

EFRAG SECRETARIAT PAPER FOR PUBLIC EFRAG TEG MEETING

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EFRAG Research Project Discounting with Current Interest Rates

Relevance of discounting with a negative rate

Objective

- 1 The objective of this session is to discuss if discounting with negative rates provides relevant information in all circumstances. We also include a brief background on the economic factors behind the current interest rate environment.
- 2 In some cases, entities hold financial assets to cover future expenditures. This is typically the case of pension obligations but may occur also for other obligations – in some countries entities that have long-term decommissioning obligations are required to set up a fund. In that case, the discounting issue does not concern exclusively the discount rate that should be used for the liability, but whether and how there should be consistency in the rates used to measure the economically linked assets and liabilities.
- 3 EFRAG is considering the perceived accounting mismatch for return-linked pension benefit in its proactive project on Pension Plans. The discussion may be relevant for other types of obligations. However, this paper does not address this specific issue.

Applying present value measurement to liabilities

- 4 Present value measurement is used to reflect the time value of money. It translates the sum of money to be held at a future date (a future value) into an equivalent in terms of money held today (a present value).
- 5 A present value measurement is affected by a number of elements:
 - (a) What the future inflow or outflow would be;
 - (b) When the future inflow or outflow will occur;
 - (c) The uncertainty about the amount and timing; and
 - (d) What the purchasing power of a specified sum of money will be at the future date.
- 6 However, the characteristic in 5(c) only applies to those liabilities that have neither a contractually fixed date nor amount. This is the case for some provisions, such as long-term decommissioning and restoration obligations; most financial liabilities will instead have contractually fixed (or determinable) dates and amounts. EFRAG Secretariat is persuaded that this is an important element of the discussion.

What should the carrying amount represent?

- 7 IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* requires to measure a provision at the best estimate of the expenditure required to settle the present obligation at the end of the reporting period.
- 8 When the IASB was considering a revision of IAS 37 in 2010, it noted that the Standard needed to clarify what the ‘best estimate’ should capture. The working draft of the replacement Standard proposed to measure provisions at the amount that an entity would rationally pay at the end of the reporting period to be relieved of the present obligation.
- 9 The amount that an entity would rationally pay to be relieved of an obligation was deemed to be the lowest of:
 - (a) the present value of the resources required to fulfil the obligation;
 - (b) the amount that the entity would have to pay to cancel the obligation; and
 - (c) the amount that the entity would have to pay to transfer the obligation to a third party.
- 10 In some cases, it may be unfeasible to cancel or transfer an obligation. However, from a conceptual perspective EFRAG Secretariat concurs that the carrying amount of a liability should represent the amount that the entity would be willing to pay to extinguish the obligation (in this paper we will not discuss the implications of an entity’s view versus a market participant’s view).
- 11 From an arithmetic perspective, a present value calculated with a negative discount rate implies that the carrying amount is higher than the expected ultimate settlement value. Many would argue that this is counterintuitive, but why is that so?
- 12 EFRAG Secretariat believes that the reasons why an entity would not be willing to settle for more than the expected ultimate settlement value are the uncertainty around the amount and timing of future outflows; and the opportunity cost in missing alternative investment opportunities.
- 13 Consider a scenario in which an entity expects the following uncertain outflow in one year’s time:
 - (a) 30%: 120 EUR
 - (b) 50%: 100 EUR
 - (c) 20%: 75 EUR
- 14 Their probability-weighted average is 101 EUR and the present value with a -1% discount rate is equal to 102.02 EUR. However, in this scenario there would be a 70% probability that the final outcome is lower than the present value.
- 15 This argument could be valid even with a positive discount rate – the present rate using a 1% is 100 EUR, which is still lower than one of the possible outcomes. However, the use of a negative rates increases the possibility that the present value – which should be the price the is willing to pay – exceeds the ultimate outcome. EFRAG Secretariat thinks that an entity would be reluctant to do that. Until settlement date, there is a possibility of an upside (i.e., a reduction in the ultimate outflow) that early settlement would eliminate.
- 16 IAS 37 allows to incorporate the uncertainty in the outcome by adjusting either the cash flows or the rate. Reflecting a potential upside in the rate would imply to increase the rate – and it could be argued this adjustment has the potential to turn a negative free-risk rate in a positive discount rate. Adjusting the cash flows would imply the inclusion of a potential upside – an ‘unknown unknown’ – in the potential outcomes, which would result in a lower weighted average outflow.

- 17 The 2010 IAS 37 revision project was in effect suggesting that an entity, after identifying each possible outcome and making an unbiased estimate of the probability of each outcome, would add a risk adjustment to the measurement. This risk adjustment would increase the value of the liability – but EFRAG Secretariat thinks that an entity would also think of potential upsides in their decisions.
- 18 The second reason is that entities have limited finance resources. Using funds to settle a liability earlier is a rationale choice only to the extent that the entity has no alternative use that can provide a better return. Industrial entities – the ones that have material long-term obligations – are likely to expect positive operating returns from their operations. Therefore an entity would not be willing to incur the opportunity cost of using the funds to settle the obligation at an earlier stage.
- 19 Based on the above, EFRAG Secretariat believes that there are arguments to introduce a zero-floor rate for the discounting of these obligations, assuming that the potential upside has not already been fully incorporated in the cash flows.
- 20 EFRAG Secretariat did not discuss the idea of a zero-floor with the User Panel. In general, User Panel members were not supportive of moving away from spot rates and pointed out that any adjustment would be judgmental.

Liabilities with contractual cash flows

- 21 The situation is different when dealing with liabilities that have a contractual cash flow and a contractual date. In that case, the two first sources of uncertainty – the amount and the timing – are removed, and the only uncertainty is the expectation about the future purchasing power of the amount.
- 22 Actually, it is possible to envisage a profitable investment strategy based on purchasing financial instruments with a negative yield as long as there is an expectation that rates will go lower. In that case, an entity would be able to realise a selling gain which could exceed the negative interest.
- 23 Conversely, for an entity holding a liability, it would be rationale to pay an amount higher than the ultimate settlement outflow; if interest rates further decline, the settlement ‘loss’ would be lower than the negative yield between the reporting date and the payment date.
- 24 There have been discussions about whether there is a natural floor to interest rates. A recent paper from the Actuarial Association of Europe recalls the distinction between the economic and the physical lower bound. The physical lower bound equals the opportunity costs of holding capital. The economic lower bound is given by cost the rates impose on the banking sector.
- 25 The physical lower bound has been estimated to be between 50bp and 200bp. However, authorities could affect the physical lower bound by different means, including the elimination of paper currency.
- 26 So, it could be argued that for liabilities with certain or determinable timing and amount discounting with a negative rate effectively provides relevant information – in this case, the present value may be closer to the amount that a rationale entity would be willing to pay at the reporting date, to the extent that it does not expect a rise in the interest rates.

Question to EFRAG TEG

- 27 Do EFRAG TEG consider that the distinction between liabilities with uncertain timing and/or amount and those with contractual date and amount could provide a relevant basis for the introduction of a zero-floor?

The international debate

- 28 Other jurisdictions are currently experiencing negative rates and are debating if discounting requirements should be amended. At the recent annual meeting of the AOSSG, the ASBJ presented a paper on the implications of a negative interest rate environment. In Japan, the BoJ has pushed yields in negative territory by a combination of purchase of bonds and charging financial institutions that have deposits (exceeding a certain threshold) with the BoJ.
- 29 In March 2016 (most companies in Japan have a 31 March year-end) the ASBJ issued guidance on the measurement of defined benefit obligations for entities reporting under Japanese GAAP allowing the choice between a zero discount rate or the high quality bond rate, which would result in a negative discount rate.
- 30 The paper presented arguments in favour and against setting a zero-floor, which mostly focused on the consistency issue between the rates used for plan assets and pension liabilities.

Background - Factors behind the current interest rate environment

- 31 A useful starting point to understand the decline in nominal risk-free long-term interest rates over the last thirty years is to decompose their evolution into four components: expected inflation over the lifespan of the asset, inflation and real term premia, which are the compensation investors require for holding onto a long-term asset and finally, the expected path of the short-term real interest rate.
- 32 **Long-term inflation expectations** have declined steadily since the beginning of the 1980s to stabilise at levels around 2% in the late 1990s. The trend decline and subsequent stabilisation are a manifestation of the success of central banks' monetary policy in regaining control of inflation and in establishing strong credibility.
- 33 The second element, the nominal term premium, corresponds to the additional return that investors demand to hold a long-term bond as opposed to rolling over a short-term bond. The term premium is found to display a trend decline over the last decades. It can be decomposed in the **inflation premium and the real term premium**. The main driving force behind the large decline in the nominal term premium observed in 2003-2004, as well as during the global financial crisis, has been the real term premium. One important factor exerting downward pressure on the real term premium has been the imbalance between the reduction in the supply of and the increased demand for safe assets at the global level, which has been exacerbated by the global financial crisis.
- 34 The final component is the expected path of the short-term real rate over the life of the asset. First, over the short and medium run, the balance between savings and investment, and therefore the real interest rate, is also affected by many factors of more cyclical nature. Since the global financial crisis in 2008, these factors have predominantly exerted downward pressure on the real interest rate. Second, in the long-term, market expectations about future monetary policy rates are being very much influenced by the difficulty in normalising inflation and by the pessimistic views about the long run growth prospects of the advanced economies.
- 35 So in summary, a number of factors may be identified in contributing to the current interest rate environment - a global savings glut, the ageing of many industrialised nations, slowing productivity gains and the macro-economic slump. While decisions of central banks have a direct impact on interest rates, it is difficult to anticipate a significant rise in rates without a general improvement in the economy. Therefore, predicting if interest rates can further drop or how much longer the current interest rate environment is going to continue is quite uncertain.

Question for EFRAG TEG

36 Does EFRAG TEG require more analysis on the economic factors underlying the current level of interest rates?