

Impact
assessment

IMPACT ASSESSMENT

Opinion on the supervision of liquidity risk
management of IORPs

EIOPA-BoS-25/260
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eiopa

European Insurance and
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1. IMPACT ASSESSMENT

1.1. PROCEDURE AND STAKEHOLDER ENGAGEMENT

According to Article 29 of the Regulation (EU) No 1094/2010, EIOPA should, where appropriate, analyse the potential costs and benefits relating to opinions provided to competent authorities (CAs), proportionate to their scope, nature and impact.

In developing this Opinion, EIOPA analysed liquidity exposures of IORPs and current regulatory and supervisory practices through a survey completed by CAs (see Annex) and engaged with stakeholders including the Occupational Pensions Stakeholder Group (OPSG), most notably through a workshop held on 14 March 2024.

Between 26 September and 20 December 2024, a draft Opinion and its impact assessment have been subject to a public consultation, in line with Regulation (EU) 1094/2010.

The analysis of costs and benefits is undertaken according to EIOPA's impact assessment methodology.

1.2. PROBLEM DEFINITION

When analysing the impact from proposed policies, the impact assessment methodology foresees that a baseline scenario is applied as the basis for comparing policy options. This helps to identify the incremental impact of each policy option considered. The aim of the baseline scenario is to explain how the current situation would evolve without additional supervisory intervention ('no change').

In the survey conducted by EIOPA, most CAs responded that liquidity risk exposures are low or non-existent or that an assessment is not available (see Annex). Almost a quarter of CAs (6 out of 26) responded that their IORPs are exposed to medium or high liquidity risk exposures. Three CAs indicated that these medium or high liquidity risk exposures relate to individual or collective transfers, while three CAs said these exposures relate to margin requirements on derivative instruments. Still, nine CAs assessed that IORPs in their Member State (MS) hold derivatives to hedge interest rate risk and/or foreign exchange risk with a notional value exceeding in aggregate 5% of total assets. Based on data received from CAs in nine MS, an increase in interest rates of 1%-point would potentially require IORPs to fulfil margin calls of almost EUR 67 bn (3.9% of assets), whereas an appreciation of foreign currencies of 10% would potentially lead to margin calls of EUR 60 bn (3.1% of assets).

The IORP II Directive introduced the requirement that IORPs should, where applicable, cover liquidity risk management in their risk-management system in a manner that is proportionate to the size and internal organisation of IORPs, as well as to the size, nature, scale and complexity of their activities. Moreover, also in a manner that is proportionate, IORPs must at least every three years carry out and document their own-risk assessment. As part of the supervisory review process, CAs should conduct

an assessment of the risks the IORP faces as well as an assessment of the ability of the IORP to assess and manage those risks.

MS may supplement the IORP II Directive through national regulation or supervisory measures. The survey results show that in a small minority of MS (7 out of 26) national regulation and supervisory measures impose more specific requirements on liquidity risk management of IORPs. Most CAs cover liquidity risk in the supervisory review process on an ad hoc or regular basis. Still, the survey showed that supervisory practices to assess exposures to liquidity risk and IORPs' ability to assess and manage the liquidity exposures differ markedly. Margin and collateral calls in relation to derivative instruments represent an important source of liquidity risk. However, more than a third of CAs (9 out of 26) did not collect derivative data from IORPs or only the market value of derivatives in the IORPs' balance sheet. As from 1 January 2025, CAs will have to collect and report item-by-item derivative data to EIOPA in relation to the direct derivative holdings of IORPs.¹

The low incidence of supplementary regulation and supervisory measures at national level and heterogeneous supervisory practices may prevent adequate liquidity risk management by IORPs. As a result, IORPs may not be able to fulfil their financial obligations towards members and beneficiaries and other counterparties when they fall due. Moreover, IORPs may contribute to the propagation of liquidity strains to other parts of the financial system and the real economy, e.g. through forced sales of government bonds within short timeframes, as witnessed during the UK gilt crisis of 2022.² A potential similar event in the EU would likely have impacts on IORPs and spill-over effects on other markets that are lower in magnitude than in the UK, due to the size and deepness of the EU sovereign debt market. Moreover, interest rate hedging exposures of IORPs are smaller relative to the EU government bond market and investments are more diversified in terms of asset classes, countries and maturities, avoiding the concentration of UK pension scheme investments in long-dated, off-the-run gilts. Still, in the baseline scenario, the protection of members and beneficiaries and financial stability are not sufficiently safeguarded.

1.3. OBJECTIVES

In drafting this Opinion, EIOPA follows the following general objectives, in line with Article 1(6) of Regulation (EU) No 1094/2010:

- adequate protection of members and beneficiaries, being the main objective of supervision³;

¹ Large IORPs, exceeding EUR 1bn in assets, have to report the derivative data on a quarterly basis, while other (non-exempted) IORPs have to report the data on an annual basis, in line with the [Decision of the Board of Supervisors on EIOPA's regular information requests regarding provision of occupational pensions information](#), EIOPA-BoS-23-030, 10 February 2023.

² See chapter 5 'In focus – The resilience of liability-driven investments funds' in [Bank of England, Financial Stability Report, December 2022](#) for an analysis of and the lessons learned from the event.

³ According to Article 45(1) of the IORP II Directive, the main objective of prudential supervision is to protect the rights of members and beneficiaries and to ensure the stability and soundness of the IORPs.

- ▶ financial stability;
- ▶ proper functioning of the internal market.

The more specific objective of this Opinion is to enhance supervisory convergence in the supervision of liquidity risk management by IORPs to foster the protection of members and beneficiaries and to enhance the stability of IORPs and the wider financial system.

1.4. POLICY ISSUES

POLICY ISSUE A: SCOPE OF LIQUIDITY RISK MANAGEMENT

Margin and collateral calls on derivative positions constitute a (very) short-term and potentially high-impact source of liquidity risk. This policy issue considers whether the supervisory actions to promote good liquidity risk management should be restricted to margin and collateral calls, most notably in relation to material derivative instruments, or apply to all material sources of liquidity risk due to potential shocks in IORPs' incoming and outgoing cash flows.

POLICY ISSUE B: OUTSOURCING OF INVESTMENTS IN DERIVATIVE INSTRUMENTS

Outsourcing of investments in derivative instruments introduces time lags in the operational process to fulfil margin and collateral calls between the IORP and the investment manager. This policy issue considers whether IORPs should expect external investment funds and managers to hold appropriate liquid assets and whether the level of these liquid assets should be further specified.

1.5. POLICY OPTIONS

POLICY ISSUE A: SCOPE OF LIQUIDITY RISK MANAGEMENT

Policy option A.0: No change

Policy option A.1: Scope restricted to margin and collateral calls on derivative positions

Under this policy option, EIOPA sets out expectations towards CAs on the supervision of liquidity risk management of IORPs, covering:

- ▶ the assessment by CAs of liquidity risks to which IORPs are exposed and, where IORPs are exposed to material liquidity risk, the assessment of the ability of IORPs to manage liquidity risks;
- ▶ the principles for proper liquidity risk management, which CAs should expect IORPs with material liquidity risk exposures to adhere to in a manner that is proportionate to their size and internal organisation as well as the nature, scale and complexity of the liquidity risk inherent in the IORPs' activities.

Under this option, the scope of liquidity risk is restricted to margin and collateral calls, most notably, on derivative positions, in line with the FSB's recommendations to enhance the liquidity preparedness of non-bank market participants for margin and collateral calls.⁴

Policy option A.2: Scope covering all material sources of liquidity risk

This option is the same as policy option A.1 with the exception of the scope of liquidity risk. Unlike policy option A.1, this option covers all material sources of liquidity risk due to potential shocks in IORPs' incoming and outgoing cash flows, including – for example – in relation to early withdrawals and outgoing individual and collective pension transfers. The supervisory expectations continue to be consistent with FSB's recommendations, but are applied to material liquidity risk in general in a manner that is proportionate to their size and internal organisation as well as the nature, scale and complexity of the liquidity risk inherent in the IORPs' activities.

POLICY ISSUE B: OUTSOURCING OF INVESTMENTS IN DERIVATIVE INSTRUMENTS

Policy option B.0: No change

Policy option B.1: Investment funds to hold appropriate level of liquid assets using principle-based approach

Under this policy option, IORPs that outsource investments in derivative instruments are expected to ensure that the external investment fund holds appropriate liquid assets to fulfil margin and collateral calls. The buffer of liquid assets is set using a principle-based approach. Its level should be sufficient to cover margin and collateral calls following a severe, but plausible market stress. This option would apply to all investment funds, including segregated accounts/mandates and multi-client/pooled funds established as alternative investment funds (AIF), but also UCITS investment funds, as IORPs should be expected to carry out an assessment of the liquidity characteristics of their (potential) investments. However, the option aims in particular to prevent operational lags in fulfilling margin requirement where IORPs invest in derivative instruments through external investment funds which have recourse to the IORP through cash calls to meet margin or collateral requirements, like liability driven investment (LDI) funds. As such, this option implements the ESMA advice⁵ in relation to GBP-denominated LDI funds in the EU more broadly to investment funds holding derivatives on behalf of IORPs. Still, this option would not prescribe a predefined interest rate or other relevant market stresses.

Policy option B.2: Investment funds to hold appropriate level of liquid assets using standardised approach

This option is the same as policy option B.1, but the level of liquid assets would be based on

⁴ FSB, [Liquidity Preparedness for Margin and Collateral Calls – Final report](#), 10 December 2024.

⁵ See ESMA, [Advice on a proposed measure by the Central Bank of Ireland under Article 25 of Directive 2011/61/EU](#), 26 April 2024 and ESMA, [Advice on a proposed measure by the Commission du Surveillance du Secteur Financier under Article 25 of Directive 2011/61/EU](#), 26 April 2024.

standardised market stresses instead of taking a principle-based approach. These standardised stresses would be prescribed for the relevant underlying market prices of derivative instruments, like interest rates and foreign exchange rates.

1.6. IMPACT OF THE POLICY OPTIONS

POLICY ISSUE A: SCOPE OF LIQUIDITY RISK MANAGEMENT

Policy option A.1: Scope restricted to margin and collateral calls on derivative positions

The costs mainly consist of the additional expenses for supervision and risk management incurred by supervisors and IORPs which do not yet meet the expectations and principles introduced under this policy option, including the potential opportunity cost of holding more liquid assets in terms of lower investment returns. The benefits consist of improved liquidity risk management by IORPs, contributing to the protection of members and beneficiaries, the stability of IORPs and the stability of the financial system as a whole. The supervisory convergence achieved in the area of liquidity risk management may also contribute to the proper functioning of the internal market by facilitating international supervisory coordination and reducing the scope for regulatory arbitrage.

Policy option A.1		
Costs	Members and beneficiaries	Where IORPs miss out on investment income because of the need to hold more liquid assets, (future) pensions of members and beneficiaries may be negatively affected, in particular where the sponsor does not guarantee a certain level of pensions.
	IORPs	IORPs that do not conform with the principles for liquidity risk management will incur compliance costs to enhance their risk management practices, including the potential opportunity cost of holding more liquid assets in terms of lower investment returns.
	Competent authorities	Supervisors that do not conform with the expectations on the supervision of IORPs' liquidity risk management will incur costs to enhance their supervisory practices.
	Other	Where IORPs miss out on investment income because of the need to hold more liquid assets, pension contributions of the sponsor may have to rise, in particular where the sponsor guarantees a certain level of pensions.

Benefits	Members and beneficiaries	Enhanced supervision, including the principles for IORP liquidity risk management, contributes to ensuring that obligations towards members and beneficiaries are met when they fall due. The prevention of derivative hedges being closed, reduces the exposure of members and beneficiaries to market risks.
	IORPs	Enhanced supervision, including the principles for IORP liquidity risk management, contributes to ensuring the stability and soundness of IORPs, also by preventing that derivative hedges are closed when margin and collateral calls cannot be met, which would increase risk exposures.
	Competent authorities	Enhanced protection of members and beneficiaries and stability and soundness of IORPs contribute to the overall objective of prudential supervision. Convergence of supervisory approaches across the EEA contributes to reducing regulatory arbitrage and facilitating international supervisory coordination.
	Other	Enhanced supervision and liquidity risk management contribute to fostering financial stability. The prevention of derivative hedges being closed, reduces the exposure of sponsors to market risks.

Policy option A.2: Scope covering all material sources of liquidity risk

The nature of the costs and benefits are the same as under the previous policy option A.1, but the size of the impacts will differ. Since the scope of this policy option is broader, i.e. all IORPs with material liquidity risk rather than just IORPs with exposures to margin and collateral calls, there are probably more IORPs that must incur additional costs to conform with the liquidity risk management principles in proportion to their size and internal organisation as well as the nature, scale and complexity of the liquidity risk inherent in their activities. At the same time, the benefits in terms of enhanced liquidity risk management will also be more pronounced. Not only because more IORPs are covered, but also because IORPs are forced to take a comprehensive view of liquidity risks.

Policy option A.2		
Costs	Members and beneficiaries	Where IORPs miss out on investment income because of the need to hold more liquid assets, (future) pensions of members and beneficiaries may be negatively affected, in particular where the sponsor does not guarantee a certain level of pensions.

	IORPs	IORPs that do not conform with the principles for liquidity risk management will incur compliance costs to enhance their risk management practices, including the potential opportunity cost of holding more liquid assets in terms of lower investment returns.
	Competent authorities	Supervisors that do not conform with the expectations on the supervision of IORPs' liquidity risk management will incur costs to enhance their supervisory practices.
	Other	Where IORPs miss out on investment income because of the need to hold more liquid assets, pension contributions of the sponsor may have to rise, in particular where the sponsor guarantees a certain level of pensions.
Benefits	Members and beneficiaries	Enhanced supervision, including the principles for IORP liquidity risk management, contributes to ensuring that obligations towards members and beneficiaries are met when they fall due. The prevention of derivative hedges being closed, reduces the exposure of members and beneficiaries to market risks.
	IORPs	Enhanced supervision, including the principles for IORP liquidity risk management, contributes to ensuring the stability and soundness of IORPs, also by preventing that derivative hedges are closed when margin and collateral calls cannot be met, which would increase risk exposures.
	Competent authorities	Enhanced protection of members and beneficiaries and stability and soundness of IORPs contribute to the overall objective of prudential supervision. Convergence of supervisory approaches across the EEA contributes to reducing regulatory arbitrage and facilitating international supervisory coordination.
	Other	Enhanced supervision and liquidity risk management contribute to fostering financial stability. The prevention of derivative hedges being closed, reduces the exposure of sponsors to market risks.

POLICY ISSUE B: OUTSOURCING OF INVESTMENTS IN DERIVATIVE INSTRUMENTS

Policy option B.1: Investment funds to hold appropriate level of liquid assets using principle-based approach

Besides incentivising IORPs to assess the liquidity characteristics of their (potential) investments in investment funds, the benefits of this option consist of increased operational resilience, where IORPs invest in derivative instruments through external investment funds which have recourse to the IORP

through cash calls to meet margin or collateral requirements. The reason is that IORPs do not immediately have to post collateral to their external investment manager/fund within a short period of time following an adverse movement in the market value of their derivative position. The increased operational resilience will contribute to enhancing the protection of members and beneficiaries, the soundness of IORPs and the stability of the wider financial system.

IORPs can implement the requirement for an investment fund with derivative instruments to hold an appropriate level of liquid assets through the investment guideline in segregated mandates and through their selection process for investments in pooled investment funds. Where the investment fund has recourse to the IORP through cash calls to meet margin and collateral requirements, the requirement may imply that IORPs have to post collateral ahead of a potential market stress. However, where IORPs already hold a similar buffer of liquid assets considering a severe, but plausible market stress, this option just changes the location of the liquid assets. Still, depending on the collateral arrangement and applicable law, i.e. title transfer or pledge of collateral, the IORP may miss out on investment income on the collateralised securities, negatively affecting (future) pensions of members and beneficiaries and/or pension costs of sponsoring undertakings.

Policy option B.1		
Costs	Members and beneficiaries	Where IORPs miss out on investment income, (future) pensions of members and beneficiaries may be negatively affected, in particular where the sponsor does not guarantee a certain level of pensions.
	IORPs	Depending on the collateral arrangement and applicable law, i.e. title transfer or pledge of collateral, the IORP may miss out on investment income on the collateralised securities.
	Competent authorities	-
	Other	Where IORPs miss out on investment income, pension contributions of the sponsor may have to rise, in particular where the sponsor guarantees a certain level of pensions.
Benefits	Members and beneficiaries	Raised awareness of the liquidity characteristics of investment funds and enhanced operational resilience contributes to ensuring that obligations towards members and beneficiaries are met.
	IORPs	Raised awareness of the liquidity characteristics of investment funds and enhanced operational resilience contribute to ensuring the stability and soundness of IORPs, also by preventing that derivative hedges are closed when margin and

		collateral calls cannot be met, which would increase risk exposures.
	Competent authorities	Convergence of supervisory approaches across the EEA contributes to reducing regulatory arbitrage and facilitating international supervisory coordination.
	Other	Enhanced operational resilience of IORPs contribute to fostering financial stability.

Policy option B.2: Investment funds to hold appropriate level of liquid assets using standardised approach

The nature of the costs and benefits are the same as under the previous policy option B.1. The only difference with the previous option is that the level of liquid assets to be held by external investment funds, which have recourse to the IORP through cash calls to meet margin and collateral calls, is established using a standardised approach. In contrast to the principle-based approach, the standardised approach may not be able to capture emerging increases and decreases in market risks, which means that the buffer of liquid assets may be set too high or too low. Too low buffers of liquid assets imply a cost in terms of lower operational resilience. Too high buffers of liquid assets imply a potential cost of limiting the scope of derivative hedging, given that IORPs tend to allocate a fixed proportion to eligible liquid assets, i.e. high-quality government bonds. In addition, depending on the collateral arrangement, too high buffers may also lead to additional missed investment income.

Policy option B.2		
Costs	Members and beneficiaries	<p>Where IORPs miss out on investment income, (future) pensions of members and beneficiaries may be negatively affected, in particular where the sponsor does not guarantee a certain level of pensions.</p> <p>Where high standardised levels of liquid assets limit the scope of derivative hedging, depending on the IORPs' allocations to eligible liquid assets, the exposure of members and beneficiaries to market risks may increase.</p>
	IORPs	<p>Depending on the collateral arrangement and applicable law, i.e. title transfer or pledge of collateral, the IORP may miss out on investment income on the collateralised securities.</p> <p>This possible cost would be exacerbated where the standardised levels of liquid assets are set too high. High standardised levels of liquid assets may also limit the scope of derivative hedging, depending on the IORPs' allocations to</p>

		eligible liquid assets, raising the exposure of IORPs to market risk.
	Competent authorities	-
	Other	Where IORPs miss out on investment income, pension contributions of the sponsor may have to rise, in particular where the sponsor guarantees a certain level of pensions. Where high standardised levels of liquid assets limit the scope of derivative hedging, depending on the IORPs' allocations to eligible liquid assets, the exposure of sponsors to market risks may increase.
Benefits	Members and beneficiaries	Raised awareness of the liquidity characteristics of investment funds and enhanced operational resilience contributes to ensuring that obligations towards members and beneficiaries are met.
	IORPs	Raised awareness of the liquidity characteristics of investment funds and enhanced operational resilience contributes to ensuring the stability and soundness of IORPs, also by preventing that derivative hedges are closed when margin and collateral calls cannot be met, which would increase risk exposures.
	Competent authorities	Convergence of supervisory approaches across the EEA contributes to reducing regulatory arbitrage and facilitating international supervisory coordination.
	Other	Enhanced operational resilience of IORPs contribute to fostering financial stability.

1.7. COMPARISON OF POLICY OPTIONS

POLICY ISSUE A: SCOPE OF LIQUIDITY RISK MANAGEMENT

Policy option A.2 is most effective in promoting good risk management and achieving consistent supervisory practices. The reason is that a comprehensive approach is taken to the IORPs' management of liquidity risk, instead of restricting the supervisory expectations to margin and collateral calls on derivative positions under policy option A.1. Both options are likely to be equally effective in enhancing the resilience of the financial system, given that liquidity risk in relation to margin and collateral calls on derivative positions is likely to be the most important threat to financial stability.

EFFECTIVENESS (0,+,++)			
	Promoting good risk management	Enhancing resilience of the financial system to liquidity risk	Achieving consistent supervisory practices
Policy option A.0	0	0	0
Policy option A.1	+	++	+
Policy option A.2	++	++	++

Policy option A.1 is the most efficient in enhancing the resilience of the financial system to liquidity risk. Under that option, the supervisory expectations are targeted at the source of liquidity risk, i.e. margin and collateral requirements, in particular in relation to derivatives, that is most likely to have financial stability implications. As such, IORPs without material derivative positions are not experiencing any implementation costs. However, in order to promote good risk management, it is essential that CAs and IORPs take a comprehensive view of all sources of liquidity risk, which is the case in policy option A.2. This option is also able to prevent undue burdens by limiting additional supervisory efforts and liquidity risk management requirements to IORPs with material exposures and stipulating a proportionate approach. Therefore, policy option A.2 is most efficient in promoting good risk management as well as achieving consistent supervisory practices.

EFFICIENCY (0,+,++)			
	Promoting good risk management	Enhancing resilience of the financial system to liquidity risk	Achieving consistent supervisory practices
Policy option A.0	0	0	0
Policy option A.1	+	++	+
Policy option A.2	++	+	++

POLICY ISSUE B: OUTSOURCING OF INVESTMENTS IN DERIVATIVE INSTRUMENTS

Policy option B.1 is most effective in promoting good risk management and enhancing the resilience of the financial system to liquidity risk. This option takes a principle- and risk-based approach to the establishment of the buffer of liquid assets to be held by external investment funds which have recourse to the IORP through cash calls for meeting margin and collateral requirements. The standardised approach under policy option B.2 would imply that emerging risks would be ignored. However, this option would be most effective in achieving consistent supervisory practices.

EFFECTIVENESS (0,+,++)			
	Promoting good risk management	Enhancing resilience of the financial system to liquidity risk	Achieving consistent supervisory practices
Policy option B.0	0	0	0
Policy option B.1	++	++	+
Policy option B.2	+	+	++

Policy option B.1 is most efficient in reaching all three specific objectives due to the principle- and risk-based approach, which ensures the buffers of liquid assets are set at appropriate levels. A standardised approach may be less costly to implement for CAs and IORPs. However, it also entails the risk that the prescribed level of liquid assets is too high, which may be costly for IORPs, or too low, reducing the effectiveness of the measure.

EFFICIENCY (0,+,++)			
	Promoting good risk management	Enhancing resilience of the financial system to liquidity risk	Achieving consistent supervisory practices
Policy option B.0	0	0	0
Policy option B.1	++	++	++
Policy option B.2	+	+	+

1.8. PREFERRED OPTIONS

Policy option A.2 ('Scope covering all material sources of liquidity risk') is the preferred option for policy issue A. The supervisory expectations take a comprehensive view of liquidity risk, promoting good risk management and ensuring financial stability. The option is targeted at IORPs with material liquidity risks and provides that both CAs and IORPs implement the expectations following risk-based and proportionate approach.

Policy option B.1 ('Investment funds to hold appropriate level of liquid assets using a principle-based approach') is the preferred option for policy issue B. The principle- and risk-based approach ensures that the level of liquid assets is effective in enhancing operational resilience without imposing any undue costs in terms of unnecessarily high buffers of liquid assets.

ANNEX: SUMMARY OF SURVEY OF NATIONAL PRACTICES AND GAPS

RESPONSE

In March 2024, EIOPA conducted a survey among competent authorities (CAs) with the aim of:

- ▶ establishing good practices and gaps in the supervision of liquidity risk management by IORPs; and
- ▶ gathering evidence on liquidity risk of IORPs originating from derivative hedging exposures and other potential sources.

The survey covered the following areas:

- ▶ Sources of IORP liquidity risk;
- ▶ Regulation of IORP liquidity risk and its management;
- ▶ Supervision of IORP liquidity risk and its management.

Twenty-six CAs completed the survey and four CAs (CZ, IS, LT, RO) did not (have to) complete the survey because IORPs do not exist in their countries.

SOURCES OF LIQUIDITY RISK

CAs were asked to provide their assessment of liquidity risk exposures of IORPs in their MS due to (1) margin calls on derivative positions, both in cash and other collateral, (2) early withdrawals by plan members, (3) individual transfers by plan members to other providers, and (4) collective transfers of occupational pension schemes to other providers.

Most CAs responded that liquidity risk exposures are low (value of 1) or non-existent or that an assessment is not available (value of 0) (see Figure 1 below). Six CAs identified medium or high liquidity risk exposures:

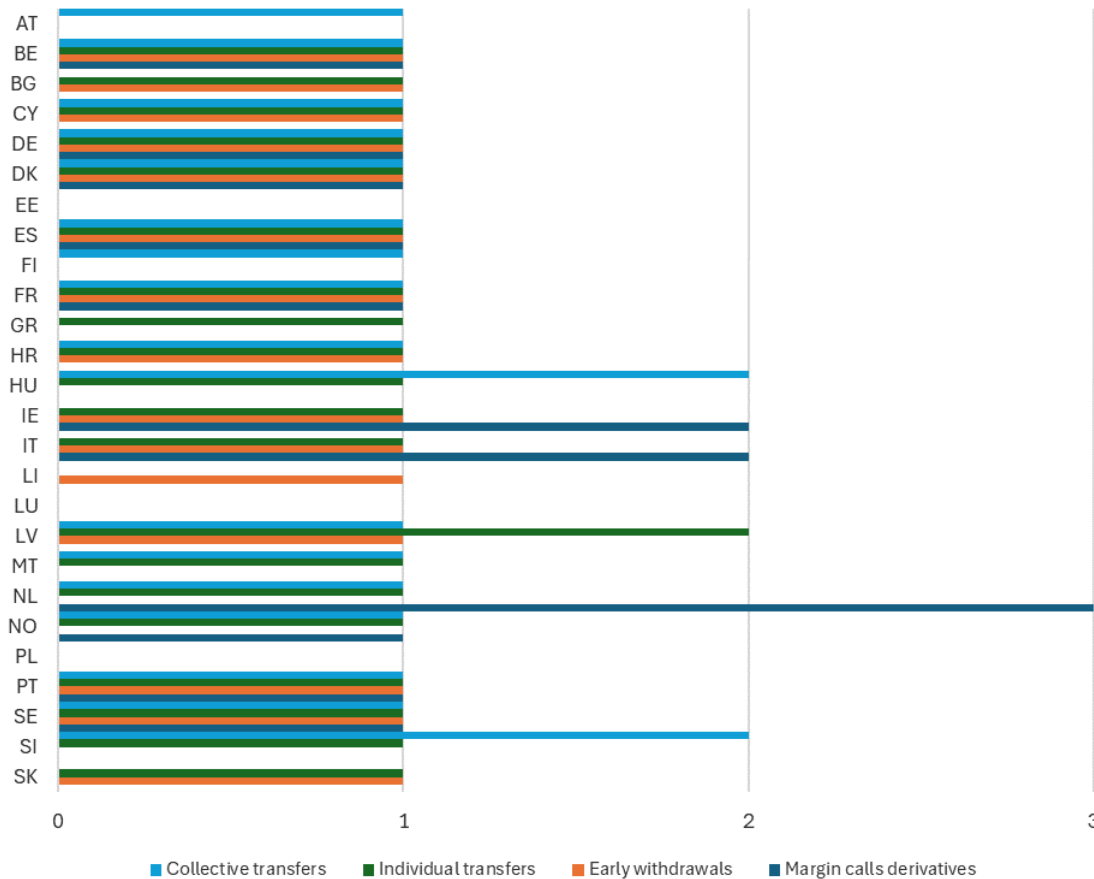
- ▶ Liquidity risk in relation to margin calls on derivatives is considered high in NL and medium in IE and IT;
- ▶ Liquidity risk in relation to individual transfers is considered medium in LV; and
- ▶ Liquidity risk in relation to collective transfers is considered medium in HU and SI.

CAs were also provided with the opportunity to indicate other sources of liquidity risk considered important or that IORPs in their MS are exposed to. Four CAs indicated other sources of liquidity risk:

- ▶ Medium liquidity risk exposures in AT in relation to investments in real estate and unlisted equity;
- ▶ Low liquidity risk exposures in BG in relation to the costs for acquisition and sales of assets;
- ▶ Low liquidity risk exposures in HR in relation to investments in domestic securities markets;

- Low liquidity risk exposures in IE in relation to a sudden cessation of employer contributions to DB schemes.

FIGURE 1: ASSESSMENT IORP LIQUIDITY RISK IN MS, 0 = NONE OR N/A, 1 = LOW, 2 = MEDIUM, 3 = HIGH



Derivative holdings

CAs were asked to provide a (rough) indication of the use of derivative instruments with different kinds of underlying by IORPs in their MS.

Often CAs responded that IORPs do not use a certain type of derivative or that an indication is not available (value of 0) (see Figure 2 below). CAs also frequently indicated that the notional value of the derivatives is below 5% of IORPs' assets.

CAs from seven MS indicated notional values of derivatives between 5 and 20% of IORPs' assets, in particular in relation to derivatives to hedge foreign exchange and interest rate risk:

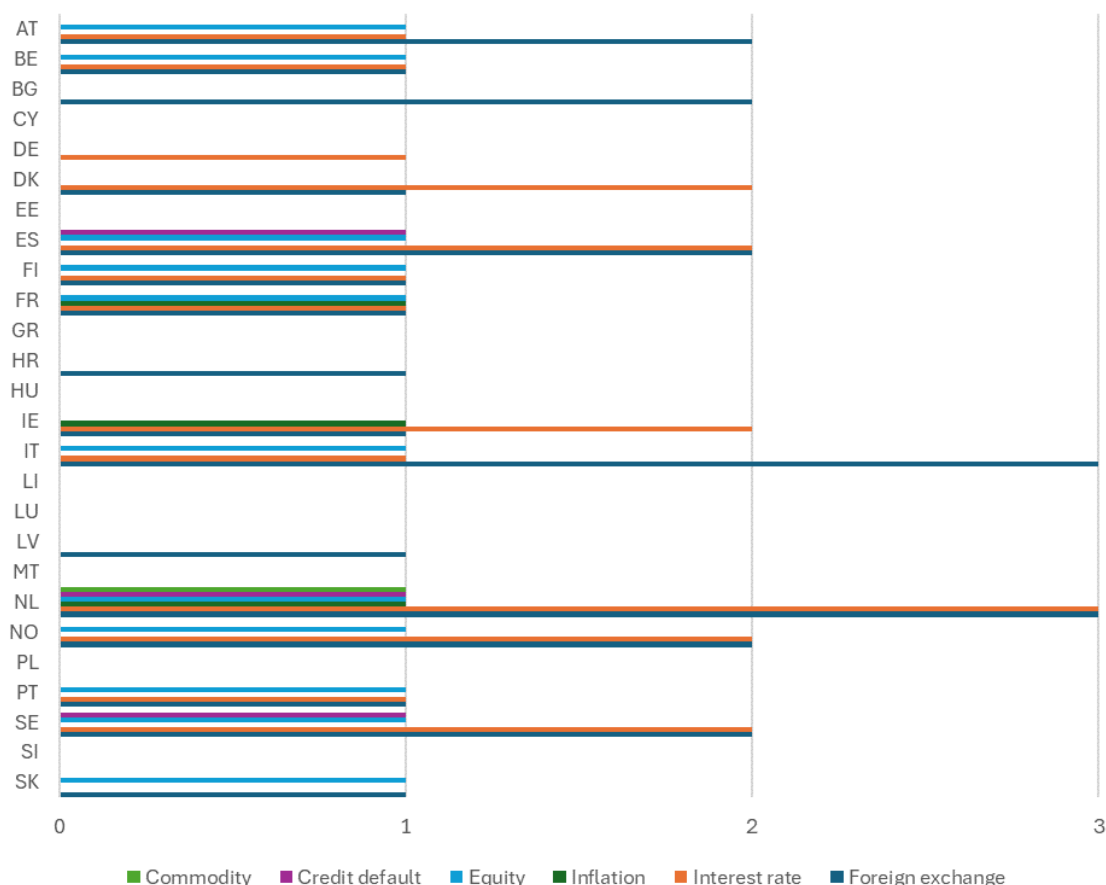
- Foreign exchange derivatives: AT, BG, ES, NO and SE;
- Interest rate derivatives: DK, ES, IE, NO and SE.

CAs from two MS indicated notional values of derivatives exceeding 20% of IORPs' assets, also in relation foreign exchange and interest rate derivatives:

- ▶ Foreign exchange derivatives: IT and NL;
- ▶ Interest rate derivatives: NL.

Three CAs reported other types of derivatives that are used by IORPs in their MS, most notably derivatives exposed to multiple factors and derivatives that cannot be specified.

FIGURE 2: INDICATION OF IORPS' USE OF DERIVATIVES, 0 = NONE OR N/A, 1 = NOTIONAL VALUE <5% OF ASSETS, 2 = NOTIONAL VALUE 5-20% OF ASSETS, 3 = NOTIONAL VALUE >20% OF ASSETS



Reporting of detailed derivative data

CAs were asked whether they collect data on IORPs' detailed derivatives holdings, i.e. type of derivative contract, notional amounts and the underlying:

- ▶ Eleven CAs (BG, ES, FR, HR, HU, IT, NL, PT, SE, SI and SK) indicated that IORPs have to report derivative data on an item-by-item basis;
- ▶ Four CAs (FI, LI, LU, LV) indicated that IORPs just have to report the (market) value of derivatives in the balance sheet;
- ▶ Five CAs (CY, EE⁶, IE, MT and PL) indicated that no information is available on derivative holdings of IORPs;
- ▶ Six CAs (AT, BE, DE, DK, GR and NO) responded ‘other’.

CAs that indicated ‘other’ provided the following explanations:

- ▶ In AT, IORPs have to report aggregate derivative data by type of underlying and purpose using a look-through approach;
- ▶ In BE, the CA collects data on IORPs’ derivative positions via MiFIR;
- ▶ In DE, part of IORPs (“Pensionskassen” only) have to report aggregate data in relation to direct derivatives holdings only;
- ▶ In DK, the four largest IORPs may report derivative information on a voluntary basis, while the rest are exempt from reporting due to their (small) size;
- ▶ In GR, according to the data submitted, IORPs do not have direct exposures to derivatives;
- ▶ In NO, the 25 largest IORPs have to report derivative positions.

Data on exposures to derivatives to hedge interest rate and foreign exchange risk

CAs which collect item-by-item or ‘other’ derivative data were requested to provide quantitative information on aggregate IORP exposures to derivatives to hedge interest rate and foreign exchange risk, provided that CAs were able to calculate the requested statistics using reasonable time and effort.

Ten CAs reported exposures to interest rate hedging derivatives in terms of notional amounts. Five of these CAs provided calculations on the extent to which the derivatives mitigated interest rate risk (hedge ratio) and the sensitivity of the market value of the derivatives - and hence margin calls - to a rise in interest rates. Since the calculations of one CA related to one single IORP, Figure 3 shows the results for the remaining four MS:

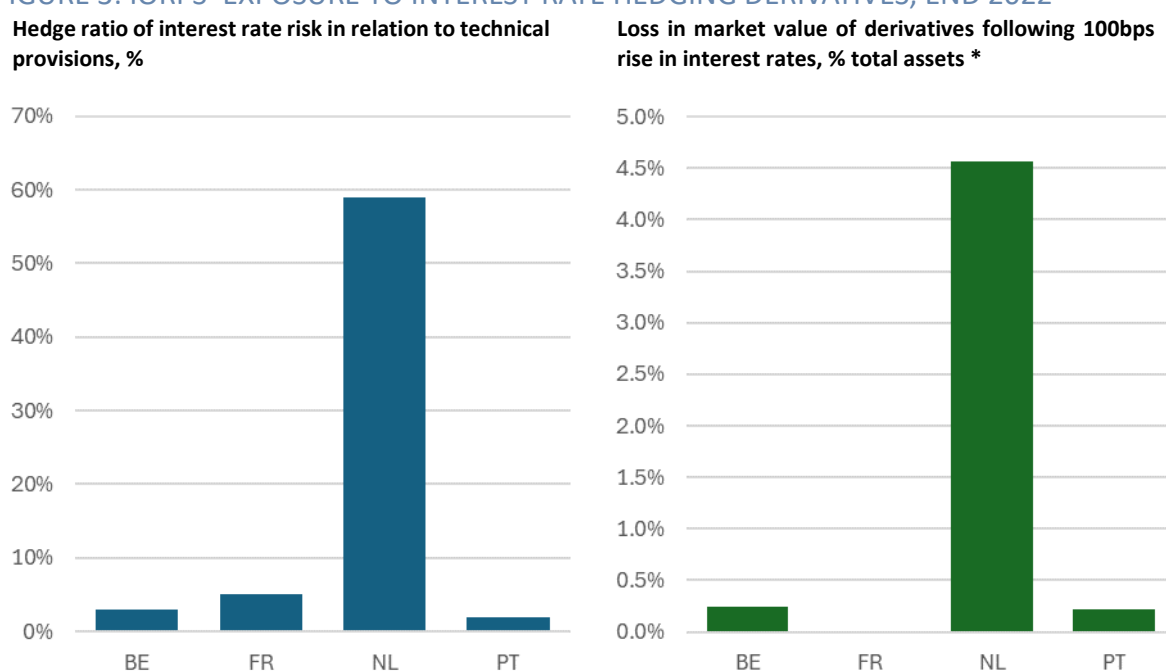
- ▶ In NL, IORPs in aggregate hedge almost 60% of interest rate risk through derivative instruments. An increase in interest rates by 100 basis points (bps) would result in an aggregate loss of more than 4.5% of the IORPs total asset value;

⁶ In EE, there are no IORPs.

- ▶ In BE, FR and PT, the use of interest rate derivative hedging is much smaller with hedge ratios being 5% or lower. The loss in the market value of the derivatives is 0.2% of assets or lower following a 100 bps interest rate rise.

EU-wide, an interest rate increase of 100 bps would result in an aggregate loss in the market value of interest rate derivatives of EUR 67 bn (3.9% of assets). This loss would be predominantly located in NL due to the high degree of interest rate hedging and the large size of the IORP sector in NL.

FIGURE 3: IORPS' EXPOSURE TO INTEREST RATE HEDGING DERIVATIVES, END 2022 ^{a,b,c,d}



* Sensitivity to 1bps (DV01) rise in interest rate was linearly extrapolated to a sensitivity to a 100bps rise.

^a For BE, only five IORPs have reported that they were holding (or held) interest rate derivatives for hedging purposes in 2022.

^b For FR, the data only cover direct derivative holdings and not derivatives held through investment funds.

^c For NL, the data relate to a sample of 188 IORPs.

^d For PT, the data relate to end 2023 and only cover direct derivative holdings and not derivatives held through investment funds.

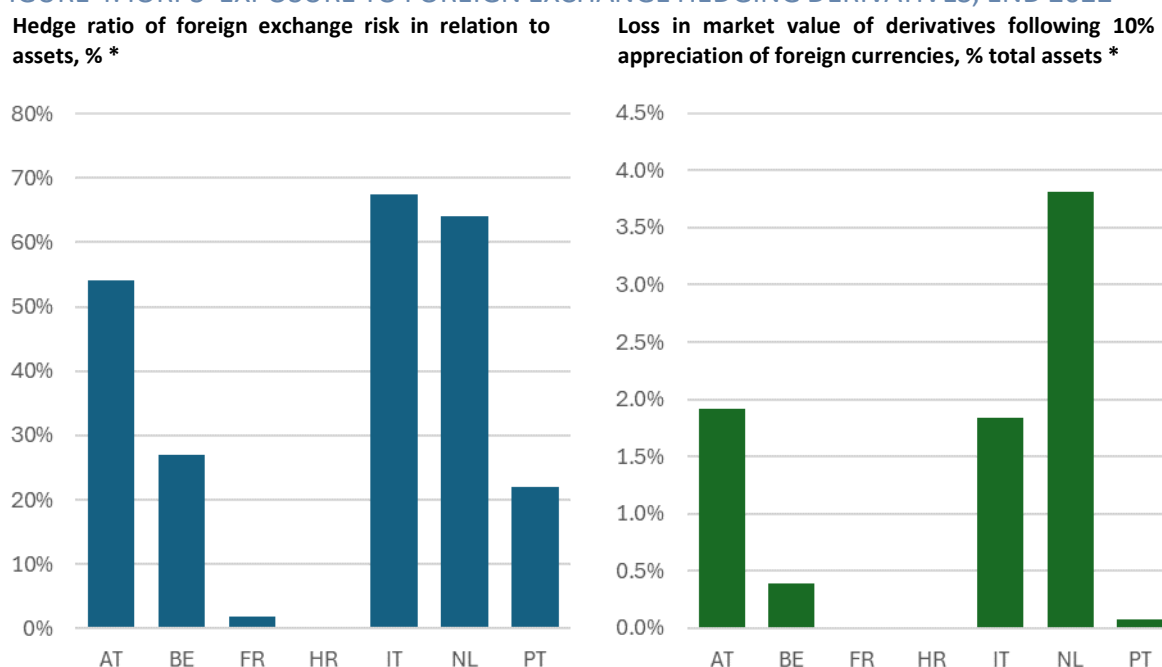
Twelve CAs reported exposures to foreign exchange hedging derivatives in terms of notional amounts. Nine of these CAs provided calculations on the extent to which the derivatives mitigated foreign exchange risk (hedge ratio) and the sensitivity of the market value of the derivatives - and hence margin calls - to an appreciation of foreign currencies. Since the calculations of two CAs related to one single IORP, Figure 4 shows the results for the remaining seven MS:

- ▶ In AT, IT and NL, IORPs hedge in aggregate more than half of foreign currency exposures. In AT and IT, the aggregate decrease in the market value of the derivatives amounts to almost 2% of total assets following an appreciation of foreign currencies by 10%. In NL, the aggregate loss amounts to almost 4% of total assets;

- ▶ In BE and PT, the hedge ratios lie between 20 and 30% and the loss on the derivative positions after an 10% appreciation of foreign currencies is below 0.5% of total assets;
- ▶ In FR and HR, currency hedging through foreign exchange derivatives is limited or non-existent.

EU-wide, an appreciation of foreign currencies by 10% would result in an aggregate loss in the market value of foreign exchange derivatives of EUR 60 bn (3.1% of assets). This loss would also be predominantly located in NL due to the high degree of currency hedging combined with the large size of the IORP sector in NL.

FIGURE 4: IORPS' EXPOSURE TO FOREIGN EXCHANGE HEDGING DERIVATIVES, END 2022 ^{a,b,c,d}



* For NL, the hedge ratio refers to USD currency exposures. The hedge ratio corresponding to GBP and JPY currency exposure is somewhat lower, while the hedge ratio corresponding to other currencies is substantially lower.

* Sensitivity to 0.1% appreciation of foreign currencies was linearly extrapolated to a sensitivity to a 10% appreciation.

^a For BE, nineteen IORPs have reported that they were holding (or held) foreign exchange derivatives for hedging purposes in 2022.

^b For FR, the data only cover direct derivative holdings and not derivatives held through investment funds.

^c For IT, the data relate to end 2023 and only cover DC IORPs.

^d For NL, the data relate to a sample of 188 IORPs.

^e For PT, the data relate to end 2023 and only cover direct derivative holdings and not derivatives held through investment funds.

Liability-driven investment funds

Interest rate hedging strategies of UK pension schemes are often implemented through (leveraged) liability-driven investment (LDI) funds. These LDI funds not only hedge interest rate risk with derivatives, but also increase interest rate sensitivity on the asset-side by investing in long-term bonds financed by short-term borrowing (repo).

Three CAs (BE, IE, NL) indicated that IORPs in their MS make use of leveraged LDI funds to hedge interest rate risk (see Figure 5):

- ▶ In BE, these are “single-client” funds that are used for interest rate and inflation risk management;
- ▶ In IE, these are primarily multi-client/pooled funds, whereas the largest schemes have a mix of multi-fund and bespoke arrangements;
- ▶ In NL, LDI funds are primarily used by smaller IORPs which do not have direct access to derivative markets.

FIGURE 5: USE OF LIABILITY DRIVEN INVESTMENT (LDI) FUNDS BY IORPS, # MS

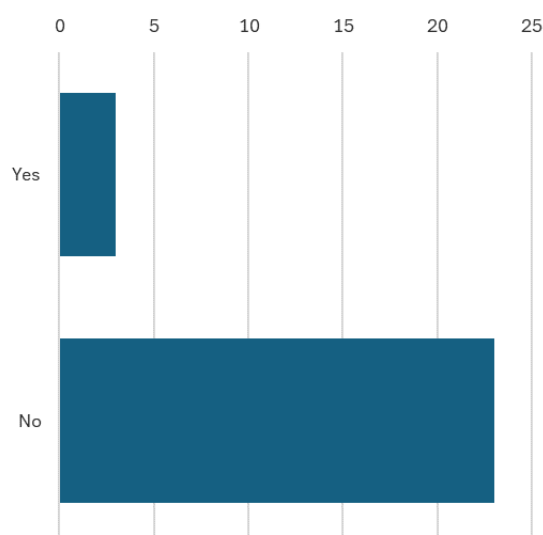
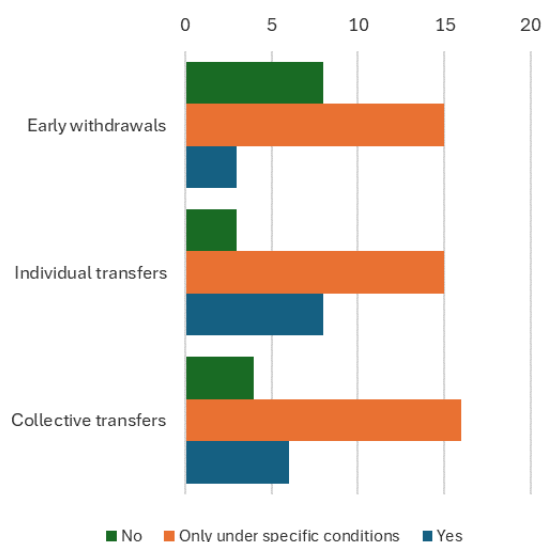


FIGURE 6: POSSIBILITY OF EARLY WITHDRAWALS AND TRANSFERS, # MS



Early withdrawals and transfers

CAs were asked whether early withdrawals, individual transfers and collective transfers are possible in their MS. In most case, early withdrawals and transfers are not possible or only under specific conditions. Early withdrawals and transfers are possible unconditionally in three to eight MS (see Figure 6):

- ▶ Early withdrawals by plan members are always possible in three MS (IE, LI, LU) and under specific conditions in 15 MS (BE, BG, CY, DE, ES, FR, GR, HR, IT, LV, PL, PT, SE, SI, SK). Often these conditions relate to life events, such as disability, long-term unemployment, and the purchase of a house (see Table A.1 in the annex).
- ▶ Individual transfers by plan members are always possible in eight MS (GR, HU, IE, LI, LU, LV, MT, SK) and under specific conditions in 15 MS (BE, BG, CY, DE, DK, ES, FR, HR, IT, NL, NO, PL, PT, SE, SI). Often individual transfers are possible when the plan member terminates / switches employment (see Table A.2 in the Annex).

- ▶ Collective transfers are always possible in six MS (BG, FI, HU, LI, LU, MT) and under specific conditions in 16 MS (AT, BE, CY, DE, DK, ES, FR, GR, HR, IT, LV, NL, NO, PL, PT, SE). Collective transfers are often subject to the approval of the sponsor, social partners, the transferring IORP and the receiving institution and/or the CA (see Table A.3 in the annex).

REGULATION OF IORP LIQUIDITY RISK AND ITS MANAGEMENT

Liquidity plans

Article 14(2)(b) of the IORP II Directive requires that IORPs take into account their liquidity plan in drawing up a recovery plan when assets are insufficient to cover the technical provisions. CAs were asked whether national regulation and/or supervisory measures in their MS require IORPs to have a liquidity plan.

Seven CAs (BE, DE, FI, GR, LU, NO, PT) indicated all IORPs are required to have a liquidity plan, whereas four CAs (CY, DK, HR, LI) replied that a liquidity plan is only required as part of a recovery plan (see Figure 7). Twelve CAs (BG, EE, ES, FR, HU, IE, LV, NL, PL, SE, SI, SK) responded that national regulation or supervisory measures do not impose a liquidity plan.⁷ Three CAs responded that the requirement for a liquidity plan only applies to some IORPs and/or in specific circumstances:

- ▶ In AT, IORPs have the possibility to value certain debt securities designated hold-to-maturity at their net book value or their net current value. IORPs should outline the suitability of the securities dedicated as hold-to-maturity as a permanent investment based on a conservative liquidity plan. Where the IORP provides a guarantee, the IORP is expected to demonstrate to the CA that it has sufficient liquidity reserves to be able to meet the pension benefit obligations for the following financial years.
- ▶ In IT, a liquidity plan is required in the event of merger, transformation or termination of the scheme.
- ▶ In MT, IORPs would include information on liquidity in the information to be sent to the CA for review, normally as part of the statement of investment policy principles (SIPP).

In seven MS (BE, CY, DK, GR, HR, LU, NO) out of the fourteen MS where a liquidity plan is prescribed, the elements of the liquidity plan are not specified (see Figure 8). In GR, according to the new legislation, the details will be determined by a decision of the CA. Three CAs (AT, DE, PT) indicate that expected cash in- and outflows as well as projected cash in- and outflows under stressed circumstances must be included. Two CAs (LI, PT) responded that arrangements or measures to resolve potential liquidity needs must be covered by the liquidity plan. Four CAs indicated 'other' main elements:

⁷ IORPs in SE are not allowed to have less assets than technical provisions.

- ▶ In AT, a specification of the hold-to-maturity debt securities and a breakdown of cash in- and outflows must be provided in the liquidity plan as well as an assessment of prescribed stress scenarios;
- ▶ In DE, supervisory guidance⁸ stipulates an adequate liquidity planning and a sensitivity analysis, linking risk management to liquidity planning and ALM. Measures to resolve potential liquidity needs are foreseen for special cases when deemed necessary. Liquidity indicators have to be assigned to especially fixed income assets;
- ▶ In FI, liquidity risk is covered by the investment plan, which has to include an actuary's report for investment risk management in relation to the (nature of) technical provisions and maintaining liquidity;
- ▶ In IT, the elements of the liquidity plan are decided on a case-by-case basis depending on the situation of the specific IORP.

FIGURE 7: REQUIREMENT TO HAVE LIQUIDITY PLAN, # MS

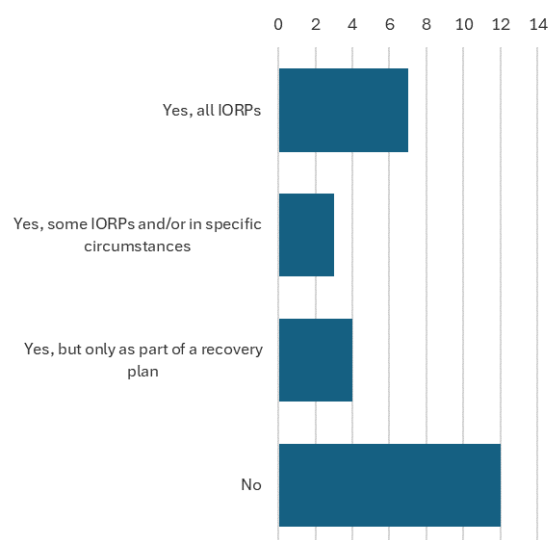
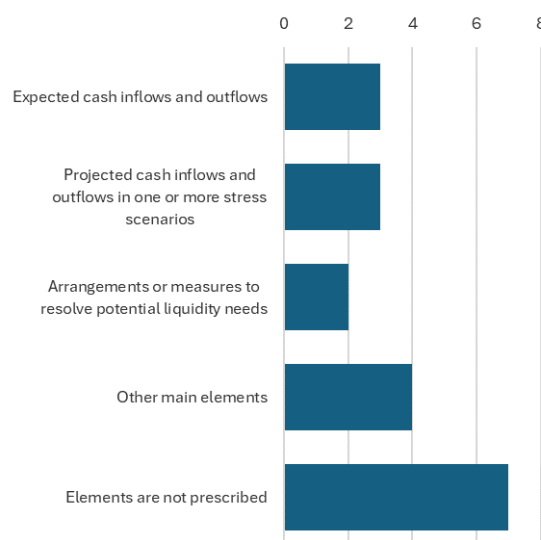


FIGURE 8: MAIN ELEMENTS LIQUIDITY PLAN, # CAS INDICATING ELEMENT



The time horizon of the liquidity plan is often not prescribed or depends on the IORPs' specificities. In IT, it is decided upon on a case-by-case basis. Some CAs specified a time horizon:

- ▶ In AT, the time horizon extends until the maturity of the hold-to-maturity debt securities;
- ▶ In DE, the time horizon also depends on IORPs' specificities, but a minimum of 5 years applies for supervisory practices, like on-site inspections;
- ▶ In LU, the time horizon equals three years;

⁸ Circular 11/2017 (VA).

- ▶ In NO, the time horizon should be at least 12 months.

The frequency of updating the liquidity plan is in some MS not prescribed or depends on the IORPs' specificities. In IT, the frequency is decided upon on a case-by-case basis. A number of CAs specified a frequency of updating:

- ▶ In AT, the liquidity plan should be updated in the event of changes in hold-to-maturity securities and, where the IORP provides guarantees, at least annually;
- ▶ In BE, the plan should be updated every three years;
- ▶ In DE, the plan should be updated regularly and in case of need or special events;
- ▶ In FI and LU, the liquidity plan should be updated annually;
- ▶ In NO, the liquidity plan should be updated at least quarterly.

Liquidity of assets

Article 19(1)(c) of the IORP II Directive prescribes that the IORPs' assets shall be invested in such a manner as to ensure the security, quality, liquidity and profitability of the portfolio as a whole. Nine CAs indicated that national regulation and/or supervisory measures in their MS impose additional requirements on IORPs' investments in assets to ensure the liquidity of the investment portfolio:

- ▶ In AT, quantitative limits are imposed on the share of debt securities that can be designated as hold-to-maturity;
- ▶ In BG, national regulation prescribes eligible assets in which IORPs can invest and requires for certain assets that they are traded on regulated markets (or equivalent third-country markets). In addition, a national regulation⁹ prescribes the minimum amount of liquid funds and the assets that are considered liquid for this purpose;
- ▶ In ES, national regulation imposes a liquidity coefficient, depending on projections of liquidity needs, the age of members and the possibility of advance payments, which has to be held in cash at bank, bank deposits and money market funds with maturities not exceeding three months. Moreover, regulation sets out liquidity requirements on investment in structured financial assets;
- ▶ In HR, national regulation lays down thirteen categories of assets in which IORPs are allowed to invest. Moreover, regulation and supervisory measures impose further quantitative restrictions on certain assets, promoting the liquidity of IORPs' investment assets;
- ▶ In IT, IORPs are not allowed to invest more than 30% of their assets in securities not traded on regulated markets;
- ▶ In MT, supervisory measures impose an extensive list of investment restrictions on IORPs;

⁹ Ordinance 10 of 29 June 2021.

- ▶ In PT, investments in assets which are not admitted to trading on a regulated market are not allowed to exceed 15% of the IORPs' portfolio value;
- ▶ In SE, IORPs need to ensure that they are able to fulfil their obligations towards the members and beneficiaries at all times;
- ▶ In SI, IORPs are required to formulate and implement a liquidity management policy, including the planning of cash in- and outflows, monitoring of liquidity and taking appropriate measures to prevent or eliminate the causes of illiquidity. Moreover, IORPs must calculate asset liquidity ratios on an ongoing basis.

Temporary borrowing for liquidity purposes

Article 19(3) of the IORP II Directive prohibits IORPs from borrowing. However, MS may authorise IORPs to carry out some borrowing only for liquidity purposes and on a temporary basis.

FIGURE 9: TEMPORARY BORROWING FOR LIQUIDITY PURPOSES ALLOWED, # MS

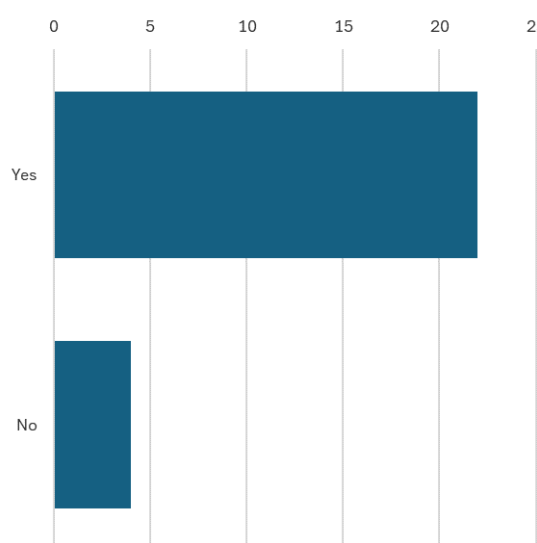
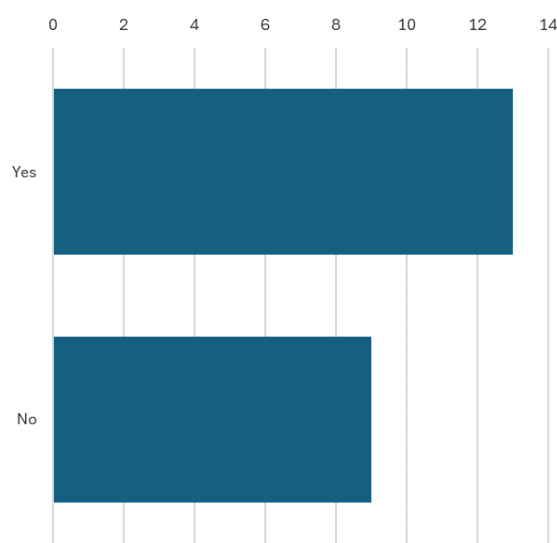


FIGURE 10: ADDITIONAL REQUIREMENTS ON TEMPORARY BORROWING FOR LIQUIDITY PURPOSES, # MS



Nearly all MS allow IORPs to borrow for liquidity purposes and on a temporary basis (see Figure 9) except for four MS (BG, HU, IT, PL). More than half of MS (AT, DE, DK, EE, ES, FR, GR, HR, LV, MT, SE, SI, SK) that allow temporary borrowing impose additional requirements (see Figure 10). In DE borrowing is only possible in exceptional cases, as generally assets have to be liquidated to fulfil liquidity needs. In DK and FR borrowing is subject to prior approval of the CA and in ES subject to prior notification. In GR, the CA should be informed in case of temporary borrowing for liquidity purposes by an IORP. Other MS specify the size and the time period of the borrowing:

- ▶ The maximum borrowing amounts to 5% of assets in HR, 10% of assets in LV, MT and SI and 25% of assets in EE. In AT borrowing should be at a cautious level and in SE small amounts are allowed;
- ▶ The maximum time period amounts to 3 months in HR and LV, 6 months in SI and 12 months in AT and SK.

Liquidity risk management and own-risk assessment

Article 25(2)(d) of the IORP II Directive requires that the risk-management system of IORPs shall, amongst others and where applicable, at least cover liquidity risk management. Article 28 requires IORPs to carry out and document their own-risk assessment (ORA).

Six MS impose additional requirements on IORPs through national regulation (Level 1/2) and/or supervisory measures (Level 3) with regard to the inclusion of liquidity risk in the risk-management system (see Figure 11)¹⁰:

- ▶ In AT, the CA provided guidance on the holistic interpretation of the ORA, also in respect of liquidity risk management;
- ▶ In BG, national regulation¹¹ requires IORPs to develop quantitative models and indicators for liquidity risk;
- ▶ In HR, national regulation imposes liquidity risk management requirements in relation stress testing and the maintenance of liquid assets;
- ▶ In PT, level 2 regulation lays down risk management requirements in respect of identifying risk measures and establishing risk tolerance limits, including for liquidity risk, while level 3 guidance provides a definition for liquidity risk, potential sources of liquidity risk and the elements to be taken into account in the risk management and internal control systems to ensure a sound and prudent management of liquidity risk;¹²
- ▶ In SE, supervisory measures require IORPs to calculate a risk-based capital ratio, including liquidity risk;
- ▶ In SK, national regulation requires IORPs to prepare projections and assess the impact of investments on liquidity.

Two MS impose additional requirements on IORPs with regard to the inclusion of liquidity risk in the ORA (see Figure 12)¹³:

¹⁰ In GR, national regulation provides for the adoption of a decision by the CA on risk management.

¹¹ Ordinance 59.

¹² ASF is in the process of revising Level 2 / 3 regulation with regard to the system of governance of pension fund management entities and changes to the provisions on liquidity risk management are expected.

¹³ In GR, national regulation provides for the adoption of a decision by the CA on ORA.

- ▶ In AT, the guidance on the holistic interpretation of the ORA addresses several aspects related to liquidity risk management, such as the obligation of additional contributions, the financial soundness of the employer and pension reductions;
- ▶ In FR, supervisory guidance specifies that the ORA is expected to include an analysis of the quality and liquidity in the representation of the IORPs' commitments.

FIGURE 11: ADDITIONAL REQUIREMENTS ON LIQUIDITY RISK IN RISK-MANAGEMENT SYSTEM, # MS

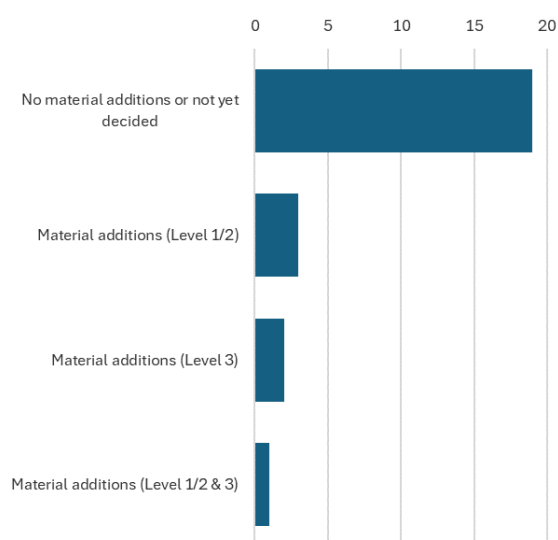
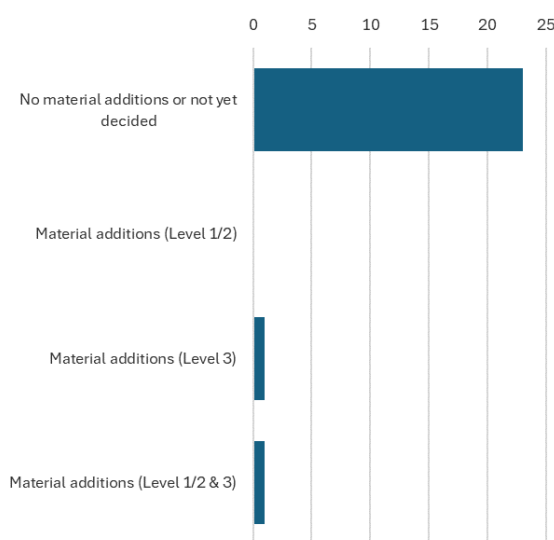


FIGURE 12: ADDITIONAL REQUIREMENTS ON LIQUIDITY RISK IN OWN-RISK ASSESSMENT, # MS



Supervisory assessment of liquidity risk

Article 49(1)(b) and (c) of the IORP II Directive provide that the supervisory review process shall comprise an assessment of the risks the IORP faces as well as an assessment of the ability of the IORP to assess and manage those risks. Two MS (AT, HR) impose more specific requirements on the supervisory review process in relation to liquidity risks that IORPs face (see Figure 13). In AT, the CA is tasked with supervising the use of hold-to-maturity designated instruments. In HR, the CA may revoke the IORP's licence, if it conducts its activities in a manner that jeopardises the IORP's liquidity or solvency.

FIGURE 13: ADDITIONAL REQUIREMENTS ON LIQUIDITY RISK IN SUPERVISORY REVIEW PROCESS, # MS

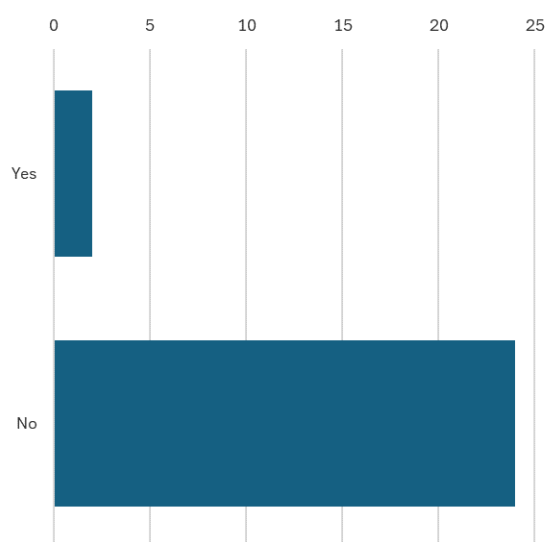
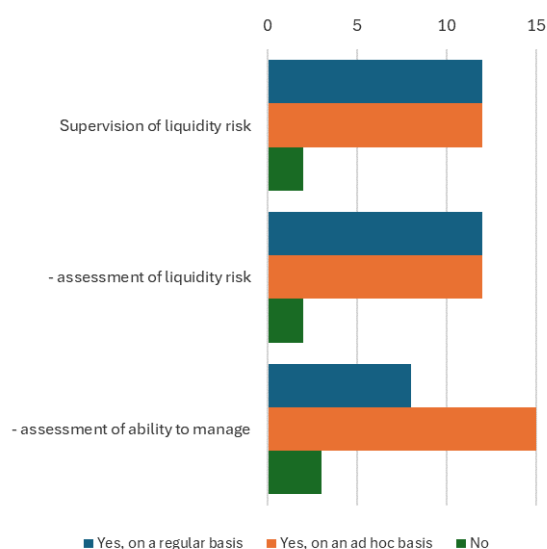


FIGURE 14: SUPERVISION OF IORP LIQUIDITY RISKS AND ITS MANAGEMENT, # CAS



SUPERVISION OF IORP LIQUIDITY RISK AND ITS MANAGEMENT

CAs were asked whether they supervise liquidity risks of IORPs, including an assessment of the liquidity risk the IORP faces and the ability of the IORP to assess and manage liquidity risks. In two MS (EE, SK) no supervision of liquidity risk is carried out because:

- ▶ in EE, there are no IORPs;
- ▶ in SK, the CA is transitioning towards risk-based supervision, including liquidity risk.

Supervision of liquidity risk on a regular basis

In almost half of MS (AT, BG, FI, FR, HU, LI, LV, MT, NL, PL, PT, SI) liquidity risk is supervised on a regular basis (see Figure 14).

In these MS, liquidity risk tends to be part of CAs' ongoing monitoring and risk assessment of individual IORPs and the sector as a whole. The liquidity risk assessment is based on information from the annual investment plan (FI), annual and quarterly reports (HU, LI), annual and quarterly financial statements (MT, PL), on-site inspections (LI) and dialogues with the IORP's management (LI). In LI, the CA applies different supervisory tools (dashboard, control forms, integrated risk assessment system) to process the information.

The frequency of liquidity risk monitoring ranges from weekly (FR), monthly (BG), quarterly (LV) to annual (BG, FI, FR, LV, NL, SI). Some CAs (BG, FR, LV) use multiple frequencies. The CA in BG calculates its liquidity indicator on a monthly and annual basis. Apart from the liquidity risk assessment on an

annual basis, the CA in LV performs liquidity checks on a quarterly basis. In FR, the CA also disposes of a weekly surveillance tool, which monitors IORPs' inflows (premiums) and outflows (withdrawals).

Several CAs have indicators in place to monitor liquidity risk. In BG, FI and PT, the (il)liquidity of investment assets is monitored. In FR, the liquidity of assets is checked in relation to the IORPs' commitments. In NL, IORPs are scored on a scale from 1 to 4 using two indicators: (1) stressed liquidity needs divided by high quality liquid assets (HQLA), and (2) stressed margin call divided by liquid assets.

A number of CAs mention that certain factors mitigate liquidity risks. In AT, IORPs are still maturing, with few members already receiving pension benefits and the schedule of pension payments being quite predictable. In PL and PT, the use of derivatives is respectively non-existent or low. Nevertheless, the CA in PT screens the impact of these instruments in the context of other risks, mainly foreign exchange, equity and interest rate risks.

Fewer CAs carry out the assessment of the IORPs' ability to manage liquidity risks on a regular basis than the assessment of liquidity risks (see Figure 14). In BG, the CA does a qualitative evaluation regarding the application of internal rules for the procedures for monitoring, measuring and managing the liquidity risk. In MT, the CA assesses whether the IORPs' investments comply with the investment parameters and restrictions in regulation and the scheme rules. In PL, the CA also assesses compliance with the law, the provisions of the IORPs' statutes and appropriate consideration of the interests of IORPs' members. This assessment is based on information from the depositary, which has an important whistleblowing function. In NL, the assessment of IORPs' ability to manage liquidity risk is also based on a score in a range from 1-4 and based on a questionnaire with 24 questions.

In FR, almost all IORPs belong to insurance groups which are subject to Solvency II governance and risk management requirements. Those groups are subject to the Solvency II requirements liquidity risk management, which are supervised on a consolidated basis, i.e. including the IORP. For the largest insurance groups, the CA performs regular oversight of liquidity positions, projections and stressed projections.

Some CAs indicate that the supervision of liquidity risk takes a two-stage approach. Based on the broad monitoring and/or analysis of governance documents, a more detailed assessment may follow through using on-site or off-site inspections. In HU, a detailed assessment of the liquidity risk is only carried out occasionally, since there is only one IORP with a negligible market weight compared to voluntary pension funds. In LI, one major IORP dominating the rest of the sector is the focus of supervisory attention as far as liquidity risks are concerned.

Supervision of liquidity risk on an ad hoc basis

In almost the other half of MS (BE, CY, DE, DK, ES, GR, HR, IE, IT, LU, NO, SE) liquidity risk is supervised on an ad hoc basis (see Figure 14).

Also in these MS, liquidity risk is assessed through the review of governance documents, such as the ORA (BE, ES), SIP (BE) and financing plans (BE). In DE, EIOPA's liquidity survey was adapted and rolled

out to a selected group of IORPs. Often liquidity risk (management) is assessed as part of on-site and/or off-site inspections of specific IORPs (DE, DK, HR, NO), explaining the ad hoc nature of the supervision. In SE, supervision of liquidity risk depends on the unfolding of stressed events, like the pandemic during which time the CA assessed, and contacted IORPs about, the liquidity situation of IORPs.

Two CAs (CY, HR) mentioned that they assessed whether IORPs have sufficient liquid assets to meet anticipated liquidity needs. In DK, when liquidity risk is in the inspection's focus, the CA will review and challenge the IORPs' policies and processes to ensure that the risks are measured and managed adequately. In IT, the CA performs horizontal supervisory checks on IORPs' derivative exposures, in particular in relation to foreign exchange derivatives.

Two CAs (BE, DE) indicated a two-stage approach to the supervision of liquidity risks. In BE, additional supervision is carried out on an ad-hoc basis depending on IORP circumstances, such as collective transfers or upon their use of LDI strategies. In DE, if the IORP's liquidity situation is deemed not to be sufficient, the IORP has to explain comprehensibly which actions will be taken to resolve the situation. Moreover, a liquidity planning for the past two and the coming five years has to be presented as well as adequate risk management tools and guidelines.

Three CAs (DE, IT, LU) explained why liquidity risk is not supervised on a regular basis. In DE, so far, no single IORP ever experienced a liquidity shortfall. In IT, liquidity risks are not considered material. In LU, one of the conditions for approval of IORPs is that the sponsoring undertakings commit to guaranteeing at all times the solvency and liquidity of the IORP.

Two CAs are planning to further develop their liquidity risk monitoring. In IE, liquidity positions are assessed as part of the monitoring of the largest DB schemes. However, the supervisory review process is currently under development, in particular in relation to larger DC schemes or master trusts in which a large number of smaller schemes are now consolidating following the introduction of IORP II. In SE, there is a planned activity to add a liquidity measure in the first automatic screening of the quarterly reporting templates.

ANNEX: CONDITIONS FOR EARLY WITHDRAWALS, INDIVIDUAL TRANSFERS AND COLLECTIVE TRANSFERS

TABLE A.1: CONDITIONS FOR EARLY WITHDRAWALS

BE	Early withdrawals are not possible except for the purchase, construction or renovation of a property, in so far the pension plan allows this.
BG	Specific conditions, e.g. termination of the employment relationship, could be introduced in the collective agreements establishing the occupational scheme.
CY	For the majority of IORPs, possible in case of termination of employment before the retirement age.
DE	Only feasible before vested benefits are acquired, but early withdrawals rarely occur.
ES	Possible in cases of serious illness or long-term unemployment, provided that this is specified in the pension plan.
FR	Possible, for example, in the event of death of the spouse of the plan member, permanent disability of the plan member, or the children or spouse of the plan member, situation of over-indebtedness of the plan members, and the purchase of the main residence, for some contracts. The IORP is subject to a legal period within which it must complete the withdrawal.
GR	Possible if it is provided for by the IORP statute and the terms of the pension scheme and as long as the member has at least 15 years of membership and does not meet the conditions for advance payment. For schemes where members bear the investment risk the amount is paid once and cannot exceed 50% of the value of the accumulated capital.
HR	<p>Possible in the following situations:</p> <ul style="list-style-type: none"> ▶ Pension rights can be exercised earlier in the event of death of a member, under the conditions stipulated in the membership agreement (agreed between IORP and its member). ▶ Early one-time withdrawal or early multiple periodic withdrawals are possible in the occurrence of the complete loss of the member's ability to work or in the occurrence of member's general inability to work. ▶ Workers terminating employment in Croatia due to starting employment in another EU member state.
IT	Possible for personal circumstances, listed and regulated by law, such as medical expenses and purchase of the first house.
LV	<p>Possible in the following situations:</p> <ul style="list-style-type: none"> ▶ A pension plan member who is recognised as a person with a disability of the first group for life is entitled to receive payments under the terms of the pension plan before retirement age. ▶ In the event of the pension plan member's death, the accumulated funds are paid to the beneficiaries. ▶ In addition, there are rules that set out special professions for which the retirement age of workers in private pension funds' pension plans may be less than 55 years are approved.
PL	Only possible in the event of liquidation of the IORP. If the IORP member does not make a transfer payment to another IORP or to an individual retirement account (IKE) within the deadline specified by law, then the funds are returned without the need to submit an individual instruction.
PT	In contributory plans, members are entitled to receive the amount determined based on their own contributions in the event of long-term unemployment, serious illness or permanent incapacity to work.

SE	Possible as from age 55.
SI	Only part of the assets that was contributed by the plan member can be withdrawn. Early withdrawals are penalised by the tax system.
SK	Possible once every 10 years, but only to the amount of the plan member's contributions.

TABLE A.2: CONDITIONS FOR INDIVIDUAL TRANSFERS

BE	<p>When leaving the company, workers have the legal right to transfer their rights to the new employer's pension institution.</p> <p>To the extent that the pension plan provides for investment options, members usually have the option to change their options (within the plan). This depends on the scheme rules.</p>
BG	<p>Individual transfers of funds accrued from personal contributions are possible upon termination of the employment/analogous relationship with the sponsoring undertaking.</p> <p>Individual transfers of funds accrued from both personal contributions and contributions by the sponsoring undertaking could also be possible in the cases and under the conditions specified in the collective agreement establishing the occupational scheme.</p>
CY	Individual transfers are allowed in cases where the sponsoring undertaking provides such an option to its workers.
DE	Within one year after termination of an employment relationship, the worker can demand a transfer to the provider of the new employer.
DK	Transfer is possible if the beneficiary is in the accumulation phase, and no longer holds a position in the sponsoring company.
ES	Only possible in the event of termination of the employment relationship, unless it is expressly prevented by the specifications of the pension scheme, and the termination of the pension scheme.
FR	Only possible in certain situations, such as the termination of the employment relationship with the sponsoring company.
HR	<p>Possible, in accordance with the IORP's prospectus and statute, if the following IORP membership requirements cease to exist: (1) employment with the IORP sponsor employer, (2) membership in the IORP sponsor trade-union, (3) membership in the IORP sponsor professional or independent activity association, (4) self-employment status.</p> <p>Moreover, IORP members, which are not yet entitled to a pension, can terminate their IORP membership, provided that they simultaneously enter into IORP membership with another provider. Workers terminating employment in Croatia due to starting employment in another EU member state are exempt from this condition.</p>
IT	Possible to transfer accrued pension pot to another pension fund after two years of participation.
NL	Participants can request an individual value transfer, for example when changing employment. The IORP can only facilitate this if the funding ratio is 100% or higher.
NO	Plan members with an individual paid-up policy are permitted to transfer their earned pension rights to a life-insurance undertaking with a corresponding licence.
PL	An individual transfer of funds may be made by a IORP member at any time to the individual retirement account (IKE) after concluding an agreement on maintaining the IKE and submitting an instruction, or in the

	event of termination of employment with the current employer, making a transfer to another employer, provided that an employee pension plan is maintained.
PT	<p>Individual transfers to other pension funds may occur in the beginning or during the pay-out phase.</p> <p>Pension benefits may also be paid through a lifetime annuity provided by an insurance undertaking and, if allowed by the plan rules, members may request that part of the pension benefits be paid in the form of a lump sum. The total amount of own contributions can also be received as a lump sum. These situations also represent a cash-out flow for the pension fund.</p> <p>Considering that in Portugal a pension plan can be financed by more than one pension fund (e.g. DC pension plans with investment options, where each pension fund represents a different investment option), individual transfers may occur, subject to the contractual conditions, when a member decides to transfer a certain accumulated amount from one investment option to another.</p> <p>In plans with vested rights, after their acquisition, and also with regard to own contributions, members who cease their relationship with the employer are given the possibility to transfer of the amount to which they are entitled to another pension fund that guarantees the same benefits. For smaller amounts, and if allowed by the plan rules, the members may request the payment to be made in the form of a lump sum.</p>
SE	Possible for DC contracts with or without guarantees, but not for DB contracts.
SI	Possible if the receiving scheme is listed in the register of the approved pension plans.

TABLE A.3: CONDITIONS FOR COLLECTIVE TRANSFERS

AT	<p>A cancellation of the Pensionskasse contract by the employer or the Pensionskasse or a termination of the Pensionskasse contract by common consent shall only be admissible and legally effective if a transfer of the parts of the assets to another Pensionskasse, a foreign IORP, an occupational group insurance of an insurance undertaking licensed to operate the life assurance business within the domestic territory, or an institution of supplementary pension insurance pursuant to Article 479 ASVG is guaranteed.</p> <p>The cancellation or termination by common consent may typically only be made jointly for all beneficiaries covered by said Pensionskasse contract. By way of derogation, in the case of an intended transfer to a foreign IORP, the cancellation or termination by mutual consent of the Pensionskasse contract shall require prior approval of the majority of affected beneficiaries. In the event of the termination by the Pensionskasse and the intended transfer to a foreign IORP the termination shall require the approval of the employer in question and the aforementioned voting procedure.</p> <p>The notice period for the cancellation of the Pensionskasse contract by the employer or the Pensionskasse is one year. Notice may only be given effective as of the Pensionskasse's balance-sheet date. The termination of the Pensionskasse contract by common consent shall become effective on the Pensionskasse's balance-sheet date at the earliest, which must be at least six months after the agreement on the termination of the Pensionskasse contract by common consent.</p>
BE	<p>The plan sponsor has the right to entrust the management of the pension plan to a new pension institution. In that case, subject to compliance with social consultation procedures, the sponsor may choose to transfer the assets to the new institution.</p>
CY	The transfer is subject to the approval of the Registrar of IORPs.
DE	<p>Both the assets and the liabilities are to be transferred and both the rendering and the receiving provider must agree. The transfer needs the permission of the CA. The CA checks that neither the plan members nor both pension providers have a disadvantage due to the transfer.</p>

DK	A collective transfer is only possible with an approval from the CA. The CA will consider all information available and will make sure that the transfer is both economically and socially sound. Additionally, it is a condition that the protection of members and beneficiaries is ensured in the transfer. Before the transfer, the members and beneficiaries can raise with the CA objections against and concerns about the transfer.
ES	Possible in the event of corporate transactions, such as a merger, or in the event of a termination of the pension scheme.
FR	Collective transfers, at the initiative of the sponsoring undertaking or the subscribing association, are possible but must comply with certain conditions such as a notice period (contractual period up to 6 months) and be reasoned/justified, in particular as regards the choice of the new IORP / insurance undertaking.
GR	Possible subject to approval of the CA. Article 12 of IORP II, as transposed into legislation in Greece, covers internal collective transfers as well.
HR	Possible, if the transferring IORP and receiving IORP enter into a written agreement containing and defining the terms and conditions prescribed by the IORP Act, as well as acquire prior approval of the transfer by the CA. The CA has adopted an ordinance further defining the procedures, conditions and method of the respective transfer.
IT	Possible in the event of extraordinary operations of the pension fund that imply the closure of the pension fund/scheme.
LV	Possible if the employer wishes to contribute to another plan or pension fund for the benefit of its workers. The transfer must be coordinated with the supervisor. Until now, there have been no cases of employers wishing to transfer their accumulated funds.
NL	<p>The pension administrator, at the request of the employer or, in the case of industry-wide pension funds, the parties who have agreed on the pension scheme, is authorised to carry out collective value transfers if:</p> <ul style="list-style-type: none"> ▶ the value transfer aims to place the value with the receiving pension administrator with whom the employer has entered into an implementation agreement, in connection with the termination of the implementation agreement between the employer and the transferring pension administrator; ▶ the employer is taken over as a result of a transfer of a company, and the acquiring company has entered into or is going to enter into an implementation agreement with another pension administrator or the same pension administrator; ▶ the value transfer aims, in connection with a collective amendment of the pension agreements, to utilise the value of pension entitlements or rights with the same pension administrator in accordance with those amended pension agreements; or ▶ the value transfer aims to place the value in another collective circle at the same general pension fund.
NO	If the employer is no longer part of the sponsoring group, the employer may transfer the pension scheme to another IORP or a life insurance undertaking with a corresponding licence.
PL	Only possible in the event of a change in the manager of the pension scheme or its liquidation.
PT	The transfer has to be formalised through a termination contract to be signed by the sponsor and the pension fund management entity. Depending on the type of pension fund or scheme, this contract is either subject to prior authorisation from the CA or has to be notified to the CA.
SE	For DB contracts only possible after approval of the CA.