Approaches for Return-Based Pension Plans
Issues Paper

Objective

1 The purpose of this session is to update EFRAG TEG members on the development related to the assessment of various alternative accounting approaches for return-based pension plans and to ask for EFRAG TEG members' views on the development of these assessments.

History of paper

2 EFRAG TEG has previously considered a paper illustrating the effects of various approaches to account for return-based pension schemes. At the meeting, the EFRAG Secretariat illustrated the various approaches on a pension scheme where the beneficiary would receive the higher of the actual return and a guaranteed return at retirement. The EFRAG Secretariat illustrated the various approaches on the following cases:

(a) A case where the (expected) actual return is higher than the guaranteed return in some years and lower than the guaranteed return in other years and where the employee's service in later years will lead to a materially higher level of benefit than in earlier years. In this case, the entity holds the assets on which the actual return is determined.

(b) A case similar to the first case, but where the contributions to the pension scheme are constant (i.e. IAS 19 will require the benefits to be attributed to periods of service based on the plan's benefit formula rather than on a straight-line basis).

(c) A case similar to the first case, but where the entity does not hold any plan assets.

Changes to the analysis

3 EFRAG PAP, EFRAG TEG, the EFRAG User Panel and the EFRAG Academic Panel have discussed issues related to the paper. Based on this input the following changes have been made:

(a) The paper considers the results of applying IAS 19 or its relevant elements in other approaches both with and without a 'backloading correction' – that is, the straight-lining of the benefits over the service period. At the July EFRAG PAP meeting, members asked to isolate the effect of the backloading correction.

(b) As per EFRAG TEG request, the paper includes a summary of the assessment of the different approaches in a table format.

(c) The prior examples that were used to illustrate the effects of the various approaches included some extreme assumptions. The current assumptions

are more realistic. The results are now illustrated by graphs rather by numeric tables, as requested by EFRAG TEG.

(d) The analysis of the various approaches adds emphasis on whether a plan is underfunded, as described in paragraph 28(a)(iii) below. The EFRAG Academic Panel has indicated that this is the major concern in relation to pension accounting.

(e) The assessment criteria (see paragraph 28 below) have been slightly amended:

(i) It has been clarified that the financial statements should not be a prediction of the final cash outflows, but reflect the status at the reporting date.

(ii) It has been clarified that the assessment of a deficit in a pension plan is based on cash flows and not whether there would be an accounting deficit.

(iii) The assessment of stewardship has been amended. Before stewardship was assessed based on whether the pattern of pension expenses would reflect the pattern of benefits from the employee service. This would occur if the pension cost would result in a constant or increasing pension cost (over the period an employee is working for an entity). Based on comments from members of the EFRAG Academic Panel and the EFRAG PAP, now the stewardship objective is served if the service cost reflects:

- The additional salary that the entity should have paid to the employee, if the entity had not offered the pension benefit. This would allow users to assess and compare salary levels. If it is assumed that the individual employee would not be able to receive a higher return on a pension scheme than that promised by the entity, it would mean that the total accumulated pension cost recognised should equal the payments made by the entity plus the value of the guaranteed return. At this stage, EFRAG Secretariat has focused only on the measurement of the liability under the different approaches and has not yet considered how the change in value in the period would be presented between profit or loss and OCI.
- How the risk related to the pension is being managed. That is, financial statements should reflect to what extent the asset allocation has achieved an appropriate coverage of the pension obligation. The statement of financial position is assessed to provide relevant information for this assessment when the pension obligation is measured similarly, method wise, to plan assets.

(iv) It has been added that relevant information should not only be useful for predicting expected future cash outflows, but also their variability.

(f) The fulfilment value approach is now illustrated both with and without considering the employer's future contributions.

Question for EFRAG TEG members

4 Do EFRAG TEG members have any comments to the changes listed in paragraph 3 above?

Approaches

5 The paper considers the following approaches, in addition to the current IAS 19:

(a) An approach under which the pension obligation is measured by reference to the underlying assets.

(b) An approach under which the estimated benefits are capped or set equal to the rate used to discount the liability.

(c) An approach under which the obligation is measured at fair value.

(d) A fulfilment value approach similar to IFRS 17 *Insurance Contracts*.

6 EFRAG TEG and EFRAG PAP have previously considered and rejected an approach where the plan assets are measured by reference to the obligation. This approach has therefore been removed.

7 Similarly, the bifurcated net fair value approach (defined contribution approach) that was included in the previous version of the paper has been removed as EFRAG PAP members at the July 2017 meeting considered that this model was a variant of the fair value model.

8 At the July 2017 PAP meeting, it was also suggested to investigate an approach where the benefits are always projected using the discount rate, instead of simply capping them. The two alternatives to be substantially similar and have been jointly assessed.

9 The approaches listed in paragraph 5 are further described below.

An approach under which the pension obligation is measured by reference to the underlying assets

10 One of the problems with the IAS 19 approach is that the measurement does not fully reflect the covariance between the plan assets and the pension obligation for return-based plans.

11 One way to address this alleged mismatch could be to measure the liability of a return-based pension plan by reference to the fair value of the plan assets.

12 A model where the obligation is measured by reference to the plan assets was proposed in the IFRIC Draft Interpretation D9 *Employee Benefit Plans with a Promised Return on Contributions or Notional Contributions* from 2004 ('D9').

13 D9 required entities to measure benefits with a variable return at the fair value of the assets upon which the benefit is specified. If a pension plan included a minimum guaranteed return, the entity would also have to measure that promise using the IAS 19 model. The entity would then compare the two obligations, and if the variable return obligation exceeded the guaranteed return obligation, the entity would recognise an additional liability over the amount for the minimum return obligation determined under IAS 19.

An approach under which the estimated returns are capped or set equal to the discount rate specified under IAS 19

14 A reason for the problem described above in paragraph 10 is that benefits are projected using the expected rate of return (or in this example, the higher of the expected and guaranteed return rate) and then discounted using a high quality corporate bonds rate.

15 A simple solution would be to cap the projection at the discount rate, or always use the discount rate to project the benefits.

An approach under which the pension obligation is measured at fair value

16 It could be argued that measuring both plan assets and pension obligation at fair value would reduce or remove accounting mismatches.

17 There are, however, many ways in which such an approach could be applied. In this paper, an approach with the following characteristics is considered:

(a) All the elements of the pension obligation are measured at fair value. A plan can be fair valued in its entirety, or one of the promises in a 'higher of' plan would be bifurcated and accounted for as a separate financial instrument. In the case considered in this paper, this would mean that it should be determined whether to treat the plan as a variable return plan with a fixed return option or as a fixed return plan with a variable return option.

(b) Only the liability for the completed service period is considered. It is possible to measure the full plan at fair value. However, it may be considered most relevant. So, rather than allocating the full fair value on a straight-line basis, the fair value could be calculated under the plan formula.

(c) Own credit risk and the likelihood of modifications or curtailments are excluded from the fair value. IFRS 13 *Fair Value Measurement* defines fair value of a liability as the price that would be paid to transfer the liability in an orderly transaction. Accordingly, a 'pure' fair value measurement should, for example, take into account the likelihood of any possible modification to the terms of the plan. In its Discussion Paper *Preliminary Views on Amendments to IAS 19 Employee Benefits* (March 2008), the IASB argued that a measurement that would reflect possible changes in the plan would misrepresent the entity's obligation.

(d) Similar to IAS 19, non-vested benefits are recognised, but the measurement will reflect the likelihood that the benefits do not vest. This likelihood is incorporated in the measurement based on an expected value approach. Measuring a pension obligation at fair value would mean that the measurement would be based on an expected value approach where the probability of different outcomes is reflected in the measurement. In cases where only a small number of employees are covered by a pension plan, this measurement may not be the best estimate of what will be the ultimate cost of providing the post-employment benefit. When considering a fair value approach, it could therefore be decided to include actuarial assumptions in the measurement on a 'most likely outcome' basis.

(e) The fair value is estimated by adding the fair value of the plan assets and the guaranteed return component. The guaranteed return component is measured based on an expected value approach. When a pension plan includes a 'higher of' option (e.g. the employee will receive the higher of the actual return on pension assets or 1 per cent return), the modified fair value could reflect the most likely outcome (e.g. the actual return or the 1 per cent return) or reflect the value of the option in the measurement.

(f) The measurement is not adapted to reflect how the pension obligation will be settled. Unless, an entity is going to pay another party to transfer the obligation, a fair value measurement would not reflect how the obligation is settled, but a modified fair value could reflect this. Such a modified fair value could make use of relevant market factors when, for example, considering the time value of money and at the same time take into account how the entity is most likely to settle the obligation.

A fulfilment value approach similar to IFRS 17 Insurance Contracts

18 There are a number of similarities between the accounting for insurance contracts in IFRS 17 and pension plans in scope of this project including the following:

(a) Both insurance contracts and the pension plans in the scope of this project may have a coverage period for many years (long-term);

(b) Both include actuarial estimations about financial and non-financial risk. There are estimations on cash inflows and outflows over the life of the insurance contract or pension plan which are discounted; and

(c) There are insurance contracts whereby in addition to insurance coverage, the policyholder receives a benefit based on the returns from assets. Therefore, there is a link between the promise and the expected returns on the assets. This is the case for the pension plans in scope of this project.

19 Accordingly, an alternative approach to measure pension obligations could be based on fulfilment cash flows, similar to IFRS 17 *Insurance Contracts* ('IFRS 17').

20 In IFRS 17, the fulfilment cash flows are defined as an unbiased and probability-weighted estimate (i.e. expected value) of the present value of future cash outflows minus the present value of future cash inflows that will arise as the entity fulfils the insurance contract. It includes a risk adjustment for non-financial risk. In calculating the liability, the entity would estimate all cash inflows and outflows that may arise from the coverage period of the contract. The risk adjustment represents the uncertainty about the amount and timing of the cash flows as the entity fulfils the contract.

21 At inception, the residual amount from calculating the fulfilment cash flows, provided that it is above zero, is the contractual service margin ('CSM') and this is the unearned profit that the entity will recognise in the profit or loss statement as it provides services under the insurance contract. The CSM could be seen as 'deferred income' on the statement of financial position and recognised in profit or loss over the life of the contract.

22 When determining the fulfilment cash flows, current discount rates are used and the entity needs to look at a full range of possible outcomes. The fulfilment cash flows are updated at each reporting date.

23 The current discount rates should reflect the characteristics of the cash flows including liquidity characteristics and should be consistent with observable current market prices (if any) for financial instruments that have similar characteristics to insurance contracts. For cash flows that vary based on the returns on underlying items, the discount rate should reflect that variability.

24 As stated above, the fulfilment cash flows also include a risk adjustment reflecting the uncertainty in the amount and timing of the cash flows. The risk adjustment is measured separately from the cash flows and the entity can choose an estimation technique to measure it.

25 The CSM is reported as a liability and an amount of CSM is recognised in profit or loss to reflect the services provided in a period. On subsequent measurement, any changes that relate to future periods adjust the CSM. Any changes which relate to the current period are charged to profit or loss, e.g. the unwinding of the discount rate and release of part of the CSM on the basis of the passage of time. If the CSM goes below zero, it is immediately recognised in profit or loss.

26 The fulfilment cash flows are reported as a liability. On subsequent measurement, any changes to the cash flows and risk adjustment that relate to future periods adjust the fulfilment cash flows. Any changes which relate to the current period, e.g. the unwinding of the discount rate, release of cash outflow provisions and changes to the risk adjustment are recognised in comprehensive income.

27 More information about IFRS 17 is available on the IASB's website.

Features of useful information about pensions

28 To assess the approaches listed in paragraph 5, the following list of features of useful information (see paragraph 3(e) above) has been used:

(a) Is the information useful for predicting future cash flows (estimated value and spread)?

(i) Does the information reflect how the pension liability will be settled? The measurement of the pension liability should reflect the value of the

liability as of the balance sheet date. To be most useful for predicting future cash outflows, the measurement should reflect the way the entity settles such liabilities.

(ii) Is the information relevant for predicting the volatility in future cash flows? In a case where the pension promise would be the return on the plan assets, the only cash outflows occur when the employer is making its contribution. However, if the plan assets and the pension obligation were measured differently, a gain or a loss would be reported from the pension plan in each financial year (in some years it would be a gain in other years it would be a loss). To assess whether the information is relevant for predicting the volatility in future cash flows, it will therefore be assessed whether economic covariances that impact future cash flows are reflected in the measurement. In this case, whether the portion of the pension obligation directly linked to the value of plan assets and the plan assets are measured similarly.

(iii) Does the information reflect a deficit in the pension plan? That is, is it reflected if the outflow of resources an entity would have when settling the pension obligation is expected to be higher than the inflows it would receive from selling the plan assets at that moment?

(iv) Does the accumulated amount recognised in comprehensive income equal the accumulated amount of net cash flows? It could also be argued that if comprehensive income (or profit or loss) should be used to predict future cash flows, there should ultimately be a link between comprehensive income (or profit or loss) and outflows of resources. The link would generally exist when preparing financial statements in accordance with IFRS. However, IFRS 2 *Share-based Payment* does not reflect the relationship.

(b) Is the information relevant for assessing stewardship? In this case, information is assessed to be relevant for assessing stewardship if it provides information about:

(i) The additional salary, the entity should have paid to the employee, if the entity had not offered the pension scheme to the employee. This would allow users to assess and compare the salary levels. If it is assumed that the individual employee would not be able to receive a higher return on a pension scheme than that promised by the entity, it would mean that the total accumulated pension cost recognised should equal the payments made by the entity plus the value of the guaranteed return. (Currently, the assessment of the various approaches does not include an evaluation of this feature – see paragraph 3(e)(iii) above).

(ii) How the risk related to the pension is being managed. That is, financial statements should reflect to what extent the asset allocation covers the pension obligation. The statement of financial position is assessed to provide relevant information for this assessment when the pension obligation is measured similarly to plan assets.

(c) Is the information useful for assessing solvency? If the measurement of a pension obligation when it is due does not reflect the amount needed to settle the liability, the measurement may not be useful for assessing solvency. Similarly, if a pension asset is used to settle a pension obligation, the net amount should reflect any additional amount that would have to be transferred to settle the liability or any amount that would be left when the liability has been settled.

(d) Does the approach result in a faithful representation?

(i) Is the information presented complete? To be complete, elements that meet the definition of a liability (and the supporting guidance) and the recognition criteria should be included in the statement of financial position. The revised Conceptual Framework will (likely) define a liability as a present obligation of the entity to transfer an economic resource as a result of past events. 'As a result of past events' means that the entity has performed an activity or received the benefits that will or may oblige it to transfer an economic resource that it would not otherwise have had to transfer. An entity has a present obligation when the entity has no practical ability to avoid the transfer.

(ii) Would it generally be possible to make reliable estimates?

(iii) Would economically similar pension plans be accounted for similarly? That is, when applying the approach, would it be possible that two arrangements that are economically similar would be accounted for differently?

(e) Would the measurement of the assets/liabilities be prudent, in particular, would there be a higher threshold to reduce a liability (or increase an asset) than to increase a liability (or decrease an asset) – an application of 'asymmetric prudence'?

(f) Will the information be comparable? If a new approach for accounting for types of pension plans is introduced, this may reduce comparability between financial years of an entity (unless restatement of prior financial statements is made). Whether the information will be comparable with past years will therefore partly depend on the transition requirements, but also on whether it would be possible to gather the information necessary to restate previous years in accordance with the new requirements. It should also be possible to compare the financial statements of different entities. In this regard, it should accordingly be assessed whether the new approach provides information that is comparable with the information resulting from applying IAS 19 to pension plans outside the scope of the project. In assessing this, it is considered whether similar elements of pension plans are accounted for similarly under a proposed new approach and IAS 19. For example, if a return-based pension plan included a minimum return guarantee, would the information under the alternative approach and IAS 19 be similar in those circumstances when the guarantee would *de facto* determine the amount to pay (so that the return-based element is insignificant)?

(g) Is the information easy to understand? Information is assessed to be easy to understand if it is easy to explain what it means. In addition, it is assessed that information that can be explained by other means than how it is 'computed' is easier to understand than information that can only be explained by the manner it is 'computed'.

(h) Is the information costly to provide? Information is assessed to be costlier when it needs to be updated in subsequent accounting periods. Also, information is costlier the more judgement is involved in providing it. Finally, it is assed that when many input are required, the information will be costlier to produce.

29 As the first step of the project is focusing on the measurement of assets and liabilities (and effect on total comprehensive income), the list does not include any features related to the information presented in profit or loss. At a later stage, additional features could be included.

30 The analysis of the various approaches is based on a pension scheme with the following characteristics:

(a) The scheme promises the beneficiary the higher of the actual return on invested assets and a guaranteed return.

(b) The guaranteed return is a fixed percentage per year of the contributions made to the pension scheme by the sponsor and the beneficiary.

(c) The guaranteed return only applies to the total return on the contributions made. Accordingly, the actual return may be lower than the guarantee in some years, but over the total service period, the total actual return is higher than the total guaranteed return, the final benefit is based on the actual return.

(d) The beneficiary receives a lump-sum payment at retirement – there is no option to convert it in an annuity from retirement.

(e) The sponsor does not have a practical ability to curtail the benefit or terminate the plan.

(f) The contributions to the plan increase over time.

(g) Contributions from the employee are discretionary.

Assessment

IAS 19 – Defined benefit plans

31 Before assessing the suggested approached in paragraph 5 against the criteria listed in paragraph 28, a point of reference is established by first assessing the IAS 19 guidance. Accordingly, paragraphs 41 - 42 below include the assessment of applying the IAS 19 guidance on the pension schemes with the characteristics listed in paragraph 30 against the criteria listed in paragraph 28. Paragraphs 33 - 37 describes the circumstances when application of IAS 19 would not reflect that a plan is underfunded as described in paragraph 28(a)(iii). As mentioned above, input received from the academic panel suggested that this might be the most important characteristic to examine.

32 Paragraph 70 of IAS 19 states that an entity, when determining the present value of its defined benefit obligations and the related current service cost shall attribute benefit periods of service under the plan's benefit formula. However, if an employee's service in later years will lead to a materially higher level of benefit than in earlier years, an entity shall attribute benefit on a straight-line basis. The attribution of benefits on a straight-line basis is termed the backloading correction in this paper. Members of the EFRAG PAP suggested that the backloading correction could be the cause of some of the problems resulting from applying current IAS 19 guidance on return-based pension schemes. Paragraphs 38 - 40 describes the effects of the backloading correction.

Reflection of inadequate funding

33 When applying the IAS 19 guidance for defined benefit obligations to the types of plans described in paragraph 30 above, the pension obligation may be measured at a lower amount than the plan assets – even though the pension obligation cannot be settled by a lower amount than the plan assets.

34 When no backloading correction is included and the total actual return is expected to be lower than the total guaranteed return, the pension obligation will be measured at a lower amount than the plan assets when the actual return on made contributions to date is higher than the total discounted guaranteed return on made contributions. There are two scenarios in which this may be the case:

(a) The first scenario is when the guaranteed return is higher than the actual return and the discount rate is higher than the guaranteed return. This could be the case if the contributions are invested in government bonds. When calculating the pension obligation, the fact that the discount factor would be higher than the guaranteed return could reduce the measurement of the

obligation to an amount lower than the fair value of the plan assets. It could be argued that, generally, the return on high-quality corporate bonds would be lower than the actual return. However, the data collected for the illustrations in the Appendix shows that this can happen in some years.

(b) The second scenario is when the actual return in the past has been higher than the guaranteed return, but the total guaranteed return is expected to be higher than the total actual return. In such cases, the measurement of the pension obligation is based on the guaranteed return and may thus be lower than the fair value of the plan assets.

In both cases, the asset ceiling will result in the pension liability being measured at nil. However, this may not reflect the fact that it is not expected that the plan assets will be sufficient to finance the retirement payment.

35 When the backloading correction is included (and the actual return is expected to be lower than the total guaranteed return), it not so simple to describe when the pension obligation will be measured at a lower amount than the plan assets. However, the situation is most likely to arise:

(a) In the first years an employee is providing services that will entitle that employee to receive pension benefits and the discount rate is high; and/or

(b) When the actual return in the past has been higher than the guaranteed return, but the total guaranteed return is expected to be higher than the total actual return.

36 In some cases, the pension obligation will be measured at a lower amount than the pension assets. However, the asset ceiling will result in the (net) pension liability being measured at nil. For the situation where no backloading correction is included and the total actual return is expected to be higher than the guaranteed return, the pension obligation will be measured at a lower amount than the plan assets if the discount factor is higher than the expected future return rate for contributions made. Such a situation could, for example, happen if the contributions are invested in government bonds.

37 For the situation where the backloading correction is included (and the total actual return is expected to be higher than the guaranteed return, it is the pension obligation may be measured at a lower amount than the plan assets when the discount factor is high and/or in the first years an employee is providing services that will entitle that employee to receive pension benefits. However, also in these cases, the asset ceiling will result in the (net) pension liability being measured at nil.

Effect of backloading correction

38 The measurement of plan assets is based on the contributions made before the balance sheet date. Generally, the measurement of the plan assets and the pension obligation would therefore be more similar when the pension obligation is measured based on paid contributions. I.e. generally, the measurement of the plan assets and the pension obligation would be more similar when no backloading correction is included, than when backloading correction is included in the computations. On the other hand, including the backloading correction would reduce the chance that a deficit, as explained in paragraph 28(a)(iii) would not be reflected.

39 Consistent with the purpose of including the backloading correction, the development in the pension obligation is closer to a straight line (and less convex) when the backloading correction is used. Including the backloading correction, however, creates a bigger difference between the value plan assets are measured at and the value the pension obligation is measured at – and thus a higher pension liability when contributions to the scheme are expected to increase over time.

40 When no backloading correction is included and the and the total actual return (based on the expectation at the beginning of the financial year) is expected to be

higher than the guaranteed return, the current service cost is higher than the cash outflows from the employer when the expected return rate is higher than the discount factor. If the discount rate is higher than the expected return rate, the current service cost is lower than the outflows from the employer. When no backloading correction is included, current service costs are very sensitive to changes in the contributions. When backloading correction is included, current service cost is more stable.

Assessment against list of features of useful information

41 The EFRAG Secretariat has applied the features listed in paragraph 28 above to assess the outcome of the IAS 19 approach. The initial assessment is that:

(a) The information reflects an estimate of the resources needed to fulfil the obligation to the employee, and not the amount that the entity would pay to transfer the obligation and the associated risks to a third party. The approach could thus be assumed to reflect the most likely manner of settlement for most pensions, but not for all of them (see paragraph 28(a)(i) above).

(b) Under the IAS 19 approach the plan assets and the pension obligation are measured differently. An economic covariance in the two amounts will accordingly not be properly reflected (see paragraph 28(a)(ii) above).

(c) As described in paragraphs 34 - 37 above, there are situations where the approach will not reflect a deficit as explained in paragraph 28(a)(iii) above.

(d) The accumulated amount recognised in comprehensive income will equal the accumulated amount of net cash flows (see paragraph 28(a)(iv) above).

(e) Under IAS 19, the measurement bases used for the measurement of pension obligations and plan assets are different (unless the plan asset has the form of a qualifying insurance policy). The information resulting from IAS 19 will accordingly not be useful for assessing stewardship in the manner explained in paragraph 28(b)(ii).

(f) Under IAS 19 the pension obligation at retirement would be measured at the total contributions multiplied with the higher of the actual returns and the guaranteed returns from the day the employee joined the pension scheme. This amount reflects the amount needed to settle the obligation when the pension obligation is due (see paragraph 28(c) above).

(g) When an entity has an obligation, in accordance with the Conceptual Framework, to provide pension benefits to an employee, IAS 19 would require the entity to recognise this obligation. As stated above the net amount may, however, reflect a net asset, when a net liability exists. In theory, it could be argued that IAS 19 could require an entity to recognise an obligation even when the definition of an obligation is not met. This could happen for plans including significant vesting conditions, but only if the entity has the practical ability to avoid transferring resources to the employee (this would require that the entity has the ability to terminate the employee before the completion of the service vesting period with no compensation for the lost benefit and repayment of the employee's own contribution). Such situations are assessed to be uncommon. It is therefore assessed that the recognised obligations would generally meet the definition of a liability. The measurement of the obligation may, however, exceed the amount that the entity has not practical ability to avoid when backloading correction is included in the computations as these computations would take expected future salary increases into account.

(h) The IAS 19 approach is currently used. The approach involves actuarial estimates. Changes in the actuarial estimates made in subsequent period can be significant. This, however, does not necessarily mean that the estimates were wrong when they were made. It is therefore assessed that it is generally

possible to make sufficiently reliable estimates (see paragraph 28(d)(ii) above).

(i) A pension plan that only vests after the employee has been working for an entity for several years could be constructed in a manner where the benefits are mainly allocated to the first years of service and a plan where the benefits are allocated on a straight-line basis. The pension obligation and the effect on comprehensive income will be different from the two plans although they may have similar economic consequences. Accordingly, under IAS 19, economically similar pension plans may not be accounted for similarly (see paragraph 28(d)(iii) above). In practice, however, benefits are likely not mainly allocated to the first years of service.

(j) As explained in paragraphs 34 - 36 above, IAS 19 will not always reflect when plan assets are insufficient to cover the pension obligation. This is considered to be imprudent (see paragraph 28(e) above).

(k) The amount of the pension obligation is not easy to explain (see paragraph 28(g)). It seems only possible to explain the amount by stating how it has been calculated. When no backloading correction is included, it can be explained as the total expected return on contributions made to date discounted by the interest on high quality corporate bonds. When backloading correction is included, it can be explained as the portion of the total expected return on all contributions that on a straight-line basis than can be attributed to the current and past years, discounted by the interest on high quality corporate bonds.

(l) The information is assessed to be relatively costly to provide (see paragraph 28(h)). It is necessary to update actuarial assumptions, which require judgement, and many input in subsequent accounting periods.

42 The EFRAG Secretariat's tentative assessment is summarised in the table below:

Symbol	Explanation
✗	The approach does not have the stated effect.
✓	The approach results in the stated effect.
◠	The approach results to some extent in the stated effect / whether the approach results in the stated effects depends on the circumstances.
?	The EFRAG Secretariat is uncertain about whether the approach results in the stated effect.
N/A	The effect is not relevant to consider for the model.

The approach always reflects how the liability will be settled	✗
The economic covariance between plan assets and pension obligation is reflected	✗
Inadequate funding is reflected	✗
Effect on comprehensive income equals net cash outflow	✓
Information is relevant for assessing stewardship	✗
Measurement reflects the amount needed to fulfil the liability	✓

The definition of a liability and recognition guidance in the revised Conceptual Framework are reflected	✓
Possible to make reliable estimates	✓
Similar pension plans are accounted for similarly	✗
Prudence is reflected	✗
Possible to apply new requirements retrospectively	N/A
Similar elements of pension plans are accounted for similarly to plans under IAS 19	N/A
It is easy to explain what the information means	✗
Information does not need to be updated	✗
Insignificant amount of judgement is needed	✗
The approach requires only a limited amount of input	✗

Assessment of suggested approaches

43 In the paragraphs below, the approaches suggested in paragraph 5 are assessed against the criteria developed in paragraph 28.

<u>The information is reflecting how the liability will be settled</u>

44 None of the suggested approaches always reflect how the obligation will be settled (see paragraph 28(a)(i)).

45 Similar to under IAS 19, the D9 approach, the approach under which the estimated benefits are capped or set equal to the rate used to discount the liability, and the fulfilment value approach reflect an estimate of the resources needed to fulfil the obligation to the employee, and not the amount that the entity would pay to transfer the obligation and the associated risks to a third party. The approaches reflect how most pension obligations are settled, but may not always reflect the most likely manner of settlement for all plans. In addition, under the approach which estimates future benefits by capping the expected return – or setting the expected return – to equal the discount rate, there may be situations where the measurement of the pension obligation is (is not) based on the guaranteed return even though it is expected that the actual return will be higher (lower) than the guaranteed return.

46 The fair value approach would also not reflect how the pension obligation is likely to be settled. A 'pure' fair value model would reflect what an entity would need to pay to an external party to take over the pension obligation.

<u>The information is reflecting the covariance between plan assets and pension obligation</u>

47 The covariance between plan assets and the pension obligation is best reflected under the fair value approach, the fulfilment value approach and the approach under which the expected return is capped or set equal to the discount factor and no backloading correction is included.

48 Under the D9 approach the plan assets and the pension obligation are measured identically when the fair value of the plan assets is higher than the IAS 19 calculation of the obligation related to the guaranteed return. There can be cases where it is expected that the pension obligation can or will be settled by the fair value of the plan assets when the employee retires (as this would be higher than the guaranteed

return), but where the obligation according to the approach will be measured on the basis of IAS 19 and the guaranteed return. This could be the case when it is expected that the actual return will be higher in the future than in the past. Generally, however, the covariance between the pension obligation and the plan assets will be reflected under the approach.

49 When a backloading correction is included in the approaches under which the expected return is capped or set equal to the discount rate, the correlation may be less visible, but may still be better reflected than under IAS 19.

The information is reflecting inadequate funding

50 The fair value approach and the fulfilment value approach would reflect inadequate funding as described in paragraph 28(a)(iii) above. Under the fulfilment value approach, the fulfilment liability would be higher than the plan assets in all cases as long as the risk adjusted discount factor used for the liability is lower than the expected future return rate of the assets.

51 The D9 approach would, however, not always reflect inadequate funding. This may happen in situations where the guaranteed return is lower than the discount factor when no backloading correction is included in the computations. The model may also not reflect an underfunding in a situation where the actual return is higher than the guaranteed return, but there is an expectation that this will not be the case in the future.

52 This may also happen when a backloading correction is included in the computations. However, if contributions are increasing over time, it is less likely that an underfunding will not be reflected compared with the calculations where no backloading correction is included. The reason is that the pension obligation in such cases is measured at a higher amount – particularly in the first years – compared with when no backloading correction is included in the computations.

53 When the expected returns are capped to the discount rate, the pension obligation will be measured at a lower amount than the plan assets when the total guaranteed return is expected to be higher than the actual return and the discount factor is higher than the guaranteed return. When the total guaranteed return is expected to be higher than the actual return, the fair value of plan assets may also be higher than the pension obligation when the actual return in the past has been higher than the guaranteed return, but the total guaranteed return is expected to be higher than the total actual return. The capping approach is thus not better than IAS 19 when it comes to not measuring the pension obligation at an amount lower than the plan assets.

54 When the backloading correction is included and the actual return is expected to be lower than the total guaranteed return, the pension obligation will be measured at a lower amount than the plan assets in the same circumstances as under the IAS 19 approach.

55 When the expected returns are set to equal the discount rate specified in IAS 19 and the total guaranteed return is expected to be higher than the total actual return, the pension obligation – and the pension liability – could be measured in a manner that would not reflect a deficit in the pension plan, when the actual return in the past has been higher than the guaranteed return, but the total guaranteed return is expected to be higher than the total actual return. In addition, when the discount factor would be higher than the “real” expected future return, using the discount factor as the future expected return rate could result in a deficit in the pension plan not being reflected. This could happen, for example, if the plan assets are government bonds which are expected to result in return below the guaranteed return. As long as the discount factor is higher than the guaranteed return, the approach would result in the pension obligation being measured based on the government bonds.

56 When the backloading correction is included (and the actual return is expected to be lower than the total guaranteed return) the pension obligation will be measured at a lower amount than the plan assets in the same circumstances as under the IAS 19 approach. However, an additional issue arises as the calculation may not (or may) be based on the guaranteed return even when it is expected that the actual return will be lower (or higher) than the guaranteed return. This issue arises as the discount factor is used in the calculations instead of the expected return.

Effect on comprehensive income equals net cash outflow

57 For all the approaches the accumulated amount recognised in comprehensive income equals the accumulated amount of net cash flows (see paragraph 28(a)(iv)).

The information is relevant for assessing stewardship

58 The fair value approach and the fulfilment value approach best reflect the extent the asset allocation covers the pension obligation (see paragraph 28(b)(ii) above). Under the fulfilment value approach, the measurement bases used for the measurement of plan assets and pension obligation are different. However, the pension obligation reflects the dependence of the asset returns and the discount rate for the liability reflects that of the assets. The EFRAG Secretariat considers that the cost of guarantee could be added as a cash flow thereby no adjustment to the liability discount rate would be needed. Therefore, the difference between the plan assets and the pension obligation would be due to the cost of the guarantee and the risk adjustment (if any) incorporated in the liability. If the guarantee is not expected to 'kick-in' then the EFRAG Secretariat considers that the pension asset would be similar to the pension obligation.

59 The D9 approach will result in the plan assets and the pension obligation being measured identically when the fair value of the plan assets is higher than the IAS 19 calculation of the obligation related to the guaranteed return. Accordingly, when the pension obligation can be settled by the plan assets, this will be reflected. However, in some cases, the different measurement bases used for the measurement of the plan assets and the pension obligation will not reflect the extent to which the pension obligation is covered by the plan assets.

60 Under the approaches under which the expected return is capped or set equal to the discount rate, there are cases, as partly explained in paragraphs 51 - 56 above, in which the approaches will not reflect the extent to which the plan assets can be used to settle the pension obligation.

Measurement reflects the amount needed to fulfil the liability

61 For all the approaches the measurement of the fulfilment liability will reflect the amount needed to settle the obligation when it becomes due (see paragraph 28(c)).

62 In theory, the fair value measurement of the pension obligation will reflect the amount needed to settle the obligation when the pension obligation is due. The measurement would reflect the price of transferring the obligation to a third party. However, when the obligation is due, there is no uncertainty about the amount, and the measurement of the obligation should therefore, in theory, equal the amount that should be paid to the employee (plus a fee for payment, perhaps).

The definition of a liability and recognition guidance in the revised Conceptual Framework are reflected

63 For all of the approaches pension obligations that would meet the definition of a liability would be recognized, and the pension obligations recognised would meet the definition of a liability in the Conceptual Framework (when disregarding certain types of vesting conditions (see paragraph 28(d)(i) above)). As stated above in paragraphs 50 - 56, the net amount recognised may, however, for some of the approaches be nil, when a net liability exists.

The information is reliable

64 It is assessed that both the D9 approach and the approaches under which the expected return is capped or set equal to the discount rate can result in reliable information. These approaches are based on IAS 19, and it is assessed that the liability and the fair value of assets measured in accordance with IAS 19 could generally be measured reliably.

65 Since in most cases there are no observable market prices for pension obligations, the fair value needs to be estimated. This estimation may be more complex than the estimations required under IAS 19, and potentially less reliable. The fair value approach may accordingly result in information that is less reliable than under IAS 19.

66 The fulfilment value approach involves actuarial estimates for a plan that could be for many years and an entity would need to determine the expected value or probability-weighted mean of a full range of possible outcomes without undue cost or effort. Changes in the actuarial estimates made in subsequent periods can be significant but this does not necessarily mean that the estimates were wrong when they are made. Assumptions are reviewed and updated each reporting period to consider current conditions at the end of the reporting period. It is therefore assessed that it is generally possible to make sufficiently reliable estimates.

Similar pension plans are accounted for similarly

67 Similar to under IAS 19, vesting conditions under the suggested approaches could result in economically similar plans where the contributions are made in different periods/with different benefit formulas being accounted for differently (see paragraph 28(d)(iii)).

Prudence

68 For all of the approaches (asymmetric) prudence (see paragraph 28(e)) will not be reflected. However, the reasons are different. For the D9 approach and the approaches under which the expected return is capped or set equal to the discount rate, this is because there can be circumstances where a deficit as explained in paragraph 28(a)(iii) will not be reflected (see paragraphs 51 - 56). However, for the fair value approach and the fulfilment value approach the reason is that the approaches do not include any guidance that, in case of uncertainty, will require more certainty for the recognition of upward changes in assets than for liabilities.

Requirements can be applied retrospectively

69 The information needed for calculating the pension obligation in accordance with the D9 approach and the approaches where the expected return is capped or set equal to the discount factor, should in principle have been collected for the IAS 19 calculations (see paragraph 28(f) above). Under the D9 approach this information is the fair value on the past reporting dates of the assets on which the variable return is determined. Under the approaches where the discount factor is used, it is the discount factor. Changes in the pension scheme could result in retrospective application would not be possible under these approaches, but it would generally be possible to apply the approaches retrospectively.

70 It may be difficult to apply the fair value approach retrospectively. Part of the information needed would be available from the calculation required under IAS 19, but some input may be more difficult to collect retrospectively.

71 The entity may be able to apply the fulfilment value approach retrospectively, but it would depend on the extent to which the entity has information, e.g., relating to cash flows from prior years. It can be noted that IFRS 17 requires retrospective application unless impracticable. If impracticable, there are two approaches which could be used instead. (See paragraph 28(f) above).

Similar elements of pension plans are accounted for similarly to plans under the IAS 19

72 During its discussions, the IFRS Interpretations Committee noted that one issue with the D9 approach was to determine a suitable scope that would both improve the accounting for a sufficient population of plans and limit any unintended consequences arising from making an arbitrary distinction between otherwise similar plans. In other words, the IFRS Interpretations Committee was concerned that similar pension plans would not be accounted for similarly. The EFRAG Secretariat has not (yet) examined the issue related to the scope of a new approach. Currently, the EFRAG Secretariat is only considering whether the guaranteed return (i.e. the 'fixed part') of the pension plan is accounted for in accordance with IAS 19. Under the D9 approach, this element is accounted for similarly as under IAS 19. The variable element is accounted for differently under the approach than how it would be under IAS 19. However, if this 'variable' element is considered sufficiently different from other elements accounted for in accordance with IAS 19, a different accounting treatment may not impair comparability (see paragraph 28(f) above).

73 A similar assessment can be made for the approaches under which the expected return is capped or set equal to discount rate.

74 Conversely, the fair value approach is different from IAS 19, so some elements of the pension obligation would be accounted for differently than similar elements in a pension scheme accounted for under IAS 19.

75 The information under the fulfilment value approach would be comparable for plans that are within the scope of this project. However, comparability may be affected for plans that apply IAS 19. For example, the treatment of similar elements of pension plans under IAS 19 and under the fulfilment value model are different as follows (See paragraph 28(f) above):

IAS 19	The fulfilment value model
Discount rate HQCB	Discount rate reflects current markets and the extent to which there is dependence on the asset returns.
Attributions of benefits on a straight-line basis when an employee's service in later years will lead to a materially higher level of benefit than in earlier years.	No allocation of IAS 19 service cost to comprehensive income.
Pension assets measured at fair value.	Assets measured under IFRS 9 *Financial Instruments or* IAS 40 *Investment Property*

The information is easy to understand

76 Under the fair value approach, the pension obligation would represent the amount that the entity would have to pay to transfer the obligation to a third party, without considering own credit risk and likelihood of modifications or curtailment. It would thus be relatively easy to explain what the figure represents (see paragraph 28(g)).

77 In contrast, the 'higher of' the fair value of the pension assets and the amount resulting from applying IAS 19 on the guaranteed minimum return (the result of the D9 approach) may be even more difficult to explain than the amount resulting from IAS 19.

78 Similarly, introducing a cap on the expected return would not make the approach and resulting figures easier to explain than the current requirements in IAS 19.

79 Finally, the amount of the fulfilment liability may not be easy to explain. This is partly because the amount reflects expectations about future salary and various assumptions, for example, assumptions relating to the fulfilment liability discount rate.

Cost of applying the approach

80 In theory, the D9 approach would be costlier (see paragraph 28(h) above) than only applying IAS 19 as the entity should first apply IAS 19 to the minimum guarantee and then add the liability for the variable promise, when applicable. In practice, however, it may often be easy to assess whether the obligation measured in accordance with IAS 19 exceeds the fair value of the plan assets. When this is not the case, the measurement of the liability is likely less costly to apply than the IAS 19 approach – depending on the nature of the plan assets. Still, however, it is necessary to update the measure. It may also require judgement and a significant number of input.

81 The approach under which the expected return would be capped to the discount rate would require the pension obligation to be measured in accordance with IAS 19 – only with a capped return rate - and would, accordingly, be as costly as IAS 19 to apply. An approach where the discount rate is always used as the expected return may be less costly than the IAS 19 approach as entities would not have to estimate future returns and, if no backloading correction is included in the computations, could avoid projecting and then discounting the same payments in some computations.

82 The fair value approach may need the use of some unobservable input and could be costlier than the estimations required under IAS 19.

83 It is also assessed to be costly to apply the fulfilment value approach as e.g. IT systems would need to be changed.

Summarised assessment

84 For the assessments of the various approaches considered in this paper are summarised below.

	IAS 19	D9 approach	Capped expected return approach	Fair value approach	Fulfilment value approach
The approach always reflects how the liability will be settled	✗	✗	✗	✗	✗
The economic covariance between plan assets and pension obligation is reflected	✗	◔	◔	✓	✓
Inadequate funding is reflected	✗	✗	✗	✓	✓
Information is relevant for assessing stewardship	✗	◔	◔	✓	✓

Effect on comprehensive income equals net cash outflow	✓	✓	✓	✓	✓
Measurement reflect the amount needed to fulfil the liability	✓	✓	✓	✓	✓
The definition of a liability and recognition guidance in the revised Conceptual Framework are reflected	✓	✓	✓	✓	✓
Possible to make reliable estimates	✓	✓	✓	◔	✓
Similar pension plans are accounted for similarly	✗	✗	✗	✗	✗
(Asymmetric) prudence is reflected	✗	✗	✗	✗	✗
Possible to apply new requirements retrospectively	N/A	✓	✓	◔	◔
Similar elements of pension plans are accounted for similarly to plans under IAS 19	N/A	✓	✓	✗	✗
It is easy to explain what the information means	✗	✗	✗	✓	✗
Information will not be costly to provide	✗	✗	✗	✗	✗

Questions for EFRAG TEG members

85 When analysing the effects of applying IAS 19 on return-based pension schemes, the EFRAG Secretariat only considered situations in which any employee contributions could be subtracted from the service cost in the period in which they are paid. According to IAS 19, some types of employee contributions should be considered as negative benefits. At the November 2017 EFRAG PAP meeting, the view was presented that EFRAG should also consider these as they were complex and calculation practice varied. The EFRAG Secretariat would, on the other hand, exclude those contributions from the project for the same reasons, in order not to broaden the scope of the project. Do EFRAG TEG members agree with the suggestion of the EFRAG Secretariat?

86 Do EFRAG TEG members consider that the D9 approach and the approaches under which the expected return is capped or set equal to the discount rate provide most useful information with or without the backloading correction – or should both an example with and without a backloading correction be considered?

87 The approach under which the expected return is set to equal the discount factor was introduced based on suggestions from the EFRAG PAP. However, at its

November 2017 meeting, some EFRAG PAP members questioned the usefulness of the approach. They noted that the approach could result in the pension obligation being presented at a too low amount. When the expected return is lower than the discount factor, the approach where the expected return is capped to the discount factor, would base expectations of future returns on this figure. If the approach under which the expected return is set to equal the discount factor is used, the computations will be based on a too optimistic figure about the future returns. This could, for example, result in the pension obligation not being based on the guaranteed return promise, when it is most likely that the pension obligation will be based on the guaranteed return promise. Do EFRAG TEG members consider that the approach under which the expected return is set to equal the discount factor should still be considered?

88 Do EFRAG PAP members have other comments to the assessments?

Additional considerations related to fulfilment value approach

89 Below are a few aspects to be considered when further developing the fulfilment value approach:

Which contributions to incorporate in the fulfilment liability?

90 In computing the insurance liability, IFRS 17 requires an entity to estimate all cash inflows and outflows that may arise from the coverage period of the contract.

91 The EFRAG Secretariat has considered two cases when determining what the cash inflows should be included when computing the fulfilment liability:

(a) Case 1 - Including *both* the employee and employer contributions as cash inflows; and

(b) Case 2 - Including *only* the employee contributions as the cash inflow.

92 At the July 2017 EFRAG PAP meeting, it was mentioned to further explore both of these cases.

93 Including the employer's contributions in the inflows may be debatable, because in substance the entity would treat its own payments as a reduction in the liability. In other words, the measurement of the liability would not be affected by how the contributions are split between the parties – it would not matter if the employee pays 0% or 100% of the contributions. On the other side, the employee is required to provide future services so that the benefits can vest. The employer contributions could therefore represent future employee service. The employer's future contributions could be used to *measure* the value of the future services that cannot be directly measured. The EFRAG Secretariat notes that a similar approach is used in IFRS 2 *Share-based payments* where the value of the instruments granted by the entity is used to measure the services received over the vesting period.

94 If the employer's contributions were excluded, the liability would increase significantly as can be seen in the graphs.

Discussion at the November 2017 EFRAG PAP meeting

95 It was mentioned to include as inflows *both* the employee and employer contributions as cash inflows (i.e. Case 1). The inflows were considered to reflect the service that the employer would receive from the employee and the outflows were considered to reflect the amounts that the employee would receive.

96 It was suggested that as a starting point, when entering into the contract between the employer and employee, one would not expect a gain or loss because the employer would be paying the employee and it would expect back an equal value of service. Therefore, the inflows should also include the value of the guarantee. As a result, there would not be any gain or cost before any service is provided.

Cost that arises at inception – Future service cost

97 When a contract is onerous at inception, IFRS 17 requires recognising the loss immediately in profit or loss. In both cases stated above, there would be a cost that arises at inception. The cost is much greater at inception for Case 2 compared to Case 1 because of the exclusion of the employer contributions in Case 2.

98 In Case 1, this cost arises due to the small difference in the discount rates between the asset and the fulfilment liability. In this example, the EFRAG Secretariat has adjusted the asset rates so that the liability rates are 10% lower than the asset rate curve in order to represent a cost of the guarantee. There may be further adjustments to the liability discount rate that could be made. These are discussed in paragraph 106.

99 The EFRAG Secretariat notes that the fulfilment value model does not incorporate the notion of 'service cost' as per IAS 19. However, the EFRAG Secretariat considers that this cost that arises at inception could be seen as a future service cost. In Case 1, the cost is effectively due to the cost of the guarantee therefore, the EFRAG Secretariat considers that this is part of the service and so this cost could be amortised over the remaining years. In Case 2, the cost arises due to the cost of the guarantee and also due to the exclusion of the employer contribution inflows.

100 In this example, this future service cost that arises at inception is an asset on the statement of financial position. Since it is a present value amount, each year there is an unwind of interest using the adjusted liability rate at inception and then it is amortised linearly over the remaining years.

Discussion at the November 2017 EFRAG PAP meeting

101 Referring to paragraph 96 above, there would not be any profit or loss arising at inception as the inflows would equal the outflows.

102 In the subsequent years, the current service cost could be the contribution made for the period plus the value of the guarantee for that period. The defined benefit obligation would therefore be the liability for past service.

Discount rate for the fulfilment liability

103 The discount rate for the pension liability under the fulfilment value model is different from IAS 19. Current discount rates are used in IFRS 17 which should reflect the characteristics of the cash flows including liquidity characteristics and should be consistent with observable current market prices (if any) for financial instruments that have similar characteristics to insurance contracts. For cash flows that vary based on the returns on underlying items, the discount rate should reflect that variability.

104 It should be noted that under IFRS 17, the discount rate should include only relevant factors relating to the liability, i.e., factors that arise from the time value of money, the characteristics of the cash flows and the liquidity characteristics of the contracts.

105 In other words, one could start with the asset rate of what is promised to the employee and adjust that rate to compute the liability discount rate, for example, adjustments relating to:

(a) *liquidity characteristics* – The liability discount rate should reflect the liquidity characteristics of the assets. This would take into account to what extent the assets are readily sold if, for example, the employee leaves earlier than expected or upon retirement.

(b) *effect of the guarantee* - IFRS 17 states that an entity shall adjust the discount rate for the effect of the guarantee, even when the guaranteed amount is lower

than the expected return on the underlying items[1]. This is because it is considered that the cash flows resulting from the guarantee does not vary directly with the asset returns.

(c) *the effect of expected credit losses on the assets* – this adjustment would decrease the liability discount rate.

106 Refer to paragraph 98 for the discount rate used to compute the fulfilment liability. The EFRAG Secretariat considers that if further adjustments would be made to the fulfilment liability discount rate, the rate would decrease and as a result, the liability would increase.

107 The EFRAG Secretariat considers that either the discount rate can be adjusted to take into account the guarantee or it can be computed separately and added to the cash flows. Note that in the examples, the liability discount rate had been adjusted.

Discussion at the November 2017 EFRAG PAP meeting

108 It was suggested that the value of the guarantee should be included in both the outflows and inflows. Refer to paragraph 96 above.

Treatment when there is a change in measurement of the fulfilment liability

109 Under IFRS 17, if there are any changes to the fulfilment cash flow liability, there is a distinction between what relates to the current period and to the future periods of service. Any amounts that relate to the current period are recognised in comprehensive income while any amounts that relate to future periods are recognised in CSM. For example:

(a) what relates to future service - changes in estimates of the present value of future cash flows and adjustments arising from premiums received in the period that relate to future service.

(b) what relates to current period – the unwind of interest relating to time value of money, changes in financial risk[2].

110 Income and expenses under IFRS 17 are recognised as a result of changes in the carrying amount of the liability relating to services provided in the current period, the effect of time value of money and the effect of financial risk.

111 The EFRAG Secretariat may need to consider whether for pension accounting:

(a) View 1 - all changes to the fulfilment liability should be recognised in comprehensive income (Note that a distinction between what would be recognised in profit or loss or other comprehensive income will be discussed at a later stage); or

(b) View 2 - a distinction should be made between the current period and future period and on what basis because this distinction would determine what would be recognised in comprehensive income and what would be recognised on the statement of financial position (potentially as an adjustment to the Future service cost asset which would be amortised over time).

Discussion at the November 2017 EFRAG PAP meeting

112 It was mentioned that changes in estimates relating to the value of the guarantee/the service that would be received from the employer should be considered. One

[1] I.e. items that determine the amounts payable to a policyholder, for example, equities, the net assets of an entity, etc.

[2] Financial risk is defined as the risk of a possible future change in one or more of a specified interest rate, financial instrument price, commodity price, currency exchange rate, index of prices or rates, credit rating or credit index or other variable, provided in the case of a non-financial variable that the variable is not specific to a party to the contract.

possibility would be that any change in the outflows relating to the value of the guarantee would be mirrored in the inflows.

Risk adjustment

113 The risk adjustment relates to non-financial risk inherent in insurance contracts and not to financial risk. It is included in the fulfilment cash flows and it represents the uncertainty about the amount and timing of the cash flows as the entity fulfils the contract.

114 In insurance accounting, there may be an uncertainty of the amount as, for example, the claims could be higher than estimated. There is also uncertainty in the timing, for example, the claims incurred could take longer to resolve or the entity has to pay claims earlier than estimated.

115 At the July 2017 EFRAG PAP meeting, it was suggested that a risk adjustment should be included. It was also suggested to distinguish between financial risk and demographic risk.

116 In the examples, the risk adjustment was assumed to be immaterial, therefore not considered in the computations. The risk adjustment will be considered at a later stage.

Question for EFRAG TEG

117 Does EFRAG TEG have any other comments on the additional considerations (including comments made from the EFRAG PAP meeting) included in paragraphs 89 to 116?

Appendix – Illustrations of the approaches considered

Case

1 A case is used to illustrate the effects of applying the various models listed in paragraph 5 of the paper.

2 The following paragraphs describe the:

(a) Pension scheme;

(b) Return assumptions;

(c) Assumptions about the beneficiary;

(d) Actuarial assumptions; and

(e) Additional assumptions relating to the fulfilment value model.

The pension scheme

3 The pension scheme used for the case applies to all employees of Entity X with an annual gross salary above a given salary threshold. The threshold salary is dynamic and is currently at EUR 50 000 per year. The threshold is adjusted every year based on inflation.

4 Each year, Entity X makes a basic (minimum) contribution to each employee's (i.e. beneficiary's) pension account. In the first five years of employment, the basic contribution is 0.5 per cent of the salary that is below the salary threshold (see paragraph 3 above) and 2.5 per cent of the salary above the salary threshold. After the first five years, the basic contribution equals 1 per cent of the salary below the salary threshold and 5 per cent of the salary above the salary threshold.

5 Any beneficiary covered by the scheme can make a supplementary contribution per year. These supplementary contributions cannot exceed 30 per cent of the employee's gross salary for the year.

6 Entity X will make an additional matching contribution corresponding to the supplementary contribution made by the beneficiary as long as the matching contribution does not exceed its own minimum contribution. Entity X will not match supplementary contributions exceeding its own minimum contribution.

7 The pension accounts of each beneficiary are held by Entity X. Entity X also makes the decisions about how the funds on these accounts should be invested. The accumulated amount becomes the property of the beneficiary at retirement. Retirement occurs when the beneficiary turns 65. If the beneficiary dies before retirement, the benefits are paid to the entitled heir.

8 The accumulated amount consists of the contributions made by Entity X and the beneficiary and the return generated. The amount that will be available to the beneficiary thus depends on the total contributions made and the return on the assets in which the contributions have actually been invested. However, if the total return generated when the time of pension occurs is less than a guaranteed return of 1 per cent p.a., Entity X will supplement the accumulated amount to ensure that the return on the contributions is the guaranteed return per year. The beneficiary will accordingly at retirement receive the 'higher of' the actual return on the plan and the guaranteed return.

9 The beneficiary or, in case the beneficiary is dead, the entitled survivor, will receive the amount accumulated on the pension plan when the beneficiary is turning (or would have turned) 65 years, i.e. at the end of year 11.

10 In cases where the beneficiary stops working for Entity X until retirement because of death or invalidity, Entity X will continue to provide contributions to the pension plan based on the payments made at the end of the employment, until the beneficiary's retirement date. In other cases, Entity X will stop making any new

contributions to the plan of the beneficiary and the guaranteed return of 1 per cent will only apply until the end of employment.

11 At retirement, the employee or the heir receive the pension as a lump-sum payment.

12 The employer has the right to reduce or terminate the future pension contributions, except for the supplementary contributions, in limited circumstances such as when the economic situation of the employer has deteriorated.

13 The employer has taken up an insolvency insurance.

14 The contributions to the plan by Entity X and the employee are made at the end of the year.

Return assumptions

15 Expected return assumptions are inspired by published return assumptions for US public pension plans[3]. The table below shows that in the first years, it is expected that the return will be 8 per cent per year. In the first years it is expected that the return will increase to 8.5 per cent in later years. However, that expectation is later revised, and it is instead expected that the return will start to decline.

Financial year

Expectation for financial year %	0	1	2	3	4	5	6	7	8	9	10	11
1	8.0											
2	8.0	8.0										
3	8.0	8.0	8.0									
4	8.0	8.0	8.0	8.0								
5	8.0	8.0	8.0	8.0	8.0							
6	8.0	8.0	8.0	8.0	8.0	8.0						
7	8.0	8.0	8.0	8.0	8.0	8.0	7.5					
8	8.0	8.0	8.0	8.0	8.0	8.0	7.5	7.0				
9	8.5	8.5	8.0	8.0	8.0	8.0	7.5	7.0	6.5			
10	8.5	8.5	8.0	8.0	8.0	8.0	7.5	7.0	6.0	6.0		
11	8.5	8.5	8.5	8.0	8.0	7.5	7.0	6.5	6.0	5.5	5.0	

16 The return on high quality corporate bonds (HQCB) is based on the US Treasury High Quality Bond Yield Curve[4]. The table below shows the interest rate per year used to discount the lump-sum amount to be paid at the end of Year 11 to the end of the various financial years:

0	1	2	3	4	5	6	7	8	9	10
5.45	5.89	6.97	4.14	3.88	3.21	1.54	1.21	1.59	1.69	1.67

[3] See: http://www.pionline.com/article/20170323/ONLINE/170319953/investment-return-assumptions-of-public-pension-funds, https://www.twosigma.com/insights/investment-return-assumptions-of-public-pension-funds, and http://www.nasra.org/files/Issue%20Briefs/NASRAInvReturnAssumptBrief.pdf

[4] The data used is available here: https://www.treasury.gov/resource-center/economic-policy/corp-bond-yield/Pages/Corp-Yield-Bond-Curve-Papers.aspx. The discount factor used in Financial Year 1 is the HQCB rate from December 2006 for bonds with a maturity of ten years. Linear interpolation is used to estimate the interest rate on bonds with a maturity of 1, 3, 4, 6, 7, 8 and 9 years.

17 The actual return is based on the return of the United Nations Joint Staff Pension Fund[5], which is a large US pension fund for which return date is available. For Year 11 (which corresponds to year 2017) the return of Financial Year 10 (2016) is reused.

1	2	3	4	5	6	7	8	9	10	11
13.9	-24.9	20.2	10.3	-3.9	12.7	15.5	3.2	-1.0	5.2	5.2

Assumptions around the beneficiary

18 The paper illustrates the application of the different approaches listed in paragraph 5 of the main paper for an individual beneficiary. The person joins Entity X at the beginning of Year 1 when 54 years of age. The person retires at the end of Year 11. Entity X accordingly makes its first contribution to the person's pension scheme at the end of Year 1, and the last contribution is made at the end of Year 11.

19 When the person joins Entity X, it is expected that her salary will increase by inflation every year. In addition, every second year her salary will increase by approximately 2.1 per cent (in addition to the inflation). The first increase is therefore expected to take place for the salary for Year 3.

20 The beneficiary makes supplementary contributions equal to the maximum amount Entity X will match. In rounded figures, in the first three years, the supplementary contributions amount to:

EUR	Year 1	Year 2	Year 3
Supplementary contribution	425	431	467

21 This means that Entity X makes the following total contributions in the first three years (rounded figures):

EUR	Year 1	Year 2	Year 3
Entity X's contributions	850	861	935

Actuarial assumptions

22 It is expected that the beneficiary will work for the entity until retirement. This assumption is not changed during the years.

Additional assumptions related to the fulfilment value model

23 In addition to the above assumptions (except for the assumption on high quality corporate bonds), the EFRAG Secretariat reflects two cases regarding the expected cash inflows used in the calculation of the liability:

(a) **Case 1** - the expected cash inflows consist of **contributions from both the employee and the employer**. In other words, the liability at inception and at the end of each period consists of the present value of: (a) cash outflows which the employee will receive (i.e. the past contributions that were made by the employee and employer and the accumulated expected returns on the assets) less (b) cash inflows relating to all estimated future contributions of the employee and employer; and

(b) **Case 2** - the expected cash inflows consist of ***only* contributions from the employee**. In other words, the liability at inception and at the end of each period consists of the present value of: (a) cash outflows which the employee will receive (i.e. the past contributions that were made by the employee and

[5] Source: http://imd.unjspf.org/historic-perf/HistoricPerformance.pdf

employer and the accumulated returns on the assets) less (b) cash inflows relating to all estimated future contributions of the employee.

24 In these examples we have, for the moment, considered that the risk adjustment relating to non-financial risk is not material. Refer to comments made in paragraphs 113 to 116 in the main paper.

25 Changes in estimates of the contribution from both the employer and employee are recognised in comprehensive income. This would be recognised in CSM in IFRS 17. Refer to paragraph 109 to 111 in the main paper for further considerations.

26 When an employee enters the pension scheme, the discounted value of the expected cash outflows will be higher than the discounted value of the expected cash inflows if the expected return on the cash inflows are higher than the discount rate used for the liability (which include a risk adjustment). This difference is amortised over the period to retirement (in the example 11 years) on a linear basis. In this example, the EFRAG Secretariat considers that this 'service cost' represents the cost of the guarantee even though the entity does not expect the guarantee to 'kick-in'. Refer to further explanation in paragraph 97 to 100 in the main paper.

Discount rate for the fulfilment liability

27 The asset rate curve in paragraph 15 of the Appendix is used as a starting basis in order to compute the discount rate for the fulfilment liability. The liability discount rate is then adjusted to 10% less than the amounts in the asset rate curve to take into consideration the cost of guarantee for example[6]. Therefore, both the inflows and the outflows are discounted with this adjusted discount rate. Please refer to paragraph 103 to 106 of the main paper for further explanation. Refer to the table below for the liability rates used.

Financial year

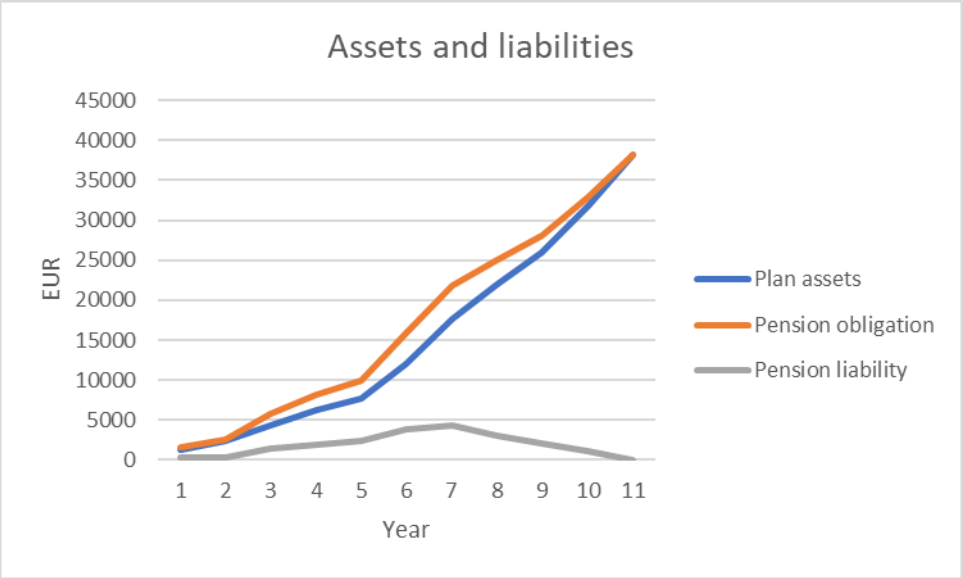
Expectation for financial year %	0	1	2	3	4	5	6	7	8	9	10	11
1	7.2											
2	7.2	7.2										
3	7.2	7.2	7.2									
4	7.2	7.2	7.2	7.2								
5	7.2	7.2	7.2	7.2	7.2							
6	7.2	7.2	7.2	7.2	7.2	7.2						
7	7.2	7.2	7.2	7.2	7.2	7.2	6.8					
8	7.2	7.2	7.2	7.2	7.2	7.2	6.8	6.3				
9	7.7	7.7	7.2	7.2	7.2	7.2	6.8	6.3	5.9			
10	7.7	7.7	7.2	7.2	7.2	7.2	6.8	6.3	5.9	5.4		
11	7.7	7.7	7.7	7.2	7.2	6.8	6.3	5.9	5.9	5.0	4.5	

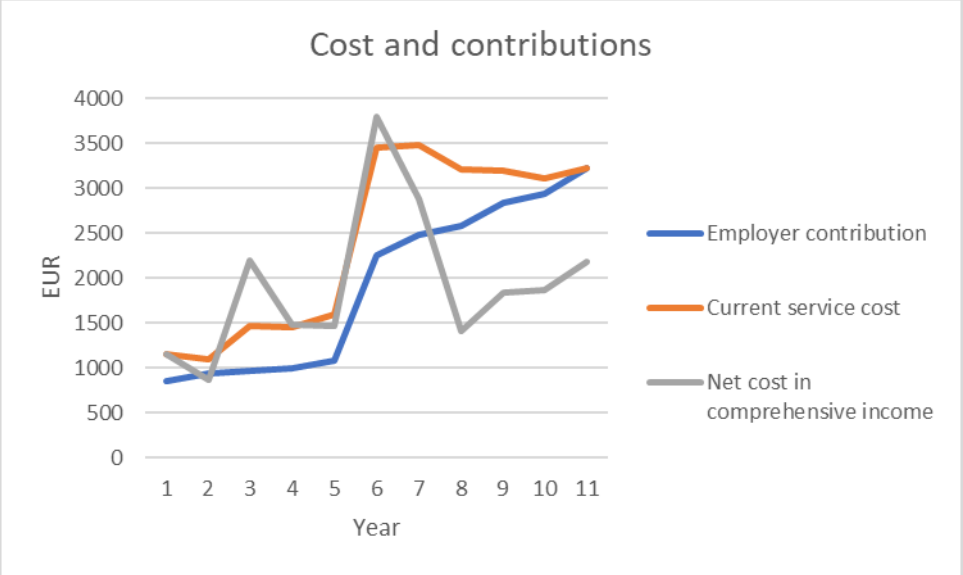
[6] As the uncertainty related to the future cash outflows resulting from the guaranteed return promise likely would decrease over time, it could be argued that the risk adjustment should be lower in the latter years. However, for simplicity, a constant percentage has been used in the examples in this paper.

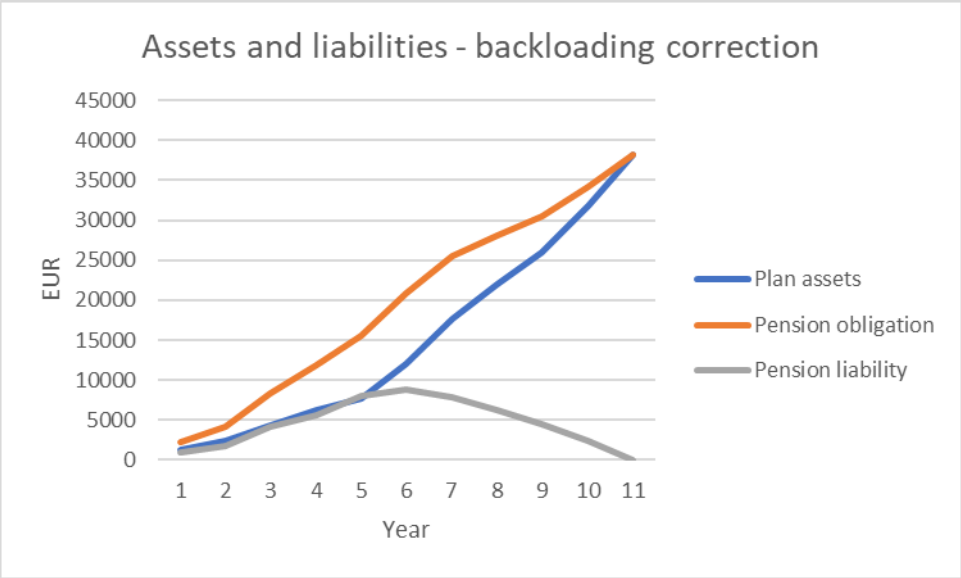
Illustrations

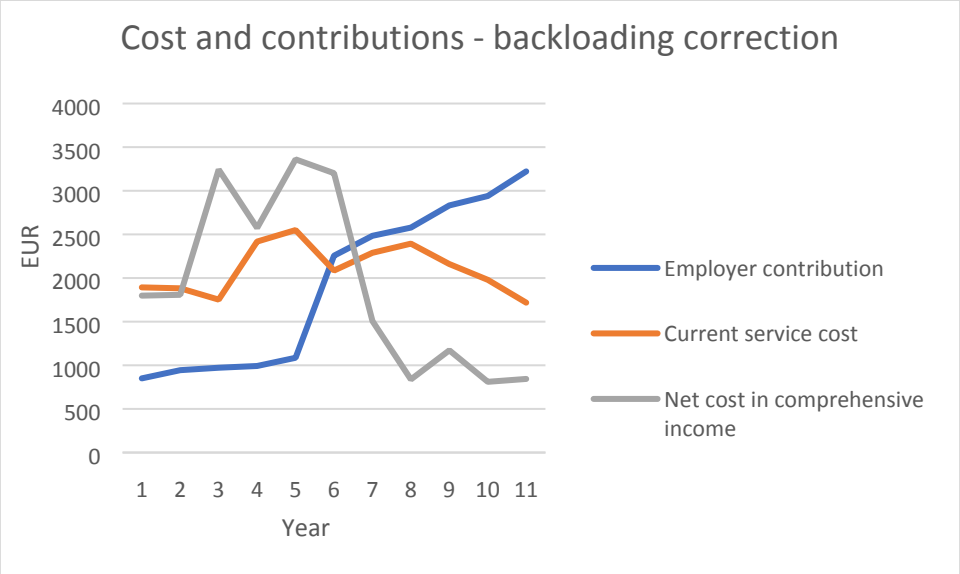
IAS 19 – Defined benefit plans

28 The effects of applying the requirements of IAS 19 on the case included in this paper are illustrated below. The first two figures illustrate the effects if no backloading correction is included in the computations. The last two figures illustrate the effects if the computations include a correction for backloading.





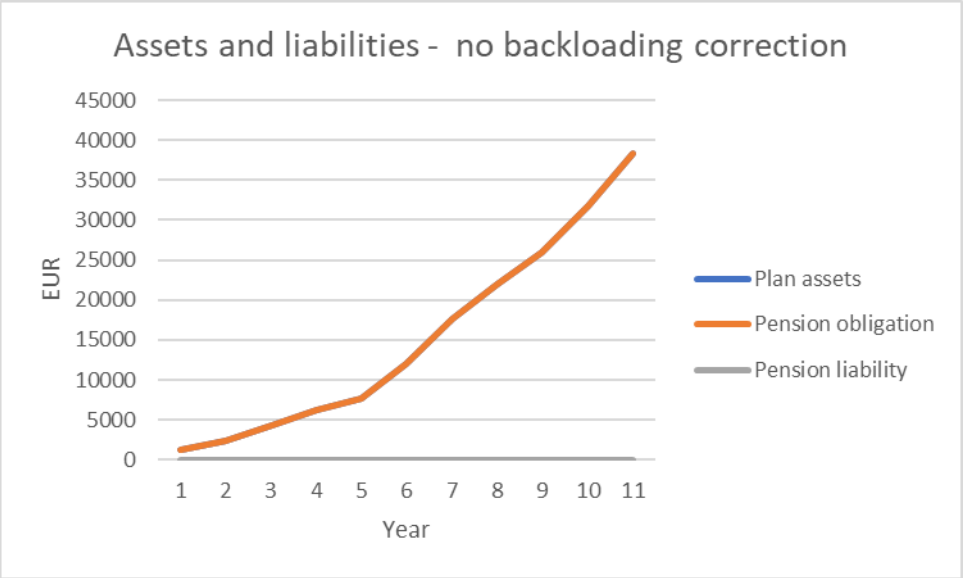


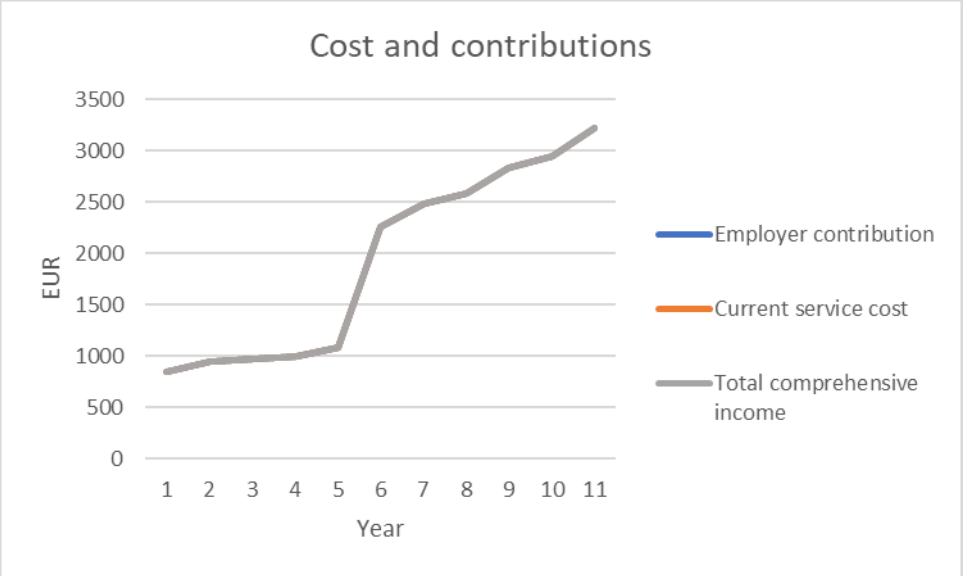


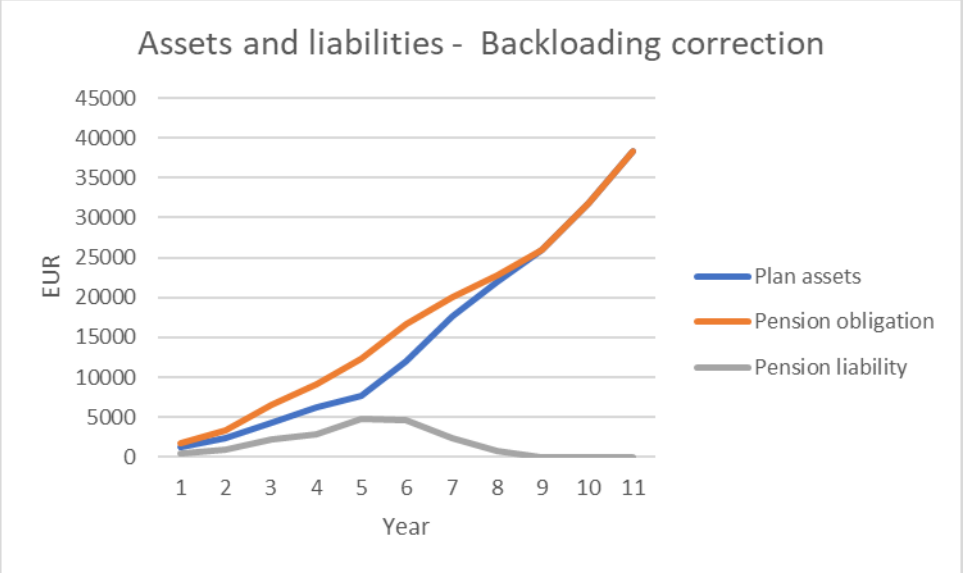
A model where the pension obligation is measured by reference to the plan assets

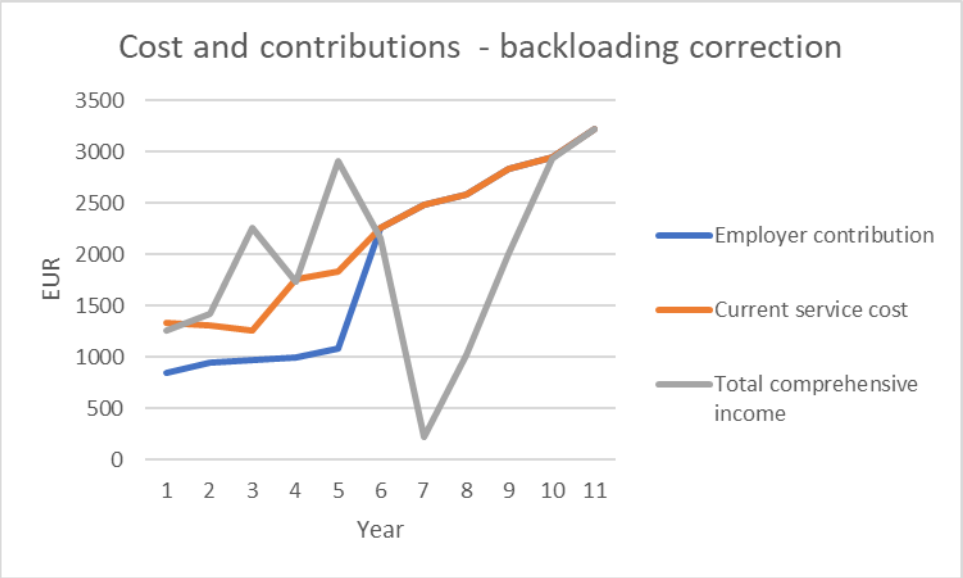
29 The effects of applying the D9 approach on the case included in this paper are illustrated below. The first two figures illustrate the effects if no backloading correction is included in the computations. The last two figures illustrate the effects if the computations include a correction for backloading.

30 In previous illustrations of the D9 approach, the EFRAG Secretariat has previously calculated current service cost based on the guaranteed return. EFRAG PAP members have noted that this might not provide the most useful information. In the illustrations below, current service cost has therefore been calculated as the higher of the employer's contribution and the current service cost based on the guaranteed return. At the November 2017 EFRAG PAP meeting, alternative approaches were suggested for the cases where a backloading correction is included. The EFRAG Secretariat will further examine those suggestions in the next phase of the project (the phase in which the effects on the statement of profit or loss will be considered).


Assets and liabilities - no backloading correction
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
EUR
1 2 3 4 5 6 7 8 9 10 11
Year
Plan assets
Pension obligation
Pension liability

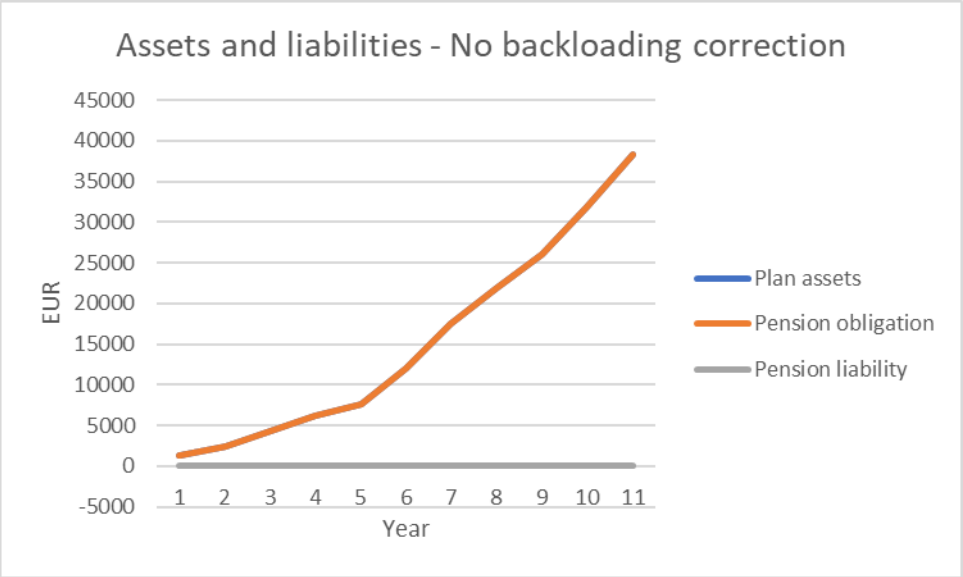

Cost and contributions
3500
3000
2500
2000
1500
1000
500
0
EUR
1 2 3 4 5 6 7 8 9 10 11
Year
Employer contribution
Current service cost
Total comprehensive income

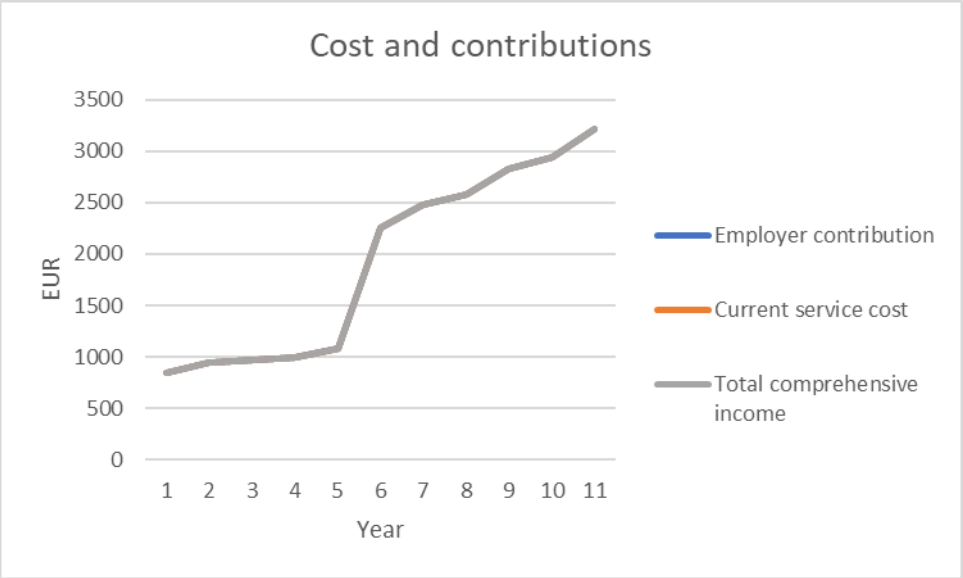

Assets and liabilities - Backloading correction
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
EUR
1 2 3 4 5 6 7 8 9 10 11
Year
Plan assets
Pension obligation
Pension liability

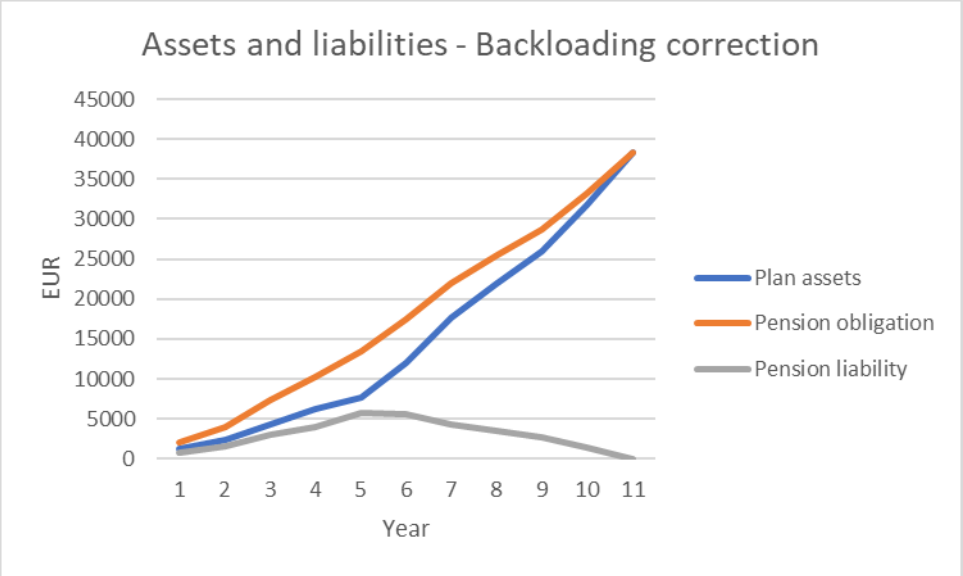


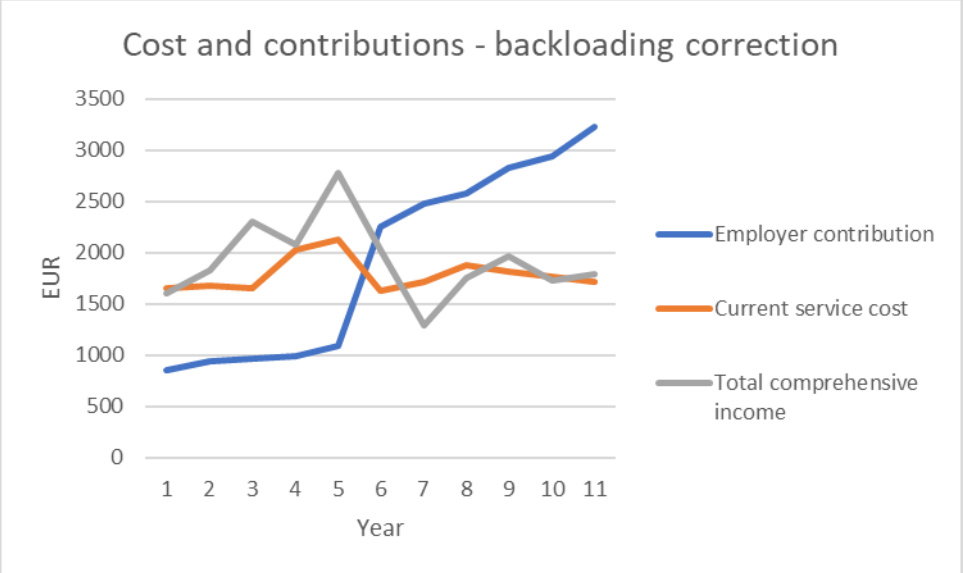
A model where the estimated returns are capped to a rate of return equal to the discount rate specified under IAS 19

31 The effects of applying an approach where the estimated returns are capped to a rate of return equal to the discount rate specified under IAS 19 on the case included in this paper are illustrated below. The first two figures illustrate the effects if no backloading correction is included in the computations. The last two figures illustrate the effects if the computations include a correction for backloading.









A model where the estimated returns are set to equal the discount rate specified under IAS 19

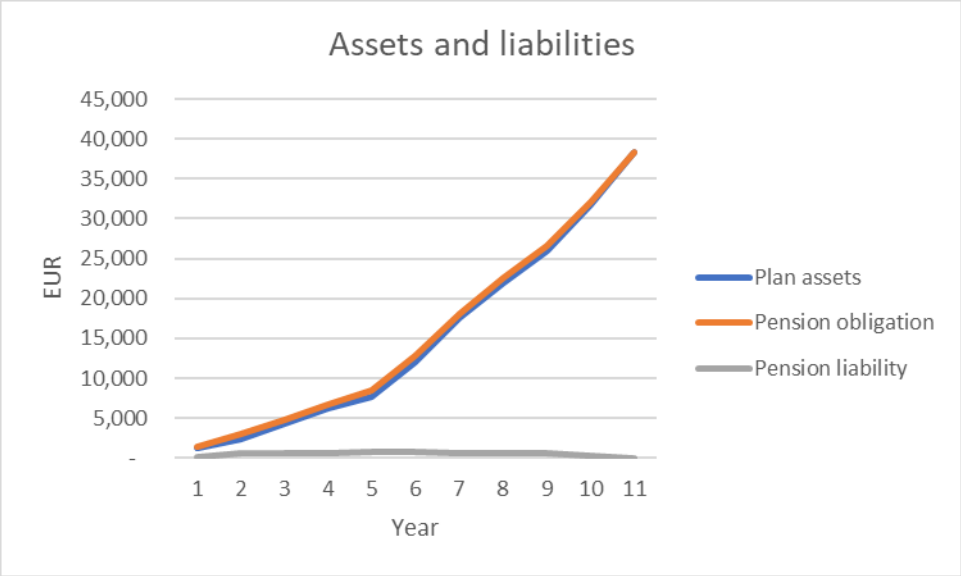
32 As the future expected return is capped to the discount factor in all the years in the example in this paper, an approach where the estimated returns are (always) set to equal the discount rate specified under IAS 19, would result in the same effects as those illustrated in paragraph 31 above.

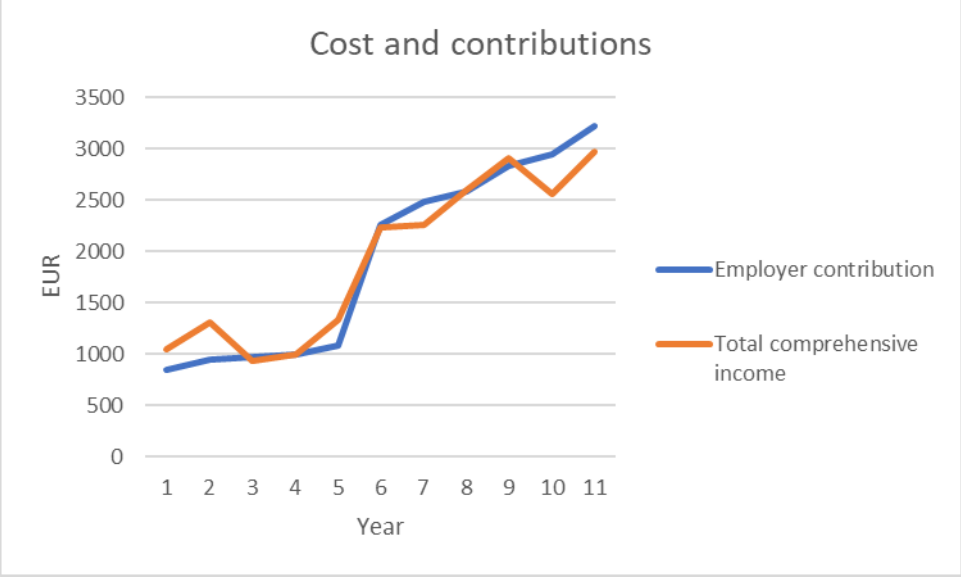
A model where the pension obligation is measured at fair value

33 The effects of applying the fair value approach outlined in paragraphs 16 - 17 of the main paper are sketched below. In this example, it has not been attempted to calculate a correct value of the guaranteed return feature. A rough estimate has been made using elements of the Black-Scholes-Merton option pricing model.

34 In the particular case, the value of the guaranteed return element is relatively modest. The pension obligation is accordingly only slightly higher than the plan assets. In the fair value model, there is not a current service cost concept. However, the effect on total comprehensive income is close to the employer contribution as the fair value of the guaranteed return component in all years is quite modest.

35 At the November 2017 EFRAG PAP meeting, it was noted that the fair value of the pension obligation should probably be higher, as the value should also include costs an acquirer of the liability would incur in relation to managing and hedging the position.





A fulfilment value model as per IFRS 17 Insurance Contracts

Case 1 Illustrations – Incorporating both the employee and employer contributions in the liability calculation

36 The effects of applying the requirements of the fulfilment value model for Case 1 are illustrated below.

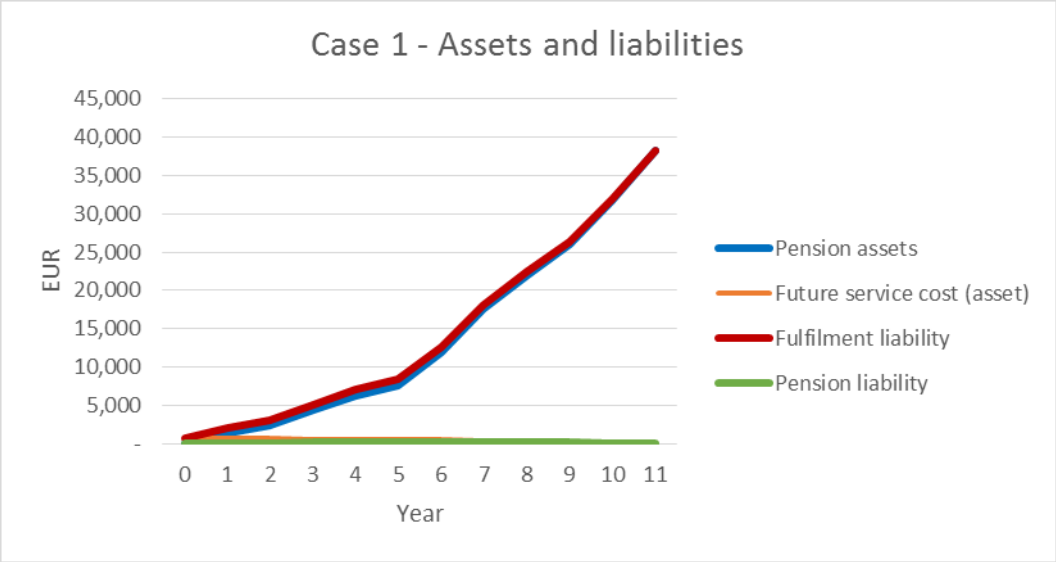
37 Note that the examples below have not yet been updated for comments received at the November 2017 EFRAG PAP meeting.

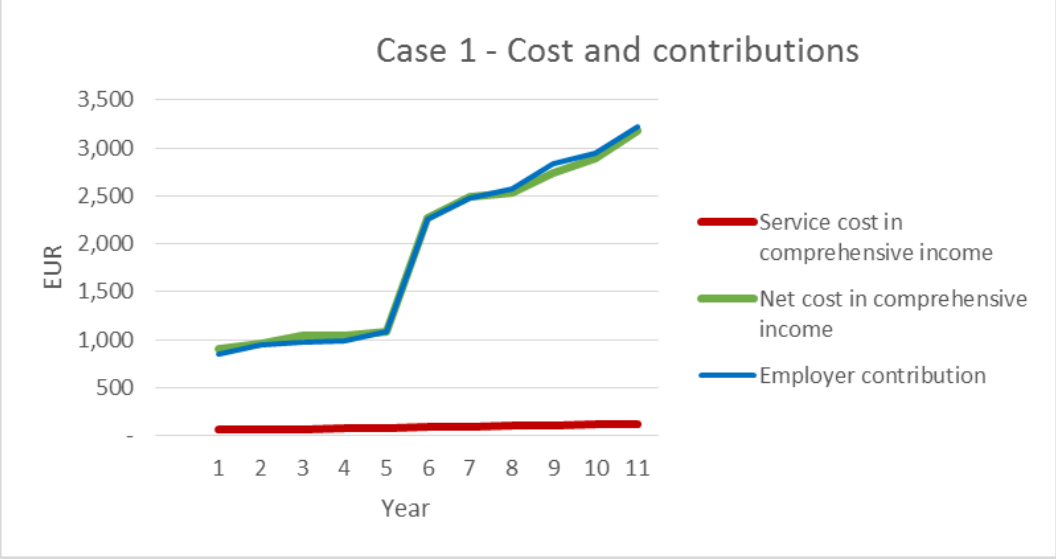
Graphs where all components are reflected separately

38 Note that in the graph below:

(a) the fulfilment liability does not incorporate the future service cost asset; and

(b) the pension liability is the fulfilment liability less the pension assets less future service cost asset.



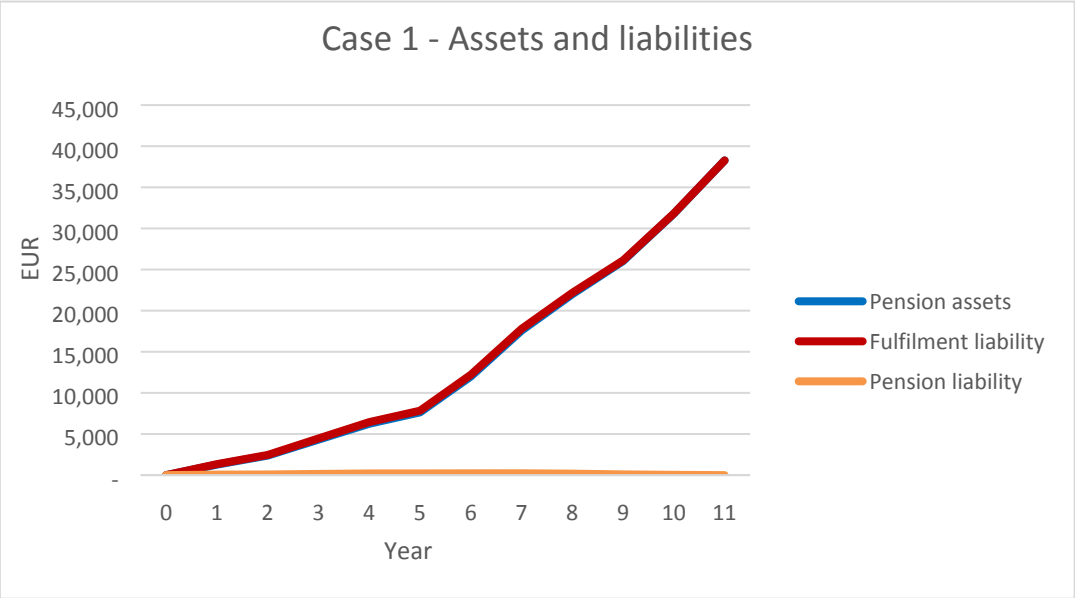


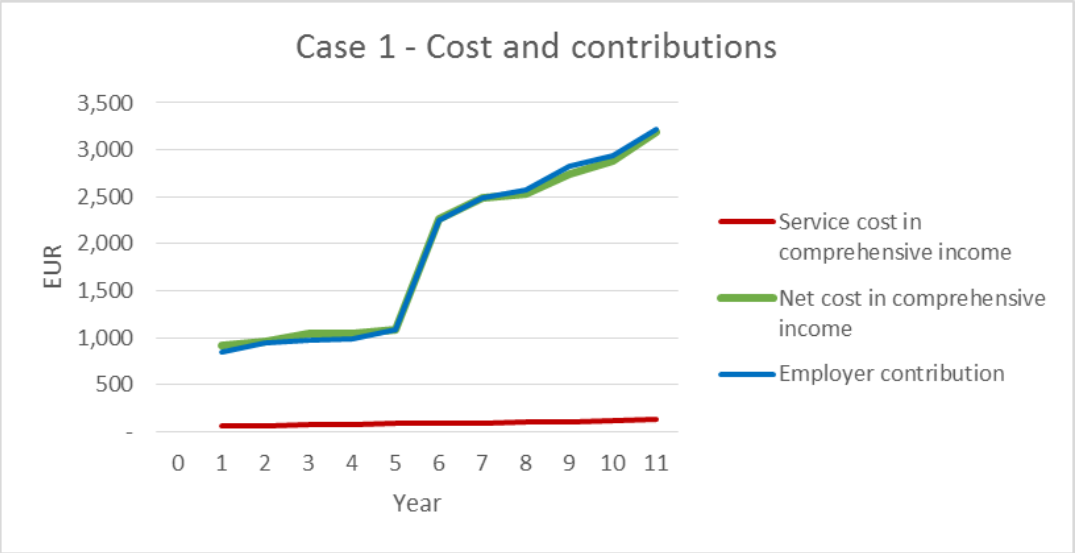
Graphs where net fulfilment liability reflected (i.e. fulfilment liability less future service cost asset)

39 Note that in the graph below:

(a) the fulfilment liability is the fulfilment liability less future service cost asset; and

(b) the pension liability is the fulfilment liability less the pension assets.





Case 2 Illustrations – Incorporating only the employee contributions in the liability calculation

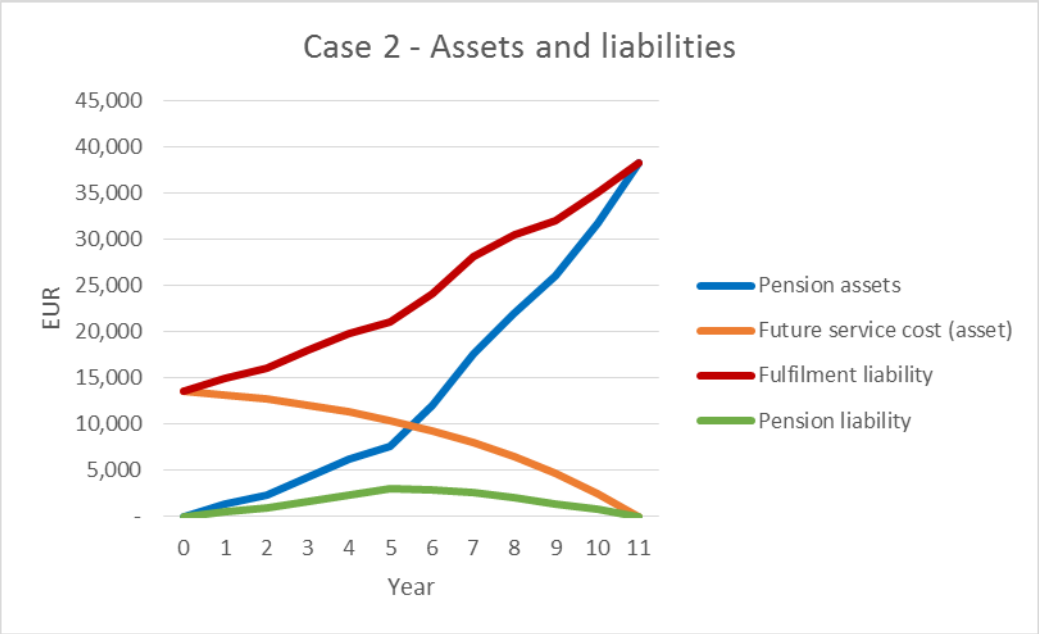
40 The effects of applying the requirements of the fulfilment value model for Case 2 are illustrated below.

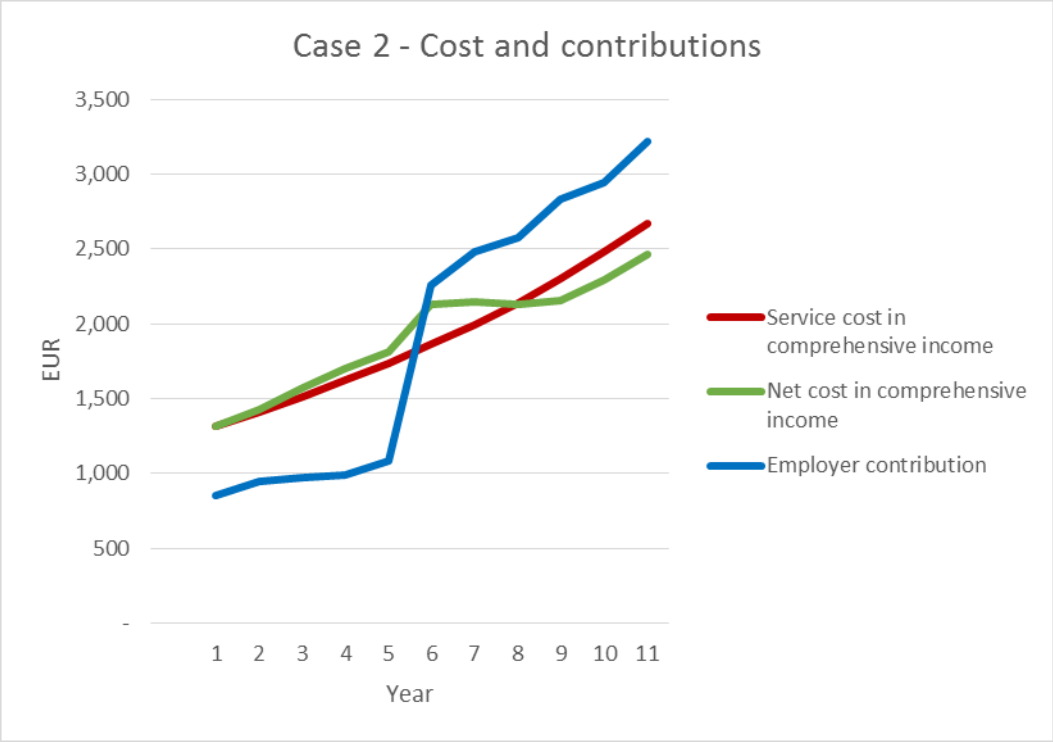
<u>Graphs where all components are reflected separately</u>

41 Note that in the graph below:

(a) the fulfilment liability does not incorporate the future service cost asset; and

(b) the pension liability is the fulfilment liability less the pension assets less future service cost asset.



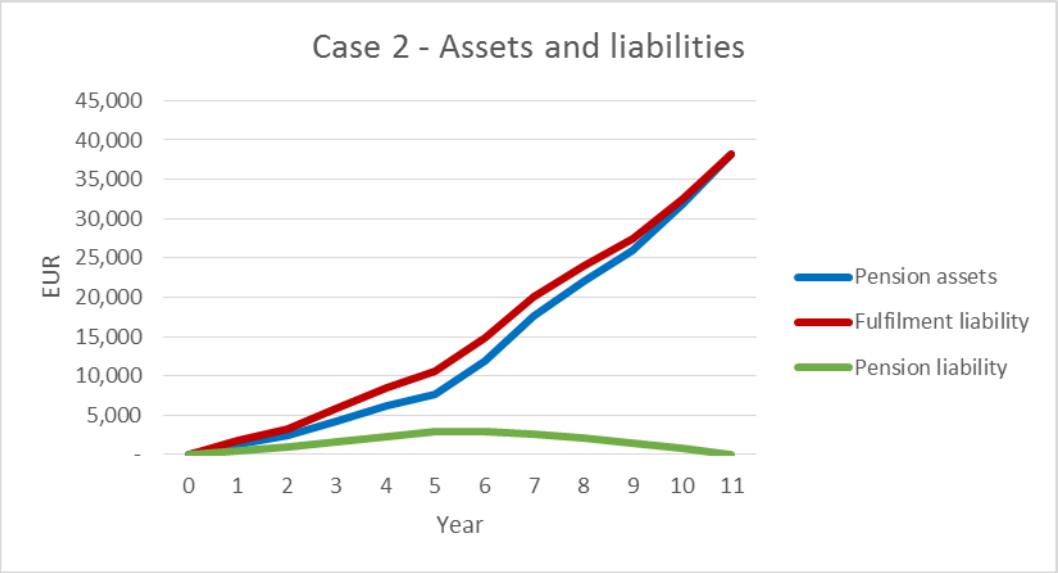


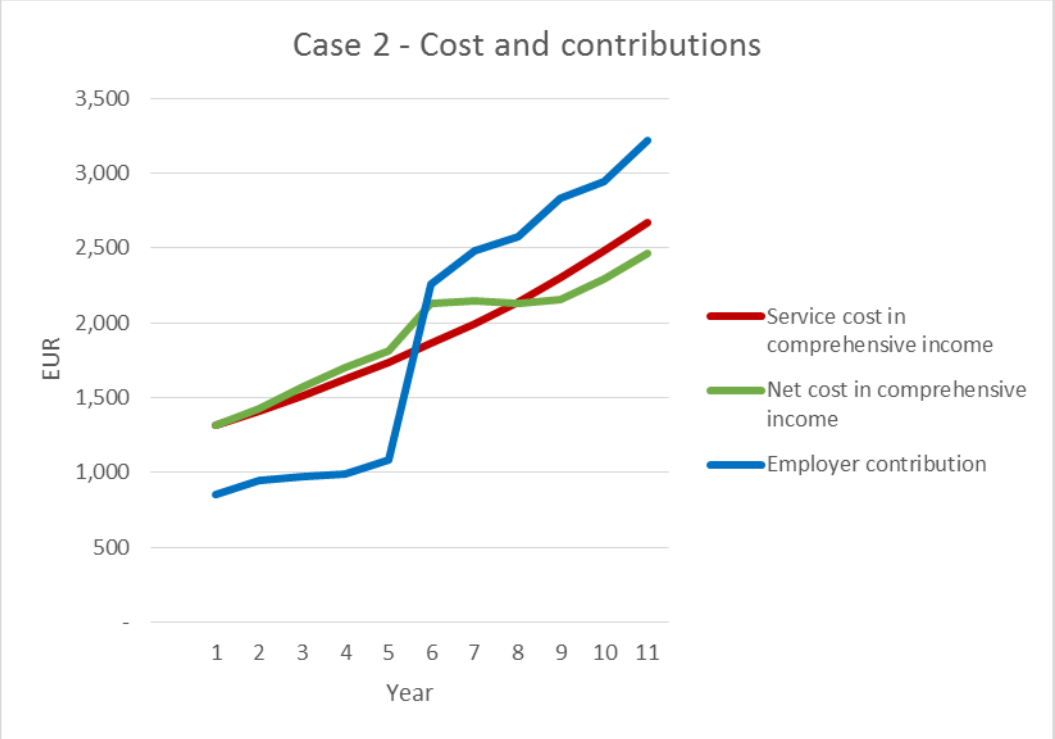
Graphs where net fulfilment liability reflected (i.e. fulfilment liability less future service cost asset)

42 Note that in the graph below:

(a) the fulfilment liability is the fulfilment liability less future service cost asset; and

(b) the pension liability is the fulfilment liability less the pension assets.





Observations relating to the Cases

43 It can be noted that in Case 1, the liability follows more closely the pension assets compared to Case 2. This is because, in Case 1, the difference is mainly caused by the differences resulting applying a slightly lower discount rate than the rate used for projecting future returns. Initially, there is thus not a big difference between the projected future cash inflows and the projected future cash outflows. Such a difference exists in Case 2. The service cost in comprehensive income increases over time due to the unwinding of the interest but the amortisation of the service cost is done on a linear basis.

44 For Case 1, between year 5 and 6, there is a big increase of the net cost in comprehensive income mainly because the employer's contribution has doubled and also due to the change in the liability discount rate. The net cost in comprehensive income increases over time mainly because of the unwind of the interest for the fulfilment liability and the employer contribution which increase over time.

45 For Case 2, between year 5 and 6, there is a big increase of the net cost in comprehensive income mainly because of the change in the liability discount rate. The net cost in comprehensive income increases over time mainly because of the unwind of the interest for the fulfilment liability which increases over time.