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EPSAS issue paper on applying discount rates

*Paper by PwC on behalf of Eurostat
- for discussion*



**Applying discount rates under the
future European Public Sector
Accounting Standards (EPSAS)**

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1 Objectives of the issue paper

The aim of this issue paper is to summarise the approaches taken at the accounting standard level concerning the application of discount rates in the relevant accounting areas, in particular in accounting for pension liabilities. The paper addresses what the discount rate is meant to achieve, what is the conceptual basis upon which it is selected/measured and what is the impact of those decisions (discount rate sensitivity), what approaches are being used under the existing international financial reporting frameworks (IPSAS, EU AR, IFRS and ESA 2010 and, where relevant and applicable, also the Manual on Government Deficit and Debt - MGDD), or are likely to be developed. The ultimate goal is to develop an approach for organising the future discussion on the application of discount rates with the EPSAS stakeholders.

Based on the request from Eurostat, the issue paper addresses the following questions:

- What are the accounting areas where application of discount rates has significant impact, and for which may problematic points/issues arise?
- What are the most common types of discount rates used to calculate present values and on what basis the choice is made between them in the case of different accounting items?
- Which accounting guidance is available for application of discount rates in IPSAS, EU Accounting Rules, national accounting standards in two EU MSs, IFRS and ESA 2010 and, where relevant and applicable, also MGDD?
- How do the analysed approaches in the three MSs differ from the treatment under IPSAS (please list the main elements/aspects)?
- For the accounting areas where application of discount rates has significant impact, what are the advantages and disadvantages of the existing approaches for their application under the existing standards (IPSAS, EU AR, national accounting standards in EU MSs, IFRS and ESA 2010 and, where relevant and applicable, also MGDD)?
- What are the main difficulties/issues in the application of discount rates?
- If/how a European harmonisation could be achieved in accounting for application of discount rates?
- Taking into account costs and benefits, what way forward in practice would PwC recommend for EPSAS on application of discount rates?
- What were the consequences of the recommended way forward for a possible convergence between IPSAS/EPAS and ESA 2010 (and if relevant and applicable, also MGDD)?

Based on the analysis performed, an approach for organising the future discussion on discount rates with the EPSAS stakeholders is proposed.

2 Background of the issue

Discounting is a technique used to measure certain assets and liabilities at their present value. Thus, the carrying amount reflected in the balance sheet generally represents the present value of future flows associated with those items discounted at specified discount rates.

The longer the maturity of the asset or liability, the higher the impact of discounting. Various discounting rules may also exist depending on the types of assets or liabilities concerned and on the applicable financial reporting frameworks. Discount rates incorporate the concept of time value of money and in some circumstances other elements as well. The various rules and principles that apply to discount rates are discussed in the following chapters.

The issue has already been discussed at various occasions in the context of the EPSAS project. We summarize below the main discussions.

The Staff Working Document accompanying the report from the Commission to the Council and the European Parliament COM (2013) 114 assessing the suitability of IPSAS for the EU Member States mentions in Annex 6.1 in the context of accounting for pension liabilities (IPSAS 25 'Employee benefits') "*The standard requires calculation of the amount of long-term post-employment benefits (unfunded liability for defined contribution plans and the total liability for defined benefit plans). In that case, the entity should use an actuarial assessment to discount the value of the future amount. In particular, actuarial assumptions to determine the cost of providing post-employment benefits include an assumption on the discount rate that is seen as a difficult issue. However, although IPSAS 25 requires the use of (complicated) actuarial techniques (and data collection), it does not require that a qualified actuary be used*".

In addition, the Staff Working Document mentions in Annex 6.1 in the context of accounting for provisions (IPSAS 19 'Provisions, contingent liabilities and contingent assets') "*...the amount of the provision recorded in the statement of financial position should be the present value of the expenditure expected to be required to settle the obligation. A discount (market) rate will need to be determined, which may be difficult in particular for long-lived provisions such as nuclear decommissioning. The choice of the discount rate can have a significant impact on the amount of the reported provision*".

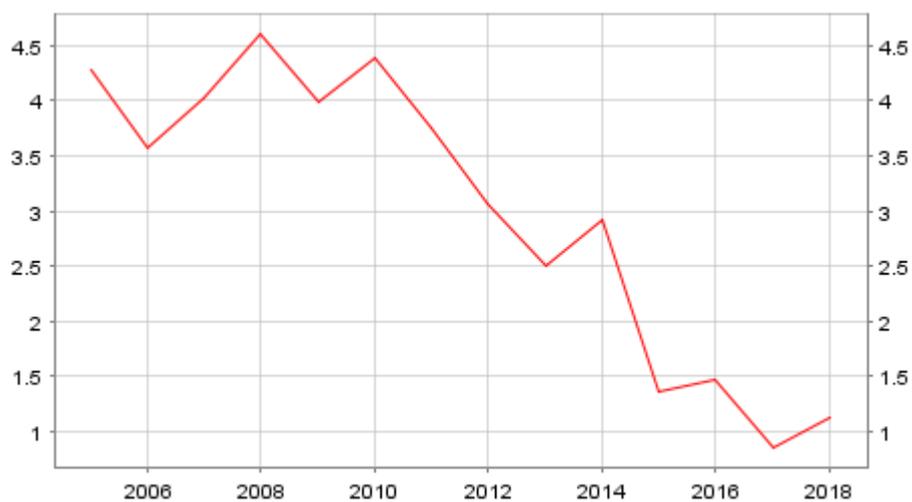
The topic of discount rate was discussed at the EPSAS Working Group meeting in Rome (22-23 November 2016). The discussion was organised in relation to pension liabilities but application of discount rates also plays a role in various other accounting areas. EY presented its issues paper on accounting for employee benefits (pensions), which addresses the application of discount rates¹. The paper drew the attention to the impact of the choice of discount rates (page 20): "*The impact of deviations in the discount rate is significant. As rule of thumb, a reduction of the discount rate by 1 percentage point increases the DBO [defined benefit obligation] by 15% and vice versa*", whereas it also concluded as a result of its country analysis (page 29) "*Currently the applied discount rates for the calculation of pension obligations differ strongly from country to country*".

¹ See EY, EPSAS issue paper on the accounting treatment of employee benefits (pensions), EPSAS Working Group, Rome, 22-23 November 2016, page 20, 44 pages.

Discount rate is indeed a key financial assumption in the evaluation of the various types of non-financial assets and liabilities². Even a slight change in the rate may lead to a significant change in the amount of the liability, thus resulting in material and often undesired fluctuations. This is particularly important in an interest rate environment which has changed profoundly over the preceding several years. To illustrate this statement numerically, we have constructed a graph of yields on AAA government bonds of the Euro area with a maturity of 20 years (constructed based on the data available on the website of the European Central Bank)³.

Figure 1: Yields on AAA government bonds of the Euro area with a maturity of 20 years

Yields on AAA government bonds of the Euro area with a maturity of 20 years are presented below, both in a graph and a table format.



² These may include on the assets side: non-current cash-generating assets; on the liabilities side: long-term provisions and employee benefit liabilities.

³

http://sdw.ecb.europa.eu/quickview.do?jsessionid=F811384B61B52CD6DoB4FFF7EAC4D64F?SERIES_KEY=165.YC.B.U2.EUR.4F.G_N_A.SV_C_YM.SR_20Y&start=&end=31-12-2017&trans=AF&submitOptions.x=0&submitOptions.y=0

Date	Yields %
06 September 2004	4,78
31 December 2004	4,28
30 December 2005	3,57
29 December 2006	4,03
31 December 2007	4,61
31 December 2008	3,98
31 December 2009	4,40
31 December 2010	3,75
30 December 2011	3,06
31 December 2012	2,50
31 December 2013	2,93
31 December 2014	1,37
30 December 2015	1,47
30 December 2016	0,86
29 December 2017	1,12

The concept of discounting is applied under various frameworks like IPSAS, EAR, IFRS, ESA 2010 rules as well by national GAAPs. However, applicable requirements for determining discount rates may vary:

- For the same instruments between various frameworks. This is for example illustrated by the difference in methodology to determine discount rates under international financial reporting frameworks on the one hand (see chapter 3) and some national rules on the other hand (see chapter 4).
- For various balance sheet items within the same framework. As detailed below in this issue paper, the requirements for discount rates may vary depending on the specific types of liabilities. As a result, the requirements of specific standards may be considered inconsistent or not be well understood by the users, as noted by the IPSASB in relation to applying discount rates in IFRS (IPSASB meeting of September 2017)⁴. This may be particularly sensitive as some of the IPSAS standards are drawn from IFRS.

Another problem in applying discount rates is the fact that the available reporting frameworks often provide only principle-based guidance on calculation of discount rates. Such situation leads to diversity in practice and questions about the comparability of the assets and liabilities reported.

Eurostat concluded at the EPSAS Working Group meeting in Rome (22-23 November 2016) with reference to accounting for pension liabilities that priority should be given in first instance to the comparability of the measurement and the conceptual approach underpinning the choice of the discount rate (in particular, the choice of the appropriate discount rate). The issue was also addressed in the presentation by the German federal Ministry of Finance and the following discussion at the EPSAS Working Group meeting in Lisbon (26-27 April 2017).

⁴ IPSASB meeting of September 2017, Summary of IASB work plan as at 28 August 2017, Agenda item 1.5, page 8/16

When recognised⁵, pension liabilities usually represent the largest amount in government balance sheets and have a long term maturity. They are thus the item that is most impacted when applying the concept of discounting.

Other items where application of discount rates is relevant and may lead to material impacts include long-term provisions and, to a lesser extent, impairment of long-term cash-generating assets as these concern long-term liabilities or assets that (may) represent significant amounts in a government's balance sheet too. We for example refer to the recognition of a liability for nuclear decommissioning of £64.3 billion (2012) in the UK's Whole of Government accounts an example of a material decommissioning provision⁶.

Applying discount rates to various types of assets and liabilities is a key issue in the development of the future EPSAS standards.

⁵ Pension liabilities to be recognised on government balance sheets under the current IPSAS standards include pension obligations arising from defined benefit plans under IPSAS 39 'Employee benefits'. Additional pension liabilities might need to be recognised under the future IPSAS standard on social benefits for eligible categories of the population. ED 63 'Social benefits' proposes to recognise a liability for social benefit obligations using one single recognition point, i.e. when the eligible criteria to receive the next benefit are met. Application of the proposed model is likely to trigger recognition of relatively small amounts of liabilities on the balance sheet. An alternative approach is favoured by some IPSASB members which would require an earlier recognition point for some benefits. Under this alternative approach, larger liabilities would need to be reported on the balance sheet.

⁶ See PwC, Collection of information related to the potential impact, including costs, of implementing accrual accounting in the public sector and technical analysis of the suitability of individual IPSAS standards, 2013/S 107-182395, 1 August 2014, p. 44.

3 Description of accounting guidance available in international accounting frameworks and in statistical rules

Accounting guidance available is discussed below, successively for the following accounting and reporting frameworks: IPSAS, EU Accounting Rules, IFRS and ESA 2010 (including references to the MGDD).

IPSAS rules are explained more in-depth, because IPSAS has been viewed as a reference framework for the future EPSAS, EU Accounting Rules are based on them and IFRS rules are similar in many respects. Particular attention is devoted to the discussions of standard setters and other stakeholders in the context of their projects on discount rates, as such discussions provide useful insight regarding the areas for (potential) improvement and how the thinking develops in this respect.

3.1 International Public Sector Accounting Standards (IPSAS)

Under IPSAS, discounting applies to a wide range of items.

The following standards address the concept of discounting in relation to those areas that we identify as (potentially) the most significant for governments and the most interesting for the EPSAS debate: IPSAS 39 'Employee Benefits', IPSAS 19 'Provisions, contingent liabilities and contingent assets' and IPSAS 26 'Impairment of cash-generating assets'.

It is worth noting that calculation of the amortised cost under IPSAS 29 'Financial instruments: recognition and measurement' is not in the scope of the present issue paper as it is done based on the effective interest rate method and this method is clearly prescribed under IPSAS.⁷ The use of discount rates when applying present value techniques to measure the fair value of financial instruments may be part of a wider debate on fair value measurement and is also not addressed in this paper.

The discount rate to be used to calculate the present value of the minimum lease payments under IPSAS 13 'Leases' or ED 64 'Leases' is the interest rate implicit in the lease⁸ or, if not practicable, the incremental borrowing rate⁹. These are well defined under IPSAS and are not discussed in the present issue paper either.

Finally, the present paper does not address discounting of long-term social liabilities that might need to be recognised when the IPSAS standard on social benefits is issued. See also footnote 5 on page 8.

⁷ The effective interest rate inherent in a financial instrument is the rate that exactly discounts the estimate cash flows associated with the financial instrument through the expected life of the instrument or, where appropriate, a shorter period to the net carrying amount at initial recognition. The computation includes all fees and points paid or received that are an integral part of the effective interest rate, directly attributable transaction costs and all other premiums or discounts.

⁸ The interest rate implicit in the lease is the discount rate that, at the inception of the lease, causes the aggregate present value of (a) the minimum lease payments and (b) the unguaranteed residual value to be equal to the sum of (i) the fair value of the leased asset and (ii) any initial direct costs of the lessor.

⁹ The incremental borrowing rate is the rate of interest the lessee would have to pay on a similar lease or, if that is not determinable, the rate that, at the inception of the lease, the lessee would incur to borrow over a similar term, and with similar security, the funds necessary to purchase the asset.

IPSAS 39 'Employee Benefits'

The purpose of the standard is to prescribe accounting for employee benefits. Application of discounting is the most sensitive in relation to long-term pension obligations and to a lesser extent other long-term employee benefit obligations.

As acknowledged in IPSAS 39, this standard is primarily drawn from IAS 19, the IFRS equivalent standard. The main elements of the IPSAS 39 guidance in respect of discount rates is summarized below:

- 1) The discount rate reflects the time value of money but not the actuarial or investment risk. Furthermore, the discount rate does not reflect the entity-specific credit risk borne by the entity's creditors, nor does it reflect the risk that future experience may differ from actuarial assumptions (IPSAS 39.82) - similar requirement exists in IAS 19.

The rationale is that defined benefit schemes create a debt towards the employees who are not investors and do not assume a financial risk in order to earn a premium. How the entity will finance itself or invest to meet its obligations towards the employees should not affect the measurement of the defined benefit liability. Following this rationale, using a discount rate that reflects only the time value of money seems appropriate.

- 2) An entity determines the discount rate and other financial assumptions in nominal (stated) terms, unless estimates in real (inflation-adjusted) terms are more reliable, for example, in a hyperinflationary economy or where the benefit is index-linked, and there is a deep market in index-linked bonds of the same currency and term (IPSAS 39.81) - similar requirement exists in IAS 19.
- 3) The currency and term of the financial instrument selected to reflect the time value of money shall be consistent with the currency and estimated term of the post-employment benefit obligations (IPSAS 39.81) - similar requirement exists in IAS 19.
- 4) The discount rate reflects the estimated timing of benefit payments. In practice, an entity often achieves this by applying a single weighted average discount rate that reflects the estimated timing and amount of benefit payments, and the currency in which the benefits are to be paid (IPSAS 39.87) - similar requirements as in IAS 19.
- 5) Actuarial assumptions should be unbiased and mutually compatible (IPSAS 39.77) - similar requirements as in IAS 19. Actuarial assumptions include demographic assumptions and financial assumptions (such as the discount rate) (IPSAS 39.78). Actuarial assumptions are mutually compatible if they reflect the economic relationships between factors such as inflation, rates of salary increase and discount rates (IPSAS 39.80).

Estimates of future cash flows and the discount rate reflect consistent assumptions about price increases attributable to general inflation. Therefore, if the discount rate includes the effect of price increases attributable to general inflation, future cash flows are estimated in nominal terms. If the discount rate excludes the effect of price increases attributable to general inflation, future cash flows are estimated in real terms (but include future specific price increases or decreases) (IPSAS 26.53).

- 6) An entity should make a judgment on whether the discount rate that reflects the time value of money is best approximated by reference to market yields at the end of the reporting period on government bonds, high quality corporate bonds, or by another financial instrument. In some jurisdictions, market yields at the end of the reporting period on government bonds will provide the best approximation of the time value of money. However, there may be jurisdictions in which this is not the case, for example, jurisdictions where there is no deep market in government bonds, or in which market yields at the end of the reporting period on government bonds do not reflect the time value of money. In such cases, the reporting entity determines the rate by another method, such as by reference to market yields on high quality corporate bonds (IPSAS 39.88).

IPSAS 39 thus leaves some freedom to the entity to determine the discount rate that best achieves the objective of reflecting the time value of money. The basis on which the discount rate has been determined should be disclosed (IPSAS 39.141 (d)).

There may be circumstances where there is no deep market in government bonds or high quality corporate bonds with a sufficiently long maturity to match the estimated maturity of all the benefit payments. In such circumstances, an entity uses current market rates of the appropriate term to discount shorter term payments, and estimates the discount rate for longer maturities by extrapolating current market rates along the yield curve (IPSAS 39.88) - similar requirement exists in IAS 19. No further guidance has been given as the IPSASB concluded that this is not an issue that applies only in the public sector, and that there is an insufficiently clear public sector-specific reason to provide such guidance (IPSAS 39 BC 10).

- 7) Presentation: with no concept of other comprehensive income (OCI) currently present in IPSAS, the effects of changes in discount rates are taken to net assets/equity. The net interest on the net defined benefit liability (asset) is calculated by multiplying the defined benefit liability (asset) by the discount rate, both at the start of the reporting period, and is presented in surplus or deficit (it represents the unwinding of the discount due to the passage of time) (IPSAS 39.122, 125 and 129).

IPSAS 19 ‘Provisions, contingent liabilities and contingent assets’

One of the objectives of the standard is to address the measurement of provisions and contingent liabilities. Since some of the provisions may be of a long-term nature, the effect of time value of money may be material. In such case, discounting technique should be applied.

As acknowledged in IPSAS 19, this standard is drawn primarily from IAS 37, with almost all of the requirements similar to IAS 37.

Key rules/principles related to discounting of provisions are as follows:

- 1) Where the effect of the time value of money is material, the amount of a provision should be the present value of the expenditures expected to be required to settle the obligation (IPSAS 19.53) - similar requirement as in IAS 37.
- 2) The discount rate (or rates) should be a pre-tax rate (or rates) that reflect(s) current market assessments of the time value of money and the risks specific to the liability (IPSAS 19.56) - similar requirement as in IAS 37.
- 3) The discount rate(s) should not reflect risks for which future cash flow estimates have been adjusted (IPSAS 19.56) - similar requirement as in IAS 37.

Principles under 2) and 3) should be read together. The discount rate for provisions should reflect the time value of money and the risks specific to the liability. In practice, the risks inherent to the liability are incorporated in the estimate of the future cash flows and the discount rate used reflects the time value of money. There is thus no double counting.

- 4) Where discounting is used, the carrying amount of a provision increases in each period to reflect the passage of time. This increase is recognised as an interest expense (IPSAS 19.70) - similar requirement as in IAS 37.

IPSAS 26 ‘Impairment of cash-generating assets’

Due to the inherent character of their activities, public sector entities mainly hold non-cash generating assets, but may also hold cash-generating assets. While the value of non-cash-generating assets is based on their service potential, cash-generating assets are generating measurable future economic benefits based on return from commercial transactions. Impairment rules are therefore included in two separate standards, IPSAS 21 ‘Impairment of non-cash-generating assets’ and IPSAS 26 ‘Impairment of cash-generating assets’. The present issue paper deals with impairment of cash-generating assets only.

The objective of the standard is to address measurement of impairment in relation to non-current assets that generate cash flows such as cash-generating property plant and equipment and intangible assets, including goodwill.

An asset is impaired when its carrying amount exceeds its recoverable amount. The recoverable amount of an asset is defined as the higher of (1) its fair value less costs to sell and (2) its value in use. It is presumed that the entity will behave in a rational way: if the fair value less costs to sell is higher, the entity will sell the asset while, if it is the value in use which is higher, the entity will continue to use the asset.

One important step in measuring impairment is the calculation of the assets’ value in use. Since determination of the asset’s value in use incorporates future cash inflows and outflows, discounting of those future cash flows is recognised by IPSAS 26 as a necessary step (IPSAS 26.44).

As acknowledged in IPSAS 26, this standard is drawn primarily from IAS 36 ‘Impairment of assets’, with guidance on discount rates similar to that of IAS 36.

The relevant guidance is presented in paragraphs 68-70 and AG15-AG21 of IPSAS 26. This guidance is the same as the requirements set out in IAS 36.

The following are key guidelines related to discounting of cash flows when calculating the value in use of an asset:

- 1) The discount rate (rates) shall be a pre-tax rate (rates) that reflect(s) current market assessments of the time value of money, represented by the current risk-free rate of interest and the risks specific to the asset for which the future cash flow estimates have not been adjusted (IPSAS 26.68) - similar requirement exists in IAS 36.
- 2) A rate that reflects current market assessments of the time value of money and the risks specific to the asset is the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing, and risk profile equivalent to those that the entity expects to derive from the asset. This rate is estimated from the rate implicit in current market transactions for similar assets. However, the discount rate(s) used to measure an asset's value in use shall not reflect risks for which the future cash flow estimates have been adjusted. Otherwise, the effect of some assumptions will be double-counted (IPSAS 26.69) - similar requirement exists in IAS 36.

When an asset-specific rate is not directly available from the market, an entity uses surrogates to estimate the discount rate (IPSAS 26.70). In doing so the entity should apply, as far as possible, a market assessment of:

- The time value of money to the end of the asset's useful life.
- The risks that the future cash flows will differ in amount or timing from estimates.
- The price for bearing the uncertainty inherent in the asset.
- Other factors that market participants would reflect in the rate, such as illiquidity (IPSAS 26 AG 16).

As a starting point in making such an estimate, the entity might take into account the following rates:

- The entity's weighted average cost of capital (WACC) determined using techniques such as the Capital Asset Pricing Model (CAPM).
- The entity's incremental borrowing rate.
- Other market borrowing rates.

However, these rates must be adjusted to:

- Reflect the way that the market would assess the specific risks associated with the asset's estimated cash flows.
- Exclude risks that are not relevant to the asset's estimated cash flows or for which the estimated cash flows have been adjusted. Consideration should be given to risks such as country risk, currency risk, and price risk.

The discount rate is independent of the entity's capital structure and the way the entity financed the purchase of the asset, because the future cash flows expected to arise from an asset do not depend on the way in which the entity financed the purchase of the asset.

When the basis used to estimate the discount rate is post-tax, that basis is adjusted to reflect a pre-tax rate.¹⁰

As mentioned under footnote 10, the WACC is widely used in practice. It represents the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing, and risk profile equivalent to those that the entity expects to derive from the asset, considering an optimal financing structure.

The usual formula to calculate the WACC is as follows:

$$\text{WACC} = \{KE * (E/D+E)\} + \{KD * (D/D+E) (1-t)\}$$

KE = cost of equity = risk-free rate + (β * market risk premium).

β of the company which is a measure of the covariance of the company's return compared to the return of the stock market.

KD = cost of debt = risk-free rate + margin for credit risk.

E = market value of the equity.

D = market value of the debt.

t = tax rate.

An entity normally uses a single discount rate for the estimate of an asset's value in use. However, an entity uses separate discount rates for different future periods where value in use is sensitive to a difference in risks for different periods or to the term structure of interest rates (IPSAS 26 AG 15-AG 21).

3.2 European Union Accounting Rules (EAR)

European Union Accounting Rules constitute the accounting framework of the European Union Institutions, including the European Commission and its agencies.

The issue of discount rates is addressed in several EAR. The requirements included in EAR are consistent with IPSAS.

EAR 12 'Employee benefits'

Under EAR 12, the rate used to discount post-employment benefit obligations shall reflect the time value of money. It should be determined by reference to market yields on government bonds at the reporting date. The currency and term of the government bonds should be consistent with the currency and estimated duration of the post-employment benefit obligations (EAR 12.6.2).

EAR 10 'Provisions, contingent liabilities and contingent assets'

Where the effect of the time value of money is material, the amount of a provision should be the present value of the expenditures expected to be required to settle the obligation.

¹⁰ In practice, the WACC is widely used. As the WACC is a post-tax rate, post-tax cash flows are used, for consistency reasons, to calculate the value in use. An iterative calculation is then made and a pre-tax rate is determined for disclosure purposes (IAS 36 BCZ85).

The discount rate (or rates) should be a rate (or rates) that reflect(s) current market assessments of the time value of money and the risks specific to the liability. The discount rate(s) should not reflect risks for which future cash flow estimates have been adjusted. As an example, the zero coupon Euro bond yield curve can often be used as discount rate suitable for EU bodies. (EAR 10.5.3)

Where discounting is used, the carrying amount of a provision increases in each period to reflect the passage of time. This increase is recognised as an interest expense (EAR 10.5.6).

EAR 18 ‘Impairment of assets’

The discount rate (rates) shall be a pre-tax rate (rates) that reflect(s) current market assessments of:

- (a) The time value of money, represented by the current risk-free rate of interest; and
- (b) The risks specific to the asset for which the future cash flow estimates have not been adjusted (EAR 18.5.2.24).

Discount rate should reflect consistent assumptions about price increases attributable to general inflation. Therefore, if the discount rate includes the effect of price increases attributable to general inflation, future cash flows are estimated in nominal terms. If the discount rate excludes the effect of price increases attributable to general inflation, future cash flows are estimated in real terms (but include future specific price increases or decreases) (EAR 18.5.2.11).

3.3 *International Financial Reporting Standards (IFRS)*

Discounting applies to a wide scope of items under IFRS. The standards that are being discussed deal with similar topics as the ones discussed under section 3.1 on IPSAS: IAS 19 ‘Employee benefits’, IAS 37 ‘Provisions, contingent assets and contingent liabilities’ and IAS 36 ‘Impairment of assets’.

IAS 19 ‘Employee benefits’

As IPSAS 39 is drawn primarily from IAS 19, the key concepts related to discounting (such as the overall objective of reflecting the time value of money, and not the actuarial or investment risk; the use of nominal rates, unless real rates are more reliable; term and currency of the underlying bonds to be consistent with those of the post-employment benefit obligations, etc.) are largely identical in these two standards.

The rate used to discount post-employment benefit obligations (both funded and unfunded) shall be determined by reference to market yields at the end of the reporting period on high quality corporate bonds. In countries where there is no deep market in such bonds, the market yields (at the end of the reporting period) on government bonds shall be used.

IAS 19 contains a guidance on measurement of discount rates for the purposes of calculating employee benefits obligation, and in the first instance long-term pension obligations. The guidance is rather detailed, however, it leaves significant room for interpretation, which leads to recurring requests. As witnessed in IFRS staff paper in March 2017, regular questions on the details of this guidance are sent to IFRIC (e.g. what pool of data to use, what high quality is, how to match with the currency and duration of the pension liabilities).

The following points provide a good summary of the level of detail of the guidance provided by IAS 19 in relation to discount rates. Differences with IPSAS 39 are also highlighted.

- 1) The primary reference is made to use of high quality corporate bonds, the secondary reference is to government bonds. This is different from IPSAS. It should be determined if there is a deep market in high-quality corporate bonds in the currency in which the liabilities are denominated, rather than corporate bonds of a particular country. Government bonds denominated in that currency should be used where there is no deep market in high-quality corporate bonds in that currency. Where a common currency is used by more than one country and there is no deep market in high-quality corporate bonds, the standard does not specify which government bond rate should be used.
- 2) The concept of 'high quality' is not detailed in IFRS, which may lead to significant variation in practice of application of the standard's guidance. In 2013, a request was addressed to IFRIC asking for further clarification of the issue. The request was referring to previous practice of referring to corporate bonds rated AAA or AA as 'high quality' corporate bonds. In particular, the request was asking whether corporate bonds rated below AA can still be considered as 'high quality' in the light of significant decrease in number of corporate bonds rated AA or above following the financial crisis. IFRIC replied to the request in IFRIC Update dated November 2013. The following were the key messages of IFRIC:
 - IAS 19 does not specify how to determine the market yields on 'high quality' corporate bonds, and in particular what grade of bonds should be designated as high quality; IFRIC did not provide any further guidance on the subject.
 - The concept of 'high quality' is an absolute, not relative, which means that the concept should not change over time. This means that current market conditions should not affect the initially chosen concept of 'high quality'.
 - IFRIC indicated, that in case the market of 'high quality' corporate bonds becomes insufficiently deep, existing guidance of IAS 19 should be applied. This means that either (i) yields of government bonds are to be applied, or (ii) in case sufficiently deep market is no longer in place for 'high quality' corporate bonds of a specific maturities, the discount rate for longer maturities may be estimated by extrapolating current market rates along the yield curve maturities (IAS 19.86).
 - For some currencies, the rating agencies provide two classifications: a global rating, and a local rating. The purpose of the local rating is to provide a greater level of distinction between bonds reflecting risk relative to the local government debt. In line with the IFRIC rejection that concluded that 'high-quality' is an absolute measure and not a relative one, global ratings, rather than local ratings, should be used as the benchmark for 'high quality'.
- 3) IASB has not identified clear evidence that the expected return on an appropriate portfolio of assets provides a relevant and reliable indication of the risks associated with a defined benefit obligation, or that such a rate can be determined with reasonable objectivity (IAS 19 BC 134). Consequently, IASB decided that the discount rate should reflect the time value of money, but should not attempt to capture those risks.
- 4) The discount rate should not reflect the entity's own credit rating, because otherwise an entity with a lower credit rating would recognise a smaller liability (IAS 19 BC 134).

- 5) Presentation: under IAS 19 changes in discount rates are presented through OCI. This differs from IPSAS, where the concept of OCI is not (yet) introduced.

Issue arising from a low/negative interest rate environment

A relatively new discussion in relation to IAS 19 is related to low/negative interest rate environment. Such level of rates may lead to very high level of pension liabilities to be recognised in the balance sheet, while negative interest rates lead to a potential scenario of the liabilities in the balance sheet exceeding the future estimated cash flows. The scenario that negative interest rates will have to be applied under the existing methodology of calculating discount rates was not analysed under IAS 19. Under the current circumstances, the issue becomes a concern for preparers, users and the IASB. Pressure on the rules is magnified in the current times of low interest rates, when a small absolute change in the discount rate has an especially large relative impact on the reported amounts. However, as of now, no specific guidance was presented by the IASB.

In his speech “The pension liability: low interest rates are no free lunch” given in Rotterdam in December 2016¹, Hans Hoogervorst, chairman of the IASB, while acknowledging existence of problems in application of IAS 19, still confirmed that the fundamental approach to accounting for pension liabilities, i.e. use of high quality corporate bonds yields as discount rates, is not going to be changed. Here is an extract of his speech:

“Essentially, IFRS Standards require that pension liabilities be measured based on the characteristics of that liability, irrespective of how the obligation is funded. The liability in respect of a defined benefit pension is in effect a debt to employees where the payments are fixed or indexed. In a standard defined benefit scheme payments to employees are not affected by the actual returns on the assets used to fund those pensions. Accordingly, IFRS standards require the liability to be measured using a discount rate that reflects a fixed interest return, and not the expected return on the actual assets held.

Of course I am not saying that the current IAS 19 on pensions is perfect. We recognise that our Standard is a bit out of date in that it does not cater for recent developments in pension scheme design. This is especially the case here in the Netherlands, where pure Defined Benefit schemes have largely made place for hybrid schemes in which the pension liability is defined more flexibly. I accept this and the International Accounting Standards Board is looking at whether improvements can be made. However, such problems are not related to the central tenet of the standard that liabilities that do not depend on asset returns should not be discounted at the expected asset return.

So why the controversy? As pension liabilities are measured based on bond yields, given the record lows for these rates, inevitably pension liabilities are at record highs. The argument is that if the future returns on pension assets can be expected to be higher than the liability ‘discount rate’ then fewer assets are actually required to pay those liabilities than is suggested by the accounting. Critics argue that if the fund is invested in, say, equities - with higher expected return - then meeting future pension payments requires fewer assets today and hence the liability is being overstated.

While these arguments have some intuitive appeal, the IASB believes them to be flawed. Here are some reasons for rejecting discounting pension liabilities at a higher rate:

- It fails to properly take account of risk—a central and key feature of finance. The objective of financial reporting is to provide relevant information for investors in companies. We would not serve that objective if risk were ignored.*
- It would suggest that sponsors of pension schemes can reduce deficits by switching from low-risk, low-return bonds to higher-risk, higher-expected-return equities. The fact is that markets have already done so to a great extent and that equity prices are widely considered to be overpriced. Why are investors willing to pick up government bonds at negative rates if equities are so much more attractive? Equities and bonds compete for the same capital in many cases. If you exchange 100 worth of bonds for 100 of equities, clearly your wealth today remains 100.*
- It is inconsistent with prudent financial management. In effect, the suggested approach involves booking profit before it has actually been earned. For example, if a company purchases an equity investment, would it be prudent to report all of the expected future return immediately at the time of purchase? This is, in effect, what is being advocated for pension accounting. It would facilitate imprudent distributions, excessive management bonuses and risky leverage in the entity's capital structure.*

For these reasons the IASB rejects calls to fundamentally change pension accounting to eliminate or reduce pension deficits. Our approach to liability measurement in accounting is well accepted. The same or similar approaches are being used in other areas of accounting, such as insurance and environmental liability measurement. It is also the basis of prudential regulation and is consistent with how markets measure such liabilities and with the advice of the actuarial profession.”

IAS 37 ‘Provisions, contingent liabilities and contingent assets’

IAS 37 key concepts related to discounting (need for discounting; use of pre-tax rates which reflect current market assessments of time value of money and risks specific to the liability; non-reflection of the risks for which future cash flows have already been adjusted; accounting for changes in the provisions as interest expenses) are similar to IPSAS 19 and are therefore not repeated here.

IFRIC 1 ‘Changes in existing decommissioning, restoration and similar liabilities’ further details that, for decommissioning obligations, the change in the discount rate should be treated in the following way:

- For assets accounted for under the cost model - should be added to or deducted from the cost of the related asset in the period of the change in estimate; or
- For assets accounted for under the revaluation model - should be recognised as changes to the revaluation surplus in OCI unless they represent an impairment charge. Impairments are recognised in the income statement (IFRIC 1 para 5-6).

IAS 37 does not specify the discount rate that reflects the time value of money. Generally, a risk-free pre-tax rate is appropriate and is typically used. Government bond ‘yields’ for the currency in which the obligation arises and for the duration of the obligation are a good proxy for a risk-free pre-tax

rate that matches the maturity of the liability. This is relatively straightforward where the obligation will be settled with a single payment, because a government bond will have a single capital repayment at the end of its term. Where the provision is made up of a string of cash flows arising in different periods, it might be necessary to adjust the discount rate to reflect the different timing of the cash flows.

IAS 37 does not explicitly state whether an entity's own credit risk should be taken into account in determining the amount of the provision. In IFRIC rejection decision in March 2011 it was noted that own credit risk is "generally viewed in practice as a risk of the entity rather than a risk specific to the liability". This is consistent the view that risk in the context of a provision reflects uncertainty about the resources that will be required to settle or fulfil the obligation, which does not include the entity's own credit risk. IFRIC does not object to this practice stating that any additional guidance would only be provided in the scope of a fundamental review of IAS 37.

The issue of own credit risk was further discussed in the framework of the discount rate research project mentioned above. The March 2017 staff paper noted that there is a diversity in practice for own credit risk in IAS 37 and concluded that own credit risk in IAS 37 may be considered in pipeline research project on provisions. In practice this means that both approaches (whether to include or to exclude own credit risk from the discount rate) are considered acceptable as of now, even if excluding own credit risk from the discount rate seems preferable from a conceptual viewpoint (because as mentioned in the preceding paragraph, own credit risk is a risk of the entity rather than a risk specific to the liability).

IAS 36 'Impairment of assets'

The guidance related to application of discount rates in IAS 36 is similar to IPSAS 26, as the latter is primarily drawn from IAS 36.

Discount rates to be applied under IAS 36 were in scope of the IASB's discount rate research project. The latest staff papers issued under the project noted a 'possibly unjustified requirement to use only pre-tax rates in value in use in IAS 36' (the research found the requirement to be needlessly onerous). It was decided to consider the use of post-tax rate in IAS 36 goodwill and impairment project.

3.4 ESA 2010

ESA 2010 addresses discounting of social insurances including pensions and refers to the discount rate as one of the single most important assumptions to be made in the modelling of pension schemes, since its accumulated impact over many decades can be very large. The discount rate from a chosen approach may change over time, which would lead to revaluations in the accounts (ESA 2010.17.165).

ESA 2010 sees discount rate in pension obligations as equivalent to the expected risk-free rate of return on assets held by a pension scheme. In the case of pension entitlements to be paid in the future, the discount rate can also be seen as the cost of capital in a sense that the future payments have to be financed by government via net acquisitions of liabilities, such as loans and debt

securities, net sales of assets and government revenue. A discount rate can be derived from this cost of financing (ESA 2010 para 17.166).

The discount rate should be a risk-free rate. Some criteria for identifying suitable rates are given below:

- The discount rate on high quality government and corporate bonds, e.g. of 'AAA'-rating provides an appropriate reference. Yields for high quality corporate bonds are only used where the markets are broad.
- The bonds are to be of a residual maturity of the same order as the pension entitlements. The use of a discount rate based on a long-term maturity, where long-term is taken to be 10 years or longer, is recommended.
- The average of several years of the discount rate, linked to the length of the economic cycle, can be applied to smooth the time series of the discount rate.
- The assumption on the discount rate and the future development of wages should be consistent.

Member States are required to provide the elements demonstrating the validity of the discount rate used for pension entitlements in the light of the various criteria mentioned above (ESA 2010 para 17.167).

The same discount rate has to be used for all pension schemes where government is the pension manager (including social security pension schemes) at whatever level of government since the desired result should approximate risk-free yields (ESA 2010 para 17.168).

Eurostat 2011 'Technical Compilation Guide for Pension Data in National Accounts

Further guidance was presented in Eurostat 2011 'Technical Compilation Guide for Pension Data in National Accounts' (para 5.1 (b)). Eurostat concludes with reference to IPSAS, that for government-managed pension schemes, it is generally agreed that central government debt securities provide a suitable basis for the discount rate.

Furthermore, the following list of criteria for the choice of the discount rate is provided:

- In order to obtain a suitable proxy for a risk-free interest rate, it is advisable to base it not on central government debt securities of one single country but on a basket of e.g. European central government debt securities.
- The maturity of these debt securities should be similar to that of pension entitlements, i.e. at least 10 years, but preferably longer.
- In order to guarantee comparability across countries, the same discount rate should be applied to all EU countries and all government-managed pension schemes (including social security pension schemes) at whatever level of government.
- A stable discount rate should be applied to avoid the noise resulting from frequent changes.

In line with the above criteria, it is recommended to set the discount rate at three per cent in real terms and five per cent in nominal terms. The aim is to considerably improve the comparability of

results across EU countries and be in line with the assumptions made by the Ageing Working Group, the Economic Policy Committee’s Working Group on ageing populations and sustainability.¹¹

The rate of 3 per cent per annum in real terms was selected as the one close to the average yields for euro countries government bonds (with duration of 10 years) during the period of 1999-2009. This rate also closely corresponds to the interest rates applied by European institutions and some national regulations. The Ageing Working Group agreed with Member States a constant real discount rate of three percent p.a. for its long-term projections.

The practice applied by Germany is further referred to. For estimating pension entitlements in the business sector, the reformed German Commercial Code also prescribed a long-term interest rate of about five percent p.a. in nominal terms - corresponding to three percent p.a. in real terms. The discount factors to apply to pension liabilities under German GAAP are published monthly by the Deutsche Bundesbank and based on the average yields over the period of the last 7 years (10 years starting early 2016). In accordance with the yield curve, interest rates are published for different maturities. For pension liabilities with a duration of 30 years, the interest rate in June 2010 was set at a level of 5.28 % (for the comparison purposes: 3.71% in December 2017)¹².

3.5 Comparison between the different accounting frameworks

The table below provides an overview of the main rules relating to the application of the discount rates included in the accounting and reporting frameworks analysed as they currently stand.

Figure 2: Rules relating to discount rates in the various international financial reporting frameworks

	IPSAS	EAR	IFRS	ESA 2010
Employee benefits				
Discount rate to be applied	Market yields on government bonds, high-quality corporate bonds, or by another financial instrument (entity’s judgement).	Market yields on government bonds. The Euro zero-coupon yield is used (2016 annual report).	Market yields on high-quality corporate bonds. If no deep market in high-quality corporate bonds in a given currency, then yields on government bonds.	Risk-free rate, e.g. the discount rate on high-quality government and corporate bonds. Central government bonds are seen as a suitable reference. Risk-free rate may also be derived from cost of financing. Recommendation: 3 per cent in real terms and 5 per cent in nominal terms.
Concept of ‘high-quality’	Referred to in the guidance, but	The Euro zero-coupon	Not detailed, despite	‘AAA’-rating provided as an example.

¹¹ The Group is constituted by Member States representatives, the European Commission and the European Central Bank. It aims to contribute to improving the quantitative assessment of the long-term sustainability of public finances and economic consequences of ageing populations of the EU Member States, so as to assist policy formation.

¹² Bundesbank website.

https://www.bundesbank.de/Navigation/EN/Statistics/Time_series_databases/Macro_economic_time_series/its_detail_s_value_node.html?https=1&https=1&tsId=BBK01.WV0030

	IPSAS	EAR	IFRS	ESA 2010
bonds	not detailed further.	yield is used (2016 annual report).	requests from users. High-quality is considered an absolute, not a relative measure.	
Methodology of calculation (deep market, own credit risk, use of baskets etc.)	Use of baskets is not stated directly. However, the requirements of deep market and exclusion of own credit risk effectively achieve similar purposes.	Not applicable.	Same as in IPSAS.	Advisable to use a basket of instruments (e.g. European central government debt securities), not debt securities of a single country.
Use of nominal/real rates	Nominal terms, unless estimates in real (inflation-adjusted) terms are more reliable, (e.g. in a hyperinflationary economy).	Nominal terms.	Same as in IPSAS.	Both are referred to, with practical examples based on nominal rates.
Low/negative interest rate environment	Not addressed specifically.	Not addressed specifically.	Problem emphasized in staff papers, however, not addressed further.	Not addressed specifically.
Current projects	No active project as such yet, draft proposal for future project on IPSASB agenda for the period 2019-2023.	No active project.	'Discount rates' research project ongoing.	No active project.

Provisions				
Discount rate to be applied	Pre-tax rate (or rates) that reflect(s) current market assessments of the time value of money and the risks specific to the liability.	Same as in IPSAS (example: zero coupon Euro bond yield curve).	Same as in IPSAS.	Not specifically addressed.
Impairment of assets				
Discount rate to be applied	A pre-tax rate (rates) that reflect(s) current market assessments of the time value of money, represented by the current risk-free rate of interest and the risks specific to the asset.	Same as in IPSAS.	Same as in IPSAS.	Not specifically addressed.

3.6 Current projects

The topic of discount rates is currently being discussed by various standard setters and other financial reporting stakeholders. Taking a look at these discussions is useful as it puts into perspective those areas that are considered as areas for improvement in the application of discounting and provides a sense of direction regarding the development of the current thinking.

IPSASB

The IPSASB has identified discount rates as one of the topics to put on its agenda for the period 2019-2023.

Since the global financial crisis, the topic of discount rates used in the measurement of long-lived assets and liabilities has been noted as a public interest concern for constituents because of the low and negative interest rate environments around the world. The issue relates to the existing requirements for discounting across the suite of IPSAS and will consider the rationale for, and consistency of those existing requirements. Although guidance is in place currently for discount rates, some constituents argue that the low/negative interest rate environment may result in estimates which do not appropriately recognize the time value of money in the public sector which might promote suboptimal decision making negatively impacting public interest.

In addition, the issue is also currently being looked at in the context of the Public Sector Measurement project. The IPSASB analyses the extent to which market values should be used, including current interest rates as discount rates for long-term liabilities.

IASB

The IASB is currently undertaking a research project on discount rates.

Many requirements of IFRS refer to or specify discount rates that entities should use to discount estimated future cash flows. However, those requirements define or specify different discount rates, cash flows and other components of the calculations, depending on the objective of the particular IFRS.

During the 2011 Agenda Consultation, the IASB learnt that the reasons for using different discount rates are not well understood by constituents and, moreover, some respondents suggested that such differences cause IFRS requirements to be inconsistent.

Therefore, the IASB decided to commence a research project to examine discount rate requirements in IFRS and assess whether there are any inconsistencies that the IASB should address. The research on discount rates focuses on reviewing measurements that already require use of present value technique and for which the objective of measurement is not fair value.

This review includes:

- Present value measurement objectives set in individual standards.
- Discount rate components included in the present value measurement.
- Measurement methodology.
- Disclosure requirements.
- Definitions and terms used.

The Board noted that the project has two outputs:

- The project findings which are expected to be published in H1 2018.
- A list of matters for future staff consideration in standard-setting work relating to discount rates and other aspects of present value measurements.

A separate feasibility study is currently in progress on pension benefits that depend on asset returns. The project's objective will be to assess whether it would be feasible to develop an approach that focuses on the relationship between the cash flows included in the measurement of those benefits and the discount rate. If the research establishes that this approach would not be feasible, the staff expects to recommend no work on pensions.

EFRAG

The EFRAG (European Financial Reporting Advisory Group) is currently conducting a research project on discounting with current interest rates.

Various standards require to measure assets or liabilities at the present value of the future cash inflows or outflows. Some of these standards require to update the discount rate at each reporting date. Different concerns have been raised about the implications of the current level of negative and low interest rates in relation to discounting.

In the presence of negative rates, the present value of an asset or liability would exceed its ultimate recoverable or settlement amount. Some consider that this outcome is counterintuitive and may not provide relevant information. In the presence of rates that are close to zero, the impact of minor changes can result in very significant re-measurement. Some doubt that reporting these large re-measurements in profit or loss is helpful in depicting the entity's performance.

Moreover, there are inconsistencies across standards about reporting the impact of updating the discount rates. IAS 19 'Employee Benefits' requires recognition of actuarial differences in Other Comprehensive Income, while IAS 37 'Provisions, Contingent Liabilities and Contingent Assets' requires reporting these changes in profit or loss.

FRAB

The FRAB (Financial Reporting Advisory Board) is the UK standard setter for government financial reporting. The role of FRAB is to ensure that government financial reporting meets the best possible standards of financial reporting by following Generally Accepted Accounting Practice (GAAP) as far as possible.

Questions related to application of discount rates are addressed as a separate project being undertaken by the Treasury and FRAB. A wide range of issues related to discount rates is within the scope of this project. Below is the summary of the discussions as referred during the last meetings of FRAB on 16 March 2017 and 15 June 2017:

- 1) The rate for post-employment benefit obligations is compliant with IAS 19 which requires that the rate used is determined by reference to market yields on high quality corporate bonds. In practice, the rate for unfunded schemes is derived from a 15 year spot rate on an AA corporate bond index with adjustments to reflect that public sector pensions are uprated by CPI (consumer price indices) rather than RPI (retail price indices). This methodology was developed with the agreement of the Government Actuaries Department (GAD). The Treasury do not intend to review the pensions discount rates, as it considers that there is no evidence to suggest an alternative approach is necessary and the current methodology is consistent with the approach in the private sector.
- 2) The rate for provisions. As noted by FRAB, in the public sector provisions are discounted using three rates to reflect short (less than five years), medium (five to ten years) and long-term (over ten years). It is assumed that all risks are incorporated within the cash flow forecasts and therefore the discount rate reflects a risk-free rate. Short and medium term rates are updated annually with the long-term rate only updated at each spending review cycle. The Treasury uses government gilt yields on the assumption that these represent risk free investments and this approach generates negative real rates across all durations.

According to the currently applied methodology, the provision discount rates are based on market data published by the Bank of England as described below:

- Short-term (0-5 years): A real discount rate based on the yield on UK index-linked Gilts as determined by Bank of England data for the spot yield curve at 2.5 years to maturity.
- Medium-term (5-10 years): Spot yield curve at 7.5 years to maturity.
- Long-term (over 10 years): Spot yield curve at 25 years to maturity.

Discount rates in local authorities are determined using the same fundamental principles as central government departments and follow the requirements of IFRS. The nature of activity in this sector does not lead to material and long term provisions being recognised on balance sheet. Treasury have not been able to find any examples of local authorities with significant provisions where the time value of money has been deemed material.

- 3) Negative interest rates. As noted by the Treasury, the current methodology of calculating discount rates for provisions results in a negative discount rate for short (-2.70%), medium (-1.95%) and long-term (-0.8%) provisions, which raises a conceptual question of whether this is reflecting a true picture of the time value of money across the expected settlement periods for the affected liabilities. The members of FRAB shared the view that use of negative interest rates create a difficulty in understating the accounts but maintained that if Treasury were proposing to change the methodology it would require a very strong case.

At its November 2017 meeting, the FRAB approved the recommendation to use nominal rates for discounting of pension liabilities instead of real rates. The move will take effect from 2018-19 and follows a review undertaken by the Treasury of the discount rate methodology applied to general provisions following consultation with departments in this regard. This review culminated in several options being outlined to FRAB on the methodology to apply.

The FRAB considered the assessment of the options and in November 2017 approved a change in methodology determining that the Treasury should provide departments with nominal rates for general provisions and long-term liabilities other than pensions and termination benefits. This change is deemed necessary to ensure that the discount rate methodology continues to meet the accounting standard's requirement to provide entities with rates that reflect current market assessments of the risk-free time value of money.

The use of nominal rates to discount general provisions will require departments to forecast and apply inflation assumptions to calculate inflationary adjusted cash flows in respect of general provisions. The inflation assumptions used will be dependent on the circumstances pertaining to the provision and individual departments. Treasury plans on issuing guidance in 2018-2019 to assist departments with the practical implications of assessing inflationary effects on cash flows.

The Financial Reporting Manual provides an IAS 37 interpretation that requires entities to use the real discount rate set by the Treasury where cash flows related to provisions are expressed in current prices - i.e. cash flows are not adjusted for expected future inflation. Where entities do express cash flows related to provisions after an adjustment for inflation, Treasury has recommended specific nominal discounts rates and by providing them it will also offer departments provisional data to model the likely financial impact of the change in rates on their own provisions and those of their arm's length bodies before nominal rates are formally introduced in 2018-2019.

4 Description of approaches to applying discount rates in selected EU Member States (Finland and France)

4.1 Methodology

To analyse the approaches taken regarding the use of discount rates in financial reporting in two selected Member States, PwC sent a specifically designed questionnaire to government representatives. The first series of questions addresses the identification of the main types of non-financial assets and liabilities, for which application of discount rates represents a material issue. The questionnaire then addresses the methodology used to determine applicable discount rates, specifically with reference to existing international frameworks (IPSAS, IFRS, etc.). The last questions focus on the effects of application of discount rates on the financial statements and the related presentational and communication issues.

In addition to this, Eurostat sent a questionnaire concerning the accounting treatment of discount rates to all MS representatives following the EPSAS Working Group meeting held in Luxembourg on 21-22 November 2017. Two MS (Germany and Sweden) provided an answer. Spain also commented on the presentation of the draft issue paper on discount rates done at the EPSAS Working Group of November 2017. Their answer is summarized farther in this chapter.

A summary of the results of our country-by-country analysis is presented in the next sections.

4.2 Finland

Introduction¹³

Double entry bookkeeping and government budgetary bookkeeping are required by State Budget law. Although an accrual-based accounting approach is applied on central government level, liabilities from pension schemes are not recognised but are solely shown in the notes. As a consequence, none of the three government entities (Central government, the State Treasury, the State Pension Fund) recognise pension liabilities in its respective balance sheet.

All accounting entities that are part of Finland's central government (such as ministries) pay contributions to the State Pension Fund and account for the payment in a manner similar to a defined contribution plan. The State Pension Fund does not pay out pensions. Rather it transfers to the state budget a sum which equals 40% of the state's annual pension costs. The remaining assets build up as buffer fund. In order to be in compliance with the state pension law (1295/2006), the funding level must be 25% of the total state pension liability.

Pension funds of municipal employees are managed, both from a servicing and funding perspective, by Keva. There are in addition different pension employment systems in Finland and the Finnish earnings-related pension scheme has a decentralised administration. There are many pension providers, i.e. insurance companies, company pension funds and industry-wide pension funds.

¹³ See EY, EPSAS issue paper on the accounting treatment of employee benefits (pensions), EPSAS Working Group, Rome, 22-23 November 2016, page 25, 44 pages.

Scope of application

Discounting is applied in a different manner in the financial statements at the central government level, local authorities level and by pension funds.

In the financial statements of the central government, only pension liabilities are discounted. The potential impact of impairment is considered negligible as governments mostly have non-cash-generating assets and the use of discounting is kept to the strict minimum to limit balance sheet volatility and facilitate the understanding of financial statements by users.

During the period 2005-2008 Central Government Accounting Board did an analysis on the then existing IPSAS standards. The board concluded that national central government accounting standards are sufficient for giving a true and fair view of budgetary central government finances. In 2015 the Finnish Working Group on EPSAS came to a similar conclusion based on their analysis of the IPSAS Conceptual Framework.

Local governments do not measure anything on a discounted basis in their financial statements. The Local Government Section of the Finnish Accounting Standards Board has not given any guidance on this topic. Nominal values and historical cost are predominantly used in financial reporting.

Methodology to calculate applicable discount rates

Central government

The discount rate over index growth for government pension liabilities is 2.7 % per annum which is thought to correspond to 3.5 % real interest rate per annum used by Finnish Centre for Pensions in determining the pension liabilities of all Finnish work related pensions. The discount rate is fixed and has not changed since 2006. Use of a stable rate is in concordance with ESA 2010 recommendation.

The liabilities of Finnish government pensions are determined by estimating the accrued pension rights at the level of the current indices¹⁴ and by actuarially determined life annuities. The low discount rate implicitly accounts for the future development of relevant pension indices.

The concept of 'high quality' corporate bonds/government bonds is not incorporated in the methodology to calculate the applicable discount rates.

The discount rate has not been adapted due to the low interest rate environment. By using a stable discount rate, the development of the liability is considered to become more transparent. Also, identifying an appropriate discount rate could be seen as difficult and subjective.

The current methodology used to calculate the discount rate is based on generally accepted actuarial principles and originates from the long-term pension expenditure projections of Finnish Centre for Pensions, and 1986 memorandum on government pensions by the Ministry of Finance.

¹⁴ An earnings-related pension index and a wage coefficient determine the level of benefits to be paid.

Local government

Not applicable. Discounting is not used at the local level.

The key source of the financial reporting requirements of Finnish local authorities are FAS (Finnish Accounting Standards). As FAS is aimed for private companies, the rules for municipalities has been modified by Finnish Accounting Standards Board, Local Government Section. The main requirements are also in the Local Government Act.

Pension funds/The Finnish Pension Alliance TELA

The scope is limited to employment pension schemes. The benefits under such schemes would represent social benefits under the upcoming IPSAS standard 'Social benefits'.

The methodology applied is derived from Employees Pensions Act and actuarial principles (approved by Ministry of Social Affairs and Health), with very limited influence of international frameworks.

The discount rate applied is 3 per cent. The funds for old-age and disability pensions are supplemented yearly by a sum corresponding to the discount rate.

Each pension provider must adjust its technical provision with a three-per-cent discount rate, the adjustment factor and a change in the equity-linked buffer fund, that is, with an investment return rate. The rate is defined as the weighted average of the realised investment returns. The concepts of return on assets and low interest rate environment are incorporated in the calculation of the adjustment factor.

The significance of the effect of changes in the discount rates is not evaluated separately.

Effect on the financial statements

Pension liabilities are only disclosed in the financial statements, they are not reported in the balance sheet. Therefore changes in the pension liabilities do not have an effect on the primary statements.

4.3 France

Scope of application

In the French central government's financial statements (CGE 2016), provisions measured on discounted basis are mentioned in note 13.2.2:

- 1) Provisions for staff costs (temporary disability allowances, compensation pensions paid to civilian workers in military establishments).
- 2) Provisions for transfers (military invalidity pensions, pensions for victims of war, pensions of the firefighters and former agents of the passive defense victims of accident, etc.).

Some information which is provided in the notes for disclosure purposes only is also presented on a discounted basis.

- 1) A number of commitments granted (guarantees granted to the National Electricity and Gas Industries Fund - note 32.3.2.5, government commitments to subsidized special schemes, as in aid to access housing, the supplementary invalidity allowance – note 33.2; 33.3; etc.).
- 2) Pension commitments for civil and military civil servants (note 35), in accordance with standard 13 (commitments to be disclosed in the notes to the financial statements). Such commitments are valued using the projected unit credit method, on a discounted basis.

In accordance with standard 12 'Non-financial liabilities', non-financial debts and other liabilities are measured at their face value irrespective of whether they are short or long term liabilities whereas provisions for risks and charges are measured at the amount representing the best estimate of the outflow of funds necessary to settle the obligation.

Under standard 5 'Intangible assets', central government's specialised items that meet the criteria for recognition as intangible assets are measured on a discounted basis. In the French central government's financial statements (CGE 2016), measurement on a discounted basis mainly concerns rights arising from the electromagnetic spectrum.

Methodology to calculate applicable discount rates

The set of standards for the French central government does not comprise specific requirements for measurement on a discounted basis.

Under standard 13, the discount rate applied to the valuation of pension commitments (which are simply disclosed in the notes and are not recognised as liability in the balance sheet) is determined by reference to the yield on long-term government bonds with maturity dates matching the duration of the related commitments. The set of standards for the French central government does not mention a reference to the rate of return on assets as an applicable discount rate. This treatment is inspired by international accounting standards.

There were no changes in methodology resulting from low interest rate environment.

Effect on the financial statements

The effects of the changes in discount rates are reflected in the financial statements and recognised in the statement of financial performance (Cf. note 22.5- point 1). The changes are mainly significant for pensions commitments.

Note 35.1.1.2 emphasises the importance of the rate in the valuation of the commitment. This note presents a table of valuation with different discount rates to show the effects of a change in the rate (sensitivity analysis).

4.4 Comparison

The table below provides a high-level comparison of the main issues in applying discount rates by the two governments selected for our analysis.

Figure 3: Government practices relating to the use of discount rates compared (Finland and France)

	Finland	France
Scope	Pension liabilities (for disclosure purposes only).	Pension commitments (for disclosure purposes only), provisions for staff costs, provisions for transfers and intangible assets of a specialised nature.
Basic methodology	Central government: stable discount rate. Local authorities: no discounting. Employment pension schemes through pension funds: stable discount rate with adjustment factor and an investment return rate incorporated.	Provisions and pension commitments: reference to the yield on long-term government bonds with maturity dates matching the duration of the related commitments. Assets: no specific methodology.
Main source of inspiration	National regulations.	International accounting standards.
Use of 'high quality' corporate/ government bonds	Not applicable.	Government bonds.
Use of nominal/real rates	Not applicable.	Nominal rates.
Special treatment in low/negative interest rate environment	Not addressed (except in the adjustment factor for pension funds).	Not addressed.
Use of rate of return on assets	Limited use by pension funds	Not used.
Specific concerns	-Complexity and subjectivity of the calculation. -Concept of discounting not clearly understood by users. -Undesired variability and need for comparability (for local authorities).	None mentioned specifically.
Variation from IPSAS	The approach is not based on IPSAS.	The methodology is in line with IPSAS.

It is interesting to note the difference in the approach between France which complies with the principles included in international accounting frameworks such as IPSAS or IFRS on the one hand and the approach followed by Finland on the other hand, which uses a stable discount rate and puts the focus on simplicity.

4.5 Additional Member States input

We summarise below the answers provided by Germany and Sweden to the questionnaire sent by Eurostat concerning the accounting treatment of discount rates and the input from Spain on the presentation of the draft issue paper on discount rates done at the EPSAS Working Group of November 2017.

Germany

German input can be summarized as follows:

- According to the German Government accrual accounting standards, the discount rate used is a refinancing rate based on a 10-year average of month-end yields of Federal government bonds with a remaining maturity of 15-30 years.
- Nominal rates are used.
- The discount rate is centrally set and published by the Federal Ministry of Finance. Its calculation is based on the month-end yields of Federal government bonds, which are calculated and published by the Bundesbank.
- No special rules exist for negative interest rates.

Sweden

Key elements of the Swedish answer are as follows:

- Various methods can be used to fit various situations in the Swedish context.
- Nominal rates are mostly used, real rates can be used in some instances.
- Government bonds with different duration are used as reference.
- Averages of interest rates or other methods may in some instances be used to get a more stable interest rate.

Spain

The Spanish comments are the following:

- In the context of impairment testing for cash-generating assets, the net present value of the future cash flows is calculated using a risk-free interest rate.
- Long-term provisions are discounted using the rate of central government bonds with a matching maturity.
- There are currently no rules relating to the measurement of employee benefit obligations.

5 Difficulties/issues when applying discounting

The main difficulties/issues encountered when applying discounting can be summarized as follows:

- Technical complexity and conceptual approach to determining the appropriate discount rate.
- Comparability.
- Volatility due to changes in discount rates, understandability of impact and usefulness in the decision making.
- Neutrality.

5.1 *Technical complexity and conceptual approach to determining the appropriate discount rate*

The primary objective of discounting is to take into account the time value of money in measuring certain assets and liabilities. The longer the maturity or the expected settlement date of a liability, the higher the impact of discounting on the net present value of that liability. The same logic applies to assets. In some instances, discounting may include some other elements such as for example own credit risk (if this option is selected when calculating the net present value of long-term provisions) or an expected return on investment (when the WACC is used in an impairment test calculation) (see chapter 3 for more details).

If the basic concept around discounting may be understood quite easily, application of discounting proves to be a relatively complex area in practice.

Various requirements exist which can differ depending on the type of balance sheet item which needs to be measured on a discounted basis. For example, the guidance applicable to the determination of the discount rate for post-employment and long-term employee benefit obligations, for long-term provisions and for calculating the value in use of a group of non-current assets in the context of an impairment test is different. In addition, judgment is often required in applying the principle-based guidance included in international financial reporting standards and in selecting the appropriate discount rate.

Comparison of the requirements set by various international accounting frameworks reveals a number of issues which should be addressed when evaluating the appropriate methodology of determining discount rates:

- What instruments should be taken as a reference for determining the discount rate? Should discount rates be selected based on government bonds, corporate bonds or other instruments?
- If 'high quality' corporate bonds are used as a reference for determining discount rates, how should high quality be interpreted?
- How should the discount rates be determined in the context of low/negative interest rate environment?

- Should a basket of instruments be applied to calculate the discount rates? How should the composition of these baskets be defined?
- For long-term provisions, should own credit risk be included in the calculation of the discount rate?

The technical and conceptual complexity around discounting is acknowledged by the IPSASB and the IASB. The IPSASB has put the topic of discounting on its agenda for the period 2019-2023 and the IASB is currently conducting a research project on discounting whose results are expected in the second half of 2018.

In addition, other approaches are sometimes used in practice, which add to the complexity of the discussion. These include:

- Use of refinancing rates or rates of return of assets instead of risk-free rates as mandated by international standards.
- Use of real rates instead of nominal rates as required by international standards.
- Application of averages or of stable rates, while forbidden by international accounting standards.

5.2 Comparability

As mentioned above, discounting approaches set by international accounting frameworks only describe principles for the calculation, without providing detailed guidance, which results in lack of clarity and variety of interpretations. When a 'principle-based' approach is applied, the calculation always leaves space to judgment by preparers, unless a precise centralised guidance is available or the calculation is performed at a centralised level. In addition, a lack of appropriate disclosures would not provide sufficient clarity as to the methodology which is used and its impact on the financial statements. This may result in insufficient comparability and may be especially sensitive when the information is used for decision-making purposes.

In addition, methodologies applied by Member States may differ from international accounting requirements, as evidenced in chapter 4, therefore leading to even more diversity in practice within the EU.

Use of stable discount rates or not using discounting at all are considered by some governments as possible solutions to achieve greater comparability or simplicity, even if this is in contradiction with international accounting requirements.

In a number of instances, the applicable discount rates are calculated on a centralised level and further used by all respective preparers in order to achieve consistency in reporting. That central guidance may be given for all government entities within a country or at the level of a certain government.

5.3 *Volatility due to changes in discount rates, understandability of impact and usefulness in the decision making*

While there exists a general understanding of the concept of time value of money, its practical application is not always clearly understood by preparers and the effect of discounting is also often not clearly understood by users, e.g. decision makers, citizens, etc.

As discounting primarily applies to long-term assets and liabilities, changes in discount rates result in significant profit or loss or balance sheet fluctuations. This may be a particularly sensitive question in case of increased variability of the interest rates or specific circumstances, like in a context of low/negative interest rates.

The usefulness of discounting to achieve one of the two main objectives of financial reporting, i.e. assist in the decision making, is therefore sometimes questioned. This may for example be the case when actual numbers drawn from financial statements are compared against budgets and variances should be explained.

As a result, application of averages or stable discount rates or not applying discounting at all are sometimes seen as potential solutions to the issue, although this does not comply with the requirements of international accounting standards such as IPSAS or IFRS.

5.4 *Neutrality*

Faithful representation is one of the qualitative characteristics of financial statements. Faithful representation is attained when the information which is presented in financial statements is complete, neutral and free from material errors.

Neutrality in financial reporting is the absence of bias. It means that the selection and presentation of information is not made with the intention of attaining a particular predetermined result in order to influence users of financial statements in a certain way.

As indicated in chapter 2. Background of the issue, a small variation in discount rates may lead to a significant change in the measurement of assets or liabilities, especially when discounting is done over a long period.

The use of discount rates may therefore be seen as an area where the danger for bias in financial reporting is greater than with other areas. This risk is even greater when there is no consistent methodology neither clear accounting guidelines on the topic.

6 Discussion of matters relevant for a European harmonisation

As a reminder, Eurostat concluded at the EPSAS Working Group meeting in Rome (22-23 November 2016) with reference to accounting for pension liabilities that priority should be given in first instance to the comparability of the measurement and the conceptual approach underpinning the choice of the discount rate (in particular, the choice of the appropriate discount rate). Besides accounting for pension liabilities, application of discount rates also plays a role in other accounting areas.

In the previous chapter, we identified the following main difficulties/issues when applying discounting:

- Technical complexity and conceptual approach to determining the appropriate discount rate.
- Comparability.
- Volatility due to changes in discount rates, understandability of impact and usefulness in the decision making.
- Neutrality.

In our opinion, a fundamental question is to determine to what extent consistent guidance should be given to Member States, or in other words what is the level of details wanted in the guidance that is issued to assist Member States prepare their EPSAS reporting?

A second series of questions are more of a conceptual nature. These have been listed under section 5.1 of the present issue paper.

We further develop below the topics that, in our view, are worth being discussed at a European level in the context of the EPSAS standard setting and that are relevant for a European harmonisation.

6.1 General approach to calculation

As mentioned above, the first key question is to determine to what extent consistent guidance should be given to Member States, or in other words what is the level of details wanted in the guidance that is issued for the EPSAS reporting.

A first approach could consist in having discount rates set centrally at the European level and communicated to all Member States for mandatory application in their EPSAS reporting.

This approach is already frequently followed at the national level. Centralised determination of discount rates is a practice applied in various states as an alternative to leaving this calculation to each of the preparers. This is for example done in Finland (stable rate of 3% for the central government applied since several years), in Germany (discount rate centrally set and published by the Federal Ministry of Finance) and in the UK (discount rate calculated centrally by the Treasury).

The advantages of centralised rates were summarized by the UK Treasury in the frame of the joint discussion with FRAB:

‘In the Treasury’s view there are clear benefits in setting a central rate. Firstly it ensures consistency and efficiency in determining accounting measurements across government. Secondly, by setting the

rate, Treasury is able to ensure that judgements over accounting are objective and not subject to risks of judgement bias. Finally, it prevents additional costs for account preparers if they were required to devise their own methodologies to calculate discount rates' (FRAB 130(3) para 16).

It should be noted that an approach whereby discount rates are set centrally at the European level already exists in the insurance industry. EIOPA, European Insurance and Occupational Pensions Authority, regularly communicates the discount rate curve to be applied by all European insurance companies to calculate their best estimate liability to be reported in the context of their prudential regulatory reporting Solvency II. A certain methodology is applied to determine a risk-free rate term structure to be used by all insurance companies that should report under Solvency II.¹⁵

Member States should debate on whether they would welcome a similar approach in the context of the EPSAS reporting. Discount rates would be determined at the European level following a consistent agreed upon methodology and to be applied by all governments within the EU.

The second key question concerns the methodology to be applied to determine the discount rates, no matter whether these are set centrally (as suggested above) or whether the discount rates are determined at the level of each Member State.

6.2 Methodological aspects of calculating discount rates

A number of key conceptual questions should be answered in order to determine a consistent methodology to calculate discount rates that would be applicable across all government entities in the EU.

Using a principle-based approach leaves some degree of flexibility to the entities as to how the basic principles should be interpreted and applied in practice. However, as we could see from the country analysis under chapter 4 and from opinions shared by preparers, lack of sufficiently detailed guidance may lead to great diversity in practice, which would impair comparability of reporting by Member States in relation to those balance sheet items subject to discounting. The impact of discounting can be significant on major balance sheet items such as pension or other long-term liabilities. Achieving consistency in accounting for discount rates therefore seems very important in view of the comparability objective of the EPSAS project. Using a consistent methodology based on clear guidelines may in addition help address the potential issue of bias in financial reporting.

We list below a series of questions that, when answered, may help set detailed guidance on how to apply discounting on a consistent basis across Member States and government entities within the same Member State. We also provide summarized background information as to the compliance with international financial reporting frameworks for each of the questions and indicate in the last column whether answering to each question is likely to:

- a. improve comparability of EPSAS reporting;
- b. limit fluctuations in the EPSAS financial statements;
- c. simplify application; and
- d. be compliant with IPSAS requirements.

¹⁵ EIOPA, Technical documentation of the methodology to derive EIOPA's risk-free interest rate term structures, EIOPA-BoS-15/035, 27 June 2017, 135 pages

Most of the questions relate to pension liabilities.

Reminder: the IPSAS rationale to use a discount rate that reflects only the time value of money for post-employment benefit obligations is that defined benefit schemes create a debt towards the employees who are not investors and do not assume a financial risk in order to earn a premium. How the entity will finance itself or invest to meet its obligations towards the employees should not affect the measurement of the defined benefit liability.

The last question relates to provisions. In the absence of specific guidance under IPSAS and IFRS, the answers to some of the other questions may provide useful input for the determination of discount rates on provisions too.

Reminder: the discount rate for provisions should reflect the time value of money and the risks specific to the liability. In practice, the risks inherent to the liability are incorporated in the estimate of the future cash flows and the discount rate used reflects the time value of money. There is thus no double counting.

We do not propose to discuss the topic of impairment in the context of the future IPSAS standard setting. When performing an impairment test, the WACC is widely used in practice to calculate the net present value of the future cash flows that determine the value in use of the group of cash-generating assets tested for impairment (i.e. the cash-generating unit). This practice is mainly drawn from the experience of applying IFRS in the private sector but is equally relevant in the context of impairment testing for cash-generating assets in the public sector.

Reminder: the WACC (weighted average cost of capital) represents the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing, and risk profile equivalent to those that the entity expects to derive from the asset, considering an optimal financing structure.

In addition, Member States would need to determine whether different discount rates would be appropriate for different balance sheet items and whether similar discount rates would apply across EU Member States or different rates would be justified to address different economic realities.

Key questions	Comparability	Limitations in fluctuations	Simplicity	IPSAS compliant?	Background information
Use of risk-free rate? Or refinancing rate? Or rate of return on investments?	(√)			?	IPSAS, IFRS and ESA 2010 rules require the use of risk-free rates for pension liabilities. Refinancing rates and rates based on the return of investments are not allowed.
Use of nominal rates? Or real rates?	√			?	IPSAS and IFRS require the use of nominal rates for pension liabilities. ESA 2010 rules refer to both nominal rates and real rates.
Use of government bonds as a reference? Or high-quality corporate bonds?	√			√	IPSAS primarily refers to government bonds, but the use of high-quality corporate bonds or other financial instruments is also possible. IFRS gives priority to high quality corporate bonds while ESA 2010 refers to high quality government and corporate bonds.
If high-quality corporate bonds are used, how to determine high quality?	√			√	This concept is in some way incorporated in most of frameworks though the exact definition is not given. This creates unclarity for the preparers. It should be noted that some frameworks (e.g. IFRS) deliberately avoid giving precise thresholds for judgement, while others (e.g. ESA 2010) provide examples of such a judgement ('AAA' rating). IPSAS refers to the concept, but does not provide further guidance of what should be considered as 'high-quality' bonds.
Specific guidance for negative interest rates?	√			√	It is widely recognised, especially under IFRS, that low/negative interest rate

Key questions	Comparability	Limitations in fluctuations	Simplicity	IPSAS compliant?	Background information
					environment leads to higher level of pension liabilities recognised in the balance sheet, with significant fluctuations from very small changes in the rates. Negative interest rate environment potentially leads to a situation of pension liabilities arithmetically exceeding future cash flows. This situation is however not expected to become an economic reality during a long period for long-term instruments. Currently, no detailed solution is proposed yet by the bodies which hold discussions on the subject.
Application of baskets of instruments?	√	√		√	The most detailed guidance related to the use of baskets is described in ESA 2010 and related 'Technical Compilation Guide for Pension Data in National Accounts'. IPSAS and IFRS have similar guidance on the issue, which does not give a detail on use of baskets, though specifically explains that own credit risk should not be taken into the account.
Use of a stable rate?	(√)	√	√	X	Using a stable rate may be seen by some as a response to the issue of undesired variability of discount rates. It is however conflicting with international accounting frameworks (IPSAS and IFRS) which require current rates to be used.
Application of average rates over a certain period?	√	√		X	Using average rates is sometimes seen as a response to the issue of undesired

Key questions	Comparability	Limitations in fluctuations	Simplicity	IPSAS compliant?	Background information
					variability of discount rates (e.g. as currently done by the German federal government). International accounting frameworks (IPSAS and IFRS) however require current rates to be used.
Use of rate of return of plan assets for pension liabilities that depend on return of plan assets?	√	√		X	When benefits depend on return of plan assets, the plan is generally a defined contribution plan and no liability should be recognised. This question here addresses specific situations such as defined contribution plans with a guaranteed return and is looked at by the IASB as part of a specific research project.
Presentation of impacts of changes in discount rates (in equity versus in surplus or deficit versus in other comprehensive income?)	(√)	(√)		?	IPSAS and IFRS require the unwinding of the discount rate to be presented in the statement of financial performance. Changes in discount rates are reported in other comprehensive income (OCI) under IFRS and, in the absence of OCI concept, in equity under IPSAS.
For long-term provisions, should own credit risk be included?	√			√	IPSAS and IFRS do not provide guidance on this.

- √ Objective met.
- (√) Objective partially met.
- ? Achievement of objective uncertain.
- X Objective not met.

7 PwC's recommendations on the way forward

We present below our recommendations in the same order as the topics proposed for discussion for a European harmonisation under Chapter 6.

7.1 General approach to calculation

The principal choice to be made is whether calculation of discount rates should be made by each preparer or should be calculated at some centralised level. A centralised approach is already adopted in some Member States.

Setting discount rates at the European level would have significant merits:

- It would ensure comparability of EPSAS reporting across Member States and government entities within the EU.
- It would enhance objectivity of EPSAS reporting by eliminating the risk of bias in the preparation of financial statements, i.e. the risk of having specific discount rates selected with the objective to achieve a desired financial result.
- It would simplify the reporting process for Member States who would not need to design and implement their own rules, therefore reducing the EPSAS reporting cost.

The benefits of such an approach is widely acknowledged at the national level in a number of Member States. In addition, such an approach is already applied in the EU in the insurance industry as EIOPA, the European regulator for the insurance industry, sets centrally the discount rates to be used by insurance companies in the calculation of their technical provisions for the Solvency II reporting.

This would be at the cost of allowing each Member State interpret the principles of discounting which will be retained under the upcoming EPSAS rules according to its own judgment. When financial statements are used for the decision making, for example by comparing actuals in financial statements with budgets, moving away from some current national practices which tend to limit the impact of discount rate fluctuations, might be seen by some as an issue.

In our opinion, the benefits of having discount rates that are set centrally would probably outweigh the costs of such an approach.

The discussion should however take place within the EPSAS Working Group in order to decide on the way forward.

Irrespective of whether discount rates are set centrally or whether they are determined at the level of each Member State, a consistent agreed upon methodology should be determined that goes beyond the principles included in international financial reporting frameworks. Our recommendations in this respect are presented under 7.2 below.

7.2 Methodological aspects of calculating discount rates

As explained under 6.2, the principles included in international financial reporting frameworks about discounting leave some room for judgment and interpretation which may result in inconsistent application among preparers.

A first series of questions may address this issue by providing detailed guidance on how to interpret the general principles laid down in international reporting frameworks. We believe that such guidance is needed to achieve sufficient consistency in EPSAS reporting and therefore to meet the comparability objective of the EPSAS project. This approach is commonly adopted both in the private sector and in the public sector by parents that set harmonised accounting rules for all group reporting entities. All questions are in relation to post-employment benefit obligations, except the last one which relates to provisions.

Questions	PwC's comments
Should the rates be determined by reference to government bonds or high-quality corporate bonds?	As IPSAS and ESA 2010 lean towards the use of rates of government bonds as a first priority, and most governments also take government bonds as a benchmark, this may be viewed as the preferred solution for the future EPSAS reporting.
If high-quality corporate bonds are used, how to determine high quality?	Even if government bonds are used as a reference for discount rates, it may be appropriate to explain the concept of high quality in the future EPSAS and include a specific reference to the ratings considered as a proof of that quality (e.g. at least 'AA' or 'AAA'). Also, a reference to the global rating scale as opposite to local scale is worth providing.
Specific guidance for negative interest rates?	No specific guidance exists under international financial reporting frameworks. In our opinion, changing the usual methodology that is applied in a context of positive interest rates would require a strong justification. The use of nominal rates mitigates the importance of the issue. We also recommend to follow up how the thinking about this issue develops in the context of the projects carried out by the IPSASB and the IASB.
Should a baskets of instruments be used in determining the discount rate?	Generally, use of basket of instruments and excluding own credit risk of the preparer may be seen as an appropriate approach under the future EPSAS. However, a matter of further discussion may be how prescriptive the rules concerning the composition of the baskets should be.
For long-term provisions, should own credit risk be included?	Although no specific guidance exists under IPSAS, IFRS and ESA 2010, not including own credit risk and considering a discount rate that reflects only the time value of money (with the risks relating to the liability reflected in the estimate of future cash flows) would enable consistency in the approach which is applicable for rates applicable to pension liabilities.

A number of practices applied by governments in the EU may conflict with the principles included in international financial reporting frameworks. A second series of questions would discuss whether some of these practices might be retained in EPSAS rules.

Questions	PwC's comments
Use of risk-free rate? Or refinancing rate? Or rate of return on investments?	The one key objective of the application of discount rates is to reflect the time value of money. For pension liabilities, a risk-free rate is mandated by international frameworks. A refinancing rate does not only reflect the time value of money as it includes own credit risk. Using a rate of return on investments is also conceptually debatable as in standard defined benefit schemes, payments to employees are not affected by the actual returns on the assets used to fund those pensions.
Use of nominal rates? Or real rates?	IPSAS and IFRS require the use of nominal rates for pension liabilities. ESA 2010 rules refer to both nominal rates and real rates. Most governments use nominal rates, not real rates.
Use of a stable rate?	Using a stable rate is sometimes used (e.g. in Finland) to avoid fluctuations due to changes in discount rates. International accounting frameworks however require to use a current assessment of the time value of money, even if this assessment is made for the long term.
Application of average rates over a certain period?	Using average rates, including moving average rates, over a certain period may smoothen the impact of fluctuations in discount rates as well. The same comment applies, it is however not in line with international financial reporting frameworks.
Use of rate of return of plan assets for pension liabilities that depend on return of plan assets?	As mentioned under 6.2 this question is being looked at at IASB level and addresses very specific cases. It should not be mixed with the other more general debate on whether rates of return on investments should be used as a basis for discounting purposes.
Presentation of impacts of changes in discount rates (in equity versus in surplus or deficit versus in other comprehensive income?)	Under IPSAS changes in discount rate impact equity directly, as no OCI concept exists. This avoids fluctuations in the statement of financial performance but does however not reduce balance sheet volatility.

The above questions address measurement and presentational aspects. In addition to this, appropriate disclosures about discount rates, including about the methodology used, enhance the understandability of the financial statements and their comparability.

The topic is complex. We recommend to closely follow up the developments and discussions taking place at IPSASB and IASB level on the issue of discount rates as these may provide useful insight and input to the EPSAS standard-setting process. Adopting best international practices would also enhance international comparability and add to the credibility of EPSAS financial statements.