

**IASB Research Forum (EAR/AIE),
IESEG School of Management,
Paris 2-3 Nov 2023**

Economic Consequences of Purchase Price Allocation Reporting

Markus Buxbaum, Bettina Schabert, Wolfgang Schultze, Julia
Wilhelm, **Anne Wyatt***
University of Ausburg and Deakin University*



DEAKIN
UNIVERSITY

The study investigates the **decision usefulness of the purchase price allocation** under IFRS 3 Business Combinations

Specific focus is the IFRS 3 disaggregation requirement of the purchase premium

IFRS 3 departs from the strict standard setting approach to identifying and recognizing intangible assets

-Acquirers must:

- Remeasure the target's existing balance sheet to fair value = not contested
- Disaggregate the purchase price premium to recognise the target's qualifying identifiable intangible assets separately from goodwill = controversial

-IFRS 3 (para. 13) notes:

- Disaggregation may result in recognising assets “that the acquiree did not recognise in its financial statements” such as internally generated intangibles assets that the target previously charged to expenses

- IFRS 3 disaggregation requirements --- no other standard allows internally generated intangible assets to be recognized in this way
- IFRS 3 allows recognition of items that do not meet asset definition/recognition under other standards
 - IAS 38 Intangible Assets allows only some ‘development’ costs to be recognized
 - Paragraph 63 expressly prohibits recognition of “brands, mastheads, publishing titles, customer lists and items similar in substance”
- Valuation of previously expensed internally generated intangible assets is likely to be highly speculative

Research Motivation



However, it is important to note the Conceptual Framework commits the IASB to foster transparency and accountability for resources, even in the absence of observables for measurement:

“**To make assessments of their expected returns and management’s stewardship** of the firm’s **resources**, existing and potential investors, lenders and other creditors need information about: (a) the **economic resources of the entity**, claims against the entity and changes in those resources and claims; and (b) how efficiently and effectively the entity’s management and governing board have **discharged their responsibilities to use the entity’s economic resources**” (CF, para. 1.4).

“**use of reasonable estimates** is an essential part of the preparation of financial information and does not undermine the usefulness of the information if the estimates are clearly and accurately described and explained. **Even a high level of measurement uncertainty** does not necessarily prevent such an estimate from **providing useful information**” (CF, para. 2.19).

Research Motivation



- Clear intent for IFRS 3 to provide new information and increase transparency:
 - By asking acquirers to at least **partially disaggregate the purchase premium to make transparent the qualifying identifiable intangible assets acquired** in the business combination, separately from goodwill
- Strong investor demand for information **to evaluate the motivation for acquisitions, and price relative to prospects** of the acquisition (Jensen and Ruback 1983; Amit et al. 1989; Agrawal et al. 1992; Loughran and Vijh 1997)
- IFRS 3 context **provides useful setting** for studying the decision usefulness of more transparent approach to accounting for internally generated intangibles

Background and Hypotheses – Standard Setting Rules for Recognizing Expensed Intangibles



- To operate, IFRS 3 must **over-ride** the prohibition on recognition of internally generated intangibles (except qualifying development costs) in IAS 38
- Achieved in an ad hoc manner by **deeming provisions in** IAS 38 (para. 33, 35)
 - (1) “**probability of future benefits**” satisfied (IAS 38 para. 21(a);
 - (2) “**sufficient information to measure fair value reliably**” satisfied (IAS 38 para. 21(b).
- Next, (the expensed) identifiable intangible assets must meet the asset definition:
 - A present **economic resource controlled** by the entity as a result of past events (para. 4.3), and the **economic resource must represent a right** with the **potential for generating economic benefits** (para. 4.4).

Background and Hypotheses – Standard Setting Rules for Recognizing Expensed Intangibles



- IFRS 3 does not provide **economic principles as guidance** for implementing the asset definition
- **To overcome this problem**, IFRS 3 provides **additional “identifiability” criteria** (IAS 38 para.10-12; IFRS 3, para. B31, B40).
 - A qualifying identifiable intangible asset is identifiable separately from goodwill if it is **separable and/or relates to a contract or other legal right**
- **Ad hoc approach allows broad interpretation of an intangible asset – without due regard to control**
 - A more principled approach is possible
 - Property “right” can be decomposed into three components: **(a) determination of use**; (b) bearing of the market value; and (c) exchangeability of rights to (a) and (b) (Alchian, 1984)

Background and Hypotheses – Economic Literature



- Economic literature makes a strong prima facie case for the importance of intangible investment and the decision usefulness of intangibles information
- “**Knowledge (the most elementary intangible capital asset)** is a primary factor of production” (Webster 1999) (along with land and labour)
- Value increasingly attributed to intangibles, reflects tendency for knowledge/technology to be embodied in **intellectual property and labour**, where previously it resided in fixed assets (Kendrick (1972), Auerbach (1988; Ch 5))
- Highlights why realising benefits from intangibles is uncertain - due to an inability **to assign property rights over people and some types of inputs** (e.g., R&D) (Webster 1999)
- Economists distinguish **intangible assets that** are excludable assets from **intangible inputs** that are non-excludable sources of value (that can easily be copied or accessed by rivals)

Background and Hypotheses – Empirical Literature on Decision Usefulness



Wyatt (2008) review suggests intangible assets/inputs can be useful information

But those intangible investments less likely to have property rights assignable such as goodwill, R&D, customer satisfaction, brands without trademark protection tend to be unreliable predictors of future performance

Further caveat is much of the research is valuation/performance relevance studies that need to be carefully interpreted -e.g., don't know if information is actually used

- Reviewed six categories of intangibles and five different measurement approaches (GAAP, researcher defined, non-financial input and output metrics)

Background and Hypotheses – Empirical Literature on Decision Usefulness



- Pre-IFRS 3, Henning et al. (2000) find **goodwill includes an over-payment**, asset revaluation component, and synergy component that is not always realized
- Studies investigating the IFRS 3 (SFAS141) implementation, find purchased goodwill reflects overpayments, and **goodwill impairments are untimely** (e.g., Ramanna and Watts 2012; Shalev et al. 2013; Filip et al. 2015; Zhang and Zhang 2017; Li and Sloan 2017)
- Shalev's (2009) - **23 required disclosures** in SFAS 141 are **positively associated** with one & two-year ahead ROA changes and one year ahead returns, but negative link to “abnormal goodwill” reflects overpayment
- Paugam et al. (2015) study short-term market reactions to purchase price allocation announcements and similarly conclude goodwill has an overpayment

Background and Hypotheses - Overall Summary from Standards and Economic/Empirical Studies



- Overall, the clear IFRS 3 intent is for greater transparency of the intangible assets acquired in an acquisition leading to decision usefulness
- Plus, the economic and empirical literature make a strong case for decision usefulness
- Therefore, even with the broad reach of the recognition rules for the previously expensed intangible investment, and inevitable measurement error in the fair valuation
- We expect the **new information from a diligent IFRS 3 disaggregation of the purchase premium** to be informative about the different types of assets acquired, revealing new information about the underlying economics of the acquisition, and contributing to financial reporting transparency

Background and Hypotheses – H1 – Good Standard Prediction if Diligent



HYPOTHESIS 1: The net identifiable assets recognised separately from goodwill in the purchase price allocation are relevant for market valuation.

- Despite broad reach of recognition criteria and valuation problems, we expect the new information generated is valuation relevant, when there is a diligent disaggregation of the purchase premium

Background and Hypotheses – H2 –Good Standard Prediction if Diligent



HYPOTHESIS 2: The proportion of purchase price allocated to fair valued identifiable assets is negatively associated with (a) information asymmetry; (b) the implied cost of capital; (c) analyst forecast dispersion and analyst forecast errors; and positively associated with (d) analyst following.

- Financial reporting transparency can lower information risk and mitigate the information disadvantage of outsiders and uncertainty that has been linked to information asymmetry (Copeland and Galai 1983; Glosten and Milgrom 1985; Kyle 1985; Welker 1995; Heflin et al. 2005).
- We expect a reduction in information risk and increased transparency from the new information is associated with lower information asymmetry and cost of equity capital.

Background and Hypotheses – H2 –Good Standard Prediction if Diligent



- Analysts more likely to maintain coverage of diligent firms demonstrating commitment to transparent financial reporting
- New information for understanding motivation and sources of expected benefits from acquisitions is expected to decrease uncertainty in forecasting earnings and potentially analysts' forecast dispersion

Null for H1, H2:

- A low-cost alternative to diligent disaggregation is to non-transparently allocate the entire purchase premium to goodwill (good standard – but costly – study how cost could be reduced)
- Investors focus on income and do not find a detailed disaggregation informative (bad standard – information not decision useful)

Background and Hypotheses - H3 – good standard but bad management



HYPOTHESIS 3: The negative association of the proportion of purchase price allocated to fair valued identifiable assets with (a) information asymmetry; (b) the implied cost of capital; (c) analyst forecast dispersion and analyst forecast errors; and positive association with (d) analyst following, **is present only in firms not suspects for benchmark beating.**

- Some under pressure management may abuse their accounting discretion to obfuscate (bad management)
- For example, to cover up a bad acquisition deal intended to boost short term performance at the detriment of the long-term performance
- We therefore expect the **positive effect hypothesized in Hypothesis 2 (good standard) is only observed for firms that do not engage in earnings management which we proxy using benchmark beating.**

- Tests are conducted in the German setting using mainly manually collected data - we start with 234 listed companies employing international accounting standards
- After filters, we have 1,190 firm-year observations of German public firms listed on the German stock indices DAX30, MDAX and TecDAX between 2004 and 2014 – we retain acquired and bankrupt firms in the period
- 500 firm-year observations have undertaken acquisitions and consequently disclosed a purchase price allocation and 690 firm-year observations have not undertaken an acquisition
- Primary experimental variable is PPAIA which is the proportion of the purchase price allocated to net identifiable tangible and intangible assets, separated from goodwill

Preliminary Tests to Evaluate Convergent Validity of PPAIA



- We document significant positive associations between the PPAIA measure and:
 - Index of the transparency of the acquirers' qualitative disclosures of underlying intangible assets,
 - Measures of overall accounting/accruals quality,
 - Intellectual capital disclosure score (IC_discore), and
 - Index of qualitative disclosures describing the purchase price allocation required by IFRS 3

Results – H1 - Market Value Analysis



First set of tests based on the **sample of acquiring firms only**

Fair value adjustments made to other net assets and the **qualifying previously unrecognized identified intangible assets** are both valuation relevant

This result is consistent with H1 and with the intent of the standard setters to:

- Provide new information and increase the transparency of the intangible assets acquired in an acquisition, and decision usefulness
- Positive result for “good standard” test

Results – H2 - Information Asymmetry and Cost of Capital



- First set of tests based on the **sample of acquiring firms only**
- PPAIA is associated with lower information asymmetry (bid-ask spread) and cost of capital
 - Cost of capital following Hail and Leuz (2006) and Hou et al. (2012) is a mean implied cost of capital of five or eight different measures from the literature –to ensure results are not driven by a particular method
- Positive result for “good standard” test

Results – H2 - Weighted tests including acquiring and non-acquiring firms



- Tests based on the sample of acquiring firms and propensity matched non-acquiring firms
 - Weighting used is the ‘Inverse probability of treatment (i.e., making an acquisition)’ computed using propensity scores
- We find the proportion of the purchase price allocated to fair valued net identifiable assets including the previously unrecognized identifiable intangible assets, separated from goodwill – PPAIA is significantly :
 - Associated with proxies for lower information asymmetry
 - Associated with proxies for lower cost of capital
 - Associated with higher analysts’ following and lower analysts’ earnings forecast errors (no link to analysts’ forecast dispersion)
- Positive result for “good standard” test

Results – H3 - Influence of Incentives to Manage Earnings on the IFRS 3 Implementation



- Weighted test based on the **sample of acquiring firms and propensity matched non-acquiring firms**
- Firms are defined as suspect (EM=1) of benchmark beating when their earnings are equal or just above the analyst earnings forecast (by 2%, otherwise EM=0)
- **Main results for information asymmetry, cost of capital, and analysts' following and forecast errors hold for firms not suspect for earnings management by benchmark beating**
- **Discretion implementing IFRS 3 may be abused to a point where the presented information is no longer decision-useful for firms pressured to manage earnings (bad management not diligently applying a good standard)**

- Range of tests reported confirm main results
- Results are robust to key control variables, different estimators, endogeneity concerns, and alternative measures of the key variables
- We have run an additional analysis that demonstrates the PPAIA is not associated with the prior period's information asymmetry or cost of capital measures, but is significantly associated only with contemporaneous and future information asymmetry or cost of capital measures

- Positive results for “good standard” test
- A diligent IFRS 3 implementation provides new information about the target’s previously unrecognized identifiable intangible assets that is decision useful
- We find the proportion of the purchase price allocated to fair valued net identifiable assets including the previously unrecognized identifiable intangible assets, separated from goodwill – is significantly associated with measures proxying decision usefulness
- This result is robust despite the lack of precision in the asset definition and recognition criteria and difficulty of valuation
- Discretion implementing IFRS 3 may be abused to a point where the presented information is no longer decision-useful for firms pressured to manage earnings
- Bad management not diligently applying a good standard

- Respondents to PIR plus other anecdotal discussions with auditors and preparers acknowledge the useful new information from IFRS 3 disaggregation
- However, diligence is required and there is no doubt the diligence is costly – but overall, not so costly to prevent wholesale avoidance of IFRS 3 implementation
- Pain points in implementation are reportedly occurring:
 - at the stage of **valuing qualifying identifiable intangible assets**,
 - at the stage of **post-acquisition accounting** for indefinite life intangibles and the impairment only requirement for the goodwill
 - At stage of comparing financial statement information for firms growing by acquisition versus firms growing organically (less transparent form of growth under current accounting rules?)
 - While outside scope of paper, there are opportunities to examine how greater consideration of underlying economics in relation to some of the pain points might reduce costs

Marketing Intangibles – Type of Right
<ul style="list-style-type: none"> • → Trademarks – Contract • → Tradenames – Contract • → <u>Service marks</u> – Contract • → Collective marks – Contract • → Certification marks – Contract • → Trade dress – Contract • → Newspaper mastheads – Contract • → Internet domain names – Contract • → Non-competition agreements – Contract
Customer Intangibles – Type of Right
<ul style="list-style-type: none"> • → Customer lists – <u>Non-contract</u> • → Order or production backlog – Contract • → Customer contracts and related customer relationships – Contract • → Non-contractual customer relationships – Contract
Artistic Intangibles – Type of Right
<ul style="list-style-type: none"> • → Plays, operas and ballets – Contract • → Books, magazines, newspapers and other literary works – Contract • → Musical works such as compositions, song lyrics and advertising jingles – Contract • → Pictures and photographs – Contract • → Video and audiovisual material, including motion pictures or films, music videos and television programmes – <u>Contract</u>
Contract Intangibles – Type of Right
<ul style="list-style-type: none"> • → Licensing, royalty and standstill agreements → ¶ • → Advertising, construction, management, service or supply contract ¶ • → Construction <u>permits</u> ¶ • → Franchise agreements ¶ • → Operating and broadcast rights ¶ • → Servicing contracts, such as mortgage servicing contracts ¶ • → Employment contracts ¶ • → Use rights, such as drilling, water, air, timber cutting and route authorities ¶
Technology Intangibles – Type of Right
<ul style="list-style-type: none"> • → Patented technology – Contract ¶ • → Computer software and mask works – Contract ¶ • → Unpatented technology – <u>Non-contract</u> ¶ • → Databases, including title plants – <u>Non-contract</u> ¶ • → Trade secrets, such as secret formulas, processes and recipes – Contract ¶

Source: IFRS 3 Business Combinations Illustrative Examples 2023 Issue