

**Let the Fox Guard the Henhouse: How Relaxing the Three-Level Fair Value Hierarchy
Increases the Reliability of Fair Value Estimates**

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ABSTRACT

Fair value accounting rules distinguish among three levels of inputs used to derive fair value estimates of certain assets and liabilities. The three-level fair value hierarchy reflects the notion that, owing to objectivity, the valuation technique the entity uses must maximize the use of relevant observable inputs and minimize the use of unobservable inputs. This article questions the appropriateness of the three-level hierarchy as defined by IFRS 13 for the fair value measurement of a significant influence investment in an entity whose shares are traded on the exchange. It is highly likely that the preferred Level 1 fair values—in this case the investment’s quoted price on the exchange—do *not* capture the fair value for a market participant as defined by the accounting standard itself. Empirical evidence supports this notion. Based on a recent study showing that firms using external and independent pricing of their Level 3 fair values enhance the latter’s credibility, we suggest that the three-level hierarchy can be relaxed in the case of a significant influence investment in an entity, conditional on the investor’s use of external and independent pricing. Our suggestion is supported by empirical evidence in the accounting literature, as well as the documented psychological underpinnings, of managers’ restrained reporting behavior under a relaxed reporting policy. The behavioral insights gathered in our article are of particular relevance to accounting standard setters who face the task of choosing the optimal (fair value) measurement and reporting rules for restraining opportunistic reporting by firms and encouraging them to adhere to higher ethical standards over time.

1. Introduction

The International Financial Reporting Standards (IFRS) have been developed to harmonize corporate accounting practices and to answer the need for high quality standards that result in high quality information, transparency and comparability in issuing financial reports.¹ One of the major changes introduced by the international standards has been the ability to recognize certain assets and liabilities at fair value. Unlike the US accounting standards (US GAAP) that permit the measurement of only financial instruments at fair value,² the IFRS allows the measurement of various financial statement items such as financial instruments, investment property, investment in subsidiaries and investment in associates and joint ventures at fair value.³ As such, while fair value accounting in the US is primarily relevant to financial institutions, fair value accounting in countries using IFRS affects firms in various industries.

To date, the accounting standards that provide a framework for the measurement of reporting elements at fair value (IFRS 13 and its corresponding US GAAP standard SFAS 157)⁴ distinguish among three levels of inputs used to derive fair value estimates: Level 1, reflecting observable inputs consisting of quoted prices in active markets for identical assets or liabilities; Level 2, reflecting observable inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly; and Level 3, reflecting unobservable inputs. Given that Level

¹ See, for example, Ashbaugh and Pincus (2001); Barth et al. (2008); Daske et al. (2008).

² FASB Statements No. 115 *Accounting for Certain Investments in Debt and Equity Securities* (1993), FASB Statements No. 133 *Accounting for Derivative Instruments and Hedging Activities* (1998), and FASB Statements No. 159 *The Fair Value Option for Financial Assets and Financial Liabilities* (2007).

³ IAS No. 39 *Financial Instruments: Recognition and Measurement* (as revised in 2005), to be replaced by IFRS 9 *Financial Instruments*; IAS No. 40 *Investment Property* (as revised in 2005); IAS No. 27 *Consolidated and Separate Financial Statements* (as revised in 2005); IAS No. 28 *Investment in Associates and Joint Ventures* (as revised in 2005); IFRS 11 *Joint Arrangements* (2011).

⁴ International Financial Reporting Standards (IFRS 13), *Fair Value Measurement* (IASB 2011), effective 2013 (with early adoption allowed); Statement of Financial Accounting Standards (SFAS) 157, *Fair Value Measurements* (FASB 2006), effective 2008 (with early adoption allowed for 2007).

Level 1 consists of pure market-based inputs free from manipulation and estimation errors, they are regarded as providing objective fair valuations. Level 2 inputs should also yield relatively objective valuations as they are mainly market-based. In contrast, Level 3 inputs are firm-supplied, and as such are subject to managerial discretion.⁵ Nevertheless, the Level 3 inputs must be developed using the best information available at the time of valuation. Furthermore, due to their greater subjectivity, both IFRS 13 and SFAS 157 require expanded disclosures about Level 3 measures.

The three-level hierarchy requires that a firm must measure fair values using Level 1 inputs if available. If Level 1 inputs are unavailable, then Level 2 inputs may be used. Hence, Level 3 measures are allowed only if neither Level 1 nor Level 2 inputs are available. The standards are clear in that the valuation technique the entity uses must maximize the use of relevant *observable* inputs and minimize the use of unobservable inputs.

One of the items allowed to be measured and reported at fair value in accordance with IFRS is a *significant influence* investment in an entity (e.g., holding 20% or more of the voting power of the investee) held by an investment entity. In accordance with IAS 28 *Investments in Associates and Joint Ventures*, investment entities⁶ present their investments in other entities at fair value in the financial statements in accordance with IFRS 13's definition of, and framework for measuring, fair value.⁷ Even when the investment entity obtains control of another entity, it is required to measure the investment in its subsidiary at fair value, rather than consolidate it in its financial statements (IFRS 10 *Consolidated Financial Statements*). This article calls into question the

⁵ The Level 3 inputs must be developed using the best information available at the time of valuation.

⁶ Investment entities, as per IAS 28, include venture capital organizations, mutual funds, unit trusts and similar entities including investment-linked insurance funds.

⁷ All other entities that are investors with joint control of, or significant influence over, an investee (associate or joint venture) must apply the equity method when accounting for their significant influence investments in other entities.

appropriateness of the three-level hierarchy as defined by IFRS 13 for the fair value measurement of a significant influence investment (including control) in an entity whose shares are traded on the exchange. It is highly likely that Level 1 fair values—in this case the investment’s quoted price on the exchange—do *not* capture the fair value for a market participant as defined by the accounting standard itself. As per the definition of a market participant in IFRS 13, the fair value of such an investment should reflect the price that a potential buyer would pay for *all* of the shares being held by the current parent company. Thus, the fair value of an investment in another entity with significant influence (i.e., an investment held with strategic intent as part of a long-term view) should incorporate elements such as premium controls and synergy expectations. Such elements are obviously not taken into account by the marginal investor trading shares on the exchange.

The evidence presented in the extant literature examining market premiums in sale transactions of significant influence investments,⁸ as well as more recent data extracted from the markets that use IFRS, further highlight the unsuitability of the three-level hierarchy for such investments. Based on a recent study by Chung et al. (2017) showing that firms using external and independent pricing of their Level 3 fair values enhance the latter’s credibility, we suggest that the three-level hierarchy can be relaxed in the case discussed above conditional on the firm’s use of external and independent pricing. Specifically, we suggest allowing investment entities to recognize Level 3 fair values of significant influence investments in their financial statements provided that (1) fair values have been estimated by an independent pricing service vendor (say, a broker, an analyst or an investment manager), rather than using an internal appraiser within the firm; and (2) the investment entity discloses the Level 1 values in the notes to the investment.

Notwithstanding the greater reliability that investors associate with external versus internal

⁸ See, for example, Pratt (2001); Brigham and Gapenski (1996); DeAngelo (1990).

value estimations, we contend that the setting of accounting standards should not be based on the premise that firms are likely to take advantage of flexibility in financial measurement and reporting rules to misstate reported values. Empirical studies examining the impact of greater flexibility in reporting rules on firms' reporting quality provide support for our argument (e.g., Barth et al., 2008; Atwood et al., 2010; Blaylock et al., 2012; Zeghal et al., 2012; Watrin et al., 2014). Whereas conventional wisdom states that stronger constraints curb the managers' ability and motivation to engage in manipulative financial reporting, empirical findings suggest the opposite. This phenomenon can be explained by behavioral theories of motivation. By merging psychological and accounting theories, we suggest that relaxing external constraints on the managers' reporting discretion increases their level of autonomy over and ownership of their reports and curbs feelings of defiance, resulting in higher quality reporting. Our suggestion is based on research in social psychology and organizational behavior which shows that environments characterized by greater individual autonomy are associated with greater trust and organizational commitment, and, consequently, with higher quality performance (e.g., Deci et al., 1989; Ryan and Deci, 2000; Moller et al., 2006). Controlling systems, on the other hand, often prompt defiance rather than compliance, motivating managers to do the opposite of what the policy demands (Moller et al., 2006). Similarly, when the constraints put forth by the three-level hierarchy are relaxed, the managers' decision-making power with respect to financial reporting is increased and hence their sense of autonomy and control over their work, which may lead to higher quality reporting than under greater constraint. The behavioral insights gathered in our article are of particular relevance to accounting standard setters who face the task of choosing the optimal (fair value) measurement and reporting rules for restraining opportunistic reporting by firms and encouraging them to adhere to higher ethical standards over time.

2. Background

The international accounting standard that provides a framework for the measurement of reporting elements at fair value is IFRS 13, *Fair Value Measurement*. Its corresponding US GAAP standard is SFAS 157, *Fair Value Measurement*. The two standards, IFRS 13 and SFAS 157, are virtually identical.⁹ Their purpose is to define fair value, create a unified framework for measuring fair value and broaden the required disclosure regarding fair value measurement. However, given that US GAAP permits the measurement of only financial instruments at fair value, SFAS 157 is primarily relevant to financial institutions given their substantial exposure to financial instruments, many of which must be reported at fair value (e.g., Riedl and Serafeim, 2011). In contrast, the IFRS allows the measurement of other financial statement items as well, including investment in associates and joint ventures—our item of interest—at fair value. We thus, henceforth, refer to IFRS 13 in our discussion.

IFRS 13 defines fair value as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.” Fair value measurement under IFRS 13 assumes that a transaction to sell an asset or to transfer a liability takes place in the principal market or, in the absence of a principal market, in the most advantageous market. The principal market is the market with the greatest volume and level of activity for the asset or liability. The most advantageous market is the market that maximizes the amount that would be received to sell the asset or minimizes the amount that would be paid to

⁹ A careful examination of the international standard (IFRS 13) and the corresponding US GAAP standard (SFAS 157) shows that the two are identical with the exception of one requirement that appears in IFRS 13 [paragraph 93(h) (ii)] and not required by SFAS 157. This excess requirement determines that, for financial assets and financial liabilities, if changing one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change the fair value significantly, an entity shall state that fact and disclose the effect of those changes.

transfer the liability, after considering transaction costs and transport costs. Consistent with rational economic behavior, it would be reasonable to assume that the principal market in which an entity actually transacts would be the most advantageous market. Given that there might be buyers and sellers who are willing to pay high prices and deal outside the principal market, the most advantageous market may not be the principal market. However, an entity may assume that the principal market is the most advantageous market provided that the entity can access the principal market.

IFRS 13 does not mandate the use of a particular valuation technique(s) but sets out a principle requiring an entity to determine a valuation technique that is “appropriate in the circumstances” for which sufficient data is available and for which the use of relevant observable inputs is maximized. The standard discusses three widely used valuation techniques: (1) the market approach, (2) the cost approach and (3) the income approach.¹⁰ Furthermore, it defines a three-level categorization of the fair value measurement hierarchy. This hierarchy is determined based on the source of the inputs used to evaluate the fair value, such that the input used with the highest-level ranking (1 [quoted input], 2 [unquoted input but observable] or 3 [unobservable]) determines the level in which the asset or liability is classified. Specifically, Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are inputs other than the quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Such inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (such as interest rates,

¹⁰ Valuation techniques should be applied consistently from one period to the next.

implied volatility for the shares and a price to customers in a retail market or a price to retailers in a wholesale market), and market-corroborated inputs. Level 3 inputs are unobservable inputs for the asset or liability. These inputs are firm-developed using the best information available at the time of valuation.¹¹ Moreover, the standard requires that the firm disclose additional information regarding Level 3, over and above the disclosure requirements for Levels 1 and 2. This requirement is due to the asymmetric information gap between the firm's management and the users of the firm's financial statements that results from the use of unobservable inputs for developing Level 3 fair value measurements.

IFRS 13 is clear in that the valuation technique the entity uses must maximize the use of relevant observable inputs and minimize the use of unobservable inputs. Unobservable inputs are developed using the best information available about the assumptions that market participants would use when pricing the asset or liability. In other words, unobservable inputs reflect the reporting entity's own view about the assumptions that market participants would use. Thus, if a quoted price is available for a specific asset, this price must be used instead of the entity's assumption about the price. Concurrently, the standard requires that, in a fair value measurement, an entity considers the assumptions that a market participant, acting in their economic best interest, would use when pricing the asset or liability. Market participants are defined as having all of the following characteristics: being independent of the reporting entity (that is, they are not related parties), being knowledgeable, having a reasonable understanding about the asset or liability and the transaction based on all available information, including information that might be obtained

¹¹ Using this three-level categorization hierarchy, the standard broadens the purpose of the disclosure beyond the former disclosure requirements. The firm is required to provide separate disclosures for assets and liabilities measured at fair value on a recurring or non-recurring basis and to specify in which of the three levels (1, 2 or 3) the asset or liability is being measured. It also requires that for assets and liabilities not measured at fair value, but for which the fair value is disclosed, the firm must provide the level (1, 2 or 3) in which the assets or liabilities were classified and other information.

through due diligence efforts that are usual and customary; being able to engage in transactions of the asset or liability; and being willing to engage in such transactions (that is, they are motivated but not forced or otherwise compelled to do so). Thus, the standard requires the entity to put itself in the place of a market participant and exclude any entity-specific factors that might impact the price that the entity is willing to accept in the sale of an asset or be paid in the transfer of a liability. The entity must consider the extent to which a market participant would take all of the relevant characteristics of the asset being measured into account (e.g., restrictions on the sale or use of the asset) when pricing the asset on the measurement date.¹²

3. The unsuitability of the three-level hierarchy for valuing a significant influence investment in an entity

In its preference for quoted prices in active markets (e.g., the stock price on the exchange), IFRS 13 puts the greatest weight on objectivity, even if the objective number does not capture fair value under the assumptions of a market participant as per the standard's own definition. In addition, in this preference, the standard assumes that the market is efficient and, in the case of tradable securities, that the marginal investor on the exchange represents a market participant with sufficient knowledge and expertise to determine the fair value of a security. Moreover, if the tradable securities represent a significant influence investment in an entity, in its preference for quoted prices in active markets the standard effectively assumes that the marginal investor on the exchange represents a market participant with sufficient knowledge and expertise to determine the

¹² For example, the extent to which restrictions on the sale or use of the asset should be reflected in its fair value depend a great deal on where the source of the restriction comes from and whether or not the restriction is separable from the asset (Deloitte. Clearly IFRS. Summary guidance and practical tips for *IFRS 13* – Fair Value Measurement. <http://www2.deloitte.com/content/dam/Deloitte/ca/Documents/audit/ca-en-audit-clearly-ifs-fair-value-measurement-ifs-13.pdf>.)

fair value had s/he bought *all of the shares* from the current investor. Obviously, this is not always the case. According to Palea and Maino (2013), IFRS 13's fair value hierarchy (Levels 1, 2 and 3) results in assets being presented according to their liquidation value, which does not suit investments made by going concerns. Palea and Maino (2013) have questioned the appropriateness of fair value as defined by IFRS 13 for private equities. They contend that market-based rather than entity-specific fair value measurement fails to consider the financial instrument's liquidity and the investors' horizons, which are key to private equity valuation. Employing fair value estimates based on market and transaction multiples (Level 2 in the standard's fair value hierarchy), Palea and Maino reveal that, as conjectured, market-based valuation techniques do not provide a faithful representation of the economic value of the underlying asset, in their case—private equity.

However, the irrelevance of the market-based valuation documented is not confined only to privately held investments for which a quoted price for the original assets is absent, but also applies to investments in publicly traded equity.¹³ In particular, it applies to the measurement of the fair value of a significant influence investment in another entity (e.g., holding 20% or more of the voting power of the investee) whose shares are traded on the exchange (we will refer to all of them as “investments” for short).¹⁴ In accordance with IAS 28 *Investments in Associates and Joint Ventures*, entities that are investors with joint control of, or significant influence over, an investee (associate or joint venture) are generally required to apply the equity method when accounting for their significant influence investments in other entities. An exception for this requirement is when the investor is an *investment entity*. As per IAS 28, investment entities (e.g., venture capital

¹³ Note that Palea and Maino (2013) conducted their empirical analysis on randomly selected listed companies that they assumed to be private.

¹⁴ If the entity is traded on multiple equity exchanges, the entity should document which particular market price is used and what process was followed to determine the appropriate market to use for determining fair value.

organizations, mutual funds, unit trusts, investment-linked insurance funds and alike)¹⁵ present their investments in other entities at fair value (rather than the equity method) in the financial statements in accordance with IFRS 13's definition of, and framework for measuring, fair value. Moreover, as per IFRS 10 *Consolidated Financial Statements*, investment entities are exempted from the requirement to consolidate their subsidiaries when they obtain control of another entity. Instead, as determined for significant influence investments in general, investment entities are required to measure an investment in a subsidiary at fair value through profit or loss.¹⁶ As indicated, while Level 1 fair values are the most objective measure, whether the investment's quoted price on the exchange is an appropriate measure of fair value for a market participant as defined by the accounting standard is questionable at best.

An investment in another entity with significant influence is held with strategic intent as part of a long-term investment devoted to exploiting business opportunities, commercial or entrepreneurial relationships, or other types of synergies. For such an investment, which is not being held for trading, quoted prices on the exchange most likely do not capture fair values. As stated, in accordance with the definition of a market participant in IFRS 13, the fair value of such an investment should reflect the price that a potential buyer would pay for all of the shares being held by the current parent company. A question thus arises: Shouldn't the fair valuation of such an investment incorporate premium controls as well as synergy expectations and other positive factors (e.g., increased competitive power) taken into account by a potential buyer? Such a potential buyer

¹⁵ IFRS 10 *Consolidated Financial Statements* supplements the definition of an investment entity by indicating that the latter is an entity that: "(a) obtains funds from one or more investors for the purpose of providing those investor(s) with investment management services; (b) commits to its investor(s) that its business purpose is to invest funds solely for returns from capital appreciation, investment income, or both, and (c) measures and evaluates the performance of substantially all of its investments on a fair value basis."

¹⁶ An exception for the exemption from consolidation is where that subsidiary provides services that relate to the investment entity's investment activities.

is obviously not represented by the marginal investor trading shares on the exchange. Hence, IFRS 13's preference for a $P \cdot Q$ measurement, where P is the quoted price on the exchange and Q is the number of shares outstanding, may lead to biased measures of fair values.¹⁷

Indeed, the accounting and finance literatures dealing with market premiums in transactions involving the sale of a significant influence investment in another entity document premiums ranging from 20% to over 100% above the pre-offer stock price on the exchange (e.g., Comment and Jarrell, 1987; DeAngelo, 1990; Brigham and Gapenski, 1996; Pratt, 2001). In Table 1 we provide specific examples from recent sale transactions that took place in Israel, where IFRS has been mandatory since 2008 for companies listed on the Tel Aviv Stock Exchange (TASE). In the two transactions displayed, an investment entity (as per the definition of IAS 28) sold a significant influence investment in another entity outside the exchange. In one transaction, 22% of the voting power in the investee was sold for a price 27% higher than the pre-offer market value. In another transaction, another investment entity sold 100% of its voting power in an investee. In this transaction the market premium was 72% over the pre-offer market value.¹⁸ The results displayed in Table 1 do not change significantly if instead of the share price on the day prior to the initial offer, we take the average share price during the five to ninety trading days prior to the offer.

¹⁷ Note that, on the acquisition date, the investor recognizes the investment on the balance sheet at cost. This cost is generally higher than the quoted value on the exchange because, when buying a significant influence in another entity, the payment is likely to include control premiums or payments for other potential benefits and/or synergies. As such, in the subsequent financial statements the investor will probably have to recognize a loss from the revaluation of this investment to the exchange quoted value.

¹⁸ Recall that investment entities do not consolidate their subsidiaries. Rather, they are required to measure an investment in a subsidiary at fair value through profit or loss.

Table 1: Market premiums in significant influence sale transactions by investment entities

Transaction date	% of the voting power sold	Sale price	Pre-offer market value	Discrepancy between sale price and pre-offer market value
November 2016	22%	107 million NIS	84 million NIS	27%
December 2016	100%	1,480 million NIS	861 million NIS	72%

Information about the transactions was obtained from the immediate reports submitted by the companies to the Tel Aviv Stock Exchange (TASE), the Israeli Securities Authority (ISA) and the press regarding the transaction. These reports are required by law and have to be filed with the authorities immediately following significant events concerning the transactions. We obtained the market value of the companies' shares from the *Bloomberg Professional* database. During November-December 2016, the FX rate was in the range of 3.787-3.876 NIS (new Israeli shekels) per \$1 US.

4. A proposed adjustment to the fair value hierarchy in case of a significant influence investment in an entity

We acknowledge that investors may value market quoted prices more than they do firm-supplied inputs due to information risk, inherent estimation errors and suspicion of a reporting bias.¹⁹ Riedl and Serafeim (2011) show that equity betas increase monotonically across Levels 1, 2, and 3 in the fair value hierarchy, reflecting the higher information risk of fair values that are based on unobservable inputs for their estimation compared to those that are based on observable inputs. Magnan et al. (2016) draw similar inferences for the firm's cost of debt. Studies further document that Level 3 fair values have lower value relevance than Level 1 and Level 2 fair values (Kolev, 2009; Song et al., 2010; Goh et al., 2015).²⁰ Nevertheless, the most recent study examining both the information risk and the value relevance of the three-level fair value hierarchy shows that

¹⁹ Fair values obtained by valuation techniques could entail unintentional and/or intentional estimation errors (Barth, 2004; Benston 2006, 2008).

²⁰ Kolev (2009) and Goh et al. (2015) find that L2 and L3 estimates are valued similarly by investors.

the provision of reliability disclosures *reduces* the information risk and *increases* the value relevance of Level 3 estimates (Chung et al., 2017). Chung et al. (2017) examined three types of reliability disclosures provided voluntarily by firms in their 10-K reports: (1) a discussion of how external and independent pricing of the fair value estimates were obtained; (2) a discussion about the proper classification of the fair value estimates in accordance with the three-level hierarchy; and (3) a discussion of assurances made of management responsibility for the reliability of the fair value estimates. Chung et al. found that, amongst the three types of disclosure, the provision of discussions of the external and independent pricing, and of the proper classification, of fair value estimates enhance the credibility of, and thus reduce investors' uncertainty about, the more opaque—Level 3—estimates. Thus, for firms that obtained external fair value pricing from an independent pricing service vendor (say, a broker, an analyst or an investment manager), rather than using an internal appraiser within the firm (e.g., an internal risk department), investors regarded the Level 3 fair values as less biased and more accurate. This reduction in the information risk of Level 3 measures improved their market pricing (Chung et al., 2017).²¹

Given the inherent bias caused by using market quoted prices in the case of significant influence investments in other entities, we call for a reconsideration of the three-level hierarchy, as defined in IFRS 13, for such investments. Other valuation techniques (such as discounted cash flows (DCF)) may provide a measure that is closer to the fair value of the investment as captured by the bids of potential buyers. This is particularly true if the firm obtained external and independent pricing of its investment. According to Chung et al. (2017), investors take seriously

²¹ It should be noted that, for long-lived tangible assets (mainly real estate) there is a debate in the literature over the reliability and value relevance of revaluations conducted by independent appraisers, compared to internal appraisers. For UK investment property firms, Dietrich et al. (2000) and Muller and Riedl (2002) find evidence consistent with external appraisers providing less biased (more accurate) estimates, resulting in reduced information asymmetry across traders. In contrast, for a sample of Australian firms, Barth and Clinch (1998) find no evidence for a difference in the value-relevance of revaluations conducted by external versus internal appraisers.

the disclosure of a firm that it has used such pricing and “...do not simply regard them as boilerplate or ‘cheap talk’ from management” (p. 434). Our proposal is further supported by prior studies showing that transactions taking place outside the exchange, where a significant influence in the investee is being sold, are usually executed at a price closer to (or similar to) an expert valuation than to the stock market value (e.g., Comment and Jarrell, 1987; DeAngelo, 1990; Brigham and Gapenski, 1996; Pratt, 2001; Elnathan et al., 2010).²²

We thus suggest allowing investment entities to recognize Level 3 fair values of significant influence investments in their financial statements provided that (1) fair values have been estimated by an independent pricing service vendor (say, a broker, an analyst or an investment manager), rather than using an internal appraiser within the firm; and (2) the investment entity discloses the Level 1 values in the notes to the investment.

5. Predictions of managers’ reporting behavior under a relaxed reporting policy

Notwithstanding the greater reliability that investors associate with external versus internal value estimations, we contend that relaxing the fair value hierarchy does not necessarily imply that companies would exploit the ability to present significant influence investments in other

²² According to DeAngelo (1990), a company's market value differs from its intrinsic value because the former is based on market assessment of managers’ inside information, and not on the actual inside information that managers have; hence the need for independent expert valuations. However, according to DeAngelo (1990) there is a snag. Some claim that these experts are “rubber stamps” to a price already determined by the company's directors. Such expert valuations conducted by, e.g., financial analysts or investment banks, are generally commissioned as part of the process required for the execution of transactions that take place outside the exchange. The academic and practitioner literatures indicate that fair valuations conducted by financial experts for such transactions usually consider different methodologies (generally between two and seven valuation methods), with the DCF, also called the “field football” method, often receiving significant weight. Importantly, courts of law accept any valuation method that the financial and business community recognizes (<https://cdn-media.web-view.net/i/3fzza2dd/.pdf>). In our two examples of recent transactions displayed in Table 1, as well as in other nontabulated transactions, the valuation was consistently based on a weighted average of values obtained from different methodologies. The DCF methodology got a significant weight in the calculation, but it was not the only one taken into account.

entities based on unobservable inputs to intentionally bias the valuation results. The setting of accounting standards should not be based on the premise that firms are likely to take advantage of flexibility in financial measurement and reporting rules to misstate values. Empirical findings in the extant accounting literature challenge this conventional wisdom.

5.1. Empirical evidence of managers' restrained reporting behavior under a relaxed reporting policy

Take as an example the greater flexibility allowed by IFRS, such as the ability to recognize unrealized revaluation earnings arising from various items. This greater flexibility has drawn academic attention to the firms' incentives to take advantage of this flexibility to manipulate earnings. Various studies examined whether the adoption of IFRS enhanced the scope for earnings management²³ in the adopting countries (for example, Van Tendeloo and Vanstraelen, 2005; Barth et al., 2008; Jeanjean and Stolowy, 2008; Zeghal et al., 2012; Ahmed et al., 2013). These studies by and large indicate that earnings quality (earnings management) is either unchanged or higher (lower) under IFRS. Moreover, the evidence reveals that the adoption of IFRS is associated with *more* timely loss recognition and *more* value relevance of reported earnings (e.g., Barth et al., 2008; Zeghal et al., 2012; Ahmed et al., 2013; Elbarky et al., 2017).

As another example, take the greater flexibility in financial reporting (particularly in reporting earnings) allowed by a non-conformity between the accounting and the tax rules. The growing gap between reports of book earnings (the income statement) and taxable earnings (the tax return) has catalyzed a debate among researchers and regulators regarding the effectiveness of

²³ Earnings manipulation or earnings management refers to techniques that managers deliberately employ to achieve a desired level of reported earnings (e.g., Healy and Whalen, 1999).

book-tax conformity (BTC)²⁴ in curbing opportunistic or low-quality financial reporting.²⁵ Conventional wisdom states that less conformity or similarity between these rules facilitates manipulative reporting by managers. Of course, the motivation for self-presentation in each type of report is different: to their shareholders, managers generally want to paint a rosy picture of high earnings; when dealing with the IRS, however, it is in the firm's best interest to claim poverty. The fact that the rules governing each type of report are not identical allows managers to exercise flexibility in their earnings reports. Specifically, different rules enable firms to inflate book earnings upward without affecting taxable earnings (e.g., Phillips et al., 2003; Hanlon, 2005), deflate taxable earnings downward without affecting book earnings (e.g., Weisbach, 2002; McGill and Outslay, 2004), or even inflate book earnings *and* deflate taxable earnings in the same reporting period (e.g., Frank et al., 2009). However, recent empirical findings challenge this assumption, showing that less conformity is associated with a higher, not lower, quality of financial reports (i.e., more truthful reporting; e.g., Atwood et al., 2010; Blaylock et al., 2012; Watrin et al., 2014).

Markedly, the studies to date do not provide an explanation for the positive relationships found between greater flexibility in financial reporting and reporting quality. Why do managers forgo taking full advantage of their ability to manipulate reported numbers, even when greater flexibility in the reporting rules allows them to do so? We seek to identify the behavioral underpinnings of the increased compliance exhibited by managers under looser restrictions. By

²⁴ The degree of similarity between the rules governing book earnings (reported to shareholders) and taxable earnings (reported to the IRS) is called book-tax conformity, or BTC.

²⁵ This debate took off in the late 1990s. See, for example, evidence presented in the US Treasury tax return analysis of large corporations (1999) (US Department of the Treasury 1999); Sullivan (1999); Plesko (2000); Manzon and Plesko (2002); Desai (2003); Plesko and Shumofsky (2004) and Hanlon et al. (2005). In most IFRS adopting countries, the gap between the tax and the accounting rules has increased following the adoption, because these countries generally took the approach of maintaining local GAAP for tax purposes (e.g., Australia, New Zealand, Germany, Russia, China, Israel, etc. Only Canada allowed but did not mandate the use of IFRS for tax purposes, where local GAAP is still used to report taxes. See Chen and Gaviious, 2017).

merging psychological and accounting theories, we suggest that relaxing external constraints on managers' reporting discretion increases their level of autonomy over and ownership of their reports and curbs feelings of defiance, resulting in higher quality reporting.

5.2. Psychological underpinnings of managers' restrained reporting behavior under a relaxed reporting policy

Prior studies of managers' financial reporting have naturally been limited to accounting and related fields. To our knowledge, this article is the first one to incorporate insights from behavioral research in an attempt to explain the phenomenon described above.

5.2.1. Self-Determination Theory and the role of motivation in regulating behavior

Early research on motivation (e.g., White, 1959) distinguished between two basic types of motivation. *Intrinsic motivation* is defined as the engagement in an activity for the enjoyment of the activity itself. Conversely, *extrinsic motivation* describes the engagement in an activity in order to attain some external reward, or to alleviate an external pressure. The two sources of motivation can complement each other, but may also contradict and undermine one another. Extrinsic motivation has typically been portrayed as the less effective of the two. When a behavior is extrinsically motivated, it is externally regulated and engaged in with the intention of obtaining a desired consequence or avoiding an undesired one. Thus, the person performs the behavior only when it is instrumental to those ends. However, some extrinsic factors can facilitate intrinsic motivation processes. The Self-Determination Theory (SDT, Deci and Ryan, 1985) posits a controlled-to-autonomous continuum to describe the degree to which an external regulation has been internalized (Gagné and Deci, 2005). The autonomously motivated person feels a sense of choice and volition and fully endorses his or her own actions or decisions (Ryan, 1995). In contrast,

to be controlled is to be pressured to act in a certain way, or to perceive an external locus of causality for one's actions.²⁶

Self-Determination Theory, and the autonomy construct in particular, is a powerful predictor of the ability to regulate behavior. In work organizations, support for greater managerial autonomy is associated with increased job satisfaction among employees, more trust in corporate management and a higher quality of employee performance (Deci et al., 1989). Furthermore, training managers in supervisory styles that support autonomy results in increasing these measures among employees.

Studies examining the autonomy-control continuum in regulatory policies suggest that while controlling approaches to regulation can have immediate effects on behavior, they also have a number of serious limitations. Their effects typically do not last long, and the behaviors they aim to enforce are not sustained over time (Rupp and Williams, 2011). In addition, stringent external control may sometimes prompt defiance rather than compliance, leading people to do the opposite of what the policy demands simply because the policy demands it (Moller et al., 2006). SDT has been applied in particular to the study of the trust between regulators and regulatees as an effective compliance mechanism in regulatory relations (Braithwaite and Makkai, 1994; Murphy, 2004;

²⁶ The distinction between autonomous and controlled motivation is not synonymous with the intrinsic vs. extrinsic distinction. Extrinsically motivated behaviors vary widely in the level of autonomy that accompanies them; some motivational processes represent high levels of autonomy, whereas others are characterized as more controlling (Ryan and Connell, 1989). When the extrinsic motivation for a behavior revolves only around external reward and punishment contingencies, it is referred to as "external regulation." In contrast, "introjected regulation" occurs when internal, self-esteem-based contingencies drive behavior. When people enjoy the highest level of autonomy, they identify with the importance of the behavior and integrate it with their sense of self. This state is defined as "identified regulation" (Moller et al., 2006). When people experience threats of punishment, surveillance, deadlines, controlling evaluations, goal imposition, and pressure to win a competition, their sense of autonomy is diminished (Ryan and Deci, 2000). Autonomous extrinsic motivation occurs in environments with fewer controlling rewards or punishments, enabling people to identify with the importance of the behavior, integrate it with their sense of self and internalize the extrinsic motivation into personally endorsed values (Deci et al., 1999).

Murphy et al., 2009). Six (2012) commented that the public at times appears to want the state to assume that regulatees cannot be trusted. Empirical findings, however, have challenged the view of trust and control as mutually exclusive, the existence of one being at the expense of the other. Rather, the two may be applied simultaneously and may even reinforce each other by encouraging a moral commitment and sense of civic responsibility among the regulated actors (Tyler, 1990; Das and Teng, 1998; Mollering, 2005; Weibel, 2007). These findings are consistent with SDT, which emphasizes the importance of the regulatees' internalizing the regulators' objectives in achieving compliance.

5.2.1. Predictions of Self-Determination Theory regarding reporting quality under a relaxed fair value hierarchy

The three-level fair value hierarchy is designed to deter reporting aggressiveness by giving managers very little leeway in conveying information. By being so strict and limiting, this type of policy is a classic example of a controlling regulatory mechanism. In addition to restricting managers' flexibility in conveying financial information, a strict hierarchy sends a message to managers that their work is under close scrutiny. Thus, despite the advantages of added control, the fair value hierarchy might also have the disadvantages of controlling regulatory mechanisms, such as the dependence on maintaining reward and punishment contingencies and the increased motivation for defiant acts.

Relaxing the fair value hierarchy, as proposed in this article, may have several implications. First, relaxing the constraints put on managers may allow them to experience higher levels of control over and ownership of their own work. This change typically increases the stake people feel they have in their product. Providing managers, for whom high quality reporting constitutes a display of professional skill, with the legal means to do so may increase their sense of autonomy.

Second, greater flexibility in reporting provides managers with a greater degree of choice than they enjoy under a strict reporting rule. Research shows that the experience of greater choice, for example, by having control over one's own work, increases the likelihood of internalizing behavioral regulation (Moller et al., 2006). Finally, increasing the managers' autonomy and decision-making power may significantly reduce their motivation to defy the regulations (Murphy et al., 2009). Hence, increasing managers' flexibility in conveying information to their stakeholders effectively reduces their motivation to exploit the policy's limitations.

In sum, the theoretical arguments and empirical findings discussed above suggest that reducing the regulatory constraints on managers' reporting behavior (in our case, relaxing the fair value hierarchy) might provide them with the opportunity to engage in accounting manipulation (in our case, manipulating the estimated fair value). However, it might also prompt them, by way of increased autonomy, to exhibit greater restraint and maintain a higher quality of reporting.

6. Concluding remarks

In this article we call for a reconsideration of the fair value measurement of a significant influence investment in an entity, where the investee's shares are traded on the exchange and the investor is an investment entity, as defined in IFRS 13. Currently, the IASB conducts a post implementation review (PIR) whereby reconsiderations take place regarding the fair value measurements of assets. By using psychological and accounting theories, we suggest that the three-level hierarchy can be relaxed in the case of a significant influence investment in an entity, conditional on the investor's use of external and independent pricing. We utilize several social psychology and organizational theories of motivation as well as empirical studies

in the accounting literature examining the impact of greater flexibility in reporting rules on firms' reporting quality to support our suggestion. Thus, counterintuitive as it may seem, we maintain that allowing the fox to guard the henhouse will improve everyone's outcomes.

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