

CONSULTATION PAPER

on draft Opinion on the supervision of long-term risk assessment by IORPs providing DC schemes

EIOPA-BoS-21/112
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Table of Contents

Responding to this paper	3
Consultation paper overview and next steps	4
Draft Opinion on the supervision of long-term risk assessment by IORPs providing DC schemes	5
1. Legal basis	5
2. Context and objective	5
3. Supervision of DC risk management.....	7
4. Monitoring by EIOPA	16
Annex 1: Summary outcomes of survey of national practices and gaps.....	18
Annex 2: Analysis of costs and benefits	21
Annex 3: Value at risk measure for operational risk	23
Annex 4: Risk premiums specified in EIOPA’s 2019 IORP stress test.....	25
Annex Summary of Questions to Stakeholders.....	26

Responding to this paper

EIOPA welcomes comments on the draft Opinion on the supervision of long-term risk assessment by IORPs providing DC schemes.

Comments are most helpful if they:

- respond to the question stated, where applicable;
- contain a clear rationale; and
- describe any alternatives EIOPA should consider.

Please send your comments to EIOPA using the EU Survey tool **by Thursday, 22 July 2021, 23:59 CET** by responding to the questions under the following link:

<https://ec.europa.eu/eusurvey/runner/DCRiskAssessmentIORPs>

Contributions not provided using the EU Survey tool or submitted after the deadline will not be processed.

Publication of responses

Contributions received will be published on EIOPA's public website unless you request otherwise in the respective field in the survey. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure.

Please note that EIOPA is subject to Regulation (EC) No 1049/2001 regarding public access to documents¹ and EIOPA's rules on public access to documents².

Contributions will be made available at the end of the public consultation period.

Data protection

Please note that personal contact details (such as names of individuals, email addresses and phone numbers) will not be published. They will only be used to request clarifications if necessary on the information supplied. EIOPA, as a European Authority, will process any personal data in line with Regulation (EU) 2018/1725³ on the protection of the individuals with regards to the processing of personal data by the Union institutions and bodies and on the free movement of such data. More information on data protection can be found at <https://eiopa.europa.eu/> under the heading 'Legal notice'.

¹ Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents (OJ L 145, 31.5.2001, p. 43).

² [Public Access to Documents](#)

³ Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39).

Consultation paper overview and next steps

This Consultation Paper sets out the draft Opinion on the supervision of risk management by IORPs providing DC schemes, focussing on operational risk and long-term risk assessment.

The Opinion aims at enhancing supervisory convergence in the supervision of risk management by IORPs providing DC schemes. The Opinion is provided to the competent authorities as defined in Article 6(8) of the IORPII Directive.

Considering that a risk-sensitive supervisory approach to DC risk management is necessary to ensure that risks borne by DC IORPs and members and beneficiaries are appropriately managed and supervised, the Opinion provides guidance on the supervision of long-term risk assessment by DC IORPs, applying a risk-based and proportionate approach.

The Opinion focuses on two aspects of DC risk management. Firstly, the use of quantitative elements in operational risk management, supplementing the guidance in the existing Opinion on the supervision of the management of operational risks faced by IORPs. Secondly, the use of projections of future retirement income in assessing long-term risks from the perspective of members and beneficiaries, also in interaction with the establishment of their risk tolerance and the design of investment strategies.

Next steps

EIOPA will consider the feedback received and expects to publish the final Opinion in the fourth quarter of 2021 together with a feedback statement on the consultation responses of stakeholders.

Draft Opinion on the supervision of long-term risk assessment by IORPs providing defined contribution schemes

1. Legal basis

- 1.1. The European Insurance and Occupational Pensions Authority (EIOPA) provides this Opinion on the basis of Article 29(1)(a) of Regulation (EU) No 1094/2010⁴. This article mandates EIOPA to play an active role in building a common Union supervisory culture and consistent supervisory practices, as well as in ensuring uniform procedures and consistent approaches throughout the Union by providing opinions to competent authorities.
- 1.2. EIOPA delivers this Opinion on the basis of Directive (EU) 2016/2341⁵ (the IORP II Directive), in particular in relation to Articles 25, 28 and Article 49 thereof.
- 1.3. This Opinion is provided to the competent authorities (CAs), as defined in Article 6(8) of the IORP II Directive.

2. Context and objective

- 2.1. Due to the ongoing shift from defined benefit (DB) to defined contribution (DC) pension schemes, financial market and longevity risks are increasingly borne by members and beneficiaries. Moreover, operational risk tends to be more immediate for members and beneficiaries of DC schemes compared to DB schemes.⁶ This means a risk-sensitive supervisory approach to DC risk management is necessary to ensure that risks borne by DC IORPs – most notably operational risks – and by members and beneficiaries in terms of future retirement income are appropriately managed and supervised.
- 2.2. The IORP II Directive introduced new requirements for IORPs⁷ to have in place an effective and well-integrated risk-management system, in accordance with Article 25 of the IORP II Directive. Furthermore, IORPs are required to carry out and conduct their own-risk assessment (ORA), in accordance with Article 28 of the IORP II Directive. In particular, where members and beneficiaries bear risks, in accordance with the conditions of the pension scheme, the risk-management system should also consider those risks from the perspective of members and beneficiaries. The ORA should include an assessment of the risks to members and beneficiaries relating to the paying out of their retirement benefits. Within the

⁴ Regulation (EU) No 1094/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Insurance and Occupational Pensions Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/79/EC, OJ L 331, 15.12.2010, p. 48.

⁵ Directive (EU) 2016/2341 of the European Parliament and of the Council of 14 December 2016 on the activities and supervision of institutions for occupational retirement provision (IORPs), OJ L 354, 23.12.2016, p. 37.

⁶ See paragraph 3.15-3.20 of EIOPA, Opinion on the supervision of the management of operational risks faced by IORPs, EIOPA-BoS-19-247: https://www.eiopa.europa.eu/sites/default/files/publications/opinions/opinion_on_the_supervision_of_the_management_of_operational_risks_faced_by_iorps.pdf

⁷ Including the occupational retirement provision business of life insurance undertakings subject to Article 4 of the IORP II Directive.

supervisory review process, as set out in Article 49 of the IORP II Directive, CAs are required to assess the risks IORPs face and IORPs' ability to assess and manage those risks.

- 2.3. Pan-European Personal Pension products (PEPPs) are not occupational pension schemes, but these personal pension products may be provided by IORPs. Regulation (EU) 2019/1238 (the "PEPP Regulation") specifies that all investment options should ensure sufficient protection of savers by means of risk-mitigating techniques.⁸ Article 14(2) of Commission Delegated Regulation (EU) .../...⁹ specifies that risk-mitigation techniques for the investment strategy should be designed in a way to provide for stable and adequate individual future retirement income, taking into consideration the expected remaining duration of the accumulation phase and the nature of the decumulation phase as well as stochastic pension projections.
- 2.4. In past occupational pension stress tests applied to IORPs providing pure DC schemes, EIOPA assessed the risks of adverse market scenarios on the assets of the IORPs and on future retirement income of three groups of plan members with varying remaining duration to retirement.¹⁰
- 2.5. The objective of this Opinion is to promote consistent supervisory practices by providing CAs with guidance on the supervision of risk management by IORPs providing DC schemes. The expectations contained in this Opinion should not be interpreted to be comprehensive, covering all aspects of DC risk management. Proper risk management depends on a broad range of factors, starting with the integration of risk management considerations in the IORPs' wider system of governance. In this sense, this Opinion restricts itself to two aspects that are relevant for DC IORPs:
 - The use of quantitative elements in operational risk management, supplementing the guidance in EIOPA's opinion on operational risk management, which take as a more qualitative approach;
 - The use of projections of future retirement income, as part of the long-term risk assessment from the perspective of members and beneficiaries, also in interaction with the determination of their risk tolerance and the establishment of investment strategies.

The long-term approach of using pension projections complements the ongoing risk management of DC IORPs to effectively manage risks from the perspective of

⁸ Article 42(3) of Regulation (EU) 2019/1238 of the European Parliament and of the Council of 20 June 2019 on a pan-European Personal Pension Product (PEPP), OJ L 198, 25.7.2019, p. 1: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R1238&from=EN>

⁹ Commission Delegated Regulation (EU) 2021/473 of 18 December 2020 supplementing Regulation (EU) 2019/1238 of the European Parliament and of the Council with regard to regulatory technical standards specifying the requirements on information documents, on the costs and fees included in the cost cap and on risk-mitigation techniques for the pan-European Personal Pension Product, OJ L 99, 22.3.2021, p. 1: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0473&from=EN>

¹⁰ See for the most recent occupational pensions stress test section 5 of EIOPA, 2019 IORP Stress Test Specifications, EIOPA-BoS-19/157, 29 March 2019: https://www.eiopa.europa.eu/sites/default/files/publications/other_documents/stress_test_specifications.pdf

members and beneficiaries.

- 2.6. EIOPA surveyed existing national practices and gaps among CAs in twenty Member States (see Annex 1). In three Member States, national regulation and/or supervisory guidance lays down specific quantitative risk measures for operational risk.¹¹ In another three Member States, national regulation and/or supervisory guidance specifies how IORPs should conduct DC risk assessment from the perspective of members and beneficiaries relating to their future retirement income. The low incidence of national rules and guidance supplementing the IORP II Directive provides a further basis to fill that gap through this Opinion.
- 2.7. This Opinion recognises the heterogeneity in occupational DC schemes across Europe. DC schemes feature different risk-mitigation techniques in the accumulation phase and designs of the pay-out phase. DC schemes also differ in respect of the choice and responsibility they offer. Some DC schemes offer plan members a range of investment options to choose from in accordance with retirement needs and risk preferences. Others take a more collective approach, often with an important role for social partners in the design of the scheme and its investment policy.
- 2.8. This Opinion further aims to facilitate risk-based and proportionate supervision of IORPs. In this context, CAs may take into account the national specificities of the IORP sector to determine the requirements necessary for implementing this Opinion considering a risk-based and proportionate approach.¹²
- 2.9. Annex 2 contains an analysis of the costs and benefits relating to this Opinion.

Questions to stakeholders:

Q1: Do you agree with the focus of the draft Opinion on the quantitative elements in operational risk management and long-term risk assessment from the perspective of members and beneficiaries? Please explain and provide any suggestions for further aspects of DC risk management that need attention.

Q2: Do you agree that Annex 2 provides a balanced view of the costs and benefits of the draft Opinion? Please explain and provide any suggestions.

3. Supervision of DC risk management

Definition of DC schemes

¹¹ In ten Member States, operational risks are borne by DC IORPs through capital requirements, rather than by sponsoring undertakings and/or members and beneficiaries. Often these DC IORPs are subject to the regulatory own funds requirement of the IORP II Directive, which can be interpreted to contain an implicit allowance for operational risk.

¹² For further guidance on risk-based and proportionate supervision: EIOPA (2017) A common supervisory culture, <https://eiopa.europa.eu/Publications/Speeches%20and%20presentations/A%20Common%20Supervisory%20culture.pdf>

- 3.1 For the purpose of this Opinion, CAs should understand DC schemes to be defined as schemes where members and beneficiaries bear risks, in accordance with Article 25(3) of the IORP II Directive.
- 3.2 Consequently, the definition of DC schemes includes pension schemes in which part of the risks is borne by the IORP itself or the sponsoring undertaking, e.g. in pension schemes with a minimum guarantee.
- 3.3 The risks borne by members and beneficiaries should be material given that in all pension schemes, even DB schemes with full guarantees, members and beneficiaries are exposed to some risk. For the application of this Opinion, CAs should determine whether members and beneficiaries bear material risks in pension schemes provided by IORPs.

Forward-looking supervision of DC long-term risk assessment

- 3.4 To ensure that supervision is based on a forward-looking and risk-based approach, in accordance with Article 47(2) of the IORP II Directive, CAs should assess the risks to which DC IORPs and their members and beneficiaries are exposed and the ability of DC IORPs to assess and manage those risks. This can be achieved through various supervisory means, such as reviewing the IORPs governance documents and challenging the IORP's management board on the results of risk assessments and the management of those risks.
- 3.5 The objective of this Opinion is not to provide comprehensive guidance on all aspects of DC risk management. Previously, EIOPA issued four supervisory opinions in the area of governance and risk management, which are also relevant for DC risk management:
 - Opinion on the use of governance and risk assessment documents in the supervision of IORPs¹³, providing an overview of the governance documents required by the IORP II Directive and setting its supervisory expectations with regard to their content, in particular in relation to the IORP's statement of investment policy principles (SIPP) and the own-risk assessment (ORA);
 - Opinion on the practical implementation of the common framework for risk assessment and transparency for IORPs¹⁴, in so far IORPs provide DC schemes in which part of the risks is borne by the IORP and/or the sponsor;

¹³ EIOPA, Opinion on the use of governance and risk assessment documents in the supervision of IORPs, EIOPA-BoS-19-245, 10 July 2019: https://www.eiopa.europa.eu/sites/default/files/publications/opinions/opinion_on_the_use_of_governance_and_risk_assessment_documents_in_supervision_of_iorps_0.pdf

¹⁴ EIOPA, Opinion on the practical implementation of the common framework for risk assessment and transparency for IORPs, EIOPA-BoS-19-246, 10 July 2019: https://www.eiopa.europa.eu/sites/default/files/publications/opinions/opinion_on_the_practical_implementation_of_the_common_framework_for_risk_assessment_and_transparency_of_iorps.pdf

- Opinion on the supervision of the management of environmental, social and governance risks faced by IORPs¹⁵, containing supervisory guidance on the integration of ESG risks in the IORPs' risk management;
- Opinion on the supervision of the management of operational risks faced by IORPs¹⁶, offering supervisory guidance on reviewing the resilience of DC IORPs to operational risks, including outsourcing and cyber risk.

3.6 The latter Opinion emphasises that operational risk events have an immediate impact on members and beneficiaries of DC schemes in terms of accumulated capital and projected future retirement income. Moreover, it raises the emergence of new multi-sponsor IORP providers, increasing the need to clarify operational obligations and to assess operational viability.

Assessing the possible quantitative impact of operational risk

3.7 The Opinion on operational risk management also recognises that the frequency and severity of operational risks may be hard to quantify. IORPs perform a multitude of activities – either internally or outsourced externally – which may be subject to several types of operational risks. Consequently, good qualitative operational risk management, as substantiated further in this Opinion, is of primary importance and best suited to the different national specificities.

3.8 Given this diversity of operational risks, there is no single algebraic formula or model which could capture overall operational risk. Nevertheless, to get a better view of the possible quantitative impacts, CAs should encourage DC IORPs to estimate the possible impact of operational risk of at least the activities performed internally.¹⁷ This can be done by means of own custom-made operational risk estimates or by using the standard formulas included in EIOPA's common framework for risk assessment and transparency (see Annex 3).¹⁸

3.9 A quantification of operational risk exposures allows DC IORPs to gain in insight in the sufficiency of means to cover for the impact of (severe) operational risk. Where members and beneficiaries bear operational risks, as opposed to the IORP itself, IORPs could consider the impact of operational risk on the account values of DC members in the short term and projections of future retirement income in the long term.

¹⁵ EIOPA, Opinion on the supervision of the management of environmental, social and governance risks faced by IORPs, EIOPA-BoS-248, 10 July 2019: <https://www.eiopa.europa.eu/sites/default/files/publications/opinions/opinion-on-the-supervision.pdf>

¹⁶ EIOPA, Opinion on the supervision of the management of operational risks faced by IORPs, EIOPA-BoS-19-247: https://www.eiopa.europa.eu/sites/default/files/publications/opinions/opinion_on_the_supervision_of_the_management_of_operational_risks_faced_by_iorps.pdf

¹⁷ Quantification of operational risk may be more difficult for outsourced activities.

¹⁸ See section 4.6 of EIOPA, Principles and Technical Specifications for the Common Framework – Annex 1 to Opinion on the practical implementation of the common framework for risk assessment and transparency for IORPs, EIOPA-BoS-19-246, 10 July 2019: https://www.eiopa.europa.eu/sites/default/files/publications/opinions/annex_to_opinion_eiopa-bos-19-246_technical_specifications_1.pdf

Long-term risk assessment from the perspective of members and beneficiaries in terms of future retirement income

- 3.10 CAs should expect DC IORPs to conduct long-term risk assessments by using projections of future retirement income, as part of considering the risks from the perspective of members and beneficiaries in the risk management system. This involves a process of:
- assessing the risks for members and beneficiaries using projections of future retirement income;
 - confronting the results of the risk assessment with the established risk tolerance of the members and beneficiaries or the risk tolerance of a subset of the members and beneficiaries linked to various investment options;
 - mitigating the risks, where risk tolerance limits are exceeded, most notably through adjusting the investment strategy or strategies in case of multiple options.
- 3.11 The long-term risk assessments using projections of retirement income complement the on-going risk management of DC IORPs, monitoring and assessing the risk limits imposed on investment managers, e.g. bandwidth around strategic asset allocation, tracking error with respect to benchmark and value at risk limits.
- 3.12 Compared to such short-term risk management, the long-term risk assessment using projections of future retirement income should be expected to be conducted less frequently. For example, at the time of conducting the ORA or reviewing the SIPP, or when there is a significant change in the investment policy or risk profile.

Principles for long-term risk assessment using projections of future retirement income

- 3.13 Taking into account the specificities of DC schemes, CAs should expect DC IORPs to base the projections of future retirement income on the following main principles:

Stochastic scenarios of asset returns

3.14 The projections of future retirement income of members and beneficiaries should be based on stochastic scenarios of asset returns. However, stochastic scenario analysis is admittedly more demanding than a deterministic one, both in terms of complexity and resources. IORPs would need to have in-house expertise on stochastic modelling of asset returns and/or acquire stochastic scenario sets from external service providers. To ensure a risk-based and proportionate application of this Opinion, CAs may allow for deterministic return scenarios¹⁹ in projecting future retirement income.

¹⁹ See for example of deterministic scenario analysis section 5 of EIOPA, 2019 IORP Stress Test Specifications, EIOPA-BoS-19/157, 29 March 2019.

- 3.15 The use of a stochastic modelling approach²⁰ has distinct advantages compared to the use of deterministic scenarios. Analysing a large range of scenarios contributes to preventing that certain scenarios are overlooked. Another advantage of stochastic modelling is that it allows IORPs to calculate a wide range of risk (and performance) indicators and to attach probabilities to scenarios, like the 50th or 5th percentile. This benefits the interpretation and presentation of the results of the risk assessment.
- 3.16 The risk assessment from the perspective of members and beneficiaries should not be restricted to financial market risks, but also consider, where applicable, other risk factors, like longevity risk, labour market risks and, as indicated in paragraph 3.9, operational risk. However, adding such non-asset return variables to the stochastic would increase its complexity. To avoid that, a practical simplification would be to combine the stochastic return scenarios with deterministic scenarios for other material risks.

Market-sensitive and realistic assumptions

- 3.17 To ensure a market-sensitive and risk-based approach to the management of risks from the perspective of members and beneficiaries, the risk assessment should incorporate latest financial market data. This implies that the initial values of DC members' accounts should reflect market prices of assets and that the assumptions underlying future returns should be consistent with market interest rates.²¹ This ensures, for example, that the consequences of a low-interest rate environment are properly taken into consideration.
- 3.18 Other assumptions determining future returns, not observed in financial markets, should be realistic. Most notably, this applies to the expected risk premiums (over risk-free interest rates) on the asset classes considered. The risk premiums assumed for the most recent IORP stress test can be a point of reference, when there is no more up to date reliable market information. (see Annex 4). It also means that the projections of future returns should avoid assuming mean reversion in equity returns, i.e. that a fall in equity prices results in higher future risk premiums.^{22,23}

²⁰ See for examples of stochastic modelling approaches EIOPA, Pan-European Personal Pension Product (PEPP): EIOPA's stochastic model for a holistic assessment of the risk profile and potential performance, EIOPA-20-505, 14 August 2020: https://www.eiopa.europa.eu/sites/default/files/publications/eiopa-20-505_pepp_stochastic_model.pdf and OECD, OECD Pensions Outlook 2020 - Selecting default investment strategies, Chapter 4, 7 December 2020: https://www.oecd-ilibrary.org/finance-and-investment/oecd-pensions-outlook-2020_1c7381db-en

²¹ In term of stochastic modelling, this means that the asset return model should be calibrated to fit the initial term structure of market interest rates.

²² This is in line with EIOPA, PEPP: EIOPA's stochastic model for a holistic assessment of the risk profile and potential performance, EIOPA-20-505, 14 August 2020, p. 4 and EIOPA, 2019 IORP Stress Test Specifications, EIOPA-BoS-19/157, 29 March 2019, p. 36.

²³ The existence of mean reversion is disputed in the academic literature. An issue is that time series for stock market returns cover limited timeframes compared to the horizons in which mean reversion is assumed to materialise. Due to limited number of independent long-term observations, findings of mean reversion tend to be surrounded with considerable parameter uncertainty. Luboš Pástor and Robert F. Stambaugh, Are stocks really less volatile in the long run?, The Journal of Finance, Vol. LXVII, No. 2, April 2012: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1540-6261.2012.01722.x> show that stock returns are mean diverting when the parameter uncertainty is taken into account, as this uncertainty will compound over time.

Characteristics of members and beneficiaries

3.19 The risk assessment should take into account the characteristics of DC members. For example, the expected retirement age and life expectancy at retirement, which determine the level of future retirement income. DC members' salary and salary growth will be needed where contributions into the DC scheme are linked to wages.

3.20 It is not the intention of the risk assessment to make projections for individual members and beneficiaries. Instead, the plan members should be grouped in a way that results in a fair reflection of the risks posed to individuals within the group. At least a number of different age groups should be distinguished in order to take into account the aim of having an equitable spread of risks and benefits between generations in occupational retirement provision, in accordance with Recital 57 of the IORP II Directive.

Pension scheme characteristics

3.21 The assessment should take into account the characteristics of the pension scheme, most notably the investment strategy, risk-mitigation techniques, contributions rates over the life-cycle, costs and charges and the characteristics of the pay-out phase.

3.22 Expected future retirement income and surrounding risk will depend to an important extent on the investment strategy and the accompanying risk-mitigation techniques. Broadly three types of risk-mitigation techniques can be distinguished:

- Life-cycling approaches, where the allocation to risk assets is reduced in favour of fixed income assets with DC members getting closer to retirement;
- Buffers to smooth unfavourable and favourable returns over time;
- (Minimum) guarantees, provided by the IORP or the sponsor.

3.23 The objective of the risk-mitigation techniques is to limit the risk exposure of members and beneficiaries. Conversely, the aim of the risk assessment is to ascertain that the design of the risk-mitigation techniques meets the objective of risks not exceeding the risk tolerance of DC members and beneficiaries.

3.24 Besides investment returns, projected retirement income will be determined by the contributions that are paid into DC members' accounts and the costs and charges that are deducted from investment returns and contributions.²⁴ The inclusion of costs in the pension projection will also provide insight in the

²⁴ The draft Opinion on the supervisory reporting of costs and charges of IORPs sets EIOPA's expectations on the transparent compilation and supervisory reporting of administrative and investment costs. See Consultation Paper on draft Opinion the supervisory reporting of costs and charges of IORPs, EIOPA-BoS-21/113, 16 April 2021.

cumulative impact of annual costs and charges on future retirement income by comparing scenarios with and without costs.^{25,26}

3.25 The design of the pay-out phase also influences the risks in terms of future retirement income. For example, DC members will be subject to interest rate risk before retirement, if accumulated capital will be converted in a life annuity and assets are not fully invested in long-term bonds. As another example, where DC members are entitled to receive lump sum payments, an assessment will have to be made to what extent DC members will convert the lump sum in a regular income stream, like a life annuity, variable annuity or programmed withdrawal.

Target variables and risk & performance indicators

3.26 The pay-out phase should inform the choice of target variable for future retirement income, e.g. annuities, scheduled withdrawal or lump sum. The choice should be made with a view to facilitate the interpretation of the risk and performance indicators. The target variable could be future retirement income in euros. It can also be considered to express this as a percentage of the DC members' projected final earnings, especially when setting up a new scheme.

3.27 Appropriate indicators have to be selected to evaluate risk and performance, i.e. considering the trade-off between risk and return. A range of possible indicators exist²⁷, measuring:

- Performance, e.g. projected retirement income in a median (50th percentile) or favourable scenario (75th / 95th percentile) and the probability to reach a given ambition;
- Risk, e.g. projected retirement income in an unfavourable scenario (25th / 5th percentile), dispersion of income, expected loss and the probability of not reaching some lower level of retirement income.

3.28 The weights attached to the indicators will depend on the IORPs' objectives and, ultimately, the preferences of the members. In the end, the aim is to relate the risk and performance indicators to the established risk tolerance of members and beneficiaries.

²⁵ There is a trend to express costs with respect to their impact on final retirement income. Article 36(1)(f) of PEPP Regulation (EU) 2019/1238 requires providers to include "an estimation of the impact of the costs on the final PEPP benefits" in the PEPP Benefit Statement.

²⁶ The tool used in past IORP stress tests for analysing the impact of adverse scenarios on future retirement income of representative DC members also allowed for a calculation of the cost impact on future retirement income. See, for example, the results in paragraphs 200-201 of EIOPA, 2017 IORP Stress Test Report, EIOPA-BoS-17/370, 13 December 2017: https://www.eiopa.europa.eu/sites/default/files/financial_stability/occupational_pensions_stress_test/2017/2017_iorp_stress_test_report.pdf

²⁷ See for a discussion of risk and performance indicators section 3 and 4 of EIOPA, Pan-European Personal Pension Product (PEPP): EIOPA's stochastic model for a holistic assessment of the risk profile and potential performance, EIOPA-20-505, 14 August 2020 and section 4.1 of OECD, OECD Pensions Outlook 2020 - Selecting default investment strategies, Chapter 4, 7 December 2020.

Risk tolerance of members and beneficiaries

- 3.29 CAs should expect IORPs to establish the risk tolerance of their members and beneficiaries. Appropriate methodologies should be used to establish the risk tolerance, recognising the specificities of IORPs and the different ways to do so. The methodologies should distinguish between different generations/cohorts, given possible differences in risk tolerance.
- 3.30 The risk tolerance of members and beneficiaries can be thought of as consisting of least two components:
- The extent to which DC members want to avoid taking risk, which will depend on their risk-return preferences;
 - The extent to which DC members are able to bear risk, which depend on other sources of retirement income, including human capital (i.e. future earnings capacity) housing wealth and private savings.
- 3.31 There are broadly speaking two methods to establish the risk tolerance of DC members from an ex ante perspective²⁸:
- Analysing internal and external data sources, such as internal data on members' profiles (age, income, education level etc.) and relevant scientific literature (e.g. on financial versus human capital)
 - Approaching DC members directly, e.g. surveys, including self-assessment questionnaires to assist prospective members choosing an investment option, or panels, or indirectly through representatives of DC members.
- 3.32 The first method would be particular suitable to assess DC members' capacity to bear risk, while the second method would be more suitable to gauge members preferences on taking risks.
- 3.33 From an ex post perspective, offering a range of investment options can reveal risk-return preferences of plan members who make an active choice, especially in combination with self-assessment questionnaires to support them in their choice.

Design and review of investment strategy

- 3.34 CAs should expect IORPs to consider the long-term risk assessment from the perspective of members and beneficiaries in the design and review of the investment strategy, or strategies in the event of multiple investment options, taking into account their risk tolerance. This ensures an investment policy geared to the membership structure of the IORP, in accordance with Recital 45 of the IORP II Directive.
- 3.35 The review of the investment strategy can take place during the periodical review of the SIPP and the conduct of the ORA. The review of the SIPP and the conduct of the ORA has to be carried out at least every three years unless there is a

²⁸ See also section 6 ("Membership structure in the investment policy") in Annex 1 of EIOPA, Opinion on the use of governance and risk assessment documents in the supervision of IORPs, EIOPA-BoS-19-245, 10 July 2019.

significant change in the investment policy or the risk profile, in accordance with Article 28 and Article 30 of the IORP II Directive, here from the perspective of members and beneficiaries.²⁹

Reporting and disclosure

- 3.36 NCAs should expect DC IORPs to report on the long-term risk assessment from the perspective of members and beneficiaries in their:
- ORA results report, explaining the assumptions, methodology and results of the risk assessment from the perspective of members and beneficiaries, how the results compared to the established risk tolerance and any mitigating measures taken;
 - Statement of investment policy principles (SIPP), explaining how the investment policy takes into account the results from the risk assessment from the perspective of members and beneficiaries and their risk tolerance.
- 3.37 Where they bear (part of the) responsibility for the design of the DC scheme and its investment policy, the outcomes of the risk assessment should also be shared and discussed with the social partners.

Proportionality

- 3.38 CAs should determine the frequency and depth of their supervision of DC IORPs' risk management, taking into account their supervisory priorities and prudential objective of protecting the rights of members and beneficiaries and ensuring the stability and soundness of IORPs, as well as a proportionate application of the rules relating to the risk management of DC IORPs.

Questions to stakeholders:

Q3: Do you agree with the scope of application of the Opinion, i.e. all IORPs providing schemes where members and beneficiaries bear material risks, or should the scope of the Opinion cover only IORPs providing schemes where members and beneficiaries bear all risks? Please explain and provide any alternatives that EIOPA should consider.

Q4: Do you agree that the use of quantitative elements in operational risk assessment should be encouraged? Please explain how this could best be done in your view.

Q5: Are in your view the Value at Risk (VaR) formulas presented in Annex 3 helpful for better understanding the possible quantitative impact of operational risk exposures of DC IORPs? Please explain and provide any suggestions or alternatives that EIOPA should consider.

Q6: Do you agree that the risk assessment from the perspective of members and beneficiaries should include a long-term assessment using projections of future retirement income? Please explain.

Q7: In your view, what are the potential benefits and limitations of using pension projections for long-term risk assessment in the context of DC-based pension schemes

²⁹ It may not always be possible to adjust the investment strategy, e.g. if the investment strategy is contractually agreed with members and beneficiaries.

that are prevalent in the EU Member States or your Member State? Please explain and provide any alternative methods that should be considered.

Q8: Could you provide information on the use in practice of pension projections for the purpose of risk management and/or the design of investment strategies (e.g. in Europe, your country or within your IORP)? If yes, please provide this information.

Q9: Do the principles for conducting projections of future retirement income strike the right balance between setting sensible minimum standards and recognising the specificities of DC schemes in the various Member States? If not, please explain your suggestions to make the principles more or less specific and/or to add or remove principles.

Q10: Do you agree with the content of the below principles, as put forward in paragraphs 3.14-3.28 of the draft Opinion:

- Stochastic scenarios of asset returns;
- Market-sensitive and realistic assumptions;
- Characteristics of members and beneficiaries;
- Pension scheme characteristics;
- Target variables and risk & performance indicators?

If not, please provide your suggestions to improve the principles.

Q11: The supervisory expectations recognise and allow different methods to establish the risk tolerance of DC members and beneficiaries. Do you agree or would you propose more specific guidance? Please explain and provide any suggestion.

Q12: Do you agree that the design and the periodical review of the investment strategy, or investment strategies in case of multiple investment options, should consider the long-term risk assessment using projections of future retirement income, taking into account their risk tolerance? Please explain and provide any suggestions.

Q13: What should in your view be the frequency of conducting the risk assessment using pension projections? Is at least every three years sufficient, unless there is a significant change in the risk profile, as provided by Article 28 (ORA) and Article 30 (SIPP) of the IORP II Directive. Or should DC IORPs conduct these projections more regularly, as suggested by Article 25 (Risk-management system). Please explain.

Q14: Do the expectations put forward in the draft Opinion achieve a proportionate approach to DC risk management, fitting small-, medium- and large-sized IORPs? If not, please provide your suggestions to improve proportionality of the draft Opinion.

Q15: Do you have any other comments on the draft Opinion? If yes, please provide these other comments.

4. Monitoring by EIOPA

4.1. Two years following the publication of this Opinion, EIOPA will look into the supervisory practices of the CAs with a view to evaluate supervisory convergence.

4.2. This Opinion will be published on EIOPA's website.

Done at Frankfurt am Main, [*]

[signed]

X X

Chairperson

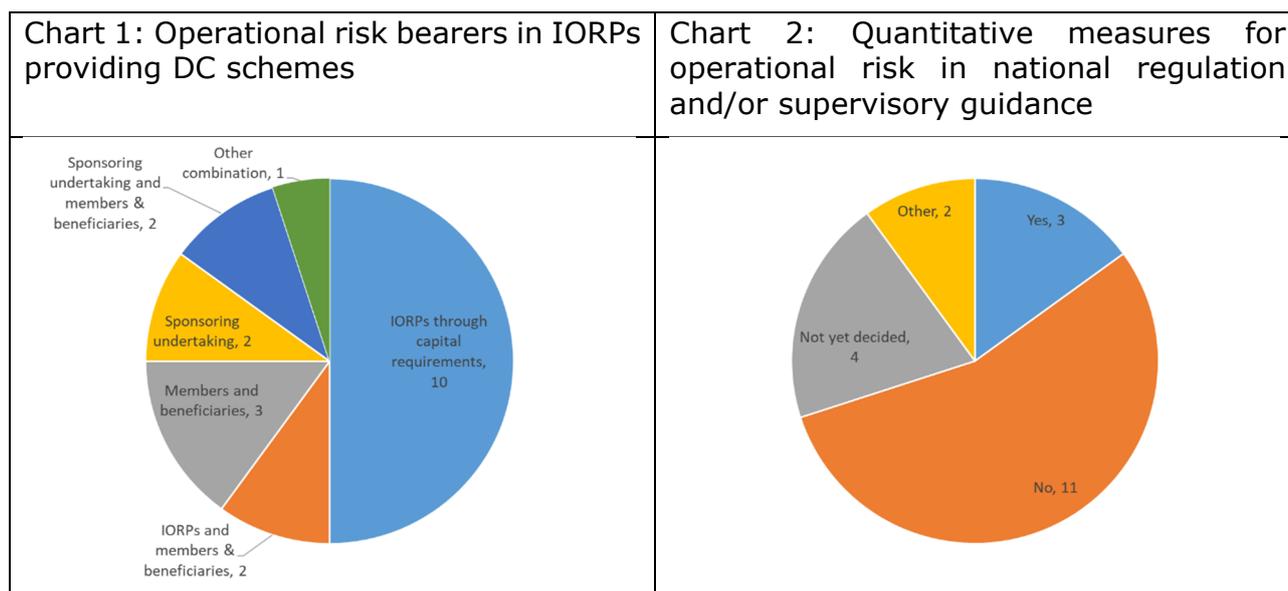
For the Board of Supervisors

Annex 1: Summary outcomes of survey of national practices and gaps

- 1.1. EIOPA conducted a survey among CAs in the third quarter of 2020 to map existing practices and gaps at national level relating to DC risk assessment.
- 1.2. All CAs responded to the survey. Sixty percent indicated that no further level 2 measures (e.g. regulations) or level 3 measures (e.g. supervisory guidance) supplementing the IORP II Directive were foreseen in the area of DC risk management. Thirty percent of CAs responded that further level 2 and/or level 3 measures have not yet been decided. In two Member States further supervisory measures in the area of DC risk assessment were still expected.
- 1.3. Twenty CAs responded to the specific questions on DC risk management, while ten CAs did not complete these questions because DC IORPs are largely absent (5 CAs) or IORPs are largely non-existent (5 CAs).

Quantitative measures for operational risk

- 1.4. In half of the Member States, operational risks are borne by DC IORPs through capital requirements (see Chart 1). Often these DC IORPs are subject to the regulatory own funds requirement of the IORP II Directive, which can be interpreted to contain an implicit allowance for operational risk. In other Member States, operational risks in DC schemes are borne by members and beneficiaries, the sponsoring undertaking or by a combination of the members and beneficiaries, the sponsor and/or the IORP.
- 1.5. In 3 out of 20 Member States, national rules lay down specific quantitative risk measures for operational risk (see Chart 2), of which in two Member States derived from the operational risk module of the standard formula in Solvency II. In most Member States this is not the case or not been decided yet.
- 1.6. A few Member States (are envisaging to) impose stricter rules on the management of operational risks by for-profit multi-employer IORPs.

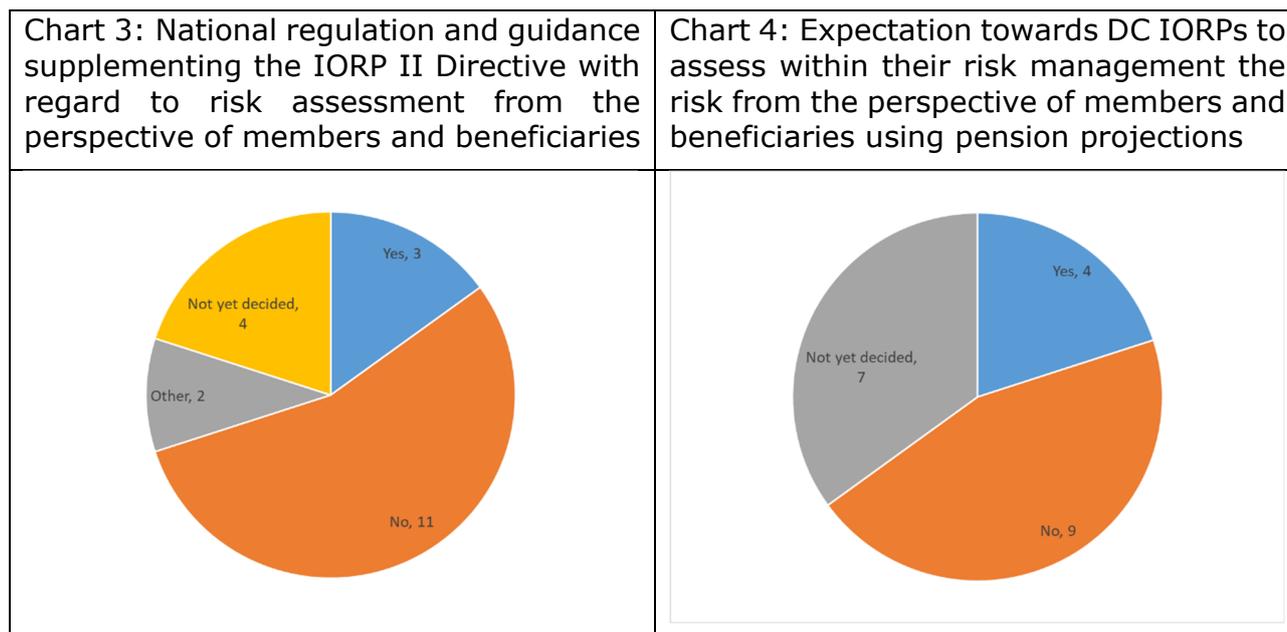


Risk assessment from the perspective of members and beneficiaries

- 1.7. Three out of 20 CAs indicated that national regulation and guidance specify how

IORPs should conduct DC risk assessment from the perspective of members and beneficiaries relating to their future retirement income (see Chart 3), as prescribed by Article 25 (Risk management) and Article 28 (Own-risk assessment) of the IORP II Directive. Still, in four Member States CAs expect DC IORPs to assess – as part of their risk management - the risk from the perspective of members and beneficiaries using pension projections (see Chart 4).

- 1.8. Of the Member States where DC IORPs are expected to use pension projections as part of their DC risk management, one CA indicated that national rules impose restrictions on the assumptions underlying the projections, like the type of scenarios and the return assumptions.



- 1.9. In four Member States, national regulations and supervisory guidance contain provisions for DC IORPs to consider and/or establish the risk tolerance of members and beneficiaries (see Chart 5). In most other Member States, this is not the case or has not been decided yet. This does not necessarily mean that DC IORPs do not consider the risk tolerance. CAs were asked how DC IORPs established the risk tolerance of members and beneficiaries. While more than a quarter of CAs did not have any experience in this regard, another quarter provided examples of different methods. These included member panels and surveys, including self-assessment questionnaires to assist prospective members choosing an investment option, the use of member administration data and the indirect establishment of the risk tolerance through social partners.

- 1.10. In five Member States, national regulation or guidance contain provisions stipulating that the investment policy or strategy has to consider the risks from the perspective of members and beneficiaries and their risk tolerance (see Chart 6). In most other Member States, this is not the case or has not been decided yet. Still, roughly half of CAs indicate that DC IORPs typically determine the investment strategy taking into account the risk assessment from the perspective of members and beneficiaries and their risk tolerance, while another half of CAs responded that this is usually not the case.

Chart 5: National regulation and guidance containing provisions to consider/establish the risk tolerance of DC members and beneficiaries

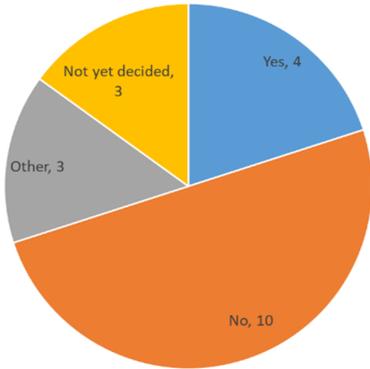
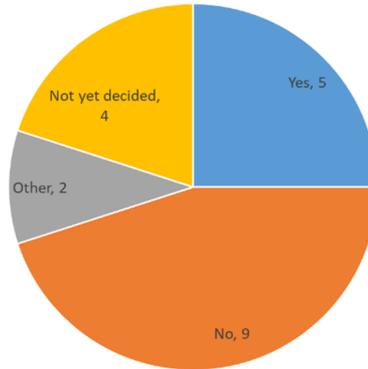


Chart 6: National regulation and guidance specifying the interaction between the risk assessment from the perspective of DC members and beneficiaries, their risk tolerance and investment strategy



Annex 2: Analysis of costs and benefits

- 2.1. The IORP II Directive introduced new risk-management requirements. In particular, where members and beneficiaries bear risks, the risk-management system (Article 25) should also consider the risks from the perspective of members and beneficiaries. The own-risk assessment (Article 28) should include an assessment of the risks to members and beneficiaries relating to the paying out of their retirement benefits.
- 2.2. Operational risk events have an immediate impact on members and beneficiaries of DC schemes, relative to DB schemes, in terms of accumulated capital and projected future retirement income. Moreover, new for-profit, multi-sponsor IORP providers are emerging, increasing the need to clarify operational obligations and to assess operational viability.
- 2.3. EIOPA surveyed existing national practices and gaps among CAs in twenty Member States (see Annex 1). In few Member States, national regulation and/or supervisory guidance specifies how IORPs should conduct DC risk assessment from the perspective of members and beneficiaries relating to their future retirement income, also in relation to establishing their risk tolerance and designing and reviewing the investment strategy. Moreover, in few Member States, national regulation and/or supervisory guidance lays down specific quantitative risk measures for operational risk.
- 2.4. In consequence, there is no assurance that risks borne by DC IORPs – most notably operational risks – and by members and beneficiaries in terms of future retirement income are appropriately managed and supervised.
- 2.5. The objective of this Opinion is to promote supervisory convergence by providing CAs with guidance on the supervision of risk management by IORPs providing DC schemes. CAs are expected to encourage DC IORPs to quantify operational risk exposures in terms of asset value losses. Moreover, DC IORPs are expected to use projections of future retirement income to assess the risks from the perspective of members and beneficiaries. The Opinion sets forth a number of principles for conducting the pension projections to foster a market-sensitive and risk-based approach and an equitable spread of risks and benefits between generations. DC IORPs are also expected to establish the risk tolerance of members and beneficiaries to ensure that risks from the perspective of members and beneficiaries are consistent with their risk preferences and capacity to bear risk. Lastly, CAs should expect DC IORPs to integrate the risk assessment from the perspective of members and beneficiaries, in conjunction with their risk tolerance, in the design and review of the investment strategy (or strategies in case of multiple investment options).
- 2.6. Conducting risk assessments using pension projections, determining the risk tolerance of members and beneficiaries and integrating the outcomes in the process of designing and reviewing the investment strategy may be accompanied with costs. The investment and risk management functions, and potentially other functions, will require additional resources and/or more services will have to be sourced from external providers. In particular, this will be the case for DC IORPs not already doing these kind of assessments, presumably smaller DC IORPs. The

larger DC IORPs are more likely to already perform pension projections to assess the risk from the perspective of members and beneficiaries and consider the results in the design of their investment strategy.

- 2.7. The expectations put forward in the Opinion are developed to allow for sufficient flexibility in order not to interfere with DC IORPs that already conduct this kind of analysis in a risk-sensitive manner. For example, the Opinion provides a limited number of high-level principles for doing risk assessment using pension projections. Moreover, appropriate methodologies are expected in order to determine the risk tolerance, but the choice of method(s) is left to the IORPs. The Opinion also strives to be proportionate and to be applied by CAs in a risk-based and proportionate way, also fitting smaller DC IORPs. For example, overall operational risk exposures can be quantified by means of own custom-made operational risk scenarios, but also a standard operational risk scenario is provided. Moreover, if warranted to achieve a proportionate approach, CAs may allow for deterministic instead of stochastic scenario analysis.
- 2.8. Considering the principle-based and proportionate approach, EIOPA is confident that the potential benefits of the Opinion exceed the potential additional costs for DC IORPs.
- 2.9. The members and beneficiaries will benefit from the risk-sensitive supervision of risks assessments using projections of future retirement income. It contributes to ensuring that their circumstances and preferences are duly taken into account in the design and review of appropriate investment strategies. A consistent supervisory approach will also benefit DC members, in particular mobile workers, contributing to similar levels of protection and preventing regulatory arbitrage. Finally, the Opinion ensures cross-sectoral consistency with the PEPP Regulation, while recognising the differences between personal pension products and occupational pension schemes.

Annex 3: Value at risk measure for operational risk

Value at risk for pure DC schemes

- 3.1. The value at risk for operational risk of pure DC schemes calibrated to a 0.5% probability of occurrence within a one-year horizon equals:

$$VaR_{Op} = 25\% \cdot Exp_{DC}$$

where:

Exp_{DC} denotes the amount of expenses incurred during the previous 12 months in respect of pension obligations of DC schemes where the investment risk is fully borne by members and beneficiaries.

Value at risk for DC schemes with guarantees

- 3.2. The value at risk for operational risk of DC schemes with guarantees calibrated to a 0.5% probability of occurrence within a one-year horizon equals:

$$VaR_{Op} = \min(1.2\% \cdot TP; Op)^{30}$$

where:

TP denotes technical provisions for pension obligations in DC schemes with guarantees;

Op denotes basic value at risk for operational risk.

- 3.3. The basic value at risk for operational risk should be calculated as follows:

$$Op = \max(Op_{contributions}; Op_{provisions})$$

where:

$Op_{contributions}$ denotes the value at risk for operational risks based on contributions received;

$Op_{provisions}$ denotes the value at risk for operational risk based on technical provisions.

- 3.4. The value at risk for operational risks based on contributions received should be calculated as follows:

$$Op_{contributions} = 4\% \cdot Contr_t + \max(0; 4\% \cdot \left(\frac{Contr_t - Contr_{t-1}}{Contr_{t-1}} - 20\% \right) \cdot Contr_{t-1})$$

where:

$Contr_t$ denotes the contributions received during the last 12 months for pension obligations in DC schemes with guarantees;

$Contr_{t-1}$ denotes the contributions received during the 12 months prior to the last

³⁰ In EIOPA's common framework for risk assessment and transparency the first term between parentheses is equal to 30% of the basic standardised value at risk (BVar), which comprises the aggregate VaR of all risks, except operational risk. To ease the calculation, the BVar has been replaced by 4% of technical provisions, line with the regulatory own funds requirement in the IORP II Directive.

12 months for pension obligations in DC schemes with guarantees.

- 3.5. The value at risk for operational risk based on technical provisions should be calculated as follows:

$$Op_{provisions} = 0.45\% \cdot TP$$

where:

TP denotes the technical provisions for pension obligations in DC schemes with guarantees.

Annex 4: Risk premiums specified in EIOPA's 2019 IORP stress test

4.1. The table below displays the risk premiums prescribed in the 2019 IORP stress test specifications. The risk premiums on government and corporate bonds are based on EIOPA estimates for long-term average spreads minus the costs of default/downgrade. This so-called fundamental spread is the part of the credit spread that does not constitute a compensation for risk. The risk premium on non-fixed income assets is assumed to be equal to 3%, the risk premium on cash and deposits is assumed to be equal to zero.³¹

Risk premiums	
Fixed incomes risk premiums over risk-free interest rate	
Government bonds	28 basis points
Corporate bonds (and other fixed income excl. cash and deposits)	86 basis points
- non-financial	56 basis points
- financial	101 basis points
Non-fixed income risk premium over risk-free rate	
Equities, property, alternatives and other non-fixed income	300 basis points
Cash and deposits risk premium over risk-free rate	
Cash and deposits	0 basis points

³¹ See for further information section 5 of EIOPA, 2019 IORP Stress Test Specifications, EIOPA-BoS-19/157, 29 March 2019.

Annex Summary of Questions to Stakeholders

Questions to stakeholders:

Q1: Do you agree with the focus of the draft Opinion on the quantitative elements in operational risk management and long-term risk assessment from the perspective of members and beneficiaries? Please explain and provide any suggestions for further aspects of DC risk management that need attention.

Q2: Do you agree that Annex 2 provides a balanced view of the costs and benefits of the draft Opinion? Please explain and provide any suggestions.

Q3: Do you agree with the scope of application of the Opinion, i.e. all IORPs providing schemes where members and beneficiaries bear material risks, or should the scope of the Opinion cover only IORPs providing schemes where members and beneficiaries bear all risks? Please explain and provide any alternatives that EIOPA should consider.

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Q6: Do you agree that the risk assessment from the perspective of members and beneficiaries should include a long-term assessment using projections of future retirement income? Please explain.

Q7: In your view, what are the potential benefits and limitations of using pension projections for long-term risk assessment in the context of DC-based pension schemes that are prevalent in the EU Member States or your Member State? Please explain and provide any alternative methods that should be considered.

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Q15: Do you have any other comments on the draft Opinion? If yes, please provide these other comments.

EIOPA

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