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**EPSAS issue paper on the accounting treatment of employee
benefits (pensions)**

Paper by Ernst & Young on behalf of Eurostat

- for discussion

**Accounting treatment of
employee benefits (pensions)
with a view to financial
reporting requirements under
the future EPSAS**

9 November 2016

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1. Objectives of the Issues Paper

The aim of the issues paper is to summarise the approaches taken at the accounting standard level concerning the recognition and measurement of pension obligations for general government employees in at least three Member States (MS) with high accounting maturity. Pension obligations of employees in the public sector other than general government employees (e.g. pensions for employees of government business enterprises) are not considered in this issues paper. These pensions are covered by either social security schemes of Member States or funded pension schemes and are contributory schemes. In addition, the requirements for the recognition and measurement of pension obligations for general government employees under the existing international financial reporting frameworks (IPSAS, IFRS, EU Accounting Rules) and statistical rules (GFS/ESA) shall be analysed.

Based on the results of the analysis a first approach for organising the future discussion on pensions with the EPSAS stakeholders is developed.

Based on the request from Eurostat the issues paper currently addresses the following questions:

- ▶ What are the main types of pension schemes used in the EU MS?

- ▶ What are the problematic issues with regards to recognition and measurement of pension obligations? In EY's view, are these issues satisfactorily treated in IPSAS? Would nevertheless supplementary guidance on some aspects of the treatment of pensions be necessary and what could that supplementary guidance look like?

- ▶ For the main pension schemes, what are the advantages and disadvantages of the existing approaches to recognition and measurement?

- ▶ What are the consequences for a possible convergence between IPSAS and SNA/ESA?

- ▶ What way forward would EY recommend on pensions?

- ▶ Are there any implications that should be noted for other employee benefits and social benefits from the conclusions on employee benefits (pensions)?

2. Background

In public sector accounting, the issue of accounting for pension obligations granted to civil servants and other general government employees is controversially discussed.¹ Where governments account for their pension obligations the provisions for pensions represent a significant part of their balance sheet. For example, the ratio between provisions for pensions and similar obligations and total assets is 65%² for the City State of Hamburg as of 31.12.2014.

Although the pension systems in Member States differ from each other, they all face similar challenges, especially with regard to the ageing population.³ Low fertility rates and an increasing longevity of the population are stated as the underlying factors determining those demographic changes. It can therefore be assumed that in the future Member States' pension obligations will increase rather than decrease. Having a clear view on the current and future pension obligations is therefore an important piece of information for policy makers in Member States.

In the public sector it is often questioned whether pension obligations shall be recognized in a government entity's balance sheet. This is on one hand due to the specific nature of pension commitments, where benefits are typically granted over the whole retirement period of the general government employees. On the other hand, the recognition question arises against the background of the financing of these obligations. Pensions in the public sector are often based on the pay-as-you-go (PAYG) principle using the tax system as the financing vehicle. Under a PAYG-system that is financed by taxes the current budget of the general government is used to finance the pensions of current pensioners. Such pension schemes are referred to as "unfunded". The consequence of such a system is that a large increase in future pension spending means less available budget for the "contributing" generation.

Opponents of recognizing pension liabilities under an unfunded PAYG scheme argue that no liability should be recognized as the cash outflows for pensions are financed by cash inflows of the future and these future cash inflows (i.e. future tax revenue) cannot be recognized as an asset. Therefore no corresponding asset to the pension liability can be recognized which leaves a government's balance sheet in imbalance.

In this context, the 2014 PwC study showed that the accounting area "employee benefits" had with 25% the lowest accounting maturity across the EU compared to other accounting areas, such as intangible assets, financial instruments or revenues.⁴ The empirical survey included in the PwC study showed that 22 EU central governments out of 28 have granted defined benefit pension schemes (or equivalent) to civil servants/government employees. However, out of those 22, only four countries recognise defined benefit pension liabilities in their balance sheet, which is depicted in the following illustration:⁵

¹ See for example PwC (2014), p. 151.

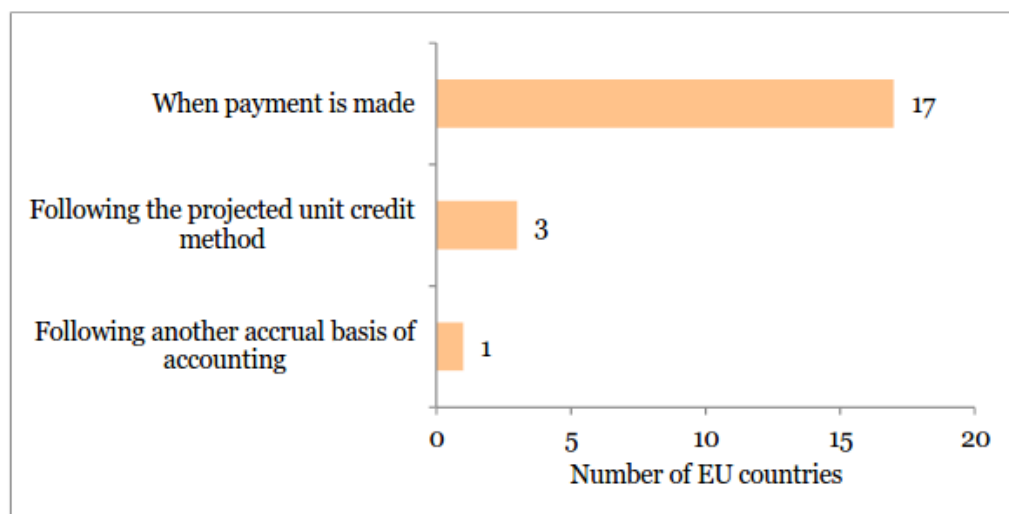
² The 2014 consolidated annual accounts of the City State of Hamburg show as of 31.12.2014 provisions for pensions and similar liabilities of 28,06 billion EUR and total assets of 43,41 billion EUR. Geschäftsbericht der Freien und Hansestadt Hamburg (2014).

³ See IZA (2011), p. 10.

⁴ See PwC (2014), p. 96.

⁵ See PwC (2014), p. 108.

Figure 16 - Timing of recognition of pension expenses for defined benefit pension schemes



The following reasons were provided in the study why central governments do not recognize pension liabilities:⁶

- ▶ the complexity of the actuarial calculations that are needed to measure pension obligations,
- ▶ the specialised expertise needed to make these calculations,
- ▶ the conceptual debate about whether a present obligation exists for the government in respect of these defined benefit pension plans, and
- ▶ the non-willingness to present large liabilities that would negatively impact the net financial position of the government.

Given the nature of such pension obligations, accounting for provisions on pensions can be considered as a complex accounting area.⁷ Especially the measurement of the related liabilities is a great practical challenge. In the private sector, actuaries are engaged by companies to determine the necessary information for the accounting of pension obligations because of the measurement complexity. In particular, actuarial assumptions to determine the cost of providing post-employment benefits include an assumption on the discount rate. The 2013 Commission Staff Working Document identified that the determination of the rate for the discounting of the pension is seen as difficult.⁸

On the other hand side, the benefits for the accounting for employee benefits have to be considered. Following the matching principle, liabilities for pension obligations are recognized in an entity's balance sheet when the obligating event occurs, i.e. the provision of services by the employees. This leads to more transparency on probable future obligations and facilitates accountability.

The recognition of pension obligations in an entity's balance sheet also leads to a more closely monitoring and management of such liabilities by governments. Policy decisions

⁶ See PwC (2014), p. 109.

⁷ See PwC (2014), p. 96.

⁸ See European Commission (2013), p. 114.

related to human resources and/or employee benefits can be taken on a better information basis.

3. Main types of pension schemes used in the EU Member States

3.1 Introduction

Pension schemes provide income after retirement. It is important to understand the different types of pension schemes in the EU Member States' pension systems. Also, the pension schemes attributable to general government employees that will be in scope of future EPSAS must be located in the pension systems.

3.2 Pension systems in EU Member States

After retirement income might be achieved from three different sources, which are referred to as the "three-pillars-model". Each of the pillars contains different types of pension schemes.⁹

First pillar	Public social security system
Second pillar	Occupational pension schemes - either mandatory or voluntary
Third pillar	Personal pension schemes - voluntary

The categorization helps to gain an understanding of the sources of income after retirement. It should be noted that other systems of categorization exist.¹⁰ Also, pension plans categorized in the same pillar might encompass significantly different characteristics.¹¹

The **first pillar**, the public social security system, comprises a standardized, state-run pension system, which offers basic coverage. It represents **public social security schemes** and is conducted by government entities. The benefits provided can be divided into social benefits and social security pension benefits.

Social benefits protect the entire population against certain risk. Such benefits do not necessarily require previous contributions from an individual beneficiary. The majority of a country's working population pay social security contributions to finance the social benefits. These types of benefits will be covered by the issues paper on accounting for social benefits.

The **social security pension benefits** as part of the governmental social security system provide a minimum pension level to prevent old-age poverty. It is often financed on a PAYG basis. In addition, some Member States introduced statutory private funded pension schemes. These types of pension schemes in the first pillar have grown recently as some countries have switched part of their social security pension schemes into funded schemes that are generally operated and managed by private institutions. Provision and

⁹ The distinction between the three pillars is not as clear-cut as it seems. Some of the overlays between the pillars are explained in this chapter. An overview of the pillar structure in all Member States is available in the 2009 "Ageing Report by the European Commission". European Commission and the Economic Policy Committee (2009).

¹⁰ For example by the OECD in OECD (2015), Pensions at a Glance 2015: OECD and G20 indicators, OECD Publishing, Paris.

¹¹ For more details, refer to European Parliament (2014), Pension Schemes.

participation in the pension scheme is usually statutory. Nine of the 27 EU Member States converted part of their social security pension provision into statutory funded private pension schemes: Sweden, Denmark, Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland and Slovakia.

The **second pillar**, occupational pension schemes, is attributable to a labour relationship. It contains a funded system that beneficiaries and employers pay into. In some Member States, mandatory funding requirements exist, especially when pension schemes are funded by both the employer and the employees. In other Member States, no funding requirements are in place and the employer recognizes a pension liability in its financial statements (book-reserve)¹². The pension promises have been made either on a voluntary or mandatory basis by private entities and can be distinguished into defined benefit plans (DB plans) and defined contribution plans (DC plans).¹³ The objective of occupational pension schemes is to increase retirement income above the minimum coverage achieved from the first pillar.¹⁴

The **third pillar**, personal pension schemes, is made up by voluntary private funded accounts, including savings plans, personal insurance, etc.

3.3 Pension schemes for general government employees in EU Member States

The characteristics of pension schemes included in the table help determining the scope of pension schemes discussed in this paper. The characteristics are partly based on the latest survey "Central government pension schemes in the EU" of Eurostat.¹⁵

Characteristic	Value
Beneficiaries	Permanent statutory staff of the sub-sector "central governments" of MS.
Benefits provided by the pension plan	The types of coverage can encompass old-age retirement, early retirement, disability, medical aid as well as survivors' pensions.
Types of pension plan	Approximately 3 out of 4 MS offer defined benefit plans, the remainder is split equally between defined contribution and hybrid plans. ¹⁶
Financing of the pension plans	A bit less than half of all MS have unfunded plans. In approx. 25% of the MS partially funded pension plans exist. The remainder belongs to plans with notional funding. Only one MS reports a funded pension plan.
Exclusivity of the pension plan	In most of the MSs the concerned pension scheme

¹² Different regimes of insolvency protection exist in Member States, which are adherent to the funding requirements.

¹³ This distinction is based on the distinction in accounting frameworks such as IPSAS 39 and IAS 19; refer to chapter 4.

¹⁴ There is a concept in place referred to as "replacement rate" that compares total retirement income to the labour income before retirement. Member States often define a level of replacement rate they would like to achieve or to retain.

¹⁵ Refer to European Commission/Eurostat: Central government pensions schemes in the EU - Survey result, Luxembourg, 2016.

¹⁶ All types of pension plans are explained in chapter 4.1.3.

	applies mainly but not exclusively to the targeted group of beneficiaries
Coverage of yearly pension expenditure	Approx. 2 out of 3 MS implemented a pay-as-you-go system, the other MS apply the budgetary method.
Pension ages	The latest pension entry age begins with 62 years in one MS and exceeds 70 years in three MS. The earliest pension age for retirement shows an even greater corridor by starting at 50 years and ending with 68 years.
Pension formula	The formula for determining the level of old-age retirement benefits is usually based on the years of service and final salary based.

International accounting frameworks and statistical rules also provide a classification of pension schemes, which is presented in the next chapter.

4. Description of accounting guidance available in international accounting frameworks and in statistical rules

The following sections analyse the guidance on accounting for employee benefits that is contained in the international accounting frameworks and, in particular, how these frameworks treat the challenges identified in the previous sections.

4.1 International Public Sector Accounting Standards (IPSAS)

The current IPSAS applicable for the accounting of employee benefits (pensions) is IPSAS 25. In June 2016, the International Public Sector Accounting Standards Board (IPSASB) approved IPSAS 39, *Employee Benefits* (hereafter “IPSAS 39” or “standard”).¹⁷ The new IPSAS is effective January 1, 2018¹⁸ and supersedes IPSAS 25, *Employee Benefits*. IPSAS 39 prescribes the accounting treatment of all types of employee benefits other than share-based transactions. IPSAS 39 does not deal with benefits provided by composite social security programs that are not consideration in exchange for services rendered by employees or past employees of public sector entities.¹⁹ The standard defines four categories of employee benefits²⁰, of which post-employment benefits will be in focus.

4.1.1 Main differences between IPSAS 39 and IPSAS 25

The new IPSAS 39, which supersedes IPSAS 25, is based on International Accounting Standard (IAS) 19. Since 2008, the International Accounting Standards Board (IASB) has made several revisions to IAS 19 that are now addressed in the new IPSAS 39. Although IPSAS 25 is still effective for two accounting periods (2016, 2017)²¹ this paper focusses on the newly issued IPSAS 39.

A primary purpose of these revisions was to create more consistency in accounting for employee benefits by eliminating the recognition and presentation options that exist under IPSAS 25. Furthermore, the IPSASB sought to provide more targeted disclosure requirements that would highlight the relevant risks of defined benefit plans.

The main changes for recognition and measurement of employee benefits caused by IPSAS 39 are described in chapters 4.1.4 and 4.1.5.

¹⁷ IPSAS 39 was published in July 2016.

¹⁸ Early adoption of IPSAS 39 is encouraged.

¹⁹ See IPSAS 39.3.

²⁰ IPSAS 39.8 defines (a) Short-term employee benefits, such as wages, salaries, and social security contributions, (b) Post-employment benefits such as pensions, other retirement benefits, post-employment life insurance and post-employment medical care, (c) Other long-term employee benefits, which may include long-service leave or sabbatical leave, jubilee or other long-service benefits and (d) Termination benefits.

²¹ Assumption: calendar year = accounting year.

4.1.2 Distinction and fundamental accounting principles of post-employment benefit in IPSAS 39

Post-employment benefits are distinct from other categories of employee benefits as benefits are paid after retirement only.²² In other words, benefits received by employees prior to retirement or as an incentive to commence retirement earlier are not post-employment benefits. Post-employment benefits might comprise pensions as well as other post-employment benefits, which mainly cover post-employment medical aid. With respect to pensions, payment options might be available to the employees, which range from one-time payments (post retirement) to life-time rental income. Hence, the types of post-employment benefit plans discussed in IPSAS 39 are in alignment with the types of pension schemes discussed in the previous chapters. For the sake of clarity it should be noted that "employee" referred to in IPSAS 39 and the remainder of this chapter agrees to the "beneficiaries" discussed in the previous chapter.

Based on the conceptual framework of IPSAS, a liability should be recognized, when a past obligating event has taken place, the amount can be reliably estimated and future outflows are probable. With respect to post-employment benefits, this fundamental accounting principle is translated in the following manner:

- A past event has taken place if and when the employee has rendered service. This is referred to as the "service period approach"²³.
- The unit-of-account for post-employment benefits is the single plan, i.e. it is not acceptable to combine all post-employment benefit plans for the purposes of recognition and measurement.
- It is important not to comingle two aspects of employee benefits: Granting a pension promise and the recognition of a pension liability is one aspect; the funding of pension promises, if any, is a whole separate aspect.²⁴ In other words, the recognition and measurement of pension liabilities should not be affected by the existence or non-existence of funding of these promises at the respective balance sheet date. Also the existence of a PAYG-system, i.e. where current tax payments and/or current contributions to pension funds are used for the payments of current pensions, does not imply that a pension liability does not need to be recognized.

Pension promises might be administered in different ways. This requires a classification of pension plans for the purpose of accounting, which is provided hereafter.

4.1.3 Distinction between different types of pension schemes

The main types of pension schemes are the following:

- Defined contribution plans (referred to hereafter as "DC" or "DC plan");
- Defined benefit plans (referred to hereafter as "DB" or "DB plan");
- Hybrid plans.

²² See definition of post-employment benefits in IPSAS 39.8.

²³ See IPSAS 39.53 and 39.72.

²⁴ This principle is for example included in IPSAS 39.26: "An entity applies this Standard to all such arrangements, whether or not they involve the establishment of a separate entity, such as a pension scheme, superannuation scheme, or retirement benefit scheme, to receive contributions and to pay benefits."; also refer to IPSAS 39.49.

IPSAS 39²⁵ requires a distinction between **DC plans** and **DB plans**.

For pensions schemes based on defined contribution plans it is necessary precondition that a separate²⁶ entity needs to be established (e.g. a fund). In case that an entity wants to shift from DB plans to DC plans the entity would need to establish a separate entity. Under a defined contribution plan, the employer, the employee or both make contributions to the separate entity on a regular basis.

The distinction between DC plans and DB plans is based on the characteristics of a DC plan, which can be found in IPSAS 39.28:

“Under defined contribution plans the entity’s legal or constructive obligation is limited to the amount that it agrees to contribute to the fund. Thus, the amount of the post-employment benefits received by the employee is determined by the amount of contributions paid by an entity (and perhaps also the employee) to a post-employment benefit plan or to an insurance company, together with investment returns arising from the contributions. In consequence, actuarial risk (that benefits will be less than expected) and investment risk (that assets invested will be insufficient to meet expected benefits) fall, in substance, on the employee.”

The characteristics of DB plans include the entity’s obligation to pay the promised benefits rather than the obligation of a third party. Also, the actuarial and investment risks associated with the pension promise are borne, in substance, by the entity.²⁷

The classification as either DC plan or DB plan is of great importance, as the accounting consequences are very different: DC plans require the payment of contributions to third parties. The liability to be recognized is limited to the amount of contribution due and payable at balance sheet date which is more or less fixed; only limited disclosure information is required. For DB plans, on the other hand, the liability to be recognized covers the entitlement of employees from past services. Also, a significant number of disclosure requirements need to be met. Not surprising, from a balance sheet perspective, entities have a preference for a DC plan classification.

In practice, the distinction between DC plans and DB plans is less clear-cut as it seems. For example, if the entity retains a subsidiary responsibility to directly pay the pensions in the unlikely event that an insurance company fails to do so, this might result in a classification as DB plan. Other examples include cases, where an entity’s obligation is not limited to contributions agreed with a third party but where additional contributions might arise if the performance of assets is not satisfactory.²⁸

Such plans for which the distinction between is DC and DB plan is ambiguous, are referred to as **hybrid plans**. Hybrid plans often house some degree of risk sharing between employers and employees. Ultimately, for accounting purposes, a classification as either DC or DB plan is inevitable and a more or less judgemental decision.

²⁵ See IPSAS 39.27.

²⁶ Refer to footnote 46.

²⁷ See IPSAS 39.30.

²⁸ See IPSAS 39.29.

IPSAS 39 also discusses **multi-employer plans**, which are defined as benefit plans that pool the assets contributed by various entities that are not under common control and that use these assets to provide benefits to employees of more than one entity on the basis that contribution and benefit levels are determined without regard to the identity of the entity that employs the employees.²⁹ It is important to note that multi-employer plans do not constitute a third category of pension schemes apart from DC and DB plans. Rather, multi-employer plans require a classification as either DC or DB plan based on the distinction listed above.³⁰ There is one important element specific to multi-employer plan: An entity that is part of a multi-employer plan might not be in the position to obtain all the information required for a DB plan accounting. If this is the case, a pension scheme that otherwise would be required to be accounted for as DB plan might be accounted for like a DC plan.³¹ In other words, the recognition of a pension accrual is not required although the pension scheme is classified as DB plan.³² Disclosure information is required if the so called “multi-employer plan exemption” is applied.³³

The standard provides an example for a multi-employer plan: A pension scheme is financed on a pay-as-you-go basis and the employees’ benefits are determined by the length of services. Also, the participating entities have no realistic chance to withdraw from the plan without paying a contribution reflecting the benefits earned by the employees of this entity up to the date of withdrawal. To properly account for such a pension scheme, two steps are required: (1) Classification as either DC or DB plan and, (2) if a classification as DB plan is required, decide whether sufficient information is available for DB accounting.³⁴ Especially step (2) requires the execution of judgment.

Similar to multi-employer plans, **insured benefits** do not constitute a separate category of pension schemes. Consequently, insured benefits require a regular classification as either DC or DB plan. What makes insured benefits specific is the fact that insurance premiums are paid to fund a pension scheme. The classification as either DC or DB plans depends on whether the entity retains any risk from the pension scheme, in particular with respect to additional premiums and / or a subsidiary liability to make direct payments to the beneficiary if the insurance entity fails to do so. If, in substance, the entity retains no risk, a classification as DC plan is acceptable³⁵. No pension accrual, beyond any contribution due and payable, is required to be recognized then. The pension costs are limited to these insurance premiums in this scenario.

²⁹ See IPSAS 39.8.

³⁰ See IPSAS 39.32.

³¹ See IPSAS 39.34.

³² On the other hand, if sufficient information is available, the entity should account for its proportionate share of the defined benefit obligations, plan assets and costs.

³³ See IPSAS 39.150 (d).

³⁴ Based on IPSAS 39.38, it is important not to comingle group administration plans and multi-employer plans: *“A group administration plan is merely an aggregation of single employer plans combined to allow participating employers to pool their assets for investment purposes and reduce investment management and administration costs, but the claims of different employers are segregated for the sole benefit of their own employees. Group administration plans pose no particular accounting problems because information is readily available to treat them in the same way as any other single employer plan and because such plans do not expose the participating entities to actuarial risks associated with the current and former employees of other entities.”*

³⁵ See IPSAS 39.51.

Lastly, IPSAS 39 discusses **state plans**. Again, state plans are not a separate category of pension schemes, but rather requires a classification as DC and DB plan. The characteristics of state plans are the following:

- State plans are established to cover all entities or all entities in a particular category within a reporting entity
- The operation of the state plans is attributed to a national, state or local government or to another body.³⁶

The standard provides more details when and how state plans are included by IPSAS 39:

First of all, the standard deals with employee benefits of the entity only. It means that IPSAS 39 does not address the accounting for any obligation resulting from state plans. In other words, the standard does not cover the accounting of pension schemes that are outside the control of the entity.³⁷

Second of all, state plans are often funded on a PAYG basis. Future benefits earned during the current period will be paid out of future contributions³⁸. There is no exception to the classification requirements for these types of pension schemes, i.e. to classify those plans as either DC plans or DB plans. The classification *"depends upon whether the entity has a legal or constructive obligation to pay future benefits. If an entity's only obligation is to pay the contributions as they fall due, and the entity has no obligation to pay future benefits, it accounts for that state plan as a defined contribution plan."*³⁹

To sum up, a proper classification of all pension promises is essential. The classification prototypes are DC plans and DB plans. For the latter one, especially the measurement of the liability to be recognized is a challenge.

4.1.4 Recognition

Starting point is the question of whether a liability has occurred that must be recognized. The definition of a liability requires that a present obligation exists based on a past event that will result in future outflow of economic resources. With respect to **DC plans**, the present obligation is limited to paying contributions to a third party, e.g. an insurance company. All risks resulting from the pension plans are, in substance, transferred to a third party. Accordingly, once the contribution being due and payable is made to the third party, there is no other present obligation and hence no liability exists that requires the recognition of a liability.

For **DB plans**, it is the entity's obligation to pay the benefits to the recipients. Most, if not all, of the prevailing financial and demographic risks remain with the entity. A future outflow of economic resources can be expected. The past event that creates a present obligation is the service that is provided by the beneficiaries. Even if the beneficiary has

³⁶ These two characteristics are applicable to the first pillar of retirement income, representing public social security schemes. Reference is made to section 3.1 of this paper.

³⁷ See IPSAS 39.44.

³⁸ The standard does not intend to discuss the financing of the state plan. Future benefits might be paid out of future taxes, future contributions or a combination of both.

³⁹ See IPSAS 39.46.

not reached the minimum retirement age⁴⁰, the entitlement to retirement benefits builds up over time. Accordingly, the liability should be recognized over the years of service.

Based on this conceptual basis, IPSAS 39 requires the recognition of the net defined benefit liability for DB plans in the statement of financial position.⁴¹ The net defined liability is arrived by deducting any plan assets from the defined benefit obligation (DBO). The calculation of the DBO is explained in the next section of this paper as part of the measurement principles.

The standard does not include any exemptions from this accounting principle. As laid out in the previous section of this paper, all pension schemes must be classified as either DC plan or DB plan. For the latter ones, recognition of the net defined liability is required. It has to be noted that also for pension schemes that are financed on a PAYG basis – following the concept of IPSAS 39 – the recording of a liability is required. Rather, the standard distinguishes the recognition and measurement criteria for DB plans from the financing of the plan. In IPSAS 39, if and how pension plans are funded do not affect the recognition of a pension liability.

With respect to the impact resulting from the introduction of IPSAS 39, the fundamental principles for recognition of pension liabilities are unchanged. The predecessor standard (IPSAS 25) allowed not recognizing changes in the DBO that resulted from actuarial gains or losses⁴² and from changes to pension plans immediately, but rather defer the recognition into future periods. This mechanism of “smoothing” the volatility in the pension liabilities (so called “corridor approach”) is no longer permitted under IPSAS 39.

4.1.5 Measurement and presentation

The objective of the measurement concept in IPSAS 39 is to determine the ultimate cost of providing post-employment benefits. The standard requires measuring the present value of the defined benefit obligation (DBO). Specific requirements exist that prescribe the methodology to arrive at the amount of the DBO. The most important aspects are highlighted hereafter:

- It is required by the standard to apply the **Projected Unit Credit Method (PUCM)** as actuarial valuation method.
- It is required to attribute benefits to the periods of service based on the respective plan formula. This concept is referred to as the “**service period approach**”. The plan formula determines how retirement income is calculated. Usually, the computation is based on an average of the last years’ wages⁴³. For each year of service, i.e. after one additional year of work of the beneficiary, the increase in the employees’ entitlement is reflected in “**current service cost**”⁴⁴. The beneficiary is one year closer to retirement. Firstly, this means that she or he has worked one

⁴⁰ See chapter 3.3

⁴¹ See IPSAS 19.65. If a single pension scheme is overfunded, the recognition of a defined benefit asset might arise.

⁴² Referred to as the „corridor approach“.

⁴³ See chapter 3.3.

⁴⁴ The service cost take into consideration expected increases in future wages.

more year (performance component). For these service cost there is a link to the payroll cost in the statement of financial performance. Secondly, it means that time has passed, so the pay-out periods for the pensions are less far away (timing component). The timing component therefore considers the “time value of money” and there is a link to interest expense in the statement of financial performance. Taken together the “service cost” increase the pension liability to reflect the beneficiary’s movement towards retirement.

- The entitlement of the beneficiaries is measured at the present value of the DBO. Accordingly, “**interest expense**” is recorded each year, as the point of time when payments to the beneficiaries commence has come one year closer. **Actuarial assumptions** must be determined for the measurement of the DBO. Two groups of actuarial assumptions exist, for which we listed the most important ones:

Demographic assumptions	Financial assumptions
Mortality	Discount rate
Rates of employee turnover, disability and early retirement	Future benefit level or salary trends
Election of payment options	Pension indexation

The measurement of the present value of the DBO is based on these aspects. Significant fluctuation in the DBO might arise, as the actuarial assumptions must predict a period of 20 or more years. Changes to the actuarial assumptions occur frequently. The actuarial assumption that is by far most sensitive to the DBO is the **discount rate**. Therefore, the methodology with respect to determining the discount rate is key. Please refer to section 4.3, in which we describe the IPSAS methodology and compare it with the IFRS requirement.

The standard acknowledges that actuarial assumptions are subject to changes and that a significant change in the DBO might arise by introducing the concept of **actuarial gains and losses**. The following two sources - and only these two sources - for changes in the present value of the DBO establish actuarial gains and losses⁴⁵:

- Experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred); and*
- The effects of changes in actuarial assumptions.*

Actuarial gains and losses are considered a part of the remeasurement component. The key aspect in the accounting of the remeasurement component is the privilege to record it directly in net assets/equity.⁴⁶ Hence, the effects from actuarial gains and losses do not affect surplus or deficit.

⁴⁵ See IPSAS 39.8.

⁴⁶ See IPSAS 39.124. Here is major change from IPSAS 25 to IPSAS 39: Whilst IPSAS 25 contained a policy choice to record actuarial gains and losses either in (1) surplus or deficit or (2) in net assets / equity or (3) apply the “corridor method” there is no such policy choice in IPSAS 39 anymore. Actuarial gains and losses have to be recorded in net assets / equity entirely when they arise.

Additional guidance exists with respect to the accounting of changes to pension schemes (“Plan amendments or curtailments”) as well as for the settlement of existing pension schemes.

Finally, the standard introduces **plan assets**. Assets restricted to the payment or funding of defined benefit plans might constitute plan assets.⁴⁷ Two types of plan assets exist:

- Assets held by a long-term employee benefit fund; and
- Qualifying insurance policies

Both types require that assets are legally transferred to a separate⁴⁸ legal entity - either a fund or an insurance company. Under all means, these assets are not available to other creditors of the entity.

Plan assets are recognized by deducting plan assets from the present value of the DBO.⁴⁹ The resulting amount is referred to as the net defined benefit liability.⁵⁰ The measurement basis for plan assets is fair value⁵¹.

The last important measurement concept in IPSAS 39 is referred to as the “**net interest approach**”⁵²: The amount of net interest is determined by applying the discount rate used to calculate the present value of the DBO to the net defined benefit liability, both determined at the beginning of the period. The net interest amount is the net of interest expense resulting from the DBO and the (technical) interest income attributable to plan assets. By that, the amount of interest income resulting from plan assets recognized in surplus or deficit is independent from the actual return on plan assets. The difference between the actual return on plan assets and interest income is recognized directly in net assets/equity.

Lastly, with respect to changes between IPSAS 39 and IPSAS 25, it should be noted that the guidance with respect to **measurement** is unchanged, i.e. IPSAS 39 follows the same principles as IPSAS 25. The net interest approach referred to above is attributable to IPSAS 39, but is considered a change in presentation and not a change in measurement.

The example in the table hereafter summarizes all components that change the DBO as well as plan assets from one year to the next⁵³. The amount that is recognized in the statement of financial position is included in “Net defined benefit liability”:

	DBO	Plan assets	Net defined benefit liability	Recognition in:
	A	B	A+B	

⁴⁷ See IPSAS 39.8.

⁴⁸ IPSAS 39 does not require that the entity must be independent of the sponsoring entity. This is because the assets held by the separate legal entity are restricted and can be used only for settling post-employment benefit. Therefore, the assets are independent from the sponsoring entity by nature.

⁴⁹ See IPSAS 39.115.

⁵⁰ If the fair value of plan assets exceeds the DBO, a net defined benefit asset might arise.

⁵¹ See IPSAS 39.115.

⁵² See IPSAS 39.125-127.

⁵³ The sample reconciliation does not include effects from past service cost, as IPSAS 39 requires a full recognition of past service cost when they arise. No recognition over time is any longer allowed.

Beginning of the year	(100)	80	(20)	N/A
Service cost	(20)	-	(20)	Surplus or deficit
Interest expense / interest income ⁵⁴	(5)	4	(1)	Surplus or deficit
Actuarial gains or losses	(30)	-	(30)	Net assets / equity
Interest income not included in surplus or deficit ⁵⁵	-	6	6	Net assets / equity
Pension payments	20	(20)	0	-
Contributions to plan assets	-	20	20	-
End of the year	(135)	90	(45)	N/A

4.2 European Union Accounting Rules (EAR)

EAR 12 is dealing with employee benefits. The introduction to EAR 12 summarizes the objective of the accounting rules for employee benefits: *“The principle underlying all of the detailed requirements of this rule is that the cost of providing employee benefits should be recognised in the period in which the benefit is earned by the employee, rather than when it is paid or payable. The principal objectives of post-employment accounting are to measure the cost associated with employees’ benefits and to recognise that cost over the employees’ respective service periods. The periodic costs of post-employment plans have to be assigned properly to the periods in which the related economic benefits are received by the employers incurring these costs.”*

This principle is generally in line with the current IPSAS standard applicable to employee benefits, i.e. IPSAS 25. Also the detailed accounting requirements for post-employment benefits are to a great extent the same as in IPSAS 25, while the EU accounting rule prescribes which option available under IPSAS 25 shall be applied in EU annual accounts.⁵⁶ In particular, the EU recognises all actuarial gains and losses immediately in the statement of financial performance, in accordance with the option available under IPSAS 25. The European Commission is currently identifying the differences between its accounting rule 12 and IPSAS 39 published in July 2016 and intends, in line with its Financial Regulation, to update the EAR 12 so as to align it with the new IPSAS 39.

4.3 International Financial Reporting Standards (IFRS)

Under IFRS, mainly IAS 19, *Employee Benefits*, deals with employee benefits and especially post-employment benefits. First of all, IAS 19 does not specify the term “employees”. The definitions in IAS 19 refers to “employee services” as *“all forms of consideration given by an entity in exchange for service rendered by employees or for the termination of*

⁵⁴ The discount rate is 5%, resulting in interest expense of $100 \times 5\% = 5$ and interest income on plan assets of $80 \times 5\% = 4$.

⁵⁵ It is assumed that the return on plan assets is 10, of which 4 are included in surplus or deficit and the remainder of 6 is included directly in net assets / equity.

⁵⁶ See European Commission (2008), section 6.2, p. 10-12.

*Employment.*⁵⁷ Accordingly, IAS 19 envisages occupational pension schemes, which are oftentimes referred to as part of the second pillar⁵⁸ of retirement income. Similar to IPSAS 39, the IFRS standard discussed “state plans” as one category of pension schemes.⁵⁹ The distinction between occupational pension schemes and state plans is similar compared to IPSAS 39.

The differences between IAS 19 and IPSAS 39 are limited:⁶⁰ the four categories of employee benefits are the same in both standards as well as the fundamental accounting principles and the recognition and measurement principles. Minor differences exist in the terminology.

One important difference though is dealing with the measurement of pension obligation. Both standards require discounting the pension obligation. The underlying principles to determine the discount rate are different though:

IPSAS 39	IAS 19
<p>Para. 88: The rate used to discount post-employment benefit obligations (both funded and unfunded) shall reflect <u>the time value of money</u>.</p> <p>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.</p>	<p>Para. 83: 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 <u>high quality corporate bonds</u>.</p> <p>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.</p> <p>The currency and term of the corporate bonds or government bonds shall be consistent with the currency and estimated term of the post-employment benefit obligations.</p>
<p>Para. 141 (d) [disclosure requirements]: The basis on which the discount rate has been determined</p>	<p>[No such equivalent in IAS 19]</p>

As part of the deliberation of IPSAS 39, the IPSASB decided to leave the way for determining the discount rate unchanged. Also, the IPSASB provided more guidance how to determine the discount rate:⁶¹ *“The IPSASB considered that the time value of money may be best reflected by reference to market yields on government bonds, high quality corporate bonds, or any other financial instrument.”* Accordingly, there are conceptual

⁵⁷ See IAS 19.8.

⁵⁸ Reference is made to section 3.1 of this paper.

⁵⁹ See IAS 19.44.

⁶⁰ More differences used to exist between the IPSAS 25 as the predecessor standard of IPSAS 39, and IAS 19. In fact, the IFRS standard was significantly changed effective January 1, 2013. These changes in IAS 19 were now followed by the introduction of IPSAS 39.

⁶¹ See IPSAS 39.BC9.

differences⁶² between the determination of the discount rate in IPSAS and IFRS. The resulting discount rates might be the same, but do not have to be identical.

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 by 15% and vice versa⁶³.

4.4 ESA 2010/System of National Accounts (SNA) 2008

In this section, the regulations in the European System of National and Regional Accounts 2010 ("ESA 2010") as well as in the System of National Accounts 2008 ("SNA 2008") are summarized. Also, important differences in definitions of ESA/SNA and the accounting standards discussed in this chapter are highlighted.

4.4.1 Types of social insurance schemes and important definitions

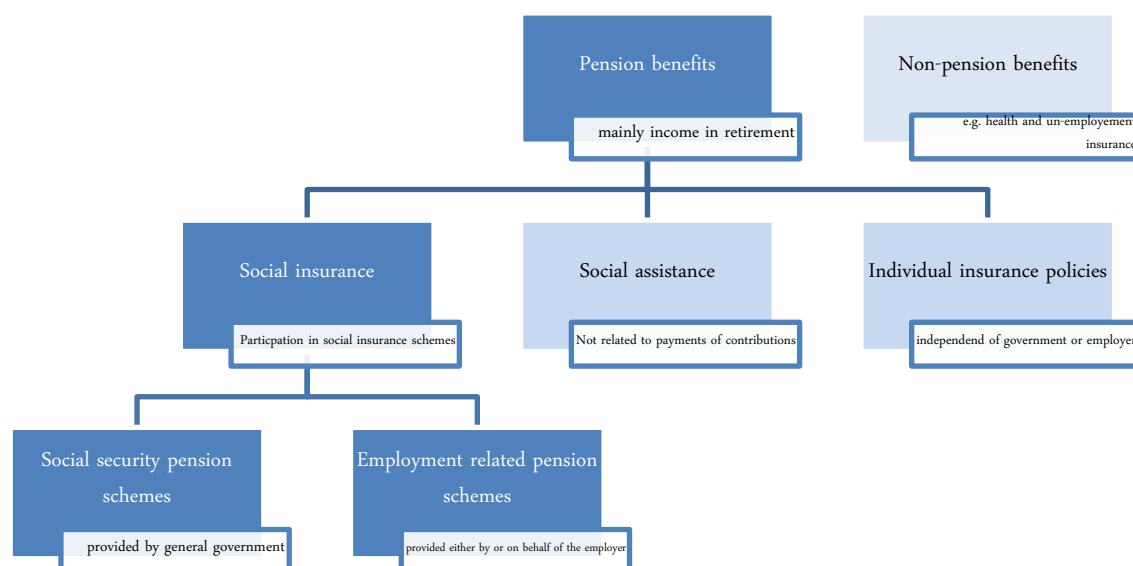
For the statistical treatment of employee benefits (pensions) Chapter 17, Social insurance including pensions, of ESA 2010 is relevant. There is a distinction in chapter 17 between (1) Social insurance benefits⁶⁴ other than pensions and (2) pensions.⁶⁵ Pension benefits might be provided to beneficiaries through social insurance, social assistance and individual insurance policies. Given the focus of this paper only social insurance pension benefits are discussed here. Chapter 17 continues with a distinction between social security pension schemes and employment related pension schemes. The table hereafter depicts these distinctions:

⁶² The IASB's concept believes that the reference to high quality corporate bonds reflects the time value of money and does not provide choices.

⁶³ More general, the rule of thumb states that a 1 percentage point reduction increase the DBO by as much percentage as the pension scheme's duration. The duration of an average pension plan is about 15 years. For plans with relative young average population, the duration might be higher than 25 years. On the other end, a pension scheme dominated by retirees might have a duration of less than 10 years.

⁶⁴ See European Commission/Eurostat (2013), chapter 17.15 - 17.39.

⁶⁵ See European Commission/Eurostat (2013), chapter 17.40 - 17.120.



In addition to these distinctions, Chapter 17 includes a definition with respect to pension schemes. The important definitions are listed hereafter:

Social security pension schemes:

Contractual insurance schemes where the beneficiaries as participants of a social insurance scheme are obliged by general government to insure against old age and other age-related risks such as disability, health etc. Social security pensions are provided to beneficiaries by general government.

According to ESA 2010, social security pension schemes are in fact multi-employer plans: General government takes over the role of providing pensions to the beneficiaries and thus relieves the employers from the risks resulting from these pension promises.

One other characteristic of social security pension schemes is the PAYG basis. Only rarely, contributions paid by the employers and employees have a savings element, i.e. no accumulation of pension assets arises.

Employment-related pension schemes: Contractual insurance schemes, either compulsory by law or encouraged by government, or where employers make it a condition of employment that employees (the beneficiaries) participate in a social insurance scheme specified by the employer to insure against old age and other age related risks. These employment-related pensions are provided to beneficiaries either by the employer or by other units on behalf of the employer.

Employment related pension schemes are categorized as either **DC plan** or **DB plan**. The main characteristics of DC plans and DB plans in GFS are the same as in the financial accounting guidance: For a DC plan, the entire risk of a defined contribution scheme to

provide an adequate income in retirement is borne by the employee⁶⁶, whereas for a DB plan the risks remain with the employer or the unit acting on behalf of the employer⁶⁷.

The comparison between DC plans and DB plans focuses on the vulnerability to changes in the benefit level: For DC plans, the benefit is determined by the current and previous contributions made to the pension scheme, including investment income and holding gains and losses earned on these contributions. For DB plans, the benefits require an actuarial estimation. Four sources of change in pension entitlements might occur⁶⁸:

- Current service cost earned in the respective period are impacted by wages and salaries earned;
- Past services increase due to the fact that the point of time of expected retirement (or death) has come one year nearer;
- The payment of benefits to retirees reduces the outstanding entitlements;
- Other factors.

The recording of stocks and flows for pension schemes is different for DC plans and DB plans, which is explained in more detail in the next section.

Lastly, there are definitions in chapter 17 for:

- **Pension administrator** - in substance, only a service function for the administration of pensions
- **Pension manager** - assumes responsibility for the pension entitlement
- **Multi-employer schemes** - same concept as in IPSAS 39.

4.4.2 Accounting for pension schemes for general government employees

SNA 2008 acknowledges that there are governments funding their pension schemes through a pay-as-you-go system.⁶⁹ Against the background of the different institutional arrangements in countries, SNA 2008 allows that only some of these pension entitlements may be recorded within the main sequence of accounts ("core accounts").⁷⁰ In addition, however, a further table has to be presented that provides information disclosing the proportion of pension provisions covered in the core accounts with some approximate estimates for the remaining schemes. SNA 2008 defines the term "supplementary table" and shows in para. 17.196 how such a supplementary table (showing the extent of pension schemes included and excluded from the SNA sequence of accounts) could be prepared. A further requirement of SNA is that a set of criteria needs to be provided to explain the distinction between those schemes carried forward to the core accounts and those recorded only in the supplementary table.⁷¹

⁶⁶ See European Commission/Eurostat (2013), chapter 17.55.

⁶⁷ See European Commission/Eurostat (2013), chapter 17.57.

⁶⁸ See European Commission/Eurostat (2013), chapter 17.65 - 17.66.

⁶⁹ See System of National Accounts 2008, para. 17.193.

⁷⁰ See System of National Accounts 2008, para. 17.191 ff.

⁷¹ Para. 17.194 in the SNA 2008 describes the sort of criteria that might be considered for explanation purposes.

Following the SNA Chapter 17 of ESA 2010 includes guidance how to record pension schemes in core national accounts. Para 17.80 of ESA 2010 states that: "In recognition of the fact that social security is normally financed on a pay-as-you-go basis, pension entitlements accruing under social security **are not shown** in the core national accounts."⁷² ESA 2010 makes use of the exemption provided by the SNA on the grounds that it was difficult in many EU countries to clearly distinguish government employee schemes from social security schemes.

Therefore, the recognition of pension liabilities under ESA 2010 depends on whether the scheme is funded or not. Following ESA 2010 para. 17.87 ff. liabilities are indeed only recorded for funded schemes, i.e. when reserves have actually been set aside to meet the entitlements accruing under the scheme. In this case, entitlements of the participants are usually recorded as they build up.⁷³ No liabilities are however recorded in the case of unfunded schemes, as for example a defined benefit pension scheme run by government for its own employees. Given the predominance of PAYG-systems for the financing of pensions in Member States, in many cases no liabilities are recorded under ESA 2010 for pension obligations.

In addition to these accounting requirements for the core national accounts, pension scheme information must be included in **supplementary tables**. These tables were introduced as part of the introduction of ESA 2010. **The supplementary table presents all accrued-to-date pension entitlements; including unfunded government pension schemes and social security pensions.** General government-funded defined benefit schemes for its own employees are therefore presented in the supplementary tables to the core accounts. Column G of the supplementary table on accrued-to-date pension entitlements in social insurance shows government schemes for its own employees where the pension entitlements do not appear in the core national accounts.⁷⁴

Hence, information about unfunded governmental pension schemes is available - although not recognized in the core national accounts⁷⁵.

When comparing statistical accounting and IPSAS 39 it becomes obvious that the ESA approach differs from IPSAS in the presentation of the information on employee benefits (e.g. statistics do not apply the net interest approach, but rather recognize the proceeds of fund assets and interest on fund liabilities according to the economic nature of these revenues and expenses).⁷⁶ Property income and the increase in the liability for benefit entitlements due to the passage of time is then allocated through an entry in "property expense for investment income disbursements". In IPSAS 39 equivalent entries are presented in surplus or deficit.).⁷⁷

⁷² See also European Commission/Eurostat (2013), chapter 17.48.

⁷³ See European Commission/Eurostat (2013), chapter 17.87.

⁷⁴ See European Commission/Eurostat (2013), chapter 17.131.

⁷⁵ See European Commission/Eurostat (2013), chapter 17.80 - 17.81.

⁷⁶ See IPSAS 39.BC16-BC22.

⁷⁷ See IPSAS 39.BC17. For further differences between IPSAS 39 and statistical accounting see IPSAS 39.BC16 to BC22.

5. Country analysis of recognition and measurement of pension obligations for government employees

5.1 Selection of countries and methodology

The following section provides an overview on how pension schemes are treated in three EU Member States: Finland, France and Germany. The selection of the countries was based on the following starting points:

- ▶ Finland: In the PwC study Finland showed a high accounting maturity at central government level.⁷⁸ Finland has experience of more than 20 years with using an accrual-based accounting approach.
- ▶ France: At central government level, France is also characterized by high accounting maturity according to the 2014 PwC Report. The French central government applies the Central Government Accounting Standards. These standards make reference to the French private sector accounting standards (*Plan Comptable General - PCG*), IFRS and IPSAS.
- ▶ Germany: Some government entities (e.g. the City State of Hamburg or the State of Hessen) have a high accounting maturity. Discussions on accounting for pensions are on-going since many years. The Standards for Accrual Accounting (*Standards staatlicher Doppik*) at state and federal government level are a modification of German Commercial Code (*HGB*).

To compare the accounting treatment of pension obligations EY analysed the legal requirements in each of the Member States, financial statements related to the subject as well as literature on the subject. Where necessary EY also reached out to EY colleagues in Member States (e.g. Finland). Direct exchanges with the standard-setters were not held.

The purpose of this analysis is to point out the current accounting practice for pension schemes of governmental employees in the light of the accounting guidance described in chapter 4.

5.2 Legal basis

Finland	Law on the State Budget (13.05.1988 /423), Degree on the State Budget (11.12.1992 /1243), Government Accounting Board resolutions
France	Central Government Accounting Standards
Germany	Regulation governing bookkeeping and accounting for federal assets (<i>Buchführungs- und Rechnungslegungsverordnung für das Vermögen des Bundes, VBRO</i>), Standards for accrual accounting (<i>Standards staatlicher Doppik</i>), German Law on Budgetary Principles (<i>Haushaltsgrundsätze-gesetz, HGrG</i>), Federal Budget Code (<i>Bundeshaushaltsordnung, BHO</i>), German Commercial Code (<i>Handelsgesetzbuch, HGB</i>)

⁷⁸ See PwC (2014), p. 92.

5.3 Budget information and statement of financial position

All Member States prepare yearly budgets at national level. These budgets are cash-based. These budgets are accompanied by statements of financial position in different shapes and forms. The discussion in this chapter focusses on the statements of financial position.

5.4 Recognition and disclosure of pension obligations for government employees

5.4.1 Finland

Finland's central government applies the Law on the State Budget in terms of accounting, preparing annual financial statements, budgeting and reporting.⁷⁹ On central governmental level a modified accruals-based approach is used⁸⁰. The financial statements consist of

- ▶ a statement of revenues earned and expenses incurred,
- ▶ a balance sheet,
- ▶ a cash flow statement and
- ▶ an annual statement of budget accomplishment.

Double entry book-keeping as well as government budgetary book-keeping are required by State Budget Law⁸¹. **Although an accrual-based accounting approach is applied on central government level, liabilities from pension schemes are not recognized but are solely shown in the notes.** As a consequence, none of the three governmental entities (Central government, The State Treasury, The State Pension Fund) recognize pension liabilities in its respective balance sheet.

Pension liabilities against the beneficiaries and the unfunded part of the pension liabilities are disclosed in the notes of the respective balance sheets of the Central Government, the State Treasury and the State Pension Fund⁸² (*Valtion Eläkerahasto*, hereafter referred to *VER*). *VER* gives further information in terms of key figures, for instance "total investments" or the "funding ratio" which considers total investments in relation to the pension liability⁸³.

All accounting entities which are part of Finland's central government, such as the ministries, pay contributions to the State Pension Fund and account for the payment similar to a defined contribution plan. It should be noted that 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 liability⁸⁴.

⁷⁹ See Ernst & Young (2012), p. 131.

⁸⁰ See Oulasvirta (2014), p. 242.

⁸¹ See Oulasvirta (2014), p. 242.

⁸² See Oulasvirta (2014), p. 247.

⁸³ See The State Pension Fund (2014), p. 2.

⁸⁴ See Oulasvirta (2014), p. 245.

The State Pension Fund system is similar to a partly funded pension scheme. The State pension liability at the end of 2014 amounted to 95.4 billion EUR. The fair value of the investments held by the State Pension Fund totaled 17.6 billion EUR, resulting in an unfunded amount of 77.8 billion EUR.⁸⁵

Another entity involved in the pension scheme environment in Finland is Keva - an independent public corporation. KEVA handles the pension matters of employees of local governments and the state. On behalf of the central government, KEVA pays out pensions to the state pensioners⁸⁶. For the avoidance of doubt, Keva is solely a service organization and is not legally liable for pension entitlements.

The **measurement basis** of the information presented in the notes is summarized hereafter: On Finnish central government level, pension liabilities are calculated by using a present value model ("long-term projected model" - LTP) which is set out by the Finnish Centre for Pensions. Several key assumptions are taken into account concerning demographic development, employment rates, retirement risk, growth in earnings, return on pension assets and inflation, etc. The discount rate, which is 2,7% for 2014, is determined by reference to an average real return on investments made by the State Pension Fund over the past 10 years.

5.4.2 France

The French Central Government applies the Central Government Accounting Standards in terms of accounting. **Although an accruals-based accounting is applied on Central Government level, liabilities from pension schemes are not recognized, but are solely shown in the notes.** The rationale for this omission is that liabilities from pension schemes are financed on a PAYG basis.

The standard for the reporting of pension obligations is Standard 13 - Commitments to be disclosed in the Notes to the Financial Statements. In this context, the French standard setter emphasizes that the accounting treatment of civil service pensions and especially the accounting treatment of pay-as-you-go retirement plans was not yet conclusively discussed. As a consequence, Standard 13 "opts for disclosing the prevailing liabilities in the notes only"⁸⁷.

In compliance with Standard 13, The French Central Government gives information on pensions in the notes of the annual financial statement, more precisely in note 35 (*Engagement de retraite de l'état*).

In order to calculate the civil servants pension commitments, the scope is restricted solely to the statutory civil servants' pensions (excluding ancillary receipts and expenses related to civil servants pensions, grants and pension expenses currently guaranteed by the Central Government or likely to be guaranteed in subsequent periods) as well as to operating expenses. Actuarial calculations are based on the following:

⁸⁵ See The State Pension Fund (2014), p. 2.

⁸⁶ See Oulasvirta (2014), p. 245-246.

⁸⁷ See Ministère des Finances et des Comptes (2016), p. 185.

- The French central government measures employees' benefits and retirement benefits under the current Central Government employees' pension scheme using the "Projected Unit Credit Method" (PUC method).
- With regards to the valuation method, Central Government Accounting Standard 13 (hereafter referred to as "CGAS") follows IPSAS 25. Based on the current literature no plans have been identified for an update to IPSAS 39.
- The pension calculation of current employees takes into account salary trends and career trends
- Retirement dates are calculated using the retirement rates observed at the measurement date.
- The indices and benefit levels used to calculate future pension benefits are the ones observed at the measurement date, adjusted to account for the increase in average wages.
- Pension obligations must be discounted at an interest rate which is determined by reference to the yield on long-term government bonds with maturity dates matching the duration of the related commitments.⁸⁸ Pension liabilities on central government level are discounted for the fiscal year 2015 by an interest rate of 0,18%.

5.4.3 Germany

According to the Act of Modernization of Budget Principles Law (*Haushaltsgrundsätze-Modernisierungsgesetz, HGrGMoG*) German governmental accounting may follow two different approaches:

- A cash-based approach or
- an accruals-based approach in compliance with standards based on German Commercial Law (*Standards staatlicher Doppik, SsD*).⁸⁹

5.4.3.1 Federal government balance sheet on Central Government level

The German Federal Government follows a cash-based approach. Besides the cash accounting on current revenue and expenditure (*Haushaltsrechnung*), the Federal government accounting arrangements are accompanied by a balance sheet (*Vermögensrechnung*). The legal basis for this balance sheet is the mandatory draft regulation governing bookkeeping and accounting for federal assets (*Buchführungs- und Rechnungslegungsverordnung für das Vermögen des Bundes, VBRO*). Accordingly, there is a specific legal basis for the balance sheet, i.e. it is not an integrated type of balance sheet following the accounting regulation referred to in chapter 4. The balance sheet includes liabilities from pension schemes for employees of Federal government, both for retirement payment as well as payments for medical aid (*Beihilfen*).⁹⁰ The provisions for pensions and other liabilities covers over 309.100 current civil servants ("Beamte") and over 604.500 pension beneficiaries.⁹¹

⁸⁸ See Ministère des Finances et des Comptes (2016), p. 189.

⁸⁹ See Ernst & Young (2012), p. 161.

⁹⁰ See Bundesministerium der Finanzen (2016), p. 24.

⁹¹ See Bundesministerium der Finanzen (2016), p. 25.

The **measurement basis** is as follows: Liabilities for retirement payments and medical aid are determined in accordance with actuarial principles on the basis of an interest rate for accounting purposes which is based on yields for listed federal government securities issued by the German Bundesbank with a remaining term to maturity of 15-30 years.⁹² The interest rate used for 2015 was 2.65 %.⁹³ With regards to the valuation method, the following assumptions are taken into account:

- Pension trend,
- Salary trend,
- Other increases in costs⁹⁴

Liabilities amount to a total of 584 billion EUR in 2015.

5.4.3.2 Accruals-based approach - State Government

Whilst no accruals-based accounting system is applied on German federal government level, the situation is different on state government level: Hamburg, as well as the states of Bremen, Hessen und North Rhine Westphalia, have decided to apply an accrual-based accounting system. On state government level, when the option to prepare an accrual-based annual financial statement was chosen, liabilities from pension schemes have to be recognised. E.g. the German City State of Hamburg complies with these requirements and recognises the pension obligations in its financial statements.

Pension obligations are reported at the best estimate of the expected settlement amount. Pension costs are calculated on the basis of actuarial valuation and take into account cost increase from salary trends and pension increases. Standard mortality tables are applied.⁹⁵

To calculate the present value of the pension obligation, the so called "current value method" is applied. This method is taken from German tax law and is neither acceptable under German Commercial Code (HGB) / German Standards for Accrual Accounting (SsD) nor under IPSAS 39.

Pension obligations must be discounted at an interest rate which is determined by listed Federal Government securities issued by the German Bundesbank with a remaining term to maturity of 15-30 years to better reflect the specific government budget refinance conditions.⁹⁶ In contrast to this requirement, Hamburg applies a discount rate of 6%, which is the fixed discount rate that must be applied in German tax books. This again is a departure from the Standards for Accrual Accounting. Hamburg provides arguments for this approach in its Risk and Opportunity Report:⁹⁷

- ▶ Minimal changes concerning the interest rate would lead to significant changes in the pension liabilities amount

⁹² See Kompetenzzentrum für das Kassen- und Rechnungswesen des Bundes (2014), p. 5.

⁹³ See Bundesministerium der Finanzen (2016), p. 24.

⁹⁴ See Kompetenzzentrum für das Kassen- und Rechnungswesen des Bundes (2014), p. 5.

⁹⁵ See Heubeck (2005).

⁹⁶ See Standards für die staatliche doppelte Buchführung (2014), p. 41-42.

⁹⁷ See Geschäftsbericht der Freien und Hansestadt Hamburg (2014), p. 41.

- ▶ A variable interest rate in compliance with the Standards for Accrual Accounting would imply huge fluctuations in the statement of financial position as well as in the annual budget due to the fact that in the statement of financial position as well as in the annual budget the same principles are used
- ▶ By using a fixed discount rate impacts on budget planning can be avoided and therefore lead to a stabilising influence

The accruals for pension and benefit obligations totalled 28 billion EUR.⁹⁸

Summary

- ▶ Finland and France do not recognize pension liabilities. They are solely disclosed in the notes of their annual financial statements, which differs from IPSAS 25/39.
- ▶ Germany does record pension obligations on federal government level but only in terms of a not-integrated, supplementary balance sheet, which differs from IPSAS 25/39. On state government level 4 out of 16 states decided to prepare an accrual-based financial statement and thus to recognize pensions liabilities in accordance to Standards for Accrual Accounting (SsD). SsD deviate in several aspects from IPSAS or IFRS, especially with respect to the determination of the discount rate.
- ▶ Currently the applied discount rates for the calculation of pension obligations differ strongly from country to country. In general, the usage of fixed discount rates as well as rates derived from specific financial instruments with similar duration can be observed.
- ▶ Valuation methods differ considerably as well, of which some differ from IPSAS 25/39.

⁹⁸ See Geschäftsbericht der Freien und Hansestadt Hamburg (2014), p. 25.

6. Discussion of matters relevant for a European harmonization of accounting for employee benefits for government employees

6.1 Matters for Discussion

The following matters for discussion include recommendations for the way forward regarding the development of an EPSAS on employee benefits (pensions). Overall, as a follow-up from the results of the issues paper, EY recommends a discussion among the MS of the matters listed hereafter. We included matters related to recognition and measurement that were subject to significant discussions when applying IPSAS or IFRS as well as observations from the country analysis. These matters are often brought up to prevent a full recognition of pension liabilities.

Diversity in the main features of the pension schemes

Chapter 3 illustrates the diversity in the main features of the pension schemes, e.g. with respect to the pension age and the determination of the retirement income. Harmonization of accounting for employee benefits for government employees does not envisage to eliminate the diversity in the pension plans, but rather to harmonize the accounting treatment for the important features in the pension schemes. Principle based accounting concepts are capable of providing reliable and understandable pension accounts even if significant diversity in the main features of the pension schemes exist. As such, IPSAS 39 as well as IAS 19 provide a framework that allows comparing the particular risks resulting from pension plans and allows projecting future cash flows. Comparability might also be significantly enhanced by disclosure information. The estimation process becomes transparent and reliable if and when the main features and assumptions are disclosed. The compulsory disclosure information might encompass other information that is deemed important for MS, such as disclosing regulations in the pension plans with respect to transfer of pension entitlements amongst MS.

Recognition of pension obligations results in a significant increase in liabilities

The pension obligations in the MS that are subject to recognition are indeed significant. However, there is more than one way how (full) recognition might be achieved. Next to the IPSAS 33 approach we have listed alternative options in the following table. Please note that these options are not in compliance with IPSAS.

Title	Details	Reference
Accounting approaches for recognition		
IPSAS 33	Where a first-time adopter has not recognized liabilities for defined benefit plans and other long-term employee benefits under its previous basis of accounting, it is not required to recognize and/or measure them for reporting periods beginning on a date within three years following the date of adoption of IPSASs. ⁹⁹	IPSAS 33.36 (d)

⁹⁹ The adoption of this exemption implies that fair presentation and compliance with accrual basis IPSASs during the period of transition is affected (see IPSAS 33.33).

"Fresh start accounting"	At a given point of time, Member States commence recognizing liabilities from current service cost, while liabilities from the past (referred to as past service cost) remain unrecognized. This means that a liability is build up over time in the future, while the percentage of unrecognized pension liabilities diminishes.	N/A
"Virtual pension assets"	Under this concept, pension liabilities are recognized in full for past and future service cost. The contra account is a "virtual pension asset" account. These virtual assets represent expected future income from taxes or contributions. Whenever income is obtained and either used for pension payments or for funding of pension plans, the virtual pension assets are amortized insofar in surplus or deficit. At the point of time of initial recognition, this concept avoids recognizing pension liabilities by debiting net assets / equity. Rather, the amortization of the "virtual pension assets" is flowing via surplus or deficit into net assets / equity over a long time.	N/A
Recognition based on funding	Under this concept, a pension liability is recognized for services provided in the past (past service cost) whenever a funding is made. This means that this concept envisages that pension plans on a PAYG basis are replaced by funded pension plans over time. No recognition of pension liabilities is required prior to funding. In order to ensure consistency among MS, mandatory funding requirements might be useful, e.g. 2% funding each year.	N/A

Complexity in measuring the pension liability

The "one and only" measurement concept for pension liabilities does not exist. Rather, measuring the pension liability is a process for which a considerable number of alternatives exist. We listed the main alternatives in the table below, which should be subject to discussion amongst MS.

Also, as a matter of lesson learned from the country analysis, the relevant pension liabilities are in fact already measured every year in these respective countries. For example, although the pension liability is not or not fully recognized in the respective financial statements of Finland, France and Germany, the amount of pension liability is presented somewhere - either in the notes or in other accompanying financial information., countries developed a way to measure the obligations. Looking forward, it is however important to ensure consistent measurement concepts and sufficient disclosure information with respect to the assumptions (e.g. the discount rate) applied.

With regards to measurement we have identified the following additional discussion points:

Title	Details	Reference
Measurement of pension liabilities		
Fluctuation from remeasurement of pension liabilities and assets	<ul style="list-style-type: none"> • The measurement of pension liabilities based on the present value of the benefit obligation and of plan assets based on the fair value is vulnerable to significant fluctuations. What about having a different measurement basis that help reduce fluctuation, e.g. a present value based on a frozen discount rate or acquisition cost for plan assets? • Alternatively, if measurement fluctuations are accepted, will EPSAS require an immediate and full recognition of remeasurement effects or is there a smoothing process in place, e.g. recognition of remeasurement effects over future periods? 	4.3
Determination of the discount rate -	<ul style="list-style-type: none"> • How prescriptive should EPSAS be? How much freedom should the guidance leave to MS? • Is it suitable for EPSAS purposes to determine the discount rate on currency zone level or is a country level more appropriate? • What is the understanding in EPSAS of “high-quality corporate bonds”? Is “high-quality” an absolute (global) or relative (local) concept? • Who determines the discount rate? Is it done by each entity or is the discount rate determined centrally, e.g. by the European Central Bank? 	4.3
Net interest method	<ul style="list-style-type: none"> • IPSAS 39 requires the application of the net interest method, which results in determining interest income from plan assets by applying the (low) DBO discount rate. This is a matter of convention and might be prescribed differently in future EPSAS. 	4.3

6.2 What are the consequences for a possible convergence between IPSAS and ESA?

Given the fact that for social security pension schemes financed on a PAYG basis, pension entitlements for general government employees accruing under social security are not shown under ESA 2010 in the core national accounts, convergence between IPSAS 39 and ESA is not possible. As outlined in chapter 4.1.4 IPSAS requires that even for pension schemes that are financed on a PAYG basis the recording of a liability is a requirement. In IPSAS 39, the question if and how of pension plan is funded does not affect the recognition of a pension liability. The disclosure of pension liabilities for unfunded government pension schemes in the supplementary tables under ESA is not sufficient to achieve convergence between the two frameworks.

Convergence between IPSAS and ESA is only achieved for funded pension schemes, where both IPSAS and ESA require the recognition of the pension entitlements. Under both frameworks entitlements of the participants are usually recorded as they build up.

The measurement guidance for the pension liabilities included in the supplementary tables is founded, in principle, on the same basis as IPSAS 39¹⁰⁰, e.g. the actuarial calculation is based on the present value of the pension entitlement taking into consideration future salary trends. However, current ESA 2010 also shows details that are not in line with IPSAS 39, e.g. with respect to the discount rate¹⁰¹.

A further difference between IPSAS 39 and ESA is the presentation of the information on employee benefits. In contrast to IPSAS statistics do not apply the net interest approach, but rather recognize the proceeds of fund assets and interest on fund liabilities according to the economic nature of these revenues and expenses. Property income and the increase in the liability for benefit entitlements due to the passage of time is then allocated through an entry in "property expense for investment income disbursements". Under IPSAS 39 equivalent entries are presented in surplus or deficit.

6.3 EY's recommendation on the way forward

First, the way forward recommended by EY suggests the discussion of the matters listed in the previous chapters 6.1 and 6.2. The most important matter for discussion out of the three matters suggested by EY is the recognition matter. EY believes that irrespective of the funding mechanism and taking into account the international (public sector) accounting literature it may be decided in the future that pension liabilities need to be recognized. The accounting concept how the (full) recognition can be attained should be in the centre of the discussion amongst the MS. The alternative recognition concepts to be discussed amongst the MS should be as broad as possible. In the end, in order to achieve comparability, MS should agree on a single recognition concept.

Second, **the effects** from the alternatives presented in the matters for discussion on the statement of financial position **should be estimated**. For example, based on the alternatives presented, the discount rate will vary within a considerable range - the lower the discount rate, the higher the DBO. Another example refers to the alternatives for the

¹⁰⁰ See European Commission/Eurostat (2013), mainly in chapter 17.162 - 17.183.

¹⁰¹ See European Commission/Eurostat (2013), chapter 17.166: "The discount rate can be seen as equivalent to the expected risk-free rate of return on assets held by a pension scheme."

recognition of pension liabilities, which would result in significantly different ratios in the statement of financial position. An estimation of the effects creates confidence in the accounting concept that is desired. Also, estimation and illustration of the accounting concept enhances the understandability of the treatment of pension obligations. And a projection of the relevant pension numbers in the chosen accounting concept contributes to the acceptance of any new accounting concept.

Overall, fair value based recognition and measurement of pension obligations will shed more light on the MS's underfunding and the expected future impacts, which is indeed the core objective of high quality accounting standards. In accruals-based accounting systems the negative impact from the recognition of pension liabilities might be mitigated as discussed in chapter 6.1.2.

7. Implications that should be noted for other employee benefits and social benefits from the conclusions on pensions

In case that EPSAS would follow the principles of IPSAS 39, liabilities would probably also have to be accounted for other employee benefits such as post-employment life insurance, post-employment medical care, long-service/sabbatical leave, jubilee or other long-service benefits even if they are settled on a “pay as you go” basis. However, from a materiality perspective it has to be considered that liabilities for other employee benefits are less material than pension liabilities.

In case that exemptions are provided for accounting for pensions under EPSAS it would need to be discussed whether such exemptions should also be made available to the accounting of other employee benefits.

With regards to social benefits it has to be noted that employment-related social insurance schemes such as government pension benefits operate within a government-internal employer-employee relationship, whereas social security schemes do not. This major conceptual difference leads to differing accounting approaches. Therefore, from a conceptual perspective no implications should be derived from accounting for employee benefits for social benefits. However, similarities exist between accounting for fully funded employee benefits and social benefits that are similar in practice to insurance contracts. However for social benefits insurance schemes that are fully funded the IPSASB envisages to refer to accounting for insurance contracts, namely IFRS 4.

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