensions of an organisation's capabilities in four steps. 1) Define key knowledge assets. 2) Identify key knowledge processes. 3) Plan actions on knowledge processes. 4) Implement and monitor improvement, then return to 1). Described in book Deloitte & Touche, *Profit with People*, 2002. Hard to find. Try Giovanni Schiuma's homepage.
2000	Value Creation Index (VCI)	*Baum, Ittner, Larcker, Low, Siesfeld, and Malone 2000*	SC	Developed by Wharton Business School, together with Cap Gemini Ernst & Young Center for Business Innovation and Forbes. They estimate the importance of different nonfinancial metrics in explaining the market value of companies. Different factors for different industries. The VCI developers claim to focus on the factors that markets consider important rather than on what managers say is important. <www.forbes.com/asap/2000/0403/140.html>

Table 2 (continued)

Approx. year	Label	Major Proponent	Category	Description of Measure
2000	The Value Explorer™	*Andriessen & Tiessen 2000*	DIC	Accounting methodology proposed by KMPG for calculating and allocating value to 5 types of intangibles: (1) Assets and endowments, (2) Skills & tacit knowledge, (3) Collective values and norms, (4) Technology and explicit knowledge, (5) Primary and management processes. Described in *Journal of IC* 2000, available at <www.weightlesswealth.com/downloads/Implementing%20the%20value%20explorer.PDF>
2000	Intellectual Asset Valuation	*Sullivan 2000*	DIC	Methodology for assessing the value of Intellectual Property.
2000	Total Value Creation, TVC™	*Anderson & McLean 2000*	DIC	A project initiated by the Canadian Institute of Chartered Accountants. TVC uses discounted projected cash-flows to re-examine how events affect planned activities. <www.cica.ca/about-the-profession/cica/annual-reports/item21582.pdf>
1999	Knowledge Capital Earnings	*Lev 1999*	ROA	Knowledge Capital Earnings are calculated as the portion of normalised earnings (3 years industry average and consensus analyst future estimates) over and above earnings attributable to book assets. Earnings then used to capitalise Knowledge Capital. B. Lev's home page.
1998	Inclusive Valuation Methodology (IVM)	*McPherson 1998*	DIC	Uses hierarchies of weighted indicators that are combined, and focuses on relative rather than absolute values. Combined Value Added = Monetary Value Added combined with Intangible Value Added.
1998	Accounting for the Future (AFTF)	*Nash H. 1998*	DIC	A system of projected discounted cash-flows. The difference between AFTF value at the end and the beginning of the period is the value added during the period. <http://home.sprintmail.com/~humphreynash/future_of_accounting.htm>
1998	Investor assigned market value (IAMV™)	*Standfield 1998*	MCM	Takes the Company's True Value to be its stock market value and divides it in Tangible Capital + (Realised IC + IC Erosion + SCA (Sustainable Competitive Advantage).

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Table 2 (continued)

Approx. year	Label	Major Proponent	Category	Description of Measure
1997	Calculated Intangible Value	*Stewart 1997*	MCM	The value of intellectual capital is considered to be the difference between the firm's stock market value and the company's book value. The method is based on the assumption that a company's premium earnings, *i.e.* the earnings greater-than those of an average company within the industry, result from the company's IC. It is hence a forerunner of Lev's Knowledge Capital model. Kujansivu & Lönnqvist (2007) gives a good example of the calculation.
1997	Economic Value Added (EVA™)	*Stern & Stewart 1997*	ROA	Calculated by adjusting the firm's disclosed profit with charges related to intangibles. Changes in EVA provide an indication of whether the firm's intellectual capital is productive or not. EVA is the property of the consulting firm Sternstewart and one of the most common methods. <www.sternstewart.com/?content=proprietary&p=eva>. A good evaluation of the method is found here: <http://lipas.uwasa.fi/~ts/eva/eva.html
1997	Value Added Intellectual Coefficient (VAIC™)	*Pulic 1997*	ROA (doesn't quite fit any of the categories)	An equation that measures how much and how efficiently intellectual capital and capital employed create value based on the relationship to three major components: (1) capital employed; (2) human capital; and (3) structural capital. $VAIC^{TM}_i = CEE_i + HCE_i + SCE_i$ <www.vaic-on.net/start.htm>
1997	IC-Index™	*Roos, Roos, Dragonetti & Edvinsson 1997*	SC	Consolidates all individual indicators representing intellectual properties and components into a single index. Changes in the index are then related to changes in the firm's market valuation.
1996	Technology Broker	*Brooking 1996*	DIC	Value of intellectual capital of a firm is assessed based on diagnostic analysis of a firm's response to twenty questions covering four major components of intellectual capital: Human-centred Assets, Intellectual Property Assets, Market Assets, Infrastructure Assets.

Table 2 (continued)

Approx. year	Label	Major Proponent	Category	Description of Measure
1996	Citation-Weighted Patents	*Dow Chemical 1996*	DIC	A technology factor is calculated based on the patents developed by a firm. Intellectual capital and its performance is measured based on the impact of research development efforts on a series of indices, such as number of patents and cost of patents to sales turnover, that describe the firm's patents. The approach was developed by Dow Chemical and is described by Bontis (2001).
1995	Holistic Accounts	*Rambøll Group*	SC	Rambøll is a Danish consulting group, which since 1995 reports according to its own 'Holistic Accounting' report. It is based on the EFQM Business Excellence model <www.efqm.org>. Describes nine key areas with indicators: Values and management, Strategic processes, Human Resources, Structural Resources, Consultancy, Customer Results, Employee Results, Society Results and Financial Results. Their report can be downloaded from <www.ramboll.com>
1994	Skandia Navigator™	*Edvinsson and Malone 1997*	SC	Intellectual capital is measured through the analysis of up to 164 metric measures (91 intellectually based and 73 traditional metrics) that cover five components: (1) financial; (2) customer; (3) process; (4) renewal and development; and (5) human. Skandia insurance company brought it to fame, but Skandia no longer produces the report.
1994	Intangible Asset Monitor	*Sveiby 1997*	SC	Management selects indicators, based on the strategic objectives of the firm, to measure four aspects of creating value from 3 classes of intangible assets labelled: People's competence, Internal Structure, External Structure. Value Creation modes are: (1) growth (2) renewal; (3) utilisation/efficiency; and (4) risk reduction/stability.<www.sveiby.com/articles/companymonitor.html>
1992	Balanced Score Card	*Kaplan and Norton 1992*	SC	A company's performance is measured by indicators covering four major focus perspectives: (1) financial perspective; (2) customer perspective; (3) internal process perspective; and (4) learning perspective. The indicators are based on the strategic objectives of the firm. <www.balancedscorecard.org/>

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Table 2 (continued)

Approx. year	Label	Major Proponent	Category	Description of Measure
1990	HR statement	*Ahonen 1998*	DIC	A management application of HRCA widespread in Finland. The *HR profit and loss account* divides personnel related costs into three classes for the human resource costs: renewal costs, development costs, and exhaustion costs. 150 listed Finnish companies prepared an HR statement in 1999.
1989	The Invisible Balance Sheet	*Sveiby (ed. 1989) The "Konrad" group*	MCM	The difference between the stock market value of a firm and its net book value is explained by three interrelated "families" of capital; Human Capital, Organisational Capital and Customer Capital. The three categories first published in this book in Swedish have become a de facto standard. <www.sveiby.com/articles/denosynl.htm>; <www.sveiby.com/articles/invisiblebalance.html>
1988	Human Resource Costing & Accounting (HRCA 2)	*Johansson 1996*	DIC	Calculates the hidden impact of HR related costs which reduce a firm's profits. Adjustments are made to the P&L. Intellectual capital is measured by calculation of the contribution of human assets held by the company divided by capitalised salary expenditures. Has become a research field in its own right. <http://info.emeraldinsight.com/products/journals/journals.htm?PHPSESSID=f11hihj3bc4itlehecphcvn5i3&id=JHRCA>
1970's	Human Resource Costing & Accounting (HRCA 1)	*Flamholtz 1985*	DIC	The pioneer in HR accounting, Eric Flamholtz, has developed a number of methods for calculating the value of human resources. Several papers are available for download on his home page. <www.harrt.ucla.edu/faculty/bios/flamholtz.html>
1950's	Tobin's q	*Tobin James*	MCM	The 'q' is the ratio of the stock market value of the firm divided by the replacement cost of its assets. Changes in 'q' provide a proxy for measuring effective performance or not of a firm's intellectual capital. Developed by the Nobel Laureate economist James Tobin in the 1950's. <http://en.wikipedia.org/wiki/Tobin's-q>

I The New Intangibles Model

Given the problems inherent in SFAS 141R/142, IFRS-3R and IASB-38, the elements of a new goodwill/intangibles accounting model (the 'New Model') are described as follows.[130]

Under the proposed New Model, there is no 'goodwill', and in combination transactions, any excess of the purchase price over the market values of the assets and liabilities of the company that is being acquired, will be allocated to specific traditional assets and to specific classes of intangibles such as human capital, brand equity, technological advantage, team cohesion, etc., and similarly, any deficiency (now called 'negative goodwill') will be deducted from allocated to specific traditional assets and to specific classes of intangibles. This facilitates the application of proper accounting methods (amortization, amortization term, expensing, impairment tests, write-offs, etc.) to each class of intangibles. (For example, the asset 'technological advantage' may have a useful life of three years, while brand equity will have a useful life of ten years; but under SFAS 141R/142 and current IASB standards, management can almost arbitrarily write-down either asset completely in one year.) Impairment testing will be done quarterly, semi-annually, or annually by third parties.

Intangibles can appreciate or depreciate in value over time, and while it may be difficult to value some Intangibles, the 'lower-of-cost–or-market' rule should not be applied to intangibles because the values of intangibles are much more sensitive than other classes of assets to competition, internal firm dynamics, and market conditions; and the values of intangibles are much more volatile than those of other classes of assets, c) the implicit conservatism in the lower-of-cost-or-market' rule is not suitable for the 'new economy' in which intellectual capital is critical, business cycles do not correspond to periods of innovation either among or even within industries, and securities analysts have more access to more information about values of intangibles and intellectual capital.

A new current-cost method should be used in valuing intangibles for financial reporting purposes and is described as follows. These assets will be valued in each reporting period (quarter), and any increases in the asset value that persists for more than 4-6 reporting quarters will result in a revaluation and write-up of the asset to the new assets values. For example, if the asset was valued at $100 million in the first quarter (Q1), and was subsequently valued at $110 million, $114 million, $116 million, $120 million, and $121 million in Q2, Q3, Q4, Q5, and Q6 respectively, then in Q6, the asset's carrying value should be written up to $110 million (with an associated credit to shareholder's equity). If there was a noted impairment in Q6 such that the Q6 valuation was $115 million, then the asset will still be written up to $110 million. Any noted impairment will be immediately recognized in the reporting period and the carrying value of the asset written down to the new value.

Any expenses incurred to create Intangible assets (including marketing/advertising costs; non-rent location costs; etc.) should be capitalized in the period

130 F. Paresi, V. Fon & N. Ghei, 'The Value of Waiting in Lawmaking', *European Journal of Law & Economics*, Vol. 18, 2004, pp. 131-148.

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incurred. Any amount spent on maintenance that contributes to the value of the asset should also be capitalized.[131]

The carrying values of the new intangibles will be amortized in each reporting period only if the intangible is determined to diminish in value periodically – hence, intangibles like some distribution agreements and business processes and organizational structure, will not be subject to amortization because their values are relatively constant; while other intangibles like brand value will be subject to amortization. Management will determine the exact amortization term, but ranges of terms for various industries will be specified by accounting regulators. Any change in the amortization term must be accompanied by extensive justification and evidence of material changes in operating environment and will be subjected to substantial scrutiny. The amortization will be an amount equal to a) the greater of the 'regular' amortization amount (derived from DDB amortization or straight-line amortization, etc.) or any identified impairment or b) where an impairment has not been identified, the lesser of 'regular' amortization amount (derived from DDB, straight-line amortization, etc.) if any, or any estimated amounts for impairment, where an impairment has been identified.

Companies whose Intangible assets exceed certain dollar amount and percentage thresholds (*e.g.* more than US $50 Million and more than 25% of total assets) should be required to file proforma financial statements that show the current values of all assets and liabilities and to disclose fair market values of all intangible assets in footnotes.

The components of sales/advertising/marketing expenses which are used for building brand value, developing strategic alliances and partnerships, and creating other intangibles should be capitalized instead of being expensed in the period incurred (such costs are now being expensed in the USA, the UK, and most developed countries). Similarly, human resources costs that are used for building human capital should be capitalized as intangible assets.

The Goodwill/Intangibles Rule should contain specific civil and criminal penalties and sanctions that should clearly match the magnitude and effects of non-compliance. Such penalties should be designed with deterrence as a primary objective.

The Goodwill/Intangibles Rules should contain clear evidentiary standards and burdens of proof for determination of non-compliance. Such evidentiary standards could be a modification of the federal rules of evidence.

The use of 'Reporting-Units' in the calculation and identification of goodwill/intangibles should be drastically reduced (to only specific circumstances or industries) or perhaps eliminated completely.

The Goodwill/Intangibles Rules should be incorporated into the federal securities regulatory scheme and the US SEC's rule-making scheme in order to reduce conflicts. The Goodwill/Intangibles Rules should include forum specification provisions and should grant special subpoena powers to such forum. The creation of summary judicial proceedings within Goodwill/Intangibles Rules can also reduce

131 *See* Chau, Leung, Yiu & Wong 2003.

investigation and enforcement rules. Such summary proceedings will reduce and clarify the evidentiary burdens and facilitate the rapid disposition of disputes.

I Goodwill Accounting Models, Economic Psychology Theories, and Finance Theories

It is conjectured here that eliminating goodwill/intangibles and disaggregating 'goodwill and intangibles' into their various components will provide a substantial incentives to employees and enable management to focus on value-creating activities and projects. It can enhance the overall goal-setting processes of the firm and reduce information asymmetry, moral hazard, and adverse selection. Such modification of 'goodwill/intangibles' will also enable investors to make better investment decisions and to assess risk more efficiently.

The Goodwill/Intangibles Accounting Rules and the pre-SFAS 141R/142 US goodwill accounting regulations invalidate the theories that were developed in DeAngelo, DeAngelo & Wruck,[132] Wruck, Kaplan & Mitchell,[133] Weiss & Wruck,[134] Wruck,[135] Wruck & Baker,[136] Wruck, Warner & Watts,[137] Cuny & Talmore,[138] Desai & Savickas,[139] Guo, Hotchkiss & Song,[140] Cain, Denis & Denis,[141]

132 H. DeAngelo, L. DeAngelo & K. Wruck, 'Asset Liquidity, Debt Covenants and Managerial Discretion in Financial Distress: The Collapse of L.A. Gear', *Journal of Financial Economics*, Vol. 64, 2002, pp. 3-34.

133 K. Wruck, S. Kaplan & M. Mitchell, 'A Clinical Exploration of Value Creation and Destruction in Acquisitions: Organization Design, Incentives and Internal Capital Markets', *in* S. Kaplan (Ed.), *Productivity of Mergers and Acquisitions*, National Bureau of Economic Research, Conference Volume, 2000, available at <http://papers.ssrn.com/sol3/paper.taf?ABSTRACT_ID=10995>.

134 L. Weiss & K. Wruck, 'Information Problems, Conflicts of Interest, and Asset Stripping: Chapter 11's Failure in the Case of Eastern Airlines', *Journal of Financial Economics*, Vol. 48, 1998, pp. 55-97.

135 K. Wruck, 'Equity Ownership Concentration and Firm Value: Evidence from Private Equity Financings', *Journal of Financial Economics*, Vol. 23, 1989, pp. 3-28; K. Wruck, 'Financial Distress, Reorganization and Organizational Efficiency', *Journal of Financial Economics*, Vol. 27, 1990, pp. 419-444. Reprinted *in* E.I. Altman (Ed.), *Bankruptcy and Distressed Restructurings: Analytical Issues and Investment Opportunities*, Business One Irwin Publishers, 1992; K. Wruck, 'What Really Went Wrong at Revco?', *Journal of Applied Corporate Finance*, 1991, pp. 79-92. Reprinted *in* C. Donald (Ed.), *The New Corporate Finance: Where Theory Meets Practice*, McGraw Hill 1993.

136 K. Wruck & G. Baker, 'Lessons from a Middle Market LBO: The Case of O.M. Scott', *Journal of Applied Corporate Finance*, 1991, pp. 46-58. Reprinted *in* D. Chew (Ed.), *The New Corporate Finance: Where Theory Meets Practice*, McGraw Hill 1993.

137 K. Wruck, J. Warner & R. Watts, 'Stock Prices and Top Management Changes', *Journal of Financial Economics*, Vol. 20, 1988, pp. 461-492.

138 C. Cuny & E. Talmore, 'A Theory of Private Equity Turnarounds', *Journal of Corporate Finance*, Vol. 13, 2007, pp. 629-646.

139 C. Desai & R. Savickas, 'On the Causes of Volatility Effects of Conglomerate Breakups', *Journal of Corporate Finance*, Vol. 16, 2010, pp. 554-571.

140 S. Guo, E.S. Hotchkiss & W. Song, 'Do Buyouts (Still) Create Value?', *The Journal of Finance*, Vol. 66, No. 2, 2011, pp. 479-517.

141 M.D. Cain, D.J. Denis & D.K. Denis, 'Earnouts: A Study of Financial Contracting in Acquisition Agreements', *Journal of Accounting and Economics*, Vol. 51, 2011, pp. 151-170.

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Eckbo, and Gu & Hao,[142] for several reasons. First, most of these theories were developed without analysis and/or testing of the impact of goodwill/intangibles reporting and amortization on valuations, incentives, nature of contracts, employee/management motivation, and expected returns. Secondly, different parties in large corporate transactions value goodwill/intangibles differently depending on their tax rates, taxable income, organizational structure, liquidity, perceived risk and credit rating, investment horizon, industry, sources of financing, etc. Third, most of these theories were developed without analysis and/ or testing of the impact of the degree of over-pricing of the acquirer-company's shares.[143]

Renneboog & Szilagyi found that most empirical studies on the effects of corporate restructuring on bondholders' wealth were inconclusive or conflicting and focused mostly of US companies.[144] In addition, most of these studies did not analyze goodwill/intangibles (which is often a critical element in loan covenants and bond indentures).

Hirschey & Richardson found that information effects narrowly tied to goodwill write-off announcements are typically negative and material (about 2-3% of the company's stock price).[145] In the one-year pre-announcement period, negative information effects of about 40% were observed. Post-announcement period information effects of roughly -11% suggest that much, but perhaps not all of the negative information (valuation) effects tied to goodwill write-off announcements are realized by the end of the announcement period. Negative stock-price effects tied to goodwill write-off decisions indicate that accounting goodwill numbers capture a significant aspect of the intangible dimension of firm value and suggest that accounting theory and practice is adept at identifying when such intangible assets are impaired. However, Gu & Lev found that many acquisition related Goodwill write-offs were attributable to over-pricing of the acquirer-company's shares.[146]

J Conclusion

The changes in the global economy raise very critical economic, accounting, and public policy issues that have certainly not been sufficiently analyzed in existing literature and have not been addressed by existing goodwill and intangibles disclosure laws/rules. These rules have significant implications for banks, investors and financial institutions, and daily business transactions particularly in an era

142 Z. Gu & X. Hao, 'Wealth Effects of the Creditor in Mergers: Evidence from Chinese Listed Companies', *in* D.D. Wu (Ed.), *Quantitative Financial Risk Management, Computational Risk Management*, Springer-Verlag, Berlin/Heidelberg 2011.

143 Gu & B. Lev, 'Overpriced Shares, Ill-Advised Acquisitions and Goodwill Impairment', *The Accounting Review*, November 2011, pp. 1995-2022.

144 R. Renneboog & P. Szilagyi, 'Corporate Restructuring and Bondholder Wealth', *European Financial Management*, Vol. 14, No. 4, 2008, pp. 792-819.

145 M. Hirschey & V. Richardson, 'Information Content of Accounting Goodwill Numbers', *Journal of Accounting and Public Policy*, Vol. 21, No. 3, 2002, pp. 173-191.

146 Gu and Lev 2008.

where intangibles constitute more than 30% of the asset values of many private and publicly traded companies around the world and more than 70% of the stock market values of exchange-traded companies in developed countries.

Goodwill/Intangibles Rules create substantial incentives for misconduct, fraud, and crime and are likely to increase enforcement costs and compliance costs. Given that the IASB and FASB (the entities that enacted the Goodwill/Intangibles Rules) are non-governmental entities, there is a significant need for new and stringent government oversight/regulation of Goodwill/Intangibles Rules and both the FASB and IASB.

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