



Department of Economics Finance & Accounting

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Working Paper N287-17

## IAS 19 valuations for DB Schemes – true or fair?

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### Abstract.

**Purpose** - This paper argues that the accounting standards' requirement for pension scheme liabilities to be discounted by reference to market yields at the end of the reporting period on high quality corporate bonds, potentially produces an artificial result which is at odds with the "fair representation" objective of these standards.

**Design/methodology/approach** –The approach is a theoretical analysis of the relevant reporting standards with the use of a theoretical example to demonstrate the impact where trustees adopt a hedged approach to portfolio investment.

**Findings** - Where the fund has adopted a hedging strategy and has invested in "risk – free" assets, the term, quantity and duration/maturity of which, is intended to match the term quantity and maturity of the scheme liabilities, applying the requirements potentially results in the reporting in sponsoring company financial statements of fluctuating surpluses or deficits each year which are potentially ill-informed and misleading.

**Originality/value** – Pension scheme surpluses or deficits reported in the financial statements of listed companies are potentially very significant numbers, however the dangers posed by theoretical nature of the calculation has largely gone unreported.

**Key Words:** Fair representation, risk free, hedging

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## **Introduction.**

Accounting for defined benefit plans in the financial statements of the sponsoring company is a complex matter. The complexity arises because the employer must, in each accounting period, recognize as an expense in its income statement/profit and loss account the cost to the employer of the retirement benefits that will eventually be paid to employees as a result of the services that they have provided during the period. Because these benefits may be payable in many years' time and their cost will depend on a number of factors (e.g. mortality, return on investments etc.), which are difficult to determine in advance, the calculation of the expense which should be recognized in an accounting period is not straightforward. As the sponsoring company carries the risk of any shortfall arising on a defined benefit scheme (i.e. if amounts contributed by both the employer and the employee, together with the net investment return on such contributions were insufficient to pay the scheme pensions and benefits as they fall due), such a shortfall if it were to exist, would constitute a medium to long term liability of the sponsoring company, over and above its annual funding commitment and would need to be recognized as such in the sponsoring company's financial statements. The converse also applies in that any excess of assets in the pension scheme (i.e. surplus) which could reduce the sponsoring company's payments or commitments in the future would (providing certain criteria are met) also be required to be recognized as an asset in its financial statements.

A complete set of financial statements includes a statement of financial position, a statement of comprehensive income, a statement of changes in equity, a statement of cash flows, and accounting policies and explanatory notes. For Irish and UK entities (depending on the entity concerned), the preparation and presentation of these financial statements is governed by International Financial Reporting Standards (IFRS) or in accordance with the provisions of domestic accounting standards (FRS 100-102 and FRSSE)

The International Accounting Standards Board (IASB) seeks to harmonise regulations, accounting standards and procedures relating to the preparation and presentation of financial statements. Its stated belief is that

financial statements which are prepared for the purpose of providing information which is useful in making economic decisions meet the common needs of most users.

“This is because nearly all users are making economic decisions for example;

- (a) To decide when to buy, hold or sell an equity investment
- (b) To assess the stewardship or accountability of management
- (c) To assess the ability of the entity to pay and provide other benefits to employees.
- (d) To assess the security for amounts lent to the entity
- (e) To determine taxation policies
- (f) To determine distributable profits and dividends
- (g) To prepare and use national income statistics
- (h) To regulate the activities of entities.

The Conceptual Framework developed by the IASB sets out the concepts that should underlie the preparation and presentation of financial statements for external users. Among the stated objectives of the Conceptual Framework are;

- (a) To assist the Board in the development of future IFRSs and in its review of existing IFRSs
- (b) To assist the Board in the harmonization of regulations, accounting standards and procedures relating to the presentation of financial statements by providing a basis for reducing the number of alternative accounting treatments permitted by (IFRS);
- (c) To assist preparers of financial statements in applying IFRSs and in dealing with topics that have yet to form the subject of an IFRS;
- (d) To assist auditors in forming an opinion on whether financial statements comply with IFRSs;
- (e) To assist users of financial statements in interpreting the information contained in financial statements prepared in compliance with IFRS;

The International Accounting Standard No. 19 (IAS 19) (International Accounting Standards Board 2008) provides the internationally recognized guidance on accounting for and disclosure in Financial Statements of defined benefit pension benefits and obligations. The first stated objective of IAS 19 is to ensure that an employer's Statement of Financial Position(SOFP) reflects a net pension liability/asset in respect of employee benefits to be paid in the future. The second stated objective of IAS 19 is to ensure that the employer's Statement of Profit or Loss and Other Comprehensive Income(SPLOCI) recognizes an expense when the employer consumes an economic benefit arising from the services provided by the employee in exchange for employee benefits.

Accounting for defined benefit plans is complex because actuarial assumptions and valuation methods are required to measure the SOFP obligation and the SPLOCI expense. The plan liabilities (the defined benefit obligation) and the plan assets are measured at each reporting year end date. The plan assets are measured at fair value (not necessarily the same as either "net realizable value" or market value). The defined benefit obligation is measured on an actuarial basis and discounted to present value. The difference between the fair value of the plan assets and the present value of the defined benefit obligation is a surplus or deficit. A surplus is regarded as an asset to the extent that the employer gains an economic benefit from it.<sup>1</sup> A deficit is regarded as a liability to the extent that the employer has a legal or constructive obligation to make it good. It is the accrued net cost to date at the reporting year end date (over and above the employers' normal contribution rate) of the promise inherent in a DB scheme that the employer will make good any shortfall in the schemes funding. Subject to certain conditions, a surplus or deficit should be recognized as appropriate as an asset or liability on the employer's SOFP..

IAS 19 requires the amount recognized in the employer company's SOFP as a defined benefit liability (deficit) or asset (surplus) to be the net total of the following amounts: (1) the present value of the defined benefit obligation at the SOFP date, (2) plus any actuarial gains less any actuarial losses not yet recognized as income

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<sup>1</sup> It remains unclear as to the legal ownership of any surplus which might arise as a result of a valuation exercise where contributions have been made by both the sponsoring company and the scheme members. This is a question to be resolved on a scheme by scheme basis, depending on individual scheme rules.

or an expense because of the smoothing afforded by the corridor approach<sup>2</sup>, (3) minus any past service cost not yet recognized<sup>3</sup>, (4) minus the fair value at the SOFP date of plan assets out of which the defined benefit obligation is to be settled directly.

The defined benefit obligation is defined as reflecting “expected future payments required to settle the obligation resulting from employee service in the current and prior periods”. It comprises not only legal obligations under the formal terms of the plan, but also constructive obligations arising from the employer’s informal practices, e.g. an established practice of facilitating early retirement even though this may not be specifically provided for in the terms of the scheme. The calculation of the liability includes a projection of the benefit earned to date to each future point that the benefit could be paid with allowance for salary increases and probabilities of payment. This requires assumptions on mortality, both during and after employment, rates of employee turnover, disability and early retirement, the proportion of plan members with dependents who will be eligible for benefits. The liability must then be discounted back to the current valuation date using the yield on high quality corporate bonds (AA).

FRS 102, effective for accounting periods beginning on or after 1 January 2015 is a single reporting standard that applies(subject to certain exceptions) to the financial statements of all UK and Republic of Ireland entities that are not applying EU adopted IFRS. This includes entities that are not constituted as companies and those that are not profit- orientated. The company law maxim of “true and fair” is replaced in FRS102 by terms such as “fair presentation” and “ faithful representation”, however the underlying sentiment remains.

The objective of financial statements within the scope of the FRS is;

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<sup>2</sup> Differences between reality and the actuarial assumptions used will occur frequently. Immediate recognition of these differences has the consequence that the total pension cost in the employer’s financial statements may become hugely volatile. In order to reduce this volatility IAS 19 allows flexibility as to the recognition of certain of these actuarial gains or losses depending on their size relative to the overall assets/liabilities of the scheme. This is known as the corridor approach.

<sup>3</sup> Past service costs arise when an employer grants pension rights for service rendered prior to the establishment of the pension plan or when an employer grants an increase in pension benefits also for service rendered in past periods. Past service costs may be vested in which case they are recognized immediately as an expense/liability or they may be conditional on further future employment in which case they are recognized on a spread basis.

“ to provide information about the financial position, performance and cash flows of an entity that is useful for economic decision- making by a broad range of users who are not in a position to demand reports tailored to meet their particular information needs.” (FRS102 ,P11)

The FRS sets out a number of concepts and pervasive principles which should underlie the information in financial statements. Amongst other criteria, the information provided in financial statements must be relevant to the decision-making needs of users.. This means it must be ;

“capable of influencing the economic decisions of users by helping them evaluate past, present or future events or confirming or correcting their past evaluations.” (FRS102 p.11).

S.28 of FRS 102 sets out the applicable accounting treatment for employee benefits, including post-employment benefits in the form of defined benefit and defined contribution pensions. The requirements are strongly consistent with the provisions of IAS 19 requiring recognition of the “net defined benefit liability” and the net change in that liability during the period as the cost of the defined benefit plan for the period. The “net defined benefit liability is the net total of the obligations under the defined benefit plan minus the fair value at the reporting date of the plan assets out of which the obligations are to be settled. An entity is required to measure its defined benefit obligation on a discounted present value basis.

“The entity shall determine the rate used to discount the future payments by reference to market yields at the reporting date on high quality corporate bonds. In countries with no deep market in such bonds the entity shall use the market yields (at the reporting date) on government bonds. The currency and term of the corporate bonds or government bonds shall be consistent with the currency and estimated period of the future payments.” (FRS 102, p 171)

This paper argues that the IAS 19/FRS102 requirement for scheme liabilities to be discounted by reference to market yields at the end of the reporting period on high quality corporate bonds or where there is no deep market in such bonds, by reference to market yields on government bonds, potentially produces an artificial result which is at odds with the “true and fair” objective of these standards and the overriding objective of enabling users of accounts to receive high- quality understandable financial reporting proportionate to the size and complexity of the entity and users’ information needs. This is particularly so in situations where the fund has adopted a hedging strategy and invested in “risk – free” assets, the term, quantity and duration/maturity of which, is intended to match the term quantity and maturity of the scheme liabilities. The effect of IAS 19/FRS102 where pension scheme liabilities are hedged by assets with matching maturity amounts is to discount the relevant assets and liabilities at potentially different discount rates. In striving to reduce the subjectivity of pension fund valuations in the interest of fair presentation, IAS 19 may be resulting in valuation amounts which are neither true or fair.

### **“Don’t Discount the Discount Rate!”**

The question of what discount rate should be used to value Defined Benefit pension liabilities is considered by Khorasane (2004). There is an acceptance that the use of discount rates linked to corporate bond yields rather than Government issued index linked bonds allows for the risk of default. However the author contends that the use of an AA corporate bond discount rate for different companies is an ad-hoc approach which makes no attempt to allow for variations in default risk for different companies.

Munnell et al (2010) consider the debate in the US on the discount rate appropriate in valuing liabilities in State and local pension plans. While State and local plans generally follow an actuarial model and discount their liabilities by the long-term yield on the assets held in the pension fund, the authors contend that the widely held view of US economists is that the discount rate should reflect the risk associated with the liabilities and given that the benefits are guaranteed under most State laws, the appropriate discount factor is a

riskless rate (typically below the yield that plans expect to earn on their investments and thereby resulting in a higher reported liability). The authors contend that using the return on a plan's assets to discount its liabilities produces misleading results. It assumes that the entire assumed yield on the assets is available to help pay future

McNally & OConnor(2014) found that the current legal and regulatory framework for Irish DB pension schemes can result in three different valuations for a scheme at any particular point in time, each of which would be regarded as fully acceptable for its specific purpose and to its specific target audience. A valuation is required for IAS 19 purposes, for the purposes of determining whether the fund satisfies the minimum funding standard valuation set down by the regulatory authority and one is also required for the fund trustees, for the purposes of their annual report to scheme members. The prescribed guidelines to be followed in each of the three valuation processes in themselves necessitate differing assumptions (including different discount rates) and calculation bases and different emphases in the produced results. The lack of cohesiveness between the three valuation models poses difficulties for stakeholders endeavoring to comprehend the financial health of a pension scheme.

Brown and Pennacchi (2015) argue that there is an important difference between the appropriate measure of a plan's funding status and the appropriate measure of its market value.. The authors contend that the appropriate rate for discounting depends on the purpose of the discounting exercise. In particular, if the objective is to account for pension under- or over – funding, a default free discount rate should always be used. If the objective is to determine the market value of an employee's pension benefits, then it is appropriate that discount rates incorporate the plan's default risk. The author contends that the default – free discount rate is the relevant measure in establishing the amount of money the plan would need to be able to pay promised benefits or if the plan wished to offload its liabilities to an insurance company that intends to make good on future benefit payments. He uses the example of General Motors who transferred its accrued pension liabilities to an insurance company who would then provide the retirement annuities to the sponsor's

employees. The insurance company taking over the plan would require the sponsor to pay the difference between the accrued plan liabilities discounted at the default free rate and the plan's assets (plus administration costs), thus eliminating any risk for the insurance company in terms of the ability of the assets (including transfer price) transferred to meet the pension liabilities. The authors address the practical question of how to measure default free discount rates and find that Treasury yields are a reasonable approximation to a discount free rate.

Pension Industry reports recognize the volatility that IAS 19 reporting has introduced to the financial statements of quoted companies with DB schemes. Attain Consulting limited (2008) estimate that a 0.1% increase in the discount rate can result in close to a 2% reduction in scheme liability values depending on the nature and duration of the scheme's pension liabilities. LCP (2014) in its report on 16 of the largest Irish quoted companies (by market capitalization) and 13 semi-state/state – controlled companies with DB schemes, contend that the deficits of the schemes analyzed more than doubled between December 2013 and August 2014. Despite a gain of more than 12% in global equity markets in the period, a fall in the bond markets over the same period had the effect of increasing total scheme deficits from €4bn to €8.5bn.

## **Recognizing the Role of the Hedge**

IFRS 9 *Financial Instruments* which replaces IAS 39 *Financial Instruments*, sets out most recent developments in accounting practice for the recognition, measurement, impairment, derecognition of financial instruments and general hedge accounting. The IFRS provides for situations where financial assets and financial liabilities may be recognized at fair value if doing so eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as an accounting mismatch) that would otherwise arise from measuring assets or liabilities or recognizing gains and losses on them. Similarly, S. 12 of FRS 102 whilst specifically excluding employers rights and obligations under employee benefit plans, permits an entity to designate a hedging relationship between a hedging instrument and a hedged item when certain defined criteria are satisfied and so qualify for “hedge accounting.” “Hedge accounting” provides that a financial asset and a

financial liability shall be offset and the net amount presented in the statement of financial position when an entity;

- “(a) Currently has a legally enforceable right to set off the recognized amounts; and
- (b) Intends to settle on a net basis, or to realise the asset and settle the liability simultaneously.”

The prescribed discounting of pension liabilities as set down in IAS 19/FRS102 in situations where the trustees have actively sought to match the nature and duration of the scheme assets with the nature and duration of its’ liabilities, would appear to be at odds with this principle and could result in a significant “accounting mismatch.”

### **Economic Decision making and IAS 19/FRS 102 PRESENTATION.**

It can be argued that the pragmatic approach of IAS 19/ FRS 102 to defined pension liability valuation is at odds at a practical level with the stated objective of the IASB that financial statements should provide information which is useful for economic decision making. There has been a definite move in recent years by defined pension schemes to reduce stock market risk and protect earnings by purchasing Government and sovereign bonds. Yet consider the position of a mature DB pension scheme who has done just that and invested its assets in sovereign bonds with maturities matching that of 100% of the fund’s liabilities. From the perspective of the trustees and fund members such a fund would be in a very comfortable position. Potentially however the financial statements of the sponsoring company could present a very different picture. This is because the financial statements would measure the fund liabilities by reference to the prevailing AA corporate bond rate rather than the hedged rate ie the applicable sovereign bond rate (Table 1 below).

**Table 1- Illustrative example of impact of IAS 19/FRS102 requirement to discount hedged liabilities at AA corporate bond rate.**

10 year Sovereign Bond Rate	4.6%
10 year AA Corporate bond rate	1.03%
Pension fund target 2025	€500,000
Required investment in 2015 in sovereign bonds to match future liability	€478,511
Present day value of liabilities discounted at expected return on related assets	€478,511
Over/ under funding	0
Present day value of liabilities discounted at 10 year AA corporate bond rates	€485,437
IAS 19 computed surplus/deficit	€7,425 deficit

In times of high corporate bond volatility as has been the case in recent years, the financial statements of the sponsor could year on year show a fluctuating surplus or deficit pertaining to the pension fund, notwithstanding the reality of its hedged position. How might this potentially effect economic decision making? It presents difficulties in interpretation of the financial statements for users including investors, potential investors and providers of funding and creates significant headaches for investor relations departments of international corporates, in terms of the explanations which may be required. Ultimately a sponsoring company could decide to move its pension liabilities effectively “off Balance Sheet” by

transferring the related hedged assets and liabilities to an insurance company. In a hedged situation, insuring pension liabilities has the effect of reducing the volatility of the Statement of Financial Position at a cost which presumably should equate to an administration fee. The net effect of insuring pension liabilities in this way would be to reduce the impact of the pension fund on the sponsoring company financial statements to an annual charge equivalent to the net insurance premium payable to insure the pension liabilities. Companies might be willing to incur the extra costs to avoid financial statement volatility. This would in turn have consequential effects for the underlying pension scheme and its modus operandi.

## **Concluding Comments**

The IAS 19/FRS102 requirement to discount actuarial liabilities by reference to AA corporate bond rates gives rise to anomalies in Financial Statements reporting particularly where the underlying pension scheme has embarked on a programme of hedging its liabilities with assets of fixed return maturity dates. The underlying objective of accounting standards local or international that financial statements provide information which is useful and relevant to decision-making is thwarted if the reported pension surplus or deficit is calculated without reference to the hedging strategy adopted. It necessitates disclosures over and above the reported numbers in the financial statements if interested parties are to fully understand the investment strategy of the underlying pension scheme. Companies could ultimately decide to insure pension liabilities to remove the volatility of IAS 19 reporting with consequential medium to long term effects for the pensions industry as a whole.

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