Accounting estimates in financial statements and their disclosure by some South African construction companies

Elsje Raubenheimer*

University of the Free State

raubene@ufs.ac.za

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Abstract

Accounting estimates form part of the preparation of financial statements and should not affect faithful representation. The use of accounting estimates does not yield exact amounts, but, rather, amounts based on assumptions. The frequency of use of accounting estimates in financial statements depends on the measurement criteria prescribed by International Financial Reporting Standards (IFRSs). For example, in the absence of prices in an active market, and if measurement is at fair value, the fair value is based on assumptions. Disclosure of the assumptions on which accounting estimates are based enables the users of financial statements to judge if amounts are faithfully represented. The objective of the research on which this article is based was to establish what IFRSs require in terms of the disclosure of assumptions and estimation uncertainty and also if listed companies in the construction and materials sector comply with these disclosure requirements.

Keywords

Accounting estimates, assumptions, disclosure, estimation uncertainty, fair value

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***Ms Elsje Raubenheimer** is a senior lecturer at the Centre of Accounting, University of the Free State, South Africa

1. INTRODUCTION AND BACKGROUND

Beechy (2005) argues that almost all the amounts on the statement of financial position (balance sheet) of entities are based on accounting estimates. The use of accounting estimates does not yield exact amounts, but, rather, amounts based on calculated guesses, judgement and discretion. According to Lendez and Dewey (2009), estimates almost always vary from actual results. Estimates may vary materially from actual results if future events differ dramatically from the assumptions the estimates are based on. However, estimating amounts to be included in financial statements is an accepted practice in accounting. If an exact amount is not available, under certain circumstances it is required by accounting principles to estimate the specific amount.

The conceptual framework for financial reporting states that financial statements are to a large extent based on estimates rather than on exact amounts (International Accounting Standards Board (IASB), 2010a). For financial information to be useful, it must be relevant and must faithfully represent the underlying economic phenomena (IASB, 2010a). However, faithful representation does not mean accurate in all respects, and the use of accounting estimates does not undermine the reliability of financial statements (IASB, 2010a). Mulford and Comiskey (2002) conclude that there are valid reasons for flexibility in the measurement of components and that the use of estimates should not result in misleading financial statements. The flexibility should, however, not be used to manipulate financial statements and to mislead the users of financial statements; rather, entities should make use of accounting estimates to provide a faithful and relevant representation of their financial results and financial position.

It is possible that accountants can use their knowledge of International Financial Reporting Standards (IFRSs) to manipulate the amounts recognised and disclosed in the financial statements. Blake, Bond, Amat and Oliveras (2000) argue that financial statements can be manipulated by being biased in the making of accounting estimates. David (2004) is also of the opinion that executives have an opportunity to manipulate the numbers in financial statements through their accounting estimates. So-called 'creative accounting' may occur when management uses judgement in the preparation of financial statements to manipulate carrying amounts to mislead some stakeholders about the underlying economic performance of the company (Healy & Wahlen, 1999). Naser (in Blake et al., 2000:137) defines creative accounting as the manipulation of the numbers in financial statements from what they actually are to what managements want them to be by taking advantage of the existing rules in IFRSs. If accounting estimates can be used to manipulate financial statements, the number of accounting estimates required by IFRSs in the preparation of financial statements is important. A large number could increase the potential risk of the bottom line of entities being manipulated.

On the other hand, Lacey (2005) is of the opinion that disclosure of the assumptions and estimation uncertainties involved in making accounting estimates could soothe the nerves of the users of financial statements, because they will be able to judge the faithful representation of these accounting estimates. International Accounting Standard (IAS) 1 *Presentation of financial statements* states that fair presentation is achieved in financial statements if the IFRSs, together with additional disclosure when necessary, are complied with (IASB, 2010b). It is therefore expected that the disclosure requirements set out in the IFRSs in terms of assumptions and estimation uncertainty should be adequate to judge the faithful representation of accounting estimates. If entities do not comply with these disclosure requirements, it will be difficult for the users of financial statements to form an opinion as to whether or not the estimations are faithfully represented in the financial statements. There could then also be a risk that financial statements may have been manipulated by using accounting estimates.

No empirical research in terms of compliance/non-compliance with the disclosure requirements, specifically dealing with assumptions and estimation uncertainty, by South African listed companies could be found. A search of the websites of *Meditari Accounting Research* (2005-2010), the *South African Journal of Accounting Research* (2005-2010) and *Accountancy SA* (2005-2010) revealed no research on assumptions and estimation uncertainty or the disclosure thereof. In the light of the above, it appears that there is a lack of research in this area.

It is against this background of the use of accounting estimates in financial statements, the possibility of misuse and the perceived lack of empirical research on the use of estimates by SA listed companies that this article focuses on disclosure requirements in terms of assumptions and estimation uncertainty and compliance with these requirements. The article is structured as follows: In section 2 the research objectives and methodology will be outlined. The literature review follows in section 3 and the results of the empirical research will then be discussed in section 4, after which a summary and conclusion is given in the last section, section 5, of the article.

2. RESEARCH OBJECTIVES AND METHODOLOGY

The research objectives are listed and then the research methodology is discussed. The objectives of the research on which this article is based were to:

- define accounting estimates and establish the number of accounting estimates required by IFRSs in the preparation of financial statements;
- identify what specific disclosure requirements are set by IFRSs in terms of assumptions and estimation uncertainty;
- provide descriptive empirical results of what certain South African listed companies in the construction and materials sector disclosed in terms of assumptions and estimation uncertainty; and
- establish whether these companies comply with the disclosure requirements set by IFRSs.

To achieve these stated research objectives, this research was briefly conducted as follows. A literature review was conducted to define accounting estimates. As part of the literature review and in order to establish the number of accounting estimates required by IFRSs, an electronic search for 'estimates' in IFRSs 2004-2010 was conducted, not only to give an indication of the number of accounting estimates required in a specific year, but also to examine a possible increase in accounting estimates over a number of years.

All IFRSs were analysed to identify the disclosure required in terms of assumptions and estimation uncertainty. To test compliance with the disclosure requirements set by IFRSs, a list of the standards which require disclosure in respect of assumptions and estimation uncertainty was prepared. The results of the electronic search, as well as the list of standards which require disclosure that deals with assumptions and estimation uncertainty, are presented as part of the literature review.

Disclosure that specifically deals with assumptions and estimation uncertainty in the financial statements of five South African listed companies in the construction and materials sector were examined to establish compliance/non-compliance with the disclosure requirements set by IFRSs. The five companies with the largest market capitalisation on 31 December 2009 were analysed. These companies all form part of the construction and materials sector, in the subsector heavy construction, of the securities exchange in South Africa, the JSE Limited (JSE). The market capitalisation of these five companies represents 90% of the total market capitalisation of this subsector on this date. A list of companies in the construction and materials sector, listed on the main board in the subsector heavy construction, was obtained directly from the JSE.

TABLE 1: Construction companies that form part of the empirical group

Long name	*Short name*	*Market Cap (Rand)*	*Financial year end*
Aveng Ltd	Aveng	15 800 662 222	30 June
Murray and Roberts H Ord	M&R-HLD	15 426 368 931	30 June
Wilson Bayly Hlm-ovc Ord	WBHO	7 094 640 000	30 June
Group Five Ord	Group 5	4 629 413 019	30 June
Raubex Group Ltd	Raubex	4 381 139 756	28 February

Source: *JSE, 2011a*

The financial statements for the financial years ended during 2010 of the above five companies which form the empirical group were obtained via the internet and were in all cases the consolidated financial statements of the group of companies (not of each individual company). These financial statements were searched for disclosure in terms of assumptions and estimation uncertainty to establish compliance/non-compliance with the disclosure requirements set by IFRSs. This is presented as part of the empirical results in section 4 of this article.

The objective of this article is not to prove that the use of accounting estimates could lead to creative accounting or misuse. As indicated, the South African listed companies chosen for the research on which this article is based are all part of the construction and materials sector. This implies that compliance/non-compliance with disclosure requirements in terms of assumptions and estimation uncertainties for other sectors were not tested, which places a limitation on the study. Care should be taken not to generalise the results to include or refer to SA listed companies in general.

The research reported on in this article contributes to the literature on the number of accounting estimates required by IFRSs in the preparation of financial statements and the disclosure of assumptions and estimation uncertainty. The research could further create an awareness of the risk that accounting estimates could be used in the manipulation of financial statements. This risk could be higher in the absence of adequate disclosure requirements or non-compliance with disclosure requirements by entities.

In the following section of this article, the literature review, the nature of accounting estimates is firstly discussed. Secondly, the number of accounting estimates required by IFRSs in the preparation of financial statements is presented in TABLE 2 and, lastly, the disclosure requirements set by IFRSs in terms of assumptions and estimation uncertainty are listed in TABLE 3.

3. LITERATURE REVIEW

3.1 The nature of accounting estimates

In the introduction and background section, it was briefly argued that accounting estimates are based on judgement and assumptions that could possibly lead to the misuse thereof. To understand the nature of accounting estimates and their effect on financial statements, it is important to define the term 'accounting estimates'. It is interesting to note that, although estimates are often referred to in the IFRSs, the term is not defined within any of the IFRSs. A definition for an accounting estimate can be found in an International Standard on Auditing (ISA).

ISA 540 Auditing accounting estimates, including fair value accounting, estimates and related disclosures defines an accounting estimate as

> ... an approximation of a monetary amount in the absence of a precise means of measurement. This term is used for an amount measured at fair value where there is estimation uncertainty, as well as for other amounts that require estimation (International Auditing and Assurance Standards Board (IAASB)2010:par7(a)).

As indicated by the ISA 540, an accounting estimate is inherently imprecise and often based on assumptions that may be influenced by the judgement of management. This inherent lack of precision of an accounting estimate is referred to as 'estimation uncertainty' (IAASB, 2010a).

The Thesaurus function in Microsoft Word lists the following synonyms among others for 'estimate': 'approximation, 'guess' and 'ballpark figure'. IFRSs recognise the imprecise nature of accounting estimates in that IAS 8 *Accounting policies, changes in accounting estimates and errors* requires a change in an accounting estimate if there is new information available that influences the carrying amount of the affected element or the periodic consumption of an asset (Ernst & Young, 2010).

From the above it can be deduced that accounting estimates are based on uncertainties and assumptions and the use of accounting estimates adds to the flexibility inherent in the preparation of financial statements. Keeping this in mind, it was important to establish the number of accounting estimates required by IFRSs and the frequency of use of accounting estimates in the preparation of financial statements.

3.2 The number of accounting estimates required by IFRSs and the frequency of use in the preparation of financial statements

In order to establish the number of accounting estimates required by IFRSs, an electronic keyword search was conducted on all IFRSs. The search was conducted making use of the South African Institute of Chartered Accountants' (SAICA) electronic handbook. The electronic handbook incorporates all IFRSs issued in a specific year and the search was conducted for every year from 2004 to 2010. The words that were used in the search were 'estimate', 'estimated', 'estimates', 'estimating, 'estimation' and 'estimations'.

A summary of the total number of hits (reference to 'estimates') for the above keywords is presented in TABLE 2. The hits include hits within the Basis for conclusions and Implementation guidance, which accompanies some IFRSs but does not form part of the specific IFRS.

TABLE 2: Number of accounting estimate hits in International Financial Reporting Standards

Year	*Number of 'estimate' hits*	*Accumulated increase from 2004*	*Increase/ decrease per year (number)*	*Increase/ decrease per year (%)*
2010	1 192	630	51	8.10
2009	1 141	579	-29	-4.60
2008	1 170	608	152	24.13
2007	1 018	456	1	0.16
2006	1 017	455	-8	-1.27
2005	1 025	463	463	73.49
2004	562	-	-	-

Source: *Author's analysis*

TABLE 2 indicates that from 2004 to 2010 there was an increase in IFRSs which contained any of the words related to 'estimates'. Of the total increases of 630, 73% (463) were between IFRSs: 2004 and IFRSs: 2005 and the remaining 27% (167) of the increases are between IFRSs: 2005 and IFRSs: 2010. The large increase between IFRSs: 2004 and IFRSs: 2005 is due to the issuing of a number of new standards which all form part of IFRSs: 2005.

An analysis of IFRSs indicated four reasons that led to the increase in the number of 'estimate' hits (refer to TABLE 2) between IFRSs: 2004 and IFRSs: 2010:

1. 'Basis for conclusions', 'Illustrative examples' and 'Guidance on implementation' paragraphs have been added to previously issued standards within the text that was used for the search.
2. Additional guidance is given on the recognition of a change in accounting estimate and the determining of fair values.
3. Additional disclosure requirements in terms of key assumptions, estimation uncertainty and risk exposure.
4. Some of the newly issued standards which form part of IFRSs 2005 require accounting estimates which mainly relate to estimating fair values. If fair value accounting is required and current prices in an active market are not available, IFRSs require measurement at the most reliable estimate of the fair value.

TABLE 2, although giving an indication of the number of hits (references) to accounting estimates in IFRSs, does not indicate the frequency of use of accounting estimates in the preparation of financial statements. The frequency of use of accounting estimates is influenced by the measurement criteria set by IFRSs. The measurement criteria dictate how the monetary amounts of the elements recognised in the financial statements are determined. The measurement criteria set by IFRSs result in a mixed model of measurement alternatives which could be, for example, historical cost, amortised cost or fair values (DiPiazza Jr. & Eccles, 2002). Of the different measurement alternatives allowed by IFRSs, it is only if an element is measured at historical cost (and not depreciated), or at fair value based on recently observed market prices, that an accounting estimate is not involved in the measurement of the carrying amount of this element.

If the measurement alternative involves an accounting estimate, disclosure of assumptions and estimation uncertainties is important. The users of financial statements can use this information to judge the faithful representation of the accounting estimates. The disclosure requirements set by IFRSs in terms of accounting estimates are listed in the next section.

3.3 Disclosure requirements set by IFRSs in terms of accounting estimates

Users of financial statements base their economic decisions on the information contained in financial statements. Access to adequate and reliable financial information is therefore an important ingredient in users' confidence and in the management of investment risks (Palmon & Sudit, 2008). Disclosure in financial statements is an important source of financial information for the users of financial statements. This is acknowledged by IFRSs in that IAS 1 requires that the notes in financial statements shall give information about the basis of preparation and the accounting policies used by an entity. The notes shall also disclose information that is not given elsewhere in the financial statements but is required by IFRSs and any other information that is important to understand the financial information presented (IASB, 2010b).

Lacey (2005) is of the opinion that the disclosure of material accounting estimates would be useful to the users of financial statements in making sense of the uncertainties the entity faces. IFRSs require disclosure of the assumptions and estimation uncertainties involved in making accounting estimates in a number of standards. For this study, it was important to identify the disclosure requirements in IFRSs in terms of estimation uncertainty and assumptions to be able to compare them with the disclosure in the financial statements of the five companies (refer to TABLE 1) that form the empirical group. The reason for the comparison was to establish whether or not these companies complied with the disclosure requirements set by IFRSs.

The standards that formed part of IFRSs: 2010 were analysed for the purposes of summarising the disclosure requirements set by IFRSs in terms of assumptions and estimation uncertainty. It is only if the disclosure paragraphs in the specific standard referred to assumptions or estimation uncertainty that the standard is listed, together with the specific disclosure requirements, in TABLE 3 below.

TABLE 3: Disclosure requirements set by IFRSs in terms of assumptions and estimation uncertainty

Standard	*Abbreviated requirement*	*Requirement*	*Reference*
IAS 1 – Presentation of financial statements	Information about assumptions.	An entity shall disclose information about the assumptions it makes and other major sources of estimation uncertainty that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year.	IASB 2010b: par 125
IAS 8 – Accounting policies, changes	Nature and amount of change in estimate.	An entity shall disclose the nature and amount of a change in an accounting estimate that has an effect in the	IASB 2010c: par 39

Standard	Abbreviated requirement	Requirement	Reference
in accounting estimates and errors		current period or is expected to have an effect in future periods.	
IAS 10 – Events after the reporting date	Financial effect.	An entity shall disclose an estimate of its financial effect for each material category of non-adjusting event.	IASB 2010f: par 21
IAS 16 – Property, plant and equipment	Depreciation method; and useful life. Carried at fair value: methods and assumptions.	Depreciation method. Estimated useful life. Methods and significant assumptions applied in estimating an item's fair value and the valuation technique used.	IASB 2010i: par 75–77
IAS 19 – Employee benefits: Defined benefit plans	Actuarial assumptions.	The principal actuarial assumptions used, including, when applicable: the discount rates; the expected rates of return; the expected rates of salary increases; medical cost trend rates; and any other material actuarial assumptions used.	IASB 2010h: par 120A
	Future contributions.	The employer's best estimate of contributions expected to be paid to the plan during the annual next financial year.	
IAS 36 – Impairment of assets	Material impairment: discount rate.	In case of a material impairment loss recognised or reversed and if the recoverable amount is value in use, an entity shall disclose the discount rate used.	IASB 2010d: par 130
	Assumptions.	An entity is encouraged to disclose assumptions used to determine the recoverable amount of assets.	IASB 2010d: par 132
	Cash generating unit containing goodwill: key assumptions; growth rate; and discount rate.	For each cash-generating unit to which goodwill or intangible assets with indefinite useful lives have been allocated an entity shall disclose: a description of each key assumption on which management has based its recoverable amount calculation; and the growth rate and discount rate to extrapolate cash-flow projections.	IASB 2010d: par 134
IAS 37 –	Provision:	An entity shall give an indication of the	IASB 2010e:

Standard	*Abbreviated requirement*	*Requirement*	*Reference*
Provisions, contingent liabilities and contingent asset	uncertainties and assumptions made. Contingent liability and asset: estimate of financial effect.	uncertainties, and, where necessary, in order to provide adequate information an entity shall disclose the major assumptions made concerning future events. An entity shall disclose an estimate of its financial effect.	par 85 IASB 2010e: par 86 and 89
IAS 38 – *Intangible assets*	Carried at fair value: methods and assumptions.	Methods and significant assumptions applied in estimating an assets fair value.	IASB 2010j: par 124
IAS 40 – *Investment property*	Carried at fair value: methods and assumptions. Statement in terms of market evidence.	The methods and significant assumptions applied in determining the fair value of investment property. Statement whether the determination of fair value was supported by market evidence or was more heavily based on other factors.	IASB 2010k: par 75
IFRS 2 – *Share-based payment*	Share options: option-pricing model and inputs; determining of expected volatility; other features incorporated.	For share options granted during the period, the entity shall disclose the weighted average fair value of those options and information on how that fair value was measured, including: the option-pricing model used and the inputs to that model; how expected volatility was determined; and whether and how any other features of the option grant were incorporated into the measurement of fair value, such as a market condition.	IASB 2010m par 47
IFRS 3 – Business combinations	Contingent consideration: range of outcomes. Receivables: cash flows not expected to be collected.	The acquirer shall disclose the following for each business combination that occurs during the reporting period: for contingent consideration arrangements and indemnification assets, an estimate of the range of outcomes. for acquired receivables the best estimate at the acquisition date of the contractual cash flows not expected to be collected.	IASB 2010n: par B64
IFRS 7 –Financial instruments:	Carried at fair value:	An entity shall disclose the methods and, when a valuation technique is used,	IASB 2010g: par 27

Standard	Abbreviated requirement	Requirement	Reference
Disclosures	methods and assumptions.	the assumptions applied in determining fair values of each class of financial assets or financial liabilities.	
	Hierarchy.	An entity shall classify fair value measurements using a fair value hierarchy with the following levels: level 1 – quoted prices (unadjusted) in active markets; level 2 – inputs other than quoted prices included within Level 1 that are observable; and level 3 – inputs for the asset or liability that are not based on observable market data.	IASB 2010g: par 27A
	Level 3: reconciliation.	For fair value measurements in Level 3: a reconciliation from the beginning balances to the ending balances; and if changing one or more of the inputs to reasonably possible alternative assumptions would change fair value significantly, the entity shall state that fact and disclose the effect of those changes.	IASB 2010g: par 27B
	Market risk: sensitivity analysis.	An entity shall disclose a sensitivity analysis for each type of market risk to which the entity is exposed at the end of the reporting period.	IASB 2010o: par 40

Source: *IFRSs (author's analysis)*

All the disclosure requirements, except for the disclosure requirements set by IAS 1 and IAS 8, listed in TABLE 3 are in respect of a specific topic – that is, the topic that the standard relates to. However, the disclosure requirement set by IAS 1 may be complied with in the case of any accounting estimate, irrespective of the specific standard (topic) it relates to. The disclosure requirement set by IAS 8, namely the disclosure of a change in accounting estimate, is also applicable to any change in accounting estimate irrespective of the specific standard (topic) to which the accounting estimate relates. IAS 11 *Construction contracts*, for example, requires that the effect of a change in the estimate of contract revenue or contract costs, or the effect of a change in the estimate of the outcome of a contract, shall be accounted for as a change in accounting estimate (IASB, 2010).

Note that two standards, namely IFRS 4 *Insurance Contracts* and IAS 41 *Agriculture,* require disclosure in terms of assumptions and estimation uncertainty but are omitted from TABLE 3 above. They are not applicable to the construction sector as they relate to business activities other than construction and therefore do not form part of the scope of this article.

The disclosure requirements, listed in TABLE 3, form the subject matter of this research and are indicated as such in the research methodology. In the next section of this article the disclosure requirements listed in TABLE 3 are compared with the actual disclosure in the financial statements of the selected companies in the empirical group.

4. EMPIRICAL RESULTS OF DISCLOSURE OF ASSUMPTIONS AND ESTIMATION UNCERTAINTY

In this section of the article, the results of the last two objectives of this study are presented. These objectives were to provide descriptive empirical results of what certain South African listed companies in the construction and materials sector disclose in terms of assumptions and estimation uncertainty and to establish whether these companies complied with the disclosure requirements set by IFRSs.

The results in respect of the disclosure of assumptions and estimation uncertainty in the financial statements of the selected construction companies are presented in TABLE 4. The statements that were listed in TABLE 3 that require disclosure of assumptions and estimation uncertainty, together with the abbreviated disclosure requirements, are again listed in TABLE 4. Disclosure of assumptions and estimation uncertainty in the financial statements of the five companies in the empirical group for the years ended during 2010 were examined to establish compliance/non-compliance with the listed disclosure requirements. If the disclosure in the financial statements of the specific company complies with the listed disclosure requirement, it is indicated with 'yes' and if it does not comply with the disclosure requirement it is indicated with 'no'. If the disclosure requirement is not applicable to the specific company, it is indicated as such with 'N/A'. For example, if the company does not measure property, plant and equipment at fair value but at cost, the disclosure requirement in terms of fair value measurement is indicated as 'N/A' (refer to IAS 16).

TABLE 4: Results in respect of disclosure of assumptions and estimation uncertainty

Standard	*Abbreviated requirement*	*Aveng*	*Group 5*	*M&R HLD*	*Raubex*	*WBHO*
IAS 1	Information about assumptions.	No	No	Yes	No	No
IAS 8	Nature; and	N/A	N/A	N/A	Yes	N/A
	amount of change in estimate.	N/A	N/A	N/A	Yes	N/A
IAS 10	Financial effect	Yes	N/A	No	N/A	No
IAS 16	Depreciation method; and	Yes	Yes	Yes	Yes	Yes
	useful life.	Yes	Yes	Yes	Yes	Yes
	Carried at fair value:	N/A	N/A	N/A	N/A	N/A
	methods and assumptions.					
IAS 19	Actuarial assumptions:				N/A	
	discount rate;	Yes	Yes	Yes		Yes
	return on assets;	Yes	Yes	Yes		Yes
	rates of salary increases;	N/A	Yes	Yes		Yes

Standard	*Abbreviated requirement*	*Aveng*	*Group 5*	*M&R HLD*	*Raubex*	*WBHO*
	medical cost rates; and	N/A	Yes	Yes		N/A
	other assumptions.	Yes	Yes	Yes		Yes
	Future contributions.	Yes	No	Yes		No
IAS 36	Material impairment:	N/A		N/A	N/A	N/A
	discount rate;		No			
	Assumptions.		No			
	Cash generating unit containing goodwill:					
	key assumptions;	Yes	Yes	Yes	Yes	Yes
	growth rate; and	Yes	No	Yes	Yes	Yes
	discount rate	Yes	Yes	Yes	Yes	Yes
IAS 37	Provision: uncertainties and assumptions made.	N/A	Yes	No	No	Yes
	Contingent liability and asset: estimate of financial effect.	N/A	N/A	N/A	N/A	N/A
IAS 38	Carried at fair value: methods and assumptions	N/A	N/A	N/A	N/A	N/A
IAS 40	Carried at fair value:	N/A			N/A	
	methods and assumptions;		Yes	No		
	Statement in terms of market evidence.		Yes	Yes		
IFRS 2	Share options:					
	option-pricing model and inputs;	Yes	Yes	Yes	Yes	
	determining of expected volatility;	No	No	Yes	No	
	other features incorporated.	No	No	No	No	
IFRS 3	Contingent conside-ration:	N/A	N/A	N/A	N/A	
	range of outcomes.					
	Receivables:					
	cash flows not expected to be collected.	No	N/A	No	No	
IFRS 7	Carried at fair value: methods and assumptions.	Yes	Yes	Yes	N/A	Yes
	Hierarchy.	Yes	Yes	Yes	N/A	Yes
	Level 3:	Yes	Yes	Yes	N/A	Yes

Standard	Abbreviated requirement	Aveng	Group 5	M&R HLD	Raubex	WBHO
	reconciliation Market risk: sensitivity analysis.	Yes	Yes	Yes	Yes	Yes

Source: *Author's analysis*

All of the companies in the empirical group complied with the disclosure requirements applicable to them in terms of IAS 8, IAS 16, IAS 38 and IFRS 7. Only one of the companies (Raubex) in the empirical group disclosed the nature and amount in respect of a change in an accounting estimate. Taking into account the subjective nature of accounting estimates, which are based on assumptions and uncertainties, as well as the number of accounting estimates required by IFRSs, it is expected that a change in accounting estimate shall be recognised often in the financial statements of companies. The financial statements that form part of this study are however not enough to draw any conclusions in terms of how often changes in accounting estimates are recognised in the financial statements of companies in the construction and materials sector.

Note that all the companies in the empirical group measure property, plant and equipment (IAS 16) and intangible assets (IAS 38) at cost, and therefore no disclosure in terms of estimating fair values is required. The other standards listed in TABLE 4 are discussed with specific reference to the disclosure requirements that the companies do not comply with, and are indicated as such in TABLE 4 with 'no'.

4.1 IAS 1 Presentation of financial statements

Only one of the companies (M&R-HLD) disclosed information about assumptions in terms of IAS 1. M&R-HLD disclosed material assumptions in terms of revenue recognition and contract accounting, which mainly deal with uncertified revenue in respect of claims.

Note that in terms of IAS 1 it is only in case of major sources of uncertainty that have a significant risk of a material adjustment to the carrying amounts of elements in the financial statements that disclosure is required (IASB, 2010b). It is therefore expected that disclosure in accordance with paragraph 125 of IAS 1 would be made in only a few cases (IASB, 2010b).

It can be concluded that the 'no' indicated in TABLE 4 for the other four companies is not necessarily an indication of non-compliance with the disclosure requirement set in IAS 1. It will only be non-compliant if the assumptions the companies make are material and no information is disclosed. The users, without any information about these assumptions, are mainly left to trust the 'tone at the top' and believe in the audit process.

4.2 IAS 10 Events after the reporting period

One company (Aveng) complied with the disclosure requirement in terms of IAS 10. Two other companies (M&R-HLD and WBHO) disclosed information about non-adjusting events, but no disclosure of the financial effects of these events can be found in the financial statements of these companies. Note that IAS 10 requires the financial effect to be disclosed only for material non-adjusting events. It can be concluded that the 'no' indicated in TABLE 4 for these two companies is not necessarily an indication of non-compliance with the disclosure requirement set in IAS 10. It will be non-complaint only if the financial effect of the non-adjusting event is material.

4.3 IAS 19 Employee benefits

Unlike the other four companies Raubex does not recognise defined benefit plans in its financial statements for the year ended 28 February 2010. All four companies complied with the disclosure requirements set by IAS 19 except for the disclosure requirement that deals with future contributions. Two companies (Group 5 and WBHO) do not disclose their best estimate of contributions expected to be paid to the plan during the next financial year, and it can be concluded that they are non-compliant in terms of this specific requirement.

4.4 IAS 36 Impairment of assets

All five companies in the empirical group recognised impairment losses in terms of cash-generating units containing goodwill or intangible assets with indefinite useful lives. All five companies, except for Group 5, which does not indicate a growth rate, complied with the disclosure requirements set by IAS 36.

One of the companies (Group 5) recognised impairment losses on property, plant and equipment. The amount of the impairment losses recognised in terms of property, plant and equipment in the financial statements of Group 5 for the year ended 30 June 2010 amounted to R326 million. Of the R326 million, R254 million was recognised against 'mining assets and undeveloped mining resources' and a further R72 million was recognised against 'factory plant'. This impairment loss amounted to 51% (R326 million/R639 million) of profit for the year, before the impairment, which seemed to be material. In the case of material impairment losses, IAS 38 requires, among other things, disclosure of the basis used to determine the fair value less cost to sell (IASB, 2010j). IAS 38 also encourages entities to disclose the assumptions on which the recoverable amount of assets are based (IASB, 2010j).

Except for the above amounts in terms of impairment losses disclosed in the financial statements of Group 5, the only other disclosures dealing with the impairment losses in the annual report of Group 5 for the year ended 30 June 2010 were the following:

> a lack of clarity on the timing for recovery of construction materials markets, including no visible recovery in the private residential and building sector and a delay in contract roll out and awards in the public sector, required management to apply a prudent consideration to the carrying value of these assets and to process an impairment of R326 million (Group 5, 2010:96).

Since all five companies in the empirical group are doing business in the construction and materials sector, in the subsector heavy construction, it is assumed that the same economic principles and market forces affect them. It is significant that only one of the other companies recognised immaterial impairment losses on property, plant and equipment for the financial year ended during 2010. In the financial statements of Group 5 for the year ended 30 June 2010, a slow and sluggish economy is blamed for the recognition of the R326 million impairment losses. Some analysts, however, claimed that Group 5 paid too much when it acquired Quarry Cats during the financial year ended 30 June 2007 (Slabbert, 2011).

Since the financial statements for the year ended 30 June 2010 do not disclose information in terms of the basis or the assumptions used in determining the fair value less cost to sell, it is difficult for the users of the financial statements to evaluate the reliability of the accounting estimates which the fair value is based on. If it is assumed that the impairment losses recognised in the financial statements of Group 5 for the year ended 30 June 2010 are material, the company does not comply with the disclosure requirements set in IAS 38.

4.5 IAS 37 Provisions, contingent liabilities and contingent assets

In four of the five company's financial statements for the financial years ended during 2010 provisions are recognised. Two companies (M&R-HLD and Raubex) do not comply with the disclosure requirements. Note that IAS 37 requires the disclosure of assumptions only if it is major and only where necessary to provide adequate information. It can be concluded that the 'no' indicated in TABLE 4 for the two companies is not necessarily an indication of non-compliance with the disclosure requirement set in IAS 37. This depends on the materiality of the provision.

4.6 IAS 40 Investment property

Two companies (Group 5 and M&R-HLD) in the empirical group recognised investment properties in their financial statements for the year ended during 2010. No disclosure in terms of methods and significant assumptions as required by IAS 40 can be found in the 'investment property' note in the financial statements of M&R-HLD. A statement is made that the fair value of the investment properties at 30 June 2010 has been arrived at on the basis of a valuation carried out by Murray & Roberts Properties Group, a related party, on an open-market basis. For further details on investment property, the users of the financial statements are referred to a register kept at the Group's registered office.

It can be concluded that M&R-HLD does not comply with the disclosure requirements set by IAS 40 in terms of the disclosure of methods and assumptions applied in determining the fair value of investments.

4.7 IFRS 2 Share-based payment

The four companies to which the disclosure requirements in terms of the share options are applicable disclosed information about the option-pricing model and the inputs to that model. Three of the four companies that granted share options during the period did not give an indication of how expected volatility was determined. None of the four companies disclosed whether and how any other features of the option were incorporated into the measurement of fair value. It can be concluded that in terms of these disclosure requirements the companies are non-compliant.

4.8 IFRS 3 Business combinations

No disclosure in terms of the acquired receivables that are not expected to be collected could be found in the financial statements of the companies that have entered into business combinations. Note that the estimate is required only if it is expected that the receivables are not collectable. If the receivables are collectable, as should be assumed in the absence of any disclosure, the 'no' indicated in TABLE 4 does not indicate non-compliance.

5. CONCLUSION

The literature review suggested that accounting estimates are imprecise, as they are based on assumptions and uncertainties. It also indicated an increase in the number of required accounting estimates from IFRSs 2004 to IFRSs 2010 (refer to TABLE 2). This increase is due to a number of reasons, one of which is IFRSs' requirement for measurement at fair value in a number of standards. In the absence of current prices in an active market, IFRSs require measurement at the most reliable estimate of the fair value. The use of fair values therefore increases the frequency of use of accounting estimates in financial statements. To enable the users of financial statements to judge the faithful representation of accounting estimates in financial statements, IFRSs require disclosure in some standards of assumptions and estimation uncertainty (listed in TABLE 3).

The financial statements of five companies (refer to TABLE 1) in the construction and materials sector were analysed with a view to establishing compliance/non-compliance with the required disclosure, prescribed by IFRSs, in terms of accounting estimates. The descriptive empirical results indicated that not all the companies complied completely with the required disclosure. Standards in terms of which some of the companies in the empirical group did not comply with the required disclosure are IAS 19, IAS 40 and IFRS 2.

In some cases it could be that the IFRSs requirements allowed management to judge whether or not disclosure was necessary based on the materiality of the estimate. This was the case for IAS 1, IAS 10, IAS 36 and IAS 37. To enable users to verify the reliability of estimates, it is necessary to disclose the underlying assumptions, the methods of compiling the information and other factors and circumstances that support the information (IASB, 2010a). Without any information, the users of the financial statements have no choice but to trust management's judgement.

IFRS 7 was applicable to four of the companies in the empirical group and all four companies complied with the required disclosure. It may be argued that the required disclosure is comprehensive and specific and therefore companies comply. The issue of IFRS 13 *Fair value measurement* possibly indicates that the International Accounting Standards Board is aware of a lack of guidance in terms of the disclosure of the assumptions fair values are based on. The objective of IFRS 13 is to set a framework for the measurement of fair values together with disclosure requirements thereof (IASB, 2011). Future research could test compliance/non-compliance with these disclosure requirements set by IFRS 13.

It can be concluded that the users of financial statements should be aware of the increased number of accounting estimates used in the preparation of financial statements. They should be aware that accounting estimates are based on assumptions and uncertainties. The objective of the required disclosure in IFRSs in terms of assumptions and estimation uncertainty is to enable the users to judge the fair representation of the assumptions themselves and to confirm the reliability of financial statements. In this study, it was found that in some instances companies in the empirical group did not comply with the required disclosure in IFRSs.

It is recommended that the Financial Reporting Investigation Panel (FRIP) take note of the findings of this study. The FRIP, which is responsible for the investigation of financial statements of listed companies in order to pick up any non-compliance with IFRSs, could give the users of financial statements the assurance that compliance with IFRSs is monitored and not left to the judgement of management.

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