

Market Valuations of Bargain Purchase Gains: Are These True Gains under IFRS?

Abstract

This study investigates stock market valuations for bargain purchase gains (BPGs) in the context of International Financial Reporting Standards (IFRS) between 2005–2014. Motivated by the increased frequency and high concentration of BPGs in Europe, we study a sample of acquirers listed on the London Stock Exchange to assess the value relevance of BPGs (a) under discrepant disclosure practices (i.e., disclosure versus non-disclosure of the reasons for the gains), (b) before and after the revision of IFRS 3, and (c) considering different income classifications for BPGs (operating or non-operating earnings). BPGs, on average, are not significantly valued by the stock market. However, the post-IFRS 3 revision period, marked by stricter measurement criteria and additional disclosure requirements, witnessed a significant shift in firm valuations. BPGs for which the reason for the gain is disclosed are positively valued only in the post-IFRS 3 revision period. BPGs are consistently perceived as value irrelevant for those firms which fail to comply with mandated IFRS 3 disclosure requirements regarding the reason for the gain. Finally, BPGs classified as a component of non-operating income with sufficient note disclosure on the reason for the gain are significantly associated with prices and returns.

Keywords: Bargain purchase gains; Negative goodwill; IFRS 3 revision; Accounting disclosure; Value relevance

1. Introduction

Most recurrent tensions in accounting for business combinations are related to intangibles and firm valuations (Amel-Zadeh et al. 2016). Although previous research has mainly focused on the value relevance¹ of goodwill (e.g., Jennings et al. 1996, Henning et al. 2000, Al Jifri and Citron 2009, Lapointe-Antunes et al. 2009), the economic value of bargain purchase gains (BPGs) has received limited attention. These occur in business acquisitions when the fair value of the identifiable net assets of the acquiree exceeds the total consideration paid (IFRS 3 2004). Accountants and auditors have distanced themselves from recognising BPGs due to concerns related to the accuracy, reliability, and classification of these gains. Controversies on the recognition of BPGs centre on the premise that these gains are conceptually impossible or may only occur occasionally and, therefore, provide fictitious gains to acquirers (Karrenbrock and Simons 1968, Burton et al. 1981, Ketz 2005, Hoyle et al. 2011). Standard setters have struggled for decades to account for BPGs, while the number of business combinations accounted for as BPGs is significant.²

During the 1980s, BPGs have been recognised on the balance sheet, systematically amortised and tested for impairment. In 2004, the International Accounting Standards Board (IASB) acknowledged under IFRS 3 *Business Combinations* that some economic gains are inherent in bargain purchases and should be reported in the acquirer's income statement. However, the proposed accounting treatment has raised concern about both intentional and unintentional bias in the reporting of BPGs. In this respect, the revised IFRS 3 aimed to promote more reliable and relevant assessment of BPGs by improving the measurement procedures and reinforcing the disclosure requirements related to

¹ Value relevance reflects the ability of an accounting measure to capture and summarise information that affects equity value (Wyatt 2008). It is characterised as one of the most important attributes of accounting quality (Francis et al. 2004). Barth et al. (2001) emphasise on the importance of the value relevance literature in providing fruitful insights for standard setting. However, Holthausen and Watts (2001) argue that, in the absence of descriptive theories to justify empirical associations, the value relevance literature has limited implications for standard setting.

² According to the European Securities and Markets Authority (ESMA 2014), out of 56 European listed companies with 66 business combinations in 2012, BPGs were reported in 11% of all transactions.

the recognition of these gains (IFRS 3 2008). Whether the enhanced transparency and reliability of BPGs affect their value relevance remains an open empirical question.

While BPGs are likely to arise for various reasons, IFRS 3 recognises bargain purchases irrespective of their causes. In this paper, we focus on the IFRS 3 disclosure requirements for BPGs and perform a content analysis of the acquirers' annual reports to identify the reasons for these gains. Our data show that BPGs are often reported with detailed notes, which justify a gain with the acquisition of a distressed business. Such types of business combination often arise from a forced or quick sale, when the acquiree is expected to sell the business at a discount (Pahler 2003, IFRS 3 2008, Hoyle et al. 2011). Few firms attribute the recognition of BPGs to fair value changes in the consideration transferred and/or net assets acquired between the agreement and the acquisition dates. In contrast, several companies recognise BPGs without clearly indicating the reasons for these gains, essentially deviating from the IFRS 3 disclosure requirements.

We argue that such inconsistency in disclosure practices across firms might contribute to increasing the opaqueness of these gains, thus exacerbating the concerns regarding the absence of true economic substance behind BPGs. A firm's compliance with mandated IFRS 3 disclosure requirements can affect investors' perceptions of the underlying cause of the bargain purchase as well as the reliability of the reported gain. Moreover, the current version of IFRS 3 lacks guidance regarding the adequate income classification of BPGs under operating or non-operating income. However, the classification of these gains is likely to affect investors' valuations of the core/operating versus occasional/non-operating profit-generating ability of a firm (Bowen, 1981, Strong and Walker 1993, Fairfield et al. 1996). Therefore, the absence of explicit requirements for the characterisation of BPGs might also influence the value relevance of these gains.

While two studies have investigated the stock market valuations of BPGs and their relevance to investors' decisions in the U.S. (Comiskey et al. 2010, Dunn et al. 2015), the effects of IFRS 3 remain unexplored. Comiskey et al. (2010) show that acquirers that recognise BPGs do not exhibit

significantly higher returns (i.e. not value relevant) compared to their matching counterparts, that is, positive goodwill acquirers. In contrast, Dunn et al. (2015) focus on financial institutions to examine earnings management using BPGs. Their results suggest that the market values BPGs. However, investors still perceive such gains as a relatively less persistent component of earnings. These studies examine BPGs (a) before the adoption of the revised Statement of Financial Accounting Standards (SFAS) No. 141, which tends to coincide with the pre-IFRS 3 revision period; (b) on an aggregate level, irrespective of the reasons or the reported classifications underlying BPGs; and (c) using comparatively small datasets.³ In this paper, we examine firm valuations of BPGs by addressing the disclosed/non-disclosed sources of the gains, the revision of IFRS 3, and the different classifications in the income statement.

We assess the value relevance of BPGs for a sample of 210 acquirer-year observations between 2005–2014. Companies listed on the London Stock Exchange (LSE) provide an ideal setting for our research. The LSE is the largest cross-border takeover market in Europe and the second largest in the world (World Investment Report 2008; p.75). These characteristics allow us to identify a large sample of BPGs in a single-country context. A distinct feature of our empirical setting is the identification of acquiring firms reporting BPGs during two regulatory events: the adoption of IFRS 3 (2005–2009) and its subsequent revision (2010–2014). We split the full sample of reported BPGs into two categories: BPGs that explicitly disclose the motivation for the gain, and those that lack disclosure of their underlying motivations. Our sample also comprises both financial and non-financial firms and is larger than most samples used by previous studies (Comiskey et al. 2010; Dunn et al. 2015).

We employ the model introduced by Ohlson (1995) based on contemporaneous analyses of stock prices and market returns (following Amir and Lev 1996; Barth and Clinch 1998, Cazavan-Jeny and Jeanjean 2006, Al Jifri and Citron 2009, Venter et al. 2014). Our findings indicate that the stock

³ Comiskey et al. (2010) uses a sample of 43 firms that recognised negative goodwill over the period 2000-2007. Dunn et al. (2015) employs a sample of 79 acquisitions of failed banks over the period 2009-2010.

market does not generally price BPGs, irrespective of the acquirers' disclosure/non-disclosure of the reasons for the gain. However, BPGs for which the reason for the gain is disclosed are positively valued in the post-IFRS 3 revision period. This finding seems consistent with the stricter measurement criteria and additional disclosure requirements of the revised accounting standard, which enhanced investors' valuation of these gains. The IASB acknowledges that the assessment procedures and the improved disclosure requirements for the reasons of bargain purchases under the revised IFRS 3 should mitigate undetected intentional or unintentional biases for recognising BPGs (IFRS 3R 2008). BPGs of firms that do not disclose the reasons for the gains in the footnotes could raise concerns by investors about the existence of true gains and the possibility of transaction structuring. Across the two regulatory phases, we find no supporting evidence for the value relevance of BPGs that fail to comply with IFRS 3 disclosure requirements regarding the reasons for the gain. These findings suggest that investors seem to be sceptical of these BPGs and penalise firms for non-compliance by not valuing the reported BPGs.

With respect to the effect of the income classifications of BPGs on firm valuation, we find that BPGs classified as a component of non-operating income with sufficient note disclosure of the reason for the gain are significantly associated with prices and returns. In addition, the results indicate that irrespective of BPGs' income classifications, investors do not price BPGs that lack adequate disclosure of the reasons behind the recognition of the gains.

Our study is the first to examine firm valuations of BPGs under IFRS. Our results contribute to the evidence on the value relevance of BPGs in the U.S, irrespective of their reasons. The findings support earlier recommendations for further research on the reasons for BPGs and contribute to the debate on whether BPGs constitute a wealth-enhancing item or represent phantom gains (e.g., Henry et al. 2008, Comiskey et al. 2010). We show that different valuations of BPGs are plausible and identify several underlying factors that could affect firm valuations of these gains. Our results demonstrate that the stock market tends to distinguish between different categories and

classifications of BPGs. Finally, by examining the impact of the revision of IFRS 3 on firm valuations of BPGs, we add to the results of prior studies that investigated the economic consequences of compliance with disclosure requirements mandated by accounting standards (Bushee and Leuz 2005, Leuz and Wysocki 2016, Mazzi et al. 2016). In this respect, our evidence might be relevant to regulators who seek to apply more evidence-informed accounting standard-setting procedures (Leuz 2018).

The remainder of the paper is organised as follows. Section 2 introduces the background of the study and the research hypotheses. Section 3 describes our research methodology while Section 4 discusses the sample selection procedure and presents the descriptive statistics. Section 5 reports our empirical results and additional analyses. Section 6 provides our concluding remarks.

2. Background and Hypothesis Development

2.1 Conceptual Issues and Regulatory Framework

BPGs are generally considered unusual transactions, as business entities and their owners are not expected to knowingly and willingly sell assets or businesses at prices below their fair value. A common example of a bargain purchase is acquiring a distressed business. Distressed acquisitions may offer a preferred exit path to various target firms' stakeholders. Managers of distressed businesses are not always fully in control of the decision-making process, which may lead to forced asset sales at discounted prices (Brown et al. 1994). A forced liquidation (for instance, after the death of a founder or key manager) may result in a price lower than fair value for the firm (IFRS 3R BC372). BPGs might also arise from a buyer's expectations of future losses and the need to incur future costs to make a business viable.

Previous studies have long debated whether BPGs truly exist and offer future economic benefits to the acquirer. Whether this gain exists might be difficult to assess at the acquisition date owing to both unintentional and intentional errors (IFRS 3R BC374-376). BPGs might arise due to unintentional

errors resulting from the use of measures, in accordance with the IFRS, that are not fair valued. Unintentional errors could also occur from an incorrect assessment of the fair value of the consideration paid for the business or the assets acquired/liabilities assumed. In some business combinations, BPGs may lead to inappropriate gain recognition possibly due to the acquirer's transaction-structuring behaviour. This can involve, for example, understating or failing to identify the value of various items of the consideration that is transferred, overstating values attributed to particular assets acquired, and understating or failing to identify and recognise specific liabilities assumed. This interpretation is in line with Burton et al. (1981) who suggest that BPGs cannot be realised as true gains and rarely exist and Karrenbrock and Simons (1968) who argue that the concept of BPG merely reflects an overvaluation of the recorded subsidiary's goodwill recognised by the parent company. Another stream of prior studies supports the recognition of BPGs as true gains for acquirers. For example, De Merville and Petrie (1989) highlight how, in some companies, the aggregate market value of net identifiable assets is customarily higher than their market price. These firms are likely to be targeted for acquisition, hence confirming that BPGs represent true gains and do exist. Consistent with this view, Pahler (2003) argues that the presence of a bargain purchase element implies that the assets are worth more individually than as a component of a going concern and reflect a true wealth increase to the acquirer.

Accounting treatments for both positive and negative goodwill have been subject to several changes over the last decades. These treatments were initially based on whether the combination qualifies as a 'purchase' or 'pooling-of-interests'.⁴ In the mid-1970s, UK firms enjoyed considerable discretion over Merger & Acquisition (M&A) accounting (Lee 1974). The accounting treatment of goodwill in the UK was set out in the Statement of Standard Accounting Practice (SSAP) No. 22, issued in 1984 by the UK Accounting Standards Board. At that time, BPGs were considered as

⁴ BPGs are only associated with purchase accounting (Wines et al. 2007).

negative goodwill. SSAP No. 22 allowed companies to eliminate all goodwill, both positive and negative, directly against equity reserves (Peasnell 1996).

Substantial regime changes were introduced in 1997 under the UK Financial Reporting Standard (FRS) 10 *Goodwill and Intangible Assets*, which replaced SSAP No. 22. Under FRS 10, negative goodwill was recognised on the balance sheet and systematically amortised while being tested for impairment.⁵ In 1998, the International Accounting Standard (IAS) 22 *Accounting for Business Combinations* was introduced and mostly embraced the logic of the UK's FRS 10, with an amortisation-plus-impairment approach for negative goodwill (Amel-Zadeh et al. 2016).⁶ Overall, all these accounting standards viewed BPGs as unrealised gains to be achieved over time through a recognition-amortisation approach.

In 2001, the IASB initiated a two-phase project to review IAS 22. Its primary objective was to improve the quality of, and to seek international convergence on, the accounting for business combinations. The product of the first stage of this process was the issuance of IFRS 3 *Business Combinations*, in March 2004, to be enacted in 2005. The new standard states that before recognising BPGs, the acquirer is required to reassess the fair value of the net assets acquired to reduce any measurement error. Any remaining excess value should be immediately recognised in the profit or loss account for the period, presented as a separate line item and classified as a gain on bargain purchase at the date of acquisition (IFRS 3 2004). For each business combination occurring

⁵ Under Financial Reporting Standard (FRS) 10, acquiring firms were required to separately disclose negative goodwill on the balance sheet under the heading of goodwill and to recognise it in the profit-loss account during the periods in which the non-monetary assets acquired were depreciated or sold. Any negative goodwill in excess of the non-monetary assets was written back in the profit-loss account over the period expected to benefit from the negative goodwill (FRS 10 1997).

⁶ International Accounting Standard (IAS) 22 stipulated that the amount of negative goodwill arising from bargain purchases should not exceed the aggregate fair values of the identifiable non-monetary assets acquired. This negative goodwill was allocated on a systematic basis over the remaining weighted average useful life of the identifiable depreciable assets. Any remaining excess was immediately recognised as income (IAS 22 1998).

during the reporting period, the acquirer should disclose the amount of BPGs and describe the nature of this excess gain.

In January 2008, the IASB issued a revised version of IFRS 3 for business combinations where the acquisition date is on or after the beginning of the first annual reporting period that begins on or after 1 July 2009. The revised IFRS 3 introduced additional criteria for the acquirer to reassess whether all the assets acquired and liabilities assumed have been correctly identified before recognising a gain on a bargain purchase. Before recognising any BPG, an acquirer is required to review the procedures used to measure the sum of the considerations transferred, any non-controlling interest, and the fair value of any previously held equity interest in the acquiree (in the case of a business combination achieved in stages). The acquirer must immediately recognise, on the acquisition date, any excess value remaining after these reassessments as a separate income line item. A separate disclosure in the notes is required for reported BPGs attributed to the acquirer. Additional disclosure is also required with respect to the reasons why the transaction has resulted in a gain (IFRS 3R 2008).

2.2 Hypothesis Development

2.2.1 Compliance with IFRS 3 Disclosure Requirement

It has long been argued in prior literature that corporate disclosure is essential to the efficient functioning of a capital market (Healy and Palepu 2001). Compliance with disclosure requirements forces companies to report on verifiable fundamentals based on past transactions/events (e.g., cash flows and profits), making it harder for managers to intentionally misstate figures. Moreover, mandatory disclosures also bind firms to disclose both good and bad news (Verrecchia 2001). Therefore, a firm is expected to comply with mandated disclosures even though proprietary information or bad news are to be disclosed.

Contradicting evidence in prior studies on the value relevance of BPGs might be attributed to the failure of distinguishing between the levels of disclosure guaranteed by an acquirer with respect to

the reasons for a bargain purchase. While most studies on disclosure only address voluntary disclosures (e.g., Botosan and Plumlee 2002, Gietzmann and Ireland 2005, Francis et al. 2008, Dhaliwal et al. 2011), our study investigates mandated disclosure by IFRS 3/3R and specifically addresses the reasons for a bargain purchase. Disclosure of the reasons behind the recognition of BPGs should enable financial statement users to process firms' private information (Dye 1985), reduce uncertainty about forecasted earnings (Hope 2003), and ultimately enhance the credibility of the reported gain.

The extensive note disclosure requirements of IFRS 3 on the reasons for BPGs aim at providing investors, analysts, and other users of financial statements with meaningful and transparent information, which enables them to evaluate the nature and financial impact of acquisitions (Glaum et al. 2013). According to the feedback statement on the post-implementation review of IFRS 3 (June 2015), investors emphasised the importance of disclosing the reasons why a transaction resulted in a bargain purchase. Furthermore, note disclosures of the reasons for the BPGs should reduce both estimation and information risks, promote better understanding/interpretations of the reasons why a company proceeds with a specific acquisition, and ultimately reflect management's confidence about the transaction. In support of the importance of goodwill notes disclosure, Al Jifri and Citron (2009) argue that the goodwill disclosed in the notes to the financial statements and the goodwill recognised on the face of the statements are equally value-relevant for investors.

In contrast, business combinations that fail to comply with IFRS 3 disclosure requirements on the reasons behind BPGs signal to the market that acquirers are less forthcoming on less favourable acquisitions. Such non-compliance may occur either because of unintentional neglect by the management, such as inadvertently overlooking specific disclosure requirements or intentional negligence. In some cases, misinterpretations of these rules could occur, for example, if a manager erroneously concludes that some rules do not apply to a certain type of business combination. In other cases, BPG can arise intentionally by structuring transactions to produce a gain that does not truly exist. For both scenarios, a lack of disclosure could lead investors to infer that asset values are

expected to imply either low or high risk (Beyer et al. 2010). Therefore, acquisitions with limited information on the potential reasons for acquisition at a bargain may lead to investor disappointment.

Varying levels of compliance with IFRS 3 disclosure requirements affect investors' abilities to assess and compare the extent and timing of firms' future earnings and net cash inflows (Mazzi et al. 2016). According to Glaum et al. (2013), compliance levels with IFRS 3 disclosure requirements vary substantially across acquiring firms. Reporting on the details of a bargain purchase indicates a high compliance with the IFRS 3 requirements. This signals to investors the presence of a true gain, while BPGs of firms that do not disclose the reasons for the gains in the footnotes could raise substantial concern about the existence of true gains and the possibility of managerial opportunism. Even if a substantial gain exists for BPGs that lack sufficient disclosure, doubts could arise on the reliability and accuracy of the measurement of BPGs in the financial statements. Investors are, hence, more likely to be sceptical of these BPGs and may even penalise firms for non-compliance by either not valuing at all or negatively valuing the reported BPGs. Therefore, we conjecture that compliance with BPGs mandatory disclosure about the reasons for the gains leads to higher firm valuations. This reasoning leads to the following hypotheses, stated in an alternative form, as follows:

H_{1a}: BPGs with related disclosure about the reason for the gain are positively valued by the market;

H_{1b}: BPGs that lack disclosure about the reason for the gain are either not valued or negatively valued by the market.

2.2.2 The Impact of IFRS 3 Revision

Within the scope of IFRS requirements, the accounting treatment of BPGs represents a significant change compared to the treatment introduced by IAS 22 and the capitalisation of negative goodwill under FRS 10. The immediate recognition of BPGs in the income statement indicates a shift from the unrealised treatment toward a realised gain approach which is likely to have a substantial impact on

firms' earnings. In addition, reporting these gains as a component of income rather than allocating them to the acquired assets results in higher stockholders' equity.

Before the revision of IFRS 3, BPGs recognised as an income statement component raised serious concerns of the IASB constituents about low transparency, transaction structuring, and the potentially opportunistic character of these gains. The IASB indicated that addressing intentional measurement errors by acquirers is beyond the scope of the revised IFRS 3 because standards specifically designed to avoid abuse would inevitably lack neutrality (IFRS 3R 2008; BC 374). The Board referred to internal mitigation mechanisms within firms, such as effective internal control systems or the use of independent valuation experts and external auditors for detecting intentional bias or fraud. The IASB concluded that BPGs should be recognised in the income statement and proposed additional measurement criteria for the reassessment procedures before any recognition of BPGs (IASB 2008).

A fundamental change incorporated by the revised accounting standard is the elimination of the measurement of the fair value of the acquiree as a whole and the recognition and measurement of a gain from a bargain purchase as a separate step (IFRS 3R 2008; BC 80A). IFRS 3R acknowledges that the required reassessment of the original IFRS 3 might still be insufficient to eliminate unintentional measurement bias, and, therefore, aims at limiting the extent of recognition of a BPG.⁷ The revised reassessment procedures under the IFRS 3R should mitigate or eliminate any undetected errors in the initial measurements (IFRS 3R 2008; BC 375). Moreover, IFRS 3R has reinforced the disclosure requirements related to the recognition of BPGs (IFRS 3 2008). The standard specifically requires disclosure of both the book values and the fair values of the net assets acquired besides additional disclosure of the reasons why the transaction has resulted in a gain (IFRS 3R 2008).

⁷ However, the prohibition of the recognition of 'possible obligations' for contingent liabilities might lead to the recognition of higher BPGs (IFRS 3R 2008; BC 275). On the other hand, in line with this prohibition, the IASB concluded that contingent assets should not be recognised. This might lead to the recognition of lower BPGs.

Overall, the revised standard aims at addressing most deficiencies in past requirements on accounting for business combinations, which had previously led to negative goodwill results, that is, a result that had the appearance but not the economic substance of a bargain purchase (IFRS 3R 2008; BC 379).⁸ Also, the revised IFRS 3 requirements are expected to improve the quality of acquiring firms' financial reporting by eliminating inconsistencies in accounting for acquisition-related costs and applying the fair-value measurement principle to all business combinations (IFRS 3R 2008; BC 369). The changes introduced by IFRS 3R suggest that the recognised BPGs are more likely to reflect true economic gains and provide reliable information to investors. These elements are expected to have a positive impact on firm valuations. As the IASB concludes in the IFRS 3R, the 'IASB sought to improve the understandability, relevance, reliability and comparability of information provided to users of financial statements' (IFRS 3R 2008; BC 437, p.481). Therefore, we conjecture that investors are more likely to perceive reported BPGs as increasing firm value after the revision of the assessment criteria and the enhanced disclosure requirements and, therefore, consider BPGs as value relevant. Reported BPGs are, in fact, more likely to reflect inherent economic gains and less likely to incorporate measurement bias. This prediction leads to the following hypothesis:

H₂: The value relevance of BPGs increases in the post-IFRS 3 revision period.

We conjecture that gains associated with the explicit disclosure of their underlying motivations will receive higher market valuations in the post-IFRS 3 revision period compared to the pre-revision phase. In addition, BPGs that lack disclosure about the reasons for the gain are predicted to have either lower or no value relevance in the two periods.

⁸ For instance, the IASB states that the lacking or delayed recognition of contingent consideration under IFRS 3 is unacceptable and unreliable and leads to incomplete financial reporting, thus lessening its usefulness in making economic decisions (IFRS 3R 2008; BC 346-347 349). In contrast, IFRS 3R requires the measurement and recognition of all liabilities at their fair values on the acquisition date (IFRS 3R 2008; BC 379). This approach is expected to result in more accurate and, more verifiable measurement of the different components of the business combination.

2.2.3 Different BPG Income Classifications

Prior research has documented that the inclusion of additional information regarding a firm's business combination in the notes of the financial statements significantly affects firm valuations (Hopkins et al. 2000, Al Jifri and Citron 2009). Until now, IFRS 3/3R has not provided explicit requirements and detailed guidance regarding the presentation and classification of BPGs as either operating or non-operating earnings. This void creates ambiguity, reduces the comparability of financial statements, and might hold implications for the value relevance of these gains. In the feedback statement on the Post-implementation Review of IFRS 3 (2015), investors highlighted the importance of the classification of BPGs and expressed the preference for presenting these gains as part of other comprehensive income.

Different firm valuations of earnings components have been discussed in previous research. In particular, earnings components (e.g., operating, non-operating, extraordinary, and special items, among the others) have differential implications on firm value based on their persistence and predictive power for future earnings (Strong and Walker 1993, Fairfield et al. 1996, Doukakis 2010). The valuation of the earnings components is also affected by the extent of the subjectivity used in determining their size. Gains and losses may be classified as operating or non-operating earnings depending on their relation to the entity's major ongoing operations. In this respect, only the ongoing and central operations of the firm should be considered as operating income.

On the one hand, the financial statement classification of BPGs under operating income is likely to signal to investors that this acquisition is core, major, and central to the acquirer's operating activities. Investors may positively perceive this income classification as an indication of future synergies, thus signalling a value-enhancing acquisition. On the other hand, the unique nature of BPGs as one-off and transitory gains suggests that their classification as operating income might not

be representationally faithful.⁹ However, analysts and investors emphasise the ability of firms to generate profit from core or operating activities, which might create strong incentives for firms to inflate operating profits through the classification of BPGs as part of their operating activities. Hence, sophisticated market participants may undervalue or ignore BPGs classified as operating income. On the contrary, sophisticated investors might highly price BPGs classified as non-operating income, perceived as a more appropriate representation of the nature of these gains.

Given these inconclusive arguments, we assume a non-directional prediction for the value relevance of different classifications of BPGs. This leads to our third hypothesis:

H₃: *BPGs classified as either operating or non-operating income are differently valued.*

3. Research Design and Methodology

To address the issue of whether acquirers comply with IFRS 3 disclosure requirements for BPGs and how this could have an implication on stock market valuation, we conduct a content analysis of the annual reports of BPG-reporting firms and identify two main categories of companies: (i) firms that disclose the reasons for BPGs; and (ii) companies that do not disclose any information related to the reasons for the bargain purchase. Although IFRS 3 clearly states that disclosure of the reasons for BPGs is required, some firms fail to comply with this disclosure requirement. We find that the most commonly disclosed reasons for BPGs relate to acquisitions that involve distressed acquirees. This phenomenon refers to a business combination in which the acquiree encounters severe financial pressure and can avoid costly bankruptcy through a takeover/selling to potential acquirers at a bargain. On the basis of the first hypothesis, we expect that disclosure about the reasons for BPGs leads to higher firm valuations even if the business combinations involve distressed firms.

⁹ In a similar vein, the U.S. SEC has questioned the classification of \$66 million of BPG arising from the acquisition of General Motors–Strasbourg by General Motors as part of the non-operating income. The company responded that, given the unique nature of a BPG, the company does not believe recording BPGs as operating income to be representationally faithful; hence, these gains should be classified under other non-operating income (SEC File No. 001-34960, Comment 7, 2011).

Acquisitions of distressed firms with sufficient note disclosure should help investors interpret information and form precise expectations on firm value. If a distressed business has an expected high value as a going concern that an acquirer views as a special competence or a good strategic fit, the acquisition may be beneficial to the acquirer (Bruyland and De Maeseneire 2016). Prior literature suggests that firms acquiring companies in financial distress tend to earn higher abnormal returns, higher bidder returns, and higher premiums than firms acquiring non-distressed companies (Ang and Mauck 2011, Meier and Servaes 2014). Moreover, acquirers merged with distressed targets show significantly improved operating performance and positive abnormal stock returns at the announcement date of the acquisition (Hotchkiss and Mooradian 1998). Acquisitions of distressed firms are often driven by synergies such as economies of scale and the acquisition of higher market power (Bruton et al. 1994; Hotchkiss and Mooradian 1998). These benefits imply higher future economic gains for the acquirer's shareholders (Hayn 1995, Ayers et al. 2003).¹⁰ Our content analysis highlights a few acquiring firms that attribute the recognition of BPGs to fair value changes in the consideration transferred and/or net assets acquired between the agreement and the acquisition dates. These fair value adjustments might reflect a decrease (increase) in the purchase price (net assets acquired), which results in the recognition of BPGs.

Based on this content analysis, we investigate the value relevance of gains on bargain purchases. We employ the Ohlson (1995) valuation framework, which has been widely used in the previous literature (Collins et al. 1997, Barth and Clinch 1998, Xu et al. 2007, Al Jifri and Citron 2009, Li et al. 2012, Venter et al. 2014). In Ohlson (1995), the market value of the firm's equity is expressed as a function of its earnings and book value of equity. It has been argued that the Ohlson price model estimates unbiased earnings response coefficients (Kothari and Zimmerman 1995) because stock

¹⁰ Other benefits, for example, are related to tax advantages such as tax-loss carry-forwards. This refers to accumulated losses incurred from the acquiree that the acquirer may use to claim for a tax expense reduction post-acquisition date. These benefits are normally carried forward for up five years depending on the jurisdiction. Acquisition of tax-loss carry-forwards by profitable companies may reduce the present and future tax liability of the combined firm, resulting in significant tax savings for the acquirer.

prices impound earnings information and reflect differences in the persistence level of earnings (Chen and Wang 2004). We separately include the gain on bargain purchases (*BPG*)¹¹ in a price valuation model to assess its value relevance. This variable reflects the pooled BPGs irrespective of whether a reason for the gain is provided or not. To identify a clean surplus relationship, we need to adjust both the book value of equity (*ADJBV*) and the net income (*ADJNI*) by subtracting the *BPGs* recorded during the year.

Previous research has shown that valuation effects might differ between profitable and non-profitable companies (Hayn 1995). We control for a firm's loss by adding a loss indicator variable (*LOSS*) and allowing it to interact with the adjusted book value of equity and adjusted net income (Dunn et al. 2015). In line with the previous literature (e.g., Jennings et al. 1996, Al Jifri and Citron 2009), we scale all variables (except for *LNTA* and *LOSS*) by the total assets at the end of year *t*. The natural logarithm of the deflator (*LNTA*) is also included as an additional variable in the valuation model to control for scale effects (Barth and Kallapur 1996). Although some studies (Barth and Kallapur 1996, Barth and Clinch 2009) suggest the use of the number of common shares outstanding as an appropriate deflator in value relevance models, a share deflation might not necessarily control for the effect of size in the goodwill setting. All variables used in this study are defined in Appendix A. Our valuation model for BPGs is specified in Equation (1), as follows:

$$MCAP_{it} = \alpha_0 + \alpha_1 ADJBV_{it} + \alpha_2 ADJNI_{it} + \alpha_3 BPG_{it} + \alpha_4 LNTA_{it} + \alpha_5 LOSS_{it} + \alpha_6 ADJBV_{it} * LOSS_{it} + \alpha_7 ADJNI_{it} * LOSS_{it} + \alpha_8 \sum_{t=2014}^{2006} T_t + \alpha_9 v_i + e_{it} \quad (1)$$

where:

MCAP is the market capitalisation at the end of year *t*;

ADJBV is the book value of equity at the end of year *t* adjusted for the gain on bargain purchase (*BPG*) in year *t*;

¹¹ The BPGs are disclosed pre-tax in the annual reports. We use the firm- and year-specific effective tax rates to calculate the after-tax BPGs.

ADJNI is the net income before extraordinary items at the end of year *t* adjusted for the gain on bargain purchase (*BPG*) in year *t*;

BPG is the gain on bargain purchase (net of tax) in year *t*;

LNTA is the natural logarithm of total assets at the end of year *t*;

LOSS is an indicator variable equal to one for loss firms in year *t*;

T_t is a set of year dummies;

v_i is a set of industry dummies.

In line with the previous literature, we expect positive and significant coefficients on the adjusted book value of equity (*ADJBV*) and adjusted net income (*ADJNI*).

We then distinguish between BPGs for which the acquirer explicitly discloses the reason for the gain (*BPG_DISC*) and BPGs that lack such disclosure (*BPG_NONDISC*). The valuation model for these two categories is specified in Equation (2), as follows:

$$MCAP_{it} = \beta_0 + \beta_1 ADJBV_{it} + \beta_2 ADJNI_{it} + \beta_3 BPG_DISC_{it} + \beta_4 BPG_NONDISC_{it} + \beta_5 LNTA_{it} + \beta_6 LOSS_{it} + \beta_7 ADJBV_{it} * LOSS_{it} + \beta_8 ADJNI_{it} * LOSS_{it} + \beta_9 \sum_{t=2014}^{2006} T_t + \beta_{10} v_i + e_{it} \quad (2)$$

where:

BPG_DISC is the gain on bargain purchase (net of tax) for which the acquirer explicitly discloses the reason for the gain at the end of year *t*;

BPG_NONDISC is the gain on bargain purchase (net of tax) for which the acquirer does not disclose the reason for the gain at the end of year *t*.

All other variables have been previously defined.

On the basis of the first hypothesis, a significantly positive (negative) coefficient on *BPG_DISC* (*BPG_NONDISC*) would suggest that BPGs for which a reason is disclosed are positively (negatively)

valued by the market. A statistically insignificant coefficient would suggest that the BPGs are not valued.

To test the second hypothesis, we use an approach similar to that of Lee (2011) and include the variable *POST10* in the model to capture the effects of the revision of IFRS 3. *POST10* is an indicator variable equal to one for BPGs reported in the 2010–2014 period (the post-IFRS 3 revision period), and zero otherwise (the pre-IFRS 3 revision phase). All other variables have been previously defined.

The valuation model for the IFRS 3 revision effects is specified in Equation (3), as follows:

$$\begin{aligned}
 MCAP_{it} = & \gamma_0 + \gamma_1 ADJBV_{it} + \gamma_2 ADJNI_{it} + \gamma_3 BPG_DISC_{it} + \gamma_4 BPG_NONDISC_{it} + \gamma_5 POST10_{it} + \\
 & \gamma_6 BPG_DISC_{it} * POST10_{it} + \gamma_7 BPG_NONDISC_{it} * POST10_{it} + \gamma_8 LNTA_{it} + \gamma_9 LOSS_{it} + \\
 & \gamma_{10} ADJBV_{it} * LOSS_{it} + \gamma_{11} ADJNI_{it} * LOSS_{it} + \gamma_{12} v_i + e_{it} \quad (3)
 \end{aligned}$$

In line with our predictions regarding the first and second hypotheses, a positive coefficient on *BPG_DISC * POST10* would indicate that *BPG_DISC* is more value relevant in the post-IFRS 3 revision period than in the pre-IFRS 3 revision phase. Accordingly, a positive sum of the *BPG_DISC* and *BPG_DISC * POST10* coefficients would suggest that *BPG_DISC* is positively valued by the market in the post-IFRS 3 revision period. Similar interpretations apply for the *BPG_NONDISC* coefficient.

To test our third hypothesis, we apply an analogous interaction model. In particular, we introduce an indicator variable *OPER* that is equal to one for BPGs classified as part of the operating income, and zero otherwise. We maintain non-directional expectations for the coefficients on *BPG_DISC* and *BPG_NONDISC*. The valuation model for the BPG classifications is specified in Equation (4), as follows:

$$\begin{aligned}
 MCAP_{it} = & \delta_0 + \delta_1 ADJBV_{it} + \delta_2 ADJNI_{it} + \delta_3 BPG_DISC_{it} + \delta_4 BPG_NONDISC_{it} + \delta_5 OPER_{it} + \\
 & \delta_6 BPG_DISC_{it} * OPER_{it} + \delta_7 BPG_NONDISC_{it} * OPER_{it} + \delta_8 LNTA_{it} + \delta_9 LOSS_{it} + \\
 & \delta_{10} ADJBV_{it} * LOSS_{it} + \delta_{11} ADJNI_{it} * LOSS_{it} + \delta_{12} \sum_{t=2006}^{2014} T_t + \delta_{13} v_i + e_{it}. \quad (4)
 \end{aligned}$$

Although price models have been extensively employed in the value relevance literature, we further examine the robustness of our results by using a return specification model. Both functional

forms have unresolved issues (Kothari and Zimmerman 1995). In general terms, price specifications seem to perform better and produce less biased coefficients. In addition, accounting information can be value relevant in a price model even though it does not provide new information that may affect stock returns. However, in the presence of omitted variable bias, the explanatory power of price models is significantly reduced. Return specifications are not affected by scale problems and are often characterised by higher R-squares. However, these models suffer from measurement error that could lead to biased estimates of the earnings response coefficient. Therefore, in this study, we follow Kothari and Zimmerman (1995), who suggest that, in the absence of a clear preference between the two models, the use of both return and price specifications has the potential to yield more convincing evidence (Amir and Lev 1996, Barth and Clinch 1998).¹²

In line with the previous literature (e.g., Hail 2013), we estimate the following model to examine the association between BPGs and stock returns. Our returns window, inclusive of dividends, spans from the announcement date to three months after the fiscal year-end. This choice ensures that information in year-end financial statements is known in the market and, thus, reflected in stock prices. All variables in the return specifications are deflated by the lagged stock price (Dhaliwal et al. 1999, Biddle and Choi 2006). The return specification for BPGs is specified in Equation (5), as follows:

$$RET_{it} = \varepsilon_0 + \varepsilon_1 ADJNI_RET_{it} + \varepsilon_2 \Delta ADJNI_RET_{it} + \varepsilon_3 BPG_RET_{it} + \varepsilon_4 \sum_{t=2014}^{2006} T_t + \varepsilon_5 v_i + e_{it} \quad (5)$$

where:

¹² Although an event-study approach would be suitable to assess how the market evaluates a business combination, there are several reasons for not adopting this approach in our study. First, the identification and exclusion of observations related to confounding events would dramatically decrease our relatively limited sample of BPG-reporting firms. Second, after checking several announcements related to our sample acquisitions, we noticed that press releases lack any information related to the existence of BPGs. More importantly, there is no disclosure about the reasons for and, thus, the source of the BPGs.

RET is the stock return (inclusive of dividends) from the announcement date to three months after the fiscal year-end;

ADJNI_RET is the net income before extraordinary items per share at the end of year *t* adjusted for the gain on bargain purchase (*BPG*);

$\Delta ADJNI_RET$ is the year-to-year change in net income before extraordinary items per share adjusted for the gain on bargain purchase (*BPG*);

BPG_RET is the gain on bargain purchase per share (net of tax) at the end of year *t*.

We then distinguish between BPGs for which the acquirer explicitly discloses the reason for the gain (*BPG_DISC_RET*) and BPGs that lack such disclosure (*BPG_NONDISC_RET*). For all variables, our predictions remain similar to those referred to the price model. The return specification for BPGs categories is specified in Equation (6), as follows:

$$RET_{it} = \theta_0 + \theta_1 ADJNI_RET_{it} + \theta_2 \Delta ADJNI_RET_{it} + \theta_3 BPG_DISC_RET_{it} + \theta_4 BPG_NONDISC_RET_{it} + \theta_5 \sum_{t=2014}^{2006} T_t + \theta_6 v_i + e_{it}, \quad (6)$$

where:

BPG_DISC_RET is the gain on bargain purchase per share (net of tax) for which the acquirer explicitly discloses the reason for the gain at the end of year *t*;

BPG_NONDISC_RET is the gain on bargain purchase per share (net of tax) for which the acquirer does not disclose the reason for the gain at the end of year *t*.

For the sake of brevity, we do not present the return specifications related to the IFRS 3 revision and the BPG classification effects. In line with the price models, we interact the *POST10* and *OPER* indicator variables with the two categories of reported BPGs (i.e., *BPG_DISC_RET* versus *BPG_NONDISC_RET*).

All the price and return models are estimated using robust regression. Robust regression attempts to dampen the influence of outliers to provide a better fit to the majority of the data and reduce variation in the coefficients across different models (De Simone 2016; Brownen-Trinh, 2019). In particular, robust regressions employ an iterative procedure that weights each observation based on absolute residuals. Therefore, the estimated coefficients are more efficient than those obtained by ordinary least squares (OLS) (Berk 1990). Our panel estimation controls for unobserved time effects (T_t) as well as unobserved heterogeneity across industries (v_i). For the pre- and post-IFRS 3 revision analysis, we do not control for time effects.

4. Sample and Descriptive Statistics

Our initial sample includes all firms listed in the London Stock Exchange (LSE) as of 2015. The LSE exhibits the highest cumulative market capitalisation of all European regulated stock exchanges and has massive exposure to investor capital and institutional traders. The LSE also differs from other European stock markets in terms of market participants, trade reporting requirements (free- and fast-trading shares, internal exchange rules), and stock market regulations (Huang and Masulis 2003, Doukakis and Papanastasopoulos 2014).

Market and accounting data are collected from DataStream and Worldscope, respectively. Announcement dates are obtained from Thomson Reuters and press releases. The data for gains on bargain purchases are hand-collected from companies' annual reports. We initially downloaded the annual reports available from 2005–2014 through either the company's website or Thomson One, providing an initial sample of 12,492 annual reports, which corresponds to 1,638 firms. Using the keyword search function of the software Zotero, we identified 587 reports (268 firms) with at least one of the relevant keywords, which include 'negative goodwill', 'bargain purchase', and 'gain on acquisition'. We dropped observations with (a) a pure narrative description of the accounting treatment of bargain purchases (i.e., no specific bargain purchase gain acquisition took place during the year), (b) a revaluation of a previously held equity interest (reported as a gain on acquisition), (c)

reconciliations between UK GAAP and IFRS (i.e. negative goodwill acquisitions that took place before 2005 and accounted for under FRS10), and (d) missing accounting and stock market data. Our final sample includes 210 firm-year observations representing 148 firms that realised and reported BPGs at the fiscal year-end. Table 1 presents the sample selection criteria.

[Insert Table 1 about here]

To identify the reasons for the BPGs, we manually reviewed all possible and relevant disclosures related to BPGs in the annual reports. Our content analysis showed that 67 firm-year observations provide a reason for the BPG (*BPG_DISC*). We identified 53 firm-year observations attributing the BPG to the distress of the acquiree and 14 firm-year observations for which the acquirer attributes the BPGs to fair value changes of the consideration transferred and/or net assets acquired between the agreement and the acquisition dates. Finally, we identified 143 firm-year observations in which the acquirer fails to meet the disclosure requirements of IFRS and does not specify the reason for the BPG (*BPG_NONDISC*). Appendix B presents some examples of the two categories of BPGs.

The content analysis of the acquirers' annual reports shows a substantial variation in the classification of BPGs as either operating or non-operating income. Around half of our sample firms reported BPGs as part of their operating income (108 firm-year observations), whereas the other half is classified as non-operating income (91 firm-year observations). The analyses on the BPGs' classifications are based on a total sample of 199 observations (compared to 210 observations in the primary analyses) because we are unable to confirm the classifications of 11 firm-year BPG observations.

Table 2 presents the characteristics of the sample distribution by industry and year. We observe a high frequency of BPGs in the more recent years. Although various industries are represented in the sample, the majority of the firms belong to the financial and industrial sectors, followed by consumer services and basic materials.

[Insert Table 2 about here]

Table 3 reports the descriptive statistics and mean comparison tests between BPG-reporting and non-BPG-reporting firms for all the variables used in the empirical analysis. The non-BPG-reporting sample comprises 10,769 observations of companies listed in the LSE over the sample period with accounting data available on the Worldscope database.

The results show that the mean value for market capitalisation (*MCAP*) is 0.767, while the adjusted book value of equity (*ADJBV*) is slightly lower at 0.445. BPG-reporting firms are, on average, profitable (around 30% report a loss). They also experience positive stock market returns (*RET*) of around 3.6% from the announcement date to three months after the fiscal year-end.¹³ In support of the economic significance of the BPGs, the mean *BPG* is 2% of total assets, which represents, on average, more than 20% of the total net income (*BPG_NI*). The materiality of BPGs is also evident, as net income, excluding BPG (*ADJNI*), is significantly lower (mean value of -0.017) than the reported total net income (*NI*, mean value of 0.006, untabulated). Finally, the paired mean comparisons (t-test) show that BPG-reporting firms are significantly larger, but they have significantly lower market capitalisations compared to non-BPG-reporting firms.

[Insert Table 3 about here]

In Table 4, we report the mean comparison tests across two sub-samples: (i) in Panel A of Table 4, BPGs for which the acquirer explicitly discloses the reason for the gain (*BPG_DISC*) versus those for which the acquirer lacks such disclosure (*BPG_NONDISC*); and (ii) the pre-IFRS 3 revision (2005–2009) and post-IFRS 3 revision (2010–2014) periods, in Panel B.

The two categories of firms (i.e., *BPG_DISC* versus *BPG_NONDISC*) are not significantly different in terms of market capitalisation, profitability, and size. We also find no differences between these sets of firms with respect to their stock returns as well as the classification of BPGs as either operating or non-operating income. *BPG* and *BPG_NI* are not significantly different. This analysis is expected to

¹³ Since we are unable to identify the exact announcement date for 82 firm-year observations, our returns analysis is based on 128 observations.

alleviate concerns that any difference in pricing between the two categories of BPGs is due to the systematically higher materiality of one category over the other.

We further investigate whether different valuations of BPGs before and after the revision of IFRS 3 can be attributed to different characteristics of BPG-reporting firms in the two periods. In Panel B of Table 4, the materiality of BPGs (*BPG*, *BPG_DISC*, and *BPG_NONDISC*) is not significantly different in the two periods. In addition, the two sub-samples have no significant differences with respect to all other firm characteristics except for the profitability and the BPGs income classification.¹⁴

[Insert Table 4 about here]

5. Results

5.1 Price Model

Table 5 presents the results of the tests on the first value relevance hypothesis, which examines whether the two BPGs categories (i.e., *BPG_DISC* versus *BPG_NONDISC*) are differently valued during the whole sample period. We first examine the value relevance of pooled BPGs (*BPG*), as reported in column 1 of Table 5, irrespective of the different BPGs-reporting categories. The aim of this step is to identify the average valuations of BPGs in the full sample, in line with previous studies. We then extend our empirical tests to examine whether the two categories of BPGs are differently priced by the stock market (column 2).

For the pooled sample, BPGs tend not to be valued by the market and are not relevant to the acquirer's firm value (column 1). This result is in line with Comiskey et al. (2010). We then distinguish between the different categories to assess the possible differential valuations, as shown in column 2 of Table 5. We find that neither *BPG_DISC* nor *BPG_NONDISC* is significantly valued by the market.

¹⁴ In untabulated sensitivity tests, we perform mean comparison (t-tests) for other common firm characteristics used in the previous literature by using all sub-samples. We find no significant differences in terms of indebtedness, growth opportunities, auditor type, alternative investment listing status, and ownership structure. In addition, we also find no significant differences in the acquisition activity (proxied by the change in positive goodwill) of BPG-reporting firms across the different sub-samples examined.

Although the equality of *BPG_DISC* and *BPG_NONDISC* coefficients is rejected at the 10% significance level (p -value = 0.075), the coefficients on the two variables are not significantly different from zero, which does not allow us to conclude that a difference exists in pricing by the stock market. These results partially support our first hypothesis by confirming the value irrelevance of BPGs that lack disclosure on their underlying motivations (*BPG_NONDISC*). However, we find no support for the value relevance of BPGs that disclose the reasons for the gain (*BPG_DISC*). These findings imply that, on average, investors tend not to differentiate the pricing of the two categories of BPG reporting firms.

[Insert Table 5 about here]

In Table 6, we report the results of the test on our second hypothesis, which investigates whether the revision of IFRS 3 has improved firm valuations with respect to BPGs. In column 1, we distinguish between the pre- and post-IFRS 3 revision period using an indicator variable, *POST10*, that takes a value equal to one for the post-revision period, and zero otherwise. We interact this variable with the different categories of BPGs (i.e., *BPG_DISC* and *BPG_NONDISC*) to identify the incremental effect of this revision in the two categories. In column 2 of Table 6, we examine our third hypothesis, that is, whether the classification of BPGs as either operating or non-operating income affects firm valuations. We distinguish between operating and non-operating income using an indicator variable, *OPER*, that takes a value equal to one for BPGs classified as part of the operating income, and zero otherwise. We then interact this variable with the two categories of BPGs.

The results in column 1 of Table 6 show that the coefficients on *BPG_DISC* (0.255, p -value = 0.815) and *BPG_NONDISC* (-2.186, p -value = 0.150) are not statistically significant, which indicates that neither of the two categories of BPGs is valued in the pre-IFRS 3 revision period. These findings imply that no matter if a reason for the gain is reported or not, investors did not seem to perceive the information reported on BPGs as value relevant during that period. However, when the two categories interact with *POST10*, the results show that BPGs for which an acquirer explicitly discloses the reason for the gain are associated with significantly higher pricing in the post-IFRS 3 revision

period, as evidenced by the positive and significant coefficient on *BPG_DISC * POST10* (4.971, p -value = 0.001). The sum of the *BPG_DISC* and *BPG_DISC * POST10* coefficients is positive and significant (5.226, p -value = 0.000), which confirms that *BPG_DISC* is positively valued following the revision of IFRS 3. Regarding *BPG_NONDISC*, although we find a significant shift in the post-revision period, as shown by the coefficient on *BPG_NONDISC * POST10* (3.369, p -value = 0.062), the sum of the *BPG_NONDISC* and *BPG_NONDISC * POST10* coefficients (1.183, p -value = 0.251) is not statistically significant, which suggests that these BPGs are consistently not valued by the market in both the pre- and post-revision periods.

Taken together, the differential pricing between *BPG_DISC* and *BPG_NONDISC* in the post revision period reflects the economic significance of these gains to the stock market valuation. These findings are consistent with our predictions and support our second hypothesis. In particular, the comparison of the results between the two regulatory periods indicates that the IFRS 3 revised criteria, and, specifically those related to mandated disclosure requirements for BPGs, tend to enhance firm valuations. In the post revision period, investors seem to positively price BPGs with explicit disclosure of their underlying motivations (i.e., *BPG_DISC*). However, they consistently do not value BPGs that lack disclosure on the reasons for the gain (i.e., *BPG_NONDISC*). Overall, our results imply that the stock market can identify each category of BPG and interpret the information related to compliance/non-compliance with IFRS 3. Investors appear to perceive poorly justified BPGs as phantom gains. This could be attributed to investors' opinion that these BPGs arise from either accounting opportunism or erroneous measurement by the management, essentially impairing investors' confidence about the value-enhancing character of these transactions.

In Table 6, column 2 reports the valuation effects across different BPGs income classifications. The results show that BPGs for which the acquirer explicitly discloses the reason for the gain are positively valued only when they are classified as part of the non-operating income (2.609, p -value = 0.077). The insignificant coefficient on *BPG_DISC * OPER* (-2.279, p -value = 0.177) along with the insignificant sum of the coefficients on *BPG_DISC* and *BPG_DISC * OPER* (0.330, p -value = 0.718)

provide evidence for the value irrelevance of *BPG_DISC* when classified as part of the operating income. These findings also indicate that the market seems not to value *BPG_NONDISC*. This insignificant association is consistently observed regardless of the BPGs classification as operating (sum of *BPG_NONDISC* and *BPG_NONDISC * OPER*: 1.234, *p*-value = 0.620) or non-operating income (*BPG_NONDISC*: 0.241, *p*-value = 0.796).

Overall, our findings suggest that investors can distinguish between the two categories of BPG and their different income classifications. In other words, consistently with the one-off and transitory nature of BPGs, investors seem to significantly price *BPG_DISC* and increase firm value when these gains are classified as part of the non-operating income, a reporting practice considered more representationally faithful. Therefore, with respect to our third hypothesis, our findings confirm a positive association between BPGs and firm value, which is particularly related to BPGs with notes disclosure on their underlying motivations. Valuations for BPGs that lack disclosure on the reasons for the gain are not significantly affected by the income classifications (i.e., remain value irrelevant).

[Insert Table 6 about here]

5.2 Returns Model

Table 7 presents the empirical results based on the returns model for the pooled BPGs (column 1); the two different categories (column 2); the effect of the revision of IFRS 3 (column 3); and the impact of the income classification (column 4). In line with the previous literature (Hail 2013), earnings adjusted for BPGs (*ADJNI_RET*) are positively valued across all different specifications, while the change in earnings is not significantly associated with stock returns (Alford et al. 1993, Hamberg and Beisland 2014).

The findings reported in Table 7, column 1, show that the pooled BPGs are not significantly valued by the market (-0.097, *p*-value = 0.705), in line with the results of the price model. When we distinguish between the different categories of firms reporting BPGs, in column 2, we find that both

BPG_DISC_RET and *BPG_NONDISC_RET* are not significantly different from zero. These findings suggest that the stock market, on average, does not differentiate between the two categories of BPGs. These results are consistent with the price model results and provide partial support for our first hypothesis.

With respect to the differential valuations of BPGs categories in the pre- and post-IFRS 3 revision periods (Table 7, column 3), we find an insignificant coefficient on *BPG_DISC_RET* (-0.772, p -value = 0.165), which suggests that BPGs reported in compliance with IFRS 3 disclosure requirements are not significantly valued in the pre-IFRS 3 revision period. However, by interacting this variable with the *POST10* indicator, we find a significantly positive coefficient on *BPG_DISC_RET * POST10* (2.609, p -value = 0.016). The results also show a significant and positive sum of the coefficients on *BPG_DISC_RET* and *BPG_DISC_RET * POST10* (1.837, p -value = 0.047). These results, taken together, indicate different market valuations for BPGs in the post-IFRS revision period as compared to the pre-revision phase, which shows significantly enhanced firm valuations under the revised standards. These findings imply that the extended measurement and disclosure criteria introduced by IFRS 3R have improved firm valuations. The positive valuation for *BPG_DISC* in the post-IFRS 3 revision period confirms the price model results and supports our second hypothesis.

With respect to the value relevance of BPGs classifications, as shown in Table 7, column 4, our results show a positive and significant coefficient on *BPG_DISC_RET* (2.280, p -value = 0.022). This suggests that *BPG_DISC* classified as part of the non-operating income tend to be perceived by investors as increasing the firm value. Moreover, in line with the price model results, the sum of the coefficients on *BPG_DISC_RET* and *BPG_DISC_RET * OPER* (-0.764, p -value = 0.172) is not statistically significant, which suggests that *BPG_DISC_RET* are not valued when classified as part of the operating income. These findings might be attributed to the predictions related to our third hypothesis, that is, investors perceive BPGs as transitory in nature and one-off gains that may be represented faithfully only as part of the non-operating income. We find no evidence of the value

relevance of *BPG_NONDISC_RET* regardless of whether they are reported as operating or non-operating income. These results further confirm that the stock market tends to be cautious about this type of BPGs and isolate their effect from other income components.

[Insert Table 7 about here]

5.3 Robustness Tests

Our sample period covers the crisis (2008–2009) and the subsequent recovery period (2010–2014). Hence, one could argue that any documented effects for BPGs may be attributed to the market conditions rather than the normative changes occurring over the sample period. For instance, the market for mergers and acquisitions (M&A) may be substantially different across the two periods. Similarly, the virtual cessation of credit by financial institutions undoubtedly affected all industries but had a substantial impact on the financial sector. Banks holding potentially worthless securities were forced to restructure their balance sheets. Hence, income statement items may have become (more) value relevant in the recovery period, irrespective of the revision of IFRS 3.

We address these concerns as follows. First, although during the financial crisis the UK M&A activity fell to its lowest level in the last 20 years (Office for National Statistics 2017), our sample composition (Table 2) shows a relatively similar frequency of the M&A activity involving BPGs between the crisis and the recovery period. Second, as a descriptive analysis, we perform paired mean comparisons (t-tests) for all our test variables during the crisis and the recovery period. We define as crisis the years characterised by negative GDP growth (IMF, World Economic Outlook) over the sample period (dummy variable *CRISIS* = 1 for years 2008 and 2009, and 0 otherwise). The (unreported) descriptive statistics show that BPG-reporting firms do not significantly differ across the two periods except for the market capitalisation (*MCAP*), stock returns (*RET*), and BPG classification

(OPER).¹⁵ These results indicate that the different valuations in the post-IFRS 3 revision period are not explained by different characteristics of BPG-reporting firms during the crisis and the subsequent recovery period but rather to the normative changes imposed by the revision of IFRS 3. Third, we perform additional empirical analysis by introducing the control variable *CRISIS* in our main analysis. The findings presented in Appendix C, Table 1 (Panel A), show that, after controlling for the financial crisis effect, *BPG_DISC* is positively valued in the post-IFRS 3 revision period but not in the pre-revision phase. We also find that the stock market tends to penalise (i.e., negatively value) firms that do not disclose the reasons for the BPGs in the pre-IFRS 3 revision period. Finally, we extend our empirical analyses to control for business combinations involving BPGs disclosed by financial institutions during the whole sample period. We identify financial institutions in our sample through a binary variable (*BANKS* = 1 for banks and financial service firms, and 0 otherwise).¹⁶ The results reported in Panel B, Table 1, in Appendix C remain unchanged and suggest that our main findings are robust and not driven by the crisis effect.

Despite the widespread use of the Ohlson model, this approach might be subject to criticism regarding the lack of information environment controls. For instance, positive pricing could be attributed to observable and unobservable firm characteristics, which might be correlated with both the likelihood of reporting a BPG and the corresponding market pricing of such component. Although empirically advancing and updating the Ohlson model is beyond the scope of our study, we perform an additional analysis by including a set of controls expected to proxy for both observable and unobservable firm characteristics. We control for (a) the ownership structure through a proxy for governance, measured by the percentage of closely held shares (*CLOSELY*); (b) leverage, a proxy for

¹⁵ We find that *BPG_RET* is significantly (10%) more material in the crisis than in the recovery period. This finding suggests that the increased value relevance of *BPG_RET* is not related to its potentially higher materiality in the recovery period.

¹⁶ The industry fixed effects controls employed in the main analysis are based on the Datastream ICB Industry classification level 2, which identifies ten industries (details are provided in Table 2). The *BANKS* control variable employed in this analysis is based on the ICB Supersector classification level 3 and identifies banks and financial services firms only.

the level of indebtedness, measured by the ratio of total debt over total assets (*LEVERAGE*); (c) above median profitability, a proxy for financial strength, measured through an indicator variable equal to one if the return on assets is above the industry median, and zero otherwise (*HIGH_PROFIT*); and (d) auditor type, a proxy for audit quality, by including an indicator variable equal to one if the firm is audited by Deloitte, Ernst & Young, KPMG, or PwC, and zero otherwise (*BIG4*). The results presented in Panel C, Table 1, in Appendix C suggest that our main findings are robust to the inclusion of the information environment controls.

The choice of the deflator tends to be important for the Ohlson model in the goodwill setting. As discussed in the research design (Section 3), deflation by total assets is likely to be more appropriate for our study setting to overcome scale effects. To check the robustness of our main findings and following Barth and Kallapur (1996) and Barth and Clinch (2009), we re-estimated our price models using the number of shares as the deflator and including the natural logarithm of shares as a control. The (untabulated) results remain robust.

Finally, we examine whether the differential pricing between *BPG_DISC* and *BPG_NONDISC* in the post-IFRS 3 revision period is driven by the different materiality levels of the two categories. Given that the frequency and the mean value of *BPG_DISC* is higher compared to *BPG_NONDISC*, we perform an additional robustness check. Out of the 143 *BPG_NONDISC* observations, we only address the largest 67 firm-year observations, which allows us to deal with a balanced sample of *BPG_DISC* and *BPG_NONDISC*, with a total of 134 observations.¹⁷ The (untabulated) results confirm a significant and positive firm valuation only for the BPGs for which the acquirer explicitly discloses the reason for the gain during the post-IFRS 3 revision period. *BPG_NONDISC* remain value irrelevant across the two regulatory periods.

¹⁷ In this subsample, *BPG_DISC* (*BPG_NONDISC*) has a mean value of 0.027 (0.038, t-test for the difference = -1.579).

6. Conclusion

We investigate whether BPG-reporting affects firm valuations within the IFRS context. The study is novel in two respects. First, it is the first study on the value relevance of BPGs that identifies the effect of the revision of IFRS 3. Second, the study is also novel in that we argue that the value irrelevance of the BPGs reported by prior studies might be attributed to the recognition of these gains on an aggregate level, irrespective of the extent of acquirers' compliance with IFRS 3/3R disclosure requirements and the income classification of these gains. Conceivably, BPGs might be perceived differently by the stock market depending on their underlying motivations. We, therefore, analyse the impact of disclosing the reasons for such gains on firm valuations. Moreover, we examine the value relevance of BPGs across different income classifications of operating versus non-operating income. In this respect, our results contribute to the ongoing debate about the economic consequences of accounting for business combinations.

Using a sample of bargain purchase gains of firms listed in the London Stock Exchange from 2005–2014, we find that the stock market differently prices BPGs conditional on the regulatory period of reporting under IFRS 3 (i.e., pre or post-IFRS 3 revision). In particular, investors tend to perceive BPGs that justify the reasons behind a bargain as increasing firm value only during the post-revision period. However, the stock market appears to be sceptical about BPGs that fail to comply with mandated IFRS 3 disclosure requirements and are poorly justified in the financial statements. For this set of reporting firms, BPGs are consistently priced as value irrelevant across the two regulatory periods. Finally, our results show significant and positive valuations for BPGs reported as non-operating income with sufficient note disclosure on the reasons for the gain. Overall, our findings are consistent across both price and returns specifications.

Taken together, the results of this study indicate that the stock market considers BPGs lacking an adequate level of disclosure as a 'shadow' income item (i.e., value irrelevant). The absence of disclosure seems to alert investors about non-compliance to mandated requirements, which might

raise concerns about the economic substance of this gain as well as the measurement/verifiability of this income component. The positive value relevance of BPGs in the post-revision period compared to the pre-revision phase might suggest that the IASB succeeded in improving the relevance and reliability of BPG-related information through stricter measurement and additional disclosure requirements. Such revision seems to promote higher investors' confidence regarding the value-enhancing substance of disclosed BPGs.

Overall, this study offers some policy implications for the IASB's current work on business combinations. The new insights presented in this study can assist in the recent discussions concerning the classification of BPGs under other comprehensive income (IFRS 3— Post-implementation Review of IFRS 3 Business Combinations, 2015). While the IFRS reporting requirements have improved over time, incomplete reporting on the reasons for the gain and inconsistent classifications across firms raise concern about the comparability of the financial information provided.

The evidence presented in this study opens new avenues for future research on the determinants and economic consequences of reporting BPGs. Our sample of BPG-reporting firms that attribute the existence of the gain to fair value changes in the consideration transferred and/or net assets acquired between the agreement and the acquisition dates is relatively limited. This does not allow us to differentiate between the value relevance of BPGs associated with distressed acquisitions and those associated with fair value changes. We leave this for future research.

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Table 1
Determination Criteria for the BPGs Sample between 2005-2014

	# of obs.	# of firms
Initial number of observations (firms) with annual reports available	12,492	1,638
Observations (firms) with none of the keywords found	(11,905)	(1,370)
Observations (firms) with at least one of the relevant keywords found	587	268
Observations (firms) with: narrative description of BPGs in the accounting policies section, revaluation of previously held equity interest, UK GAAP accounting standards or reconciliations between UK GAAP and IFRS, and missing accounting/stock price information	(377)	(120)
Final BPGs sample	210	148

Notes: This table presents our data collection process and the filtering criteria applied for the full population of listed firms in LSE during 2005–2014 in order to identify firms reporting BPGs.

Table 2
Sample Composition by Industry and Year for the BPGs Sample

Industry	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total	%
Basic Materials	1	2	3	3	5	4	2	1	1	5	27	12.86%
Consumer Goods	0	0	0	2	2	0	0	0	0	0	4	1.90%
Consumer Services	0	0	3	4	3	4	2	3	5	4	28	13.33%
Financials	0	3	5	7	13	15	10	5	11	12	81	38.57%
Healthcare	0	0	0	0	1	1	1	0	0	1	4	1.90%
Industrials	1	2	5	4	5	2	6	5	5	3	38	18.10%
Oil & Gas	0	2	1	0	1	0	2	3	4	4	17	8.10%
Technology	0	0	1	0	0	0	0	2	1	0	4	1.90%
Telecommunications	0	0	0	0	0	0	0	0	0	1	1	0.48%
Utilities	1	1	1	1	1	1	0	0	0	0	6	2.86%
Total	3	10	19	21	31	27	23	19	27	30	210	
%	1.43%	4.76%	9.05%	10.00%	14.76%	12.86%	10.95%	9.05%	12.86%	14.28%		100.00%

Notes: This table presents the sample distribution by industry and year for the final sample of firms reporting BPGs between 2005–2014. This sample comprises 210 year-observations (148 firms) from 10 different industries.

Table 3
Descriptive Statistics

Variables	Units	N	BPGs sample			Non- BPGs sample	
			Median	Std.	Mean	Mean	Two-Sample t-test (two-tailed)
MCAP	%	210	0.516	0.733	0.767	1.451	12.874***
ADJBV (BV)	%	210	0.434	0.233	0.445	0.566	7.420***
ADJNI (NI)	%	210	0.008	0.135	-0.017	-0.061	-4.488***
LNTA	Thousands	210	12.582	2.503	12.522	11.293	-7.038***
LOSS	(0/1)	210	0.000	0.461	0.305	0.390	2.643***
BPG	%	210	0.004	0.038	0.020	n/a	n/a
BPG_DISC	%	67	0.006	0.046	0.027	n/a	n/a
BPG_NONDISC	%	143	0.004	0.034	0.017	n/a	n/a
OPER	(0/1)	199	1.000	0.500	0.543	n/a	n/a
BPG_NI	%	210	0.023	0.833	0.229	n/a	n/a
RET	%	128	0.067	0.427	0.036	n/a	n/a
ADJNI_RET	%	128	0.026	0.115	0.014	n/a	n/a
ΔADJNI_RET	%	128	0.003	0.182	0.004	n/a	n/a
BPG_RET	%	128	0.010	0.039	0.028	n/a	n/a
BPG_DISC_RET	%	49	0.014	0.120	0.050	n/a	n/a
BPG_NONDISC_RET	%	79	0.009	0.052	0.029	n/a	n/a

Notes: This table reports the descriptive statistics for the variables considered in our analyses for the BPGs subsample during the periods of 2005 to 2014. Results are reported for BPGs sample with 210 firm-year observations and firms not reporting BPGs (i.e. non-BPGs sample) with 10,769 observations. We report the t-test for the paired mean comparisons between BPGs and non-BPGs reporting firms. *, **, *** denote significance at the 10%, 5% and 1% level, respectively. See Appendix A for variable definitions.

Table 4
Mean Comparison Tests

Variables	Panel A			Panel B		
	BPG_DISC Sub-sample	BPG_NONDISC Sub-sample	Two-Sample t-test (two- tailed)	Pre- IFRS3R	Post-IFRS3R	Two-Sample t-test (two- tailed)
MCAP	0.659	0.817	1.464	0.727	0.793	0.633
ADJBV	0.405	0.464	1.714*	0.446	0.445	-0.029
ADJNI	-0.016	-0.018	-0.127	0.002	-0.031	-1.744*
LNTA	12.791	12.396	-1.068	12.681	12.416	-0.749
LOSS	0.328	0.294	-0.506	0.298	0.310	0.183
BPG	0.027	0.017	-1.563	0.020	0.020	0.005
BPG_DISC	n/a	n/a	n/a	0.038	0.021	-1.403
BPG_NONDISC	n/a	n/a	n/a	0.014	0.020	1.016
OPER	0.545	0.541	-0.054	0.675	0.459	-3.037***
BPG_NI	0.321	0.186	-1.097	0.165	0.272	0.914
RET	0.073	0.014	-0.754	-0.043	0.077	1.506
ADJNI_RET	0.008	0.017	0.449	0.004	0.019	0.671
ADJDNI_RET	0.000	0.007	0.185	0.006	0.003	-0.062
BPG_RET	0.050	0.029	-1.376	0.026	0.029	0.335
BPG_DISC_RET	n/a	n/a	n/a	0.025	0.016	-0.600
BPG_NONDISC_RET	n/a	n/a	n/a	0.021	0.016	-0.562

Notes: This table reports the paired mean comparisons (t-test) between BPGs for which the acquirer explicitly discloses the reason for the gain (*BPG_DISC*) and BPGs for which the acquirer does not disclose the reason for the gain (*BPG_NONDISC*) in Panel A. In Panel B, the table presents the mean comparisons for the full sample of BPGs across the pre-IFRS 3R and post-IFRS 3R periods. *, **, *** denote significance at the 10%, 5% and 1% level, respectively.

Table 5
Price Model
The Value Relevance of BPGs over the Whole Sample Period

Variables	Pooled	Disclosure versus Non-Disclosure
ADJBV	0.578*** (0.000)	0.587*** (0.000)
ADJNI	2.824*** (0.000)	3.026*** (0.000)
BPG	-0.068 (0.921)	
BPG_DISC		0.676 (0.414)
BPG_NONDISC		-1.242 (0.170)
LNTA	-0.009 (0.426)	-0.009 (0.428)
LOSS	0.104 (0.367)	0.091 (0.433)
ADJBV*LOSS	-0.408* (0.058)	-0.398* (0.067)
ADJNI*LOSS	-2.824*** (0.000)	-3.161*** (0.000)
Constant	0.503* (0.063)	0.578** (0.037)
Year FE	Yes	Yes
Industry FE	Yes	Yes
Observations	210	210
R ²	0.459	0.457
<i>BPG_DISC = BPG_NONDISC</i>		(0.075)*
<i>ADJNI = BPG_DISC</i>		(0.010)***
<i>ADJNI = BPG_NONDISC</i>		(0.000)***

Notes: This table presents the empirical results using the price model for testing the value relevance of (i) the pooled BPG (*BPG*) irrespective of the disclosure of the reason for the gain; and (ii) the two categories of BPGs reporting firms. The latter represents the pooled BPGs classified into BPGs for which the acquirer explicitly discloses the reason for the gain (*BPG_DISC*) and BPGs for which the acquirer does not disclose the reason for the gain (*BPG_NONDISC*). P-values are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Table 6
Price Model
The Value Relevance of BPGs (Tests for the Regulatory Changes and Income Classification)

Variables	Before / After IFRS3R	Income Classification
ADJBV	0.620*** (0.000)	0.564*** (0.000)
ADJNI	3.956*** (0.000)	2.067*** (0.000)
BPG_DISC	0.255 (0.815)	2.609* (0.077)
BPG_NONDISC	-2.186 (0.150)	0.241 (0.796)
POST10	-0.113** (0.025)	
BPG_DISC*POST10	4.971*** (0.001)	
BPG_NONDISC*POST10	3.369* (0.062)	
OPER		0.159*** (0.004)
BPG_DISC*OPER		-2.279 (0.177)
BPG_NONDISC*OPER		0.993 (0.692)
LNTA	-0.013 (0.263)	-0.002 (0.885)
LOSS	0.101 (0.367)	0.037 (0.745)
ADJBV*LOSS	-0.408* (0.052)	-0.264 (0.217)
ADJNI*LOSS	-3.887*** (0.000)	-2.039*** (0.001)
Constant	0.556** (0.012)	0.417 (0.130)
Year FE	No	Yes
Industry FE	Yes	Yes
Observations	210	199
R ²	0.488	0.440
<i>BPG_DISC + BPG_DISC*POST10 = 0</i>	5.226*** (0.000)	
<i>BPG_NONDISC + BPG_NONDISC*POST10 = 0</i>	1.183 (0.251)	
<i>BPG_DISC + BPG_DISC*OPER = 0</i>		0.330 (0.718)
<i>BPG_NONDISC + BPG_NONDISC*OPER = 0</i>		1.234 (0.620)

Notes: This table presents the empirical results using the price model for identifying the effect of IFRS 3 revision on the value relevance of BPGs. The table also reports empirical results for testing the impact of different income classifications (i.e. as either operating or non-operating BPGs) on the value relevance of BPGs. *POST10* is an indicator variable equal to one for BPGs reported in the 2010–2014 period (post-IFRS 3 revision period), zero otherwise (pre-IFRS 3 revision period). *OPER* is an indicator variable equal to one for BPGs classified as part of the operating income, zero otherwise. P-values are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Table 7
Returns Model
The Value Relevance of BPGs

Variables	Pooled	Disclosure versus Non-Disclosure	Before/After IFRS3R	Income Classification
ADJNI_RET	1.137*** (0.006)	1.182*** (0.004)	1.563*** (0.000)	1.136*** (0.009)
ΔADJNI_RET	0.196 (0.401)	0.163 (0.491)	0.151 (0.502)	0.251 (0.302)
BPG_RET	-0.097 (0.705)			
BPG_DISC_RET		-0.571 (0.229)	-0.772 (0.165)	2.280** (0.022)
BPG_NONDISC_RET		-1.376 (0.237)	0.099 (0.739)	-1.731 (0.208)
POST10			0.083 (0.330)	
BPG_DISC_RET*POST10			2.609** (0.016)	
BPG_NONDISC_RET*POST10			-2.096 (0.129)	
OPER				-0.019 (0.841)
BPG_DISC_RET*OPER				-3.043*** (0.008)
BPG_NONDISC_RET*OPER				1.899 (0.561)
Constant	0.076 (0.812)	0.371 (0.372)	-0.347 (0.393)	0.419 (0.352)
Year FE	Yes	Yes	No	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	128	128	128	121
R ²	0.254	0.267	0.208	0.274

$BPG_DISC_RET = BPG_NONDISC_RET$	(0.136)		
$BPG_DISC_RET + BPG_DISC_RET*POST10 = 0$		1.837**(0.047)**	
$BPG_NONDISC_RET + BPG_NONDISC_RET*POST10 = 0$		-1.997 (0.141)	
$BPG_DISC_RET + BPG_DISC_RET*OPER = 0$			-0.764 (0.172)
$BPG_NONDISC_RET + BPG_NONDISC_RET*OPER = 0$			0.168 (0.954)

Notes: This table presents the empirical results using the return model for testing the value relevance of (i) the pooled BPGs during the whole sample period; (ii) the two categories of BPGs reporting firms (i.e. disclosure versus non-disclosure) during the whole sample period; (iii) the BPGs reporting firms during the pre- and post-IFRS 3R periods; and (iv) the income classifications during the whole sample period. P-values are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Appendix A Variable Definitions

Variable Name	Notation	Description
Market capitalization	<i>MCAP</i>	Market capitalization scaled by total assets at the end of year t.
Book value of equity adjusted for the bargain purchase gain	<i>ADJBV</i>	Book value of equity adjusted for the gain on bargain purchase (BPG) and scaled by total assets at the end of year t.
Net income adjusted for the bargain purchase gain	<i>ADJNI</i>	Net income before extraordinary items adjusted for the gain on bargain purchase (BPG) and scaled by total assets at the end of year t.
Total assets	<i>LNTA</i>	Natural logarithm of total assets at the end of year t.
Loss firm	<i>LOSS</i>	Indicator variable equal to one for loss firms in year t, zero otherwise.
Bargain purchase gain	<i>BPG</i>	Bargain purchase gain (net of tax) scaled by total assets at the end of year t.
Bargain purchase gain for which the acquirer explicitly discloses the reason for the gain	<i>BPG_DISC</i>	Bargain purchase gain (net of tax) for which the acquirer explicitly discloses the reason for the gain at the end of year t. The variable is scaled by total assets at the end of year t.
Bargain purchase gain for which the acquirer does not disclose the reason for the gain	<i>BPG_NONDISC</i>	Bargain purchase gain (net of tax) for which the acquirer does not disclose the reason for the gain at the end of year t. The variable is scaled by total assets at the end of year t.
Operating income classification	<i>OPER</i>	Indicator variable equal to one for bargain purchase gain observations classified under the operating income, zero otherwise.
Bargain purchase gain over net income	<i>BPG_NI</i>	Bargain purchase gain (net of tax) at the end of year t scaled by net income before extraordinary items in year t.
Stock return	<i>RET</i>	Stock return (inclusive of dividends) from the announcement date to three months after the fiscal year end.
Net income adjusted for the bargain purchase gain	<i>ADJNI_RET</i>	Net income before extraordinary items per share, adjusted for the gain on bargain purchase (BPG) and scaled by the lagged stock price.
Change in net income adjusted for the bargain purchase gain	<i>ΔADJNI_RET</i>	Change in net income before extraordinary items per share, adjusted for the gain on bargain purchase (BPG) and scaled by the lagged stock price.
Bargain purchase gain	<i>BPG_RET</i>	Bargain purchase gain per share (net of tax) at the end of year t scaled by the lagged stock price.
Bargain purchase gain for which the acquirer explicitly discloses the reason for the gain	<i>BPG_DISC_RET</i>	Bargain purchase gain per share (net of tax) for which the acquirer explicitly discloses the reason for the gain at the end of year t. The variable is scaled by the lagged stock price.
Bargain purchase gain for which the acquirer does not disclose the reason for the gain	<i>BPG_NONDISC_RET</i>	Bargain purchase gain per share (net of tax) for which the acquirer does not disclose the reason for the gain at the end of year t. The variable is scaled by the lagged stock price.
Post IFRS 3 revision	<i>POST10</i>	Indicator variable equal to one for BPGs reported in the 2010-2014 period (post IFRS 3 revision period), zero otherwise (pre-IFRS 3 revision period).

Notes: Appendix A summarizes the definitions, descriptions, and notations for all the variables used in the analyses.

Appendix B

Examples of Disclosures in Annual Reports by Acquiring Firms for BPGs Reasons

Panel A: BPGs for which the acquirer explicitly discloses the reason for the gain (BPG DISC)

A gain on acquisition of €33.0 million has been recognized... Papierfabrik Scheufelen *filed for insolvency* protection in July 2008 and was actively marketed for sale *by an administrator* appointed by the creditors of Scheufelen. In October 2008, the Group was selected as the preferred acquirer and reached agreement to acquire the business and assets of Scheufelen, but not the liabilities for total cash consideration of €31,950,000. The principal alternative to acceptance of the Group's offer was cessation of the business and sale of the assets (Powerflute Oyj, 2009).

The pre tax profit for the year amounted to £1,417,000 (2007: £472,000) before the negative goodwill arising on acquisition of £6,175,000 for the acquisition of the business assets of Ulva Ltd... On 29 November 2007 the Group acquired certain assets of Ulva Ltd which was *in liquidation* (SWP Group, 2008).

Bargain purchase on acquisition: USD 874,000... The acquisition of OSS was settled in cash amounting to USD 7,664,000. The gain on bargain purchase arising from the purchase of a business in a *distressed state* and acquisition-related costs are not included as part of consideration transferred and have been recognised as an expense in the consolidated statement of income, as part of other operating costs (Hydrodec Group plc, 2013).

The fair value of the assets and liabilities acquired exceeds the fair value of the consideration and as a result a gain of £52.9 million is recognised in the income statement on acquisition. This gain reflects the CSC share price at the date of the acquisition of £3.76 which, in accordance with IFRS 3 Business Combinations, is required to be used to assess the fair value of the consideration for acquisition accounting purposes. The acquisition was however agreed based on an issue price of the CSC ordinary shares of £4.00. **The difference between the agreed issue price of £4.00 and the share price at the date the acquisition was completed of £3.76** is the principal reason for recording an accounting gain on the acquisition (INTU Properties plc, former name Capital Shopping Centres Group plc, 2011).

Panel B: BPGs lacking justification on the reasons behind the BPGs (BPG NONDISC)

On 1 January 2006, following the introduction of a new Health Insurance Act, a Netherlands subsidiary acquired 100% of the share capital of O.W.M. Delta Lloyd and OHRA Zorgverzekeringen U.A. for nil consideration. Assets and liabilities acquired amounted to £272 million and £258 million respectively giving rise to £14 million of negative goodwill which has been recognised in the income statement (Aviva, 2006).

The Group acquired a 68% interest in the Vinh Thai Urban Development Corporation when the fair value of the net assets was USD94 million. The difference between the Group's share of the net assets of USD63.9 million and the cost of the acquisition of USD36.7 million represents negative goodwill which has been recognised in the Statement of Income at the acquisition date (Vina Capital, 2008).

During the year, expenses were incurred of £0.9 million relating to costs arising on the acquisition of the V12 Finance Group and Debt Managers, partially offset by the £0.4 million gain from a bargain purchase arising on the acquisition of the Debt Managers business (Secure Trust Bank, 2013).

Notes: Appendix B summarizes examples of disclosures in the annual reports by acquiring firms of different reasons of bargain purchase gains. Panel A presents BPGs (*BPG_DISC*) related to distressed acquisitions i.e. firms forced to liquidation and /or encountering insolvency problems. This panel also presents examples for acquirers reporting BPGs related to fair value adjustments. Panel B highlights examples of acquisitions lacking disclosure on the reasons behind the recognition of a BPG (*BPG_NONDISC*).

Appendix C
Table 1
Price Model
The Value Relevance of BPGs Before / After IFRS 3R

Variables	Panel A: Controlling for financial crisis effects	Panel B: Controlling for banking industry effects	Panel C: Controlling for the information environment effects
ADJBV	0.538*** (0.000)	0.474*** (0.001)	0.594*** (0.000)
ADJNI	3.555*** (0.000)	4.959*** (0.000)	4.690*** (0.000)
BPG_DISC	0.148 (0.891)	0.135 (0.912)	-0.677 (0.590)
BPG_NONDISC	-2.884* (0.057)	-3.262** (0.040)	-2.646 (0.114)
POST10	-0.249*** (0.000)	-0.289*** (0.00)	-0.094* (0.099)
BPG_DISC*POST10	5.152*** (0.001)	4.691*** (0.006)	6.537*** (0.000)
BPG_NONDISC*POST10	4.351** (0.016)	4.274** (0.024)	4.102** (0.039)
LNTA	-0.013 (0.253)	-0.021* (0.088)	-0.021 (0.200)
LOSS	0.073 (0.511)	0.066 (0.588)	0.068 (0.596)
ADJBV*LOSS	-0.307 (0.141)	-0.164 (0.473)	-0.230 (0.333)
ADJNI*LOSS	-3.509*** (0.000)	-4.857*** (0.000)	-4.694*** (0.000)
CRISIS	-0.215*** (0.003)	-0.250*** (0.002)	
BANKS		-0.027 (0.753)	
CLOSELY			-0.001

			(0.245)
LEVERAGE			-0.139
			(0.355)
HIGH_PROFIT			0.036
			(0.611)
BIG4			0.097
			(0.140)
Constant	0.772*** (0.001)	0.711*** (0.001)	0.675** (0.020)
Year FE	No	No	No
Industry FE	Yes	No	Yes
Observations	210	210	195
R ²	0.483	0.369	0.487
<hr/>			
<i>BPG_DISC + BPG_DISC*POST10 = 0</i>	5.300*** (0.000)	4.826*** (0.000)	5.860*** (0.000)
<i>BPG_NONDISC + BPG_NONDISC*POST10 = 0</i>	1.467 (0.151)	1.012 (0.371)	1.456 (0.205)

Notes: Appendix C reports robustness tests using the price model to examine (i) the effect of the crisis on the value relevance of BPGs in the pre- and post IFRS 3 revision period; (ii) the effect of the crisis and the banking industry effects on the value relevance of BPGs in the pre- and post IFRS 3 revision period and (iii) the effect of firm information environment on the value relevance of BPGs in the pre- and post IFRS 3 revision period. *CRISIS* is an indicator variable equal to one for years 2008–2009, zero otherwise. *BANKS* is an indicator variable equal to one for banks and financial service firms, zero otherwise. We control for the information environment through a set of firm characteristics including: (a) ownership structure, a proxy for governance, measured by the percentage of closely held shares (*CLOSELY*); (b) leverage, a proxy for the level of indebtedness, through the ratio of total debt over total assets (*LEVERAGE*); (c) above median profitability, a proxy for financial strength, measured through an indicator variable equal to one if the return on assets is above the industry median, zero otherwise (*HIGH_PROFIT*); and (d) auditor type, a proxy for audit quality, measured through an indicator variable equal to one if the firm is audited by Deloitte, Ernst & Young, KPMG or PwC, zero otherwise (*BIG4*). The results in Panel C are based on a sample of 195 observations due to missing values for some of the control variables. P-values are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.