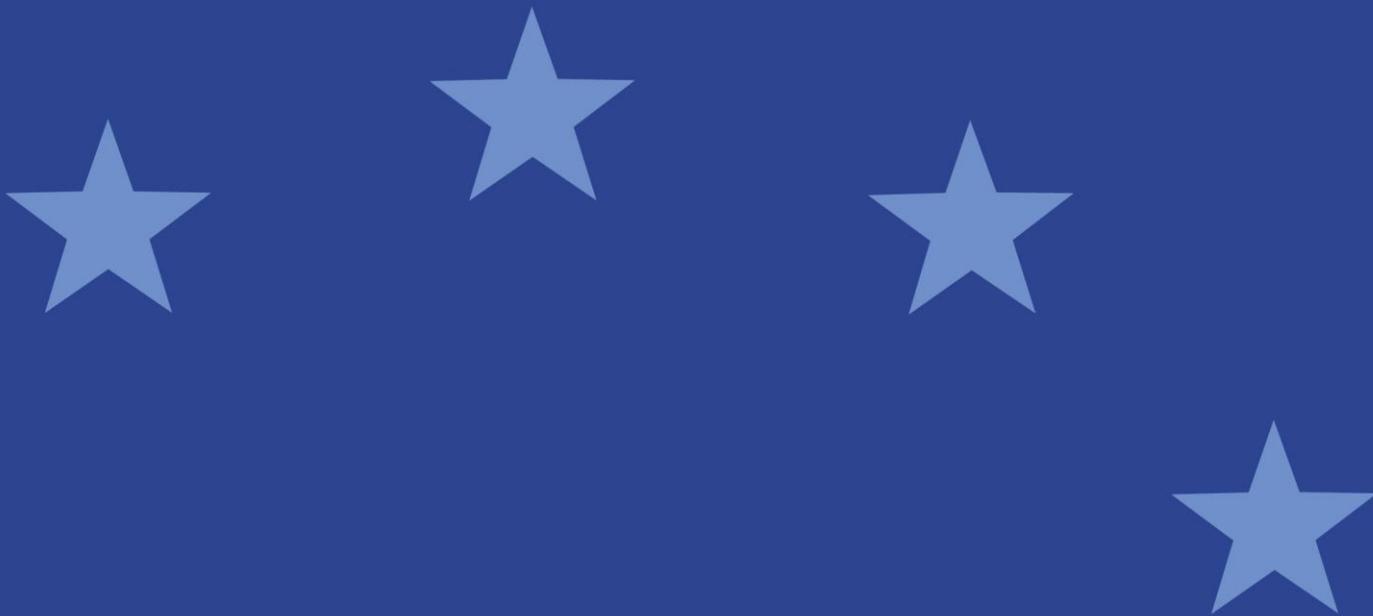




European Securities and
Markets Authority

Report to the European Commission

Report on the Central Clearing Solutions for Pension Scheme Arrangements (No. 2)





European Securities and
Markets Authority

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Acronyms

AIF	Alternative Investment Fund
BCBS	Basel Committee on Banking Supervision
CCP	Central Counterparty
CRR	Capital Requirement Regulation
CSD	Central Securities Depository
EBA	European Banking Authority
EEA	European Economic Area
EIOPA	European Insurance and Occupational Pensions Authority
EMIR	European Market Infrastructure Regulation
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
FC	Financial Counterparty
GDP	Gross Domestic Product
HQLA	High Quality Liquid Asset
ICMA	International Capital Market Association
IM	Initial Margin
LR	Leverage Ratio
NFC	Non-Financial Counterparty
OTC	Over-The-Counter
PSAs	Pension Scheme Arrangements
SFT	Securities financing Transaction
UCITS	Undertakings Collective Investment in Transferable Securities
VM	Variation Margin

1 Executive Summary

Reasons for publication

Regulation (EU) 2019/834 (hereinafter 'EMIR Refit') entered into force on 17 June 2019 and introduced a number of amendments to EMIR, one of them being a further extension of the exemption from the clearing obligation for pension scheme arrangements (PSAs). This extension was introduced because of the challenges that PSAs would face to provide cash for the variation margin calls related to cleared OTC derivative contracts.

This extension however goes hand in hand with the EMIR Refit objective of also ensuring that progress is made by the relevant stakeholders in addressing these challenges and for PSAs to clear their contracts as soon as possible. As part of this latter objective, EMIR Refit provides that ESMA, in cooperation with the European Banking Authority (EBA), the European Insurance and Occupational Pensions Authority (EIOPA) and the European Systemic Risk Board (ESRB), should prepare a report every year as long as the exemption still applies, as input for the Commission's own report, assessing whether viable technical solutions have been developed for the transfer by pension scheme arrangements of cash and non-cash collateral as variation margins and the need for any measures to facilitate those technical solutions.

ESMA's first report was published in April 2020 and served as the basis for conducting a public consultation until June 2020. The public consultation aimed to collect views from a broad range of stakeholders, as well as to collect updated data on European PSAs' portfolios and on the quantitative impact of moving their OTC derivatives portfolios to central clearing. Taking stock of the efforts made, giving due consideration to the work and discussions of the Expert Group of the Commission and taking into account the responses to the public consultation, ESMA has prepared this second report, in cooperation with the EBA, EIOPA and ESRB.

As detailed in this second report, it seems very unlikely that after so many efforts from all stakeholders and regulators since the start of the exemption, a new and never thought of 'silver bullet' solution emerges at this stage. This also means that the solution towards which we are moving seems rather to be the optimisation by different actors (regulators, CCPs, clearing members and their clients) of already existing solutions. Although some of these existing solutions need to be further developed or might need regulatory consideration, their addition should provide the conditions for PSAs to be able to clear and meet variation margin calls in all states of the market that have been considered in the discussions.

ESMA is convinced of the benefits of a broad adoption of the clearing obligation, including for PSAs, and would like to reiterate its view that exemptions, or extensions of exemptions, from the clearing obligation should thus be carefully considered. However, the additional efforts needed for implementing the solutions described in the report and ensuring readiness may still require additional time.

Contents

This report presents in Section 3 the regulatory context of this report, the next regulatory steps initiated by EMIR Refit and what is their implication for ESMA. Section 4 provides information on the participation to ESMA's public consultation, while Section 5 describes the role of derivatives as an integral part of PSAs' investment approach. Section 6 deals with central clearing requirements applied to PSAs' derivatives portfolios and provides quantitative data with respect to the typical structure of PSAs' investment portfolio and the estimated impacts of the clearing obligation for PSAs in terms of initial margin, cash allocation and yield drag. Section 7 revisits the ongoing exemption of clearing for PSAs. Section 8 presents the features of an overall solution as a combination of improved available services, including what could be done by the industry or in terms of regulatory measures to make these solutions more widely used. Section 9 provides elements on the Covid-19 crisis and its impact on bilateral and cleared markets. Section 10 refers to the access to alternative emergency liquidity arrangements. Section 11 provides the conclusion to this report. The last section highlights the expected steps following this report. Annex 1 provides the EMIR Refit articles relevant to the central clearing obligations for PSAs.

Next Steps

ESMA has now submitted this second report to the European Commission which would serve as input to the European Commission's own report.

2 Introduction

1. EMIR requires specifically identified standardised OTC derivatives to be cleared via a central counterparty (CCP) as a measure to mitigate risks. OTC derivatives are vital to manage European pension funds' solvency risks and ESMA is very much aware of the challenges that PSAs would face to start clearing their OTC derivative contracts.
2. It must be highlighted that the occupational pension funds' landscape is very heterogeneous across EU countries, not only in terms of size, but also in terms of vehicles or nature of the pension objective¹. Some Member States mostly rely on the pay-as-you-go first (public) pillar to provide for adequate pensions, while in others there is a more substantial role of the second (occupational pensions) and third pillars (personal pensions). EU countries representing a significant share of pension fund assets in the EU are the Netherlands, Denmark and to a lesser extent Ireland². Moreover, it is in these two first jurisdictions that the use of derivatives by PSAs is the most pronounced.
3. Central counterparties currently only permit variation margin (VM) to be posted in cash. Holding cash buffers results in heightened liquidity requirements and could have knock-on effects on the strategic investment allocation for PSAs, which in turn was identified as an obstacle for them to access central clearing. In other words, and broadly speaking, some PSAs might need to disinvest, and thus risk lower returns for their pension funds, hence lower retirement incomes, in order to meet cash VM calls, whereas they would have non-cash collateral available otherwise.
4. EMIR introduced to this end an initial temporary exemption, which expired on 16 August 2018³, for PSAs from the clearing obligation to allow time for a suitable solution for the transfer of non-cash collateral as VM to be developed.
5. In view of the fact that no suitable technical solution for the transfer of non-cash collateral as VM had been found by CCPs, clearing members and PSAs, the co-legislators agreed to amend EMIR (EMIR Refit) and included amongst other measures a further extension until June 2021, potentially to be extended by another year or two, of the temporary exemption for PSAs from the clearing obligation.
6. There are a number of reasons which, so far, may have prevented viable solutions to be developed. Firstly, this includes the characteristics of some PSAs' derivative portfolios, which are typically significant, long dated and unidirectional, coupled with investment strategies that usually prevent PSAs from increasing their cash holdings and a limited access of PSAs to liquidity via banks. Secondly, there have been risk management considerations of a technical and legal nature or with respect to liquidity,

¹ It must be highlighted that Pension Scheme Arrangements are not only pension funds (i.e. Institutions for Occupational Retirement), but also include other national arrangements with the objective of asset management for retirement purposes.

² The United Kingdom was also in that list at the time of the entry into force of EMIR Refit, before its subsequent withdrawal from the EU.

³ The initial temporary exemption was in fact extended in order to be valid until August 2018.

introducing significant complexities for CCPs to step away from their current cash VM protocols. Viable solutions have therefore required significant efforts and collaboration from a number of actors from the industry, and an open dialogue with policymakers, regulators and central banks.

7. Based on the varied input received through the consultation and from the Commission's Expert Group discussions, it is ESMA's understanding that a large majority of stakeholders is looking forward to a situation where PSAs would be able to clear more widely and that a majority of PSAs do want to clear. It is indeed only a matter of time before PSAs will need to clear their derivatives trades, not only because the exemption will eventually expire, but also because it provides very valuable safeguards and because a large portion of the liquidity is expected to shift to central clearing due to strong incentives provided by market and regulatory forces, driven in part by clearing obligations, bilateral margining requirements or capital requirements. Hence, there is urgency and eagerness to develop one or several viable technical solutions.
8. Moreover, with respect to systemic risk, the April 2017 ESRB opinion on the Revision of the European Market Infrastructure Regulation concluded the below, which ESMA is in full agreement with:

“While recognising the challenges faced by some counterparties in meeting the clearing obligation, the ESRB advises caution regarding exemptions from central clearing. It agrees with the European Commission's assessment that disproportionate costs and burdens need to be reduced. However, it supports a broad application of the clearing obligation, including for pension scheme arrangements and large non-financial counterparties (NFCs) that are active in the derivatives market.”
9. The European Commission has set up a dedicated stakeholder group which brings together pension funds, CCPs, banks, CSDs, EU policymakers and central banks in order to work on a robust solution to the cash VM issue that can be relied upon in stressed market conditions.
10. ESMA's first report was published in April 2020 and initiated a public consultation in order to collect views from stakeholders beyond those of the Expert Group created by the European Commission, such as potentially smaller PSAs, as well as to collect updated data on European PSAs' portfolios and on the quantitative impact of moving their OTC derivatives portfolios to central clearing. The results of this public consultation are an integral part of this report. It must also be noted that, in light of Brexit, the report focuses on EU27 jurisdictions, for PSAs as for CCPs, and that a sub-section is dedicated to the impact of the Covid 19 crisis on the relevant financial markets.

3 Regulatory context of this report

11. EMIR Refit (see Annex 1) provides that the Commission should monitor the progress made by CCPs, clearing members and PSAs towards viable solutions facilitating the participation of PSAs in central clearing and prepare a yearly report on that progress.
12. In order to provide input for this report from the European Commission, ESMA is required to produce a first report within 6 months from the entry into force of Refit, and every 12 months thereafter until the end of the exemption period, in cooperation with the EBA, EIOPA and the ESRB. A first report was provided to the European Commission in April 2020 and also served as a basis for a public consultation, in order for ESMA to collect feedback, input and views from stakeholders beyond those of the Expert Group created by the European Commission, such as potentially smaller PSAs, as well as updated data on European PSAs' portfolios and on the quantitative impact of moving their OTC derivatives portfolios to central clearing and use them for a more comprehensive second report.
13. The first report of the European Commission under Article 85(2) of EMIR assessing whether viable technical solutions have been developed for the transfer by pension scheme arrangements of cash and non-cash collateral as variation margins and the need for any measures to facilitate those viable technical solutions has been published on 23 September 2020.
14. These reports must not only cover the solutions themselves but also the related costs for PSAs, thereby considering regulatory and market developments such as changes to the type of financial counterparty subject to the clearing obligation, and specifically must assess:
 - whether the main market stakeholders have reached viable technical solutions to facilitate the participation of PSAs in central clearing by posting cash and non-cash collateral as VM;
 - the implications of those solutions on market liquidity and procyclicality and their potential legal implications;
 - the volume and nature of the activity of PSAs in cleared and non-cleared OTC derivatives markets, within each asset class, and any related systemic risk to the financial system;
 - the consequences of PSAs fulfilling the clearing requirement on their investment strategies, including any shift in their cash and non-cash asset allocation;
 - the implications of the clearing thresholds for PSAs;
 - the impact of other legal requirements on the cost differentials between cleared and non-cleared OTC derivative contracts, including margin requirements for non-cleared derivatives and the calculation of the leverage ratio;

- whether any further measures are necessary to facilitate a clearing solution for pension scheme arrangements.

4 Public consultation

4.1 Presentation

15. It was ESMA's conviction that a public consultation with all stakeholders was necessary to further inform the assessment of potential solutions, with the input from a wide range of stakeholders. Consequently, ESMA took advantage of the publication of the first report to also consult stakeholders. This consultation has allowed ESMA to gather input and drill further down into the issues, collect useful data and get a better representation of the range of views from stakeholders beyond the ones actively participating in the Expert Group.
16. The feedback received from the consultation, along with the additional discussions of the Expert Group have served as the basis for developing this second report due as per EMIR Refit by December 2020.

4.2 Participation

17. ESMA received in response to the public consultation 19 individual or trade association responses, including 2 confidential ones, and 1 joint response from 10 stakeholders from the pension fund industry.
18. More specifically, responses were provided by 8 market associations, 6 asset managers which count pension funds as key clients, 2 pension providers, 2 central counterparties, 1 bank, 1 federation of pension funds as well as 1 Central Bank.
19. Responses were received from stakeholders from the Netherlands, Germany, Sweden, the United Kingdom, Denmark and Ireland. A large share of the quantitative data was provided by Dutch stakeholders, hence a possible over-representation of Dutch PSAs compared to other European ones, i.e. primarily Danish or Irish PSAs, in the report. We however believe that Dutch PSAs constitute a good proxy for the EU pension fund sector as at the end of March 2020, our figures indicate that they were accounting for 70-80% of the notional amount of derivatives of all EU pension funds.
20. The large spectrum of stakeholders who replied to this consultation has allowed to get diverse views on all parts of the envisaged solutions.

5 Derivatives as an integral part of PSAs' investment approach

21. With an estimated total of aggregated assets above 2.7 trillion euros in the European Economic Area (EEA) at end 2019 (excluding UK)⁴, the European pension fund sector is a major participant in derivative markets.
22. The significance and size in terms of assets under management of private pension funds is diverse in the EEA. It is dominated by the large Dutch pension fund sector with investment assets amounting to 1.3 trillion euros at end 2019⁵. As for Denmark, its pension fund market was estimated at 595 billion euro at end 2018⁶. With regards to the average ratio of assets to GDP, as of end 2018, Denmark topped the ranking with assets worth 198.6% of GDP, followed by the Netherlands with 173.3%.
23. Unlike US peers, which use predominantly corporate bonds, many PSAs concentrated in some EEA countries use OTC derivatives as an integral part of their investment approach in order to manage their financial solvency risk, which also allows them to comply with the prudent person principle. The reasons for PSAs to use derivatives are an interplay of several considerations.
24. Structurally speaking, the liabilities of EEA PSAs are long dated: 50 years and longer with an average maturity at around 25-30 years (longer than US pension funds for instance), one-directional and linked to interest rates and/or inflation. To hedge their liability risks, PSAs typically invest in high-quality government bonds.
25. The most commonly mentioned reason for the use of OTC derivatives by PSAs is the insufficient number of issuances of long dated high-quality bonds restricting the ability of EU pension schemes to manage the interest rate risks adequately. As confirmed in the responses to the public consultation, the EU bond landscape, both sovereign and corporate, lacks scale and availability in several key sectors. Examples provided refer to the lack of AAA-rated sovereign bonds with a maturity greater than 30 years and the lack of long duration AA-rated corporate bonds eligible for determining IAS19-based liability discount curves. The inadequacy between long duration segments and long-dated liabilities leads to a trade-off between credit quality, liquidity, and capital efficiency.
26. Figure 1 provides an illustration of the liability profile for an Irish pension fund whose liabilities extend approximately to 50 years, while in comparison Figure 2 highlights the swift decrease in the availability of EU investment grade (IG) government and corporate bonds from circa 10 years of maturity.

⁴ PensionEurope, Pension Fund Statistics 2019

⁵ Table 1.19 of statistical tables from OECD report 'Pensions Markets in Focus 2019' (<http://www.oecd.org/daf/fin/private-pensions/globalpensionstatistics.htm>)

⁶ <https://www.forsikringogpension.dk/media/4693/pension-assets-held-by-institutional-investors-dkkbn.pdf>

Figure 1⁷: Illustration of liability profile for an Irish pension fund

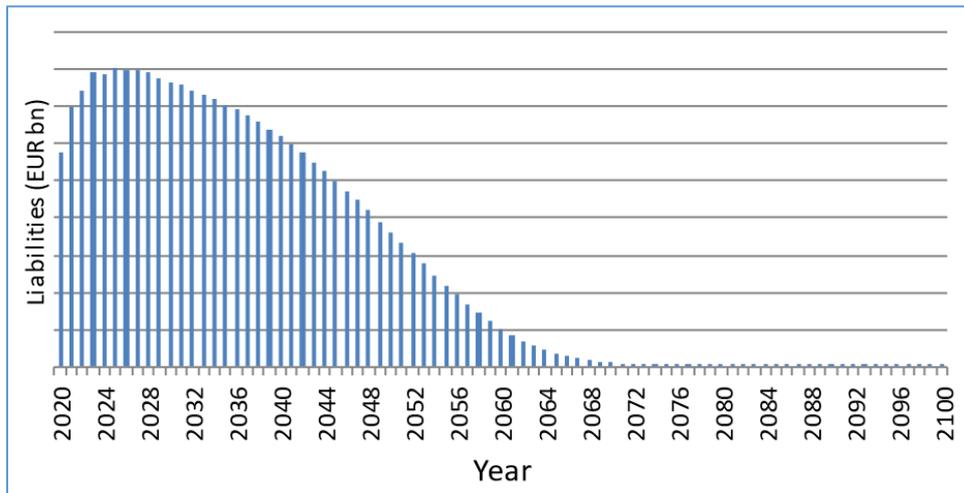
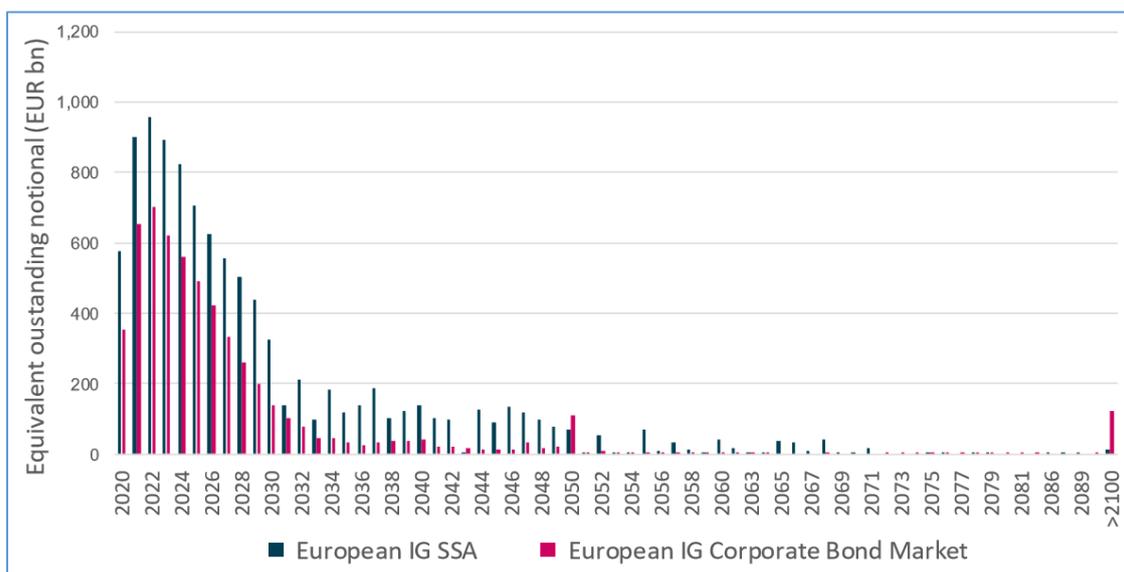


Figure 2⁸: EU investment grade (IG) government and corporate bonds maturity profile



27. Although this trade-off could be alleviated by increasing the amount of long-dated issuances, the use of derivatives versus bonds goes beyond closing the duration gap. Other aspects have an impact on PSAs’ decisions to use derivatives, such as the objectives of the PSA, considerations on spread risk, needs of higher returns or intrinsic characteristics of derivatives.

28. Some PSAs can indeed have certain objectives requiring them to hedge a significant amount while at the same time match some expected returns or inflation-linked targets.

⁷ Source: response to ESMA’s public consultation

⁸ Source: response to ESMA’s public consultation

For instance, it was highlighted during the consultation that many PSAs have objectives other than nominal matching. Given that these different objectives, to be fulfilled, will require different financial instruments (such as sovereign and corporate bonds, private credit and other illiquid investments), a Liability Driven Investment (LDI) strategy is often chosen to manage the interest rate exposure while taking other investments' risk exposures into account. In such cases the recourse to interest rate swaps helps optimise efficiency.

29. Secondly, in certain EU jurisdictions, the swap curve is the regulatory discount curve, meaning that it makes sense to hedge those liabilities using swaps rather than any other instrument. In the Netherlands for instance, where the assets under management held by PSAs are the largest in the EU, liabilities are discounted using market swap rates for the first 20 years. Thereafter, Dutch pension funds increasingly use a historical ultimate forward rate, which is lower than the ultimate forward rate used in the EIOPA swap curve. In Denmark, pension fund liabilities are discounted using the EIOPA swap curve, while in Ireland pension fund liabilities are also increasingly discounted using swaps. In a nominal regulatory framework with the euro swap curve as the discounting curve, hedging liabilities with any other instrument than euro swaps would thus create a spread risk. Limitations on how much spread risk a PSA is allowed to take, associated to the fact that many sovereign and corporate bonds have poor hedging quality as their correlation with the swap curve is too low, imply that euro swaps are the best hedging instrument by nature, most especially in stressed markets where the need for perfect hedges is most prominent.
30. PSAs collect pension premia, invest these in assets with certain risk premia such as equities or real estate, and share the investment risk collectively. Thus, another reason for PSAs to use derivatives relates to their need to invest a sizeable part of their portfolios in assets with a higher expected return such as equities. Should a PSA build an investment portfolio fully matching its liabilities, there would be insufficient money left to invest in assets with higher returns and these insufficient investment returns would impact future retirement incomes.
31. Lastly, OTC derivatives can be tailored to exactly match the dates of PSAs' liabilities, allowing a more accurate cash flow matching than with bonds.
32. The public consultation accompanying ESMA's first Report published in April 2020 allowed to collect, as was one of its goal, quantitative data with respect to the structure of PSAs' portfolios, and in particular regarding the duration gap which derivative strategies are designed to address.
33. Looking at Member State level, in the Netherlands, according to the Netherlands Bank ('DNB') statistics at Q4 2019, the average hedge ratio for a Dutch pension fund is 49%. Even if the breakdown between fixed income instruments and derivatives will differ across pension funds, out of these 49% of hedge, the fixed income portfolio contributes of up to 10-25% in average, leaving 25% to 40% hedged with derivatives. Therefore, more than half of the interest rate hedge is achieved through derivatives.

34. At a more granular level (Dutch asset managers and pension funds⁹), the trend observed at national level is corroborated.

Table 1: Asset Manager 1 - Average for pension fund clients¹⁰

Average duration of liabilities	25 years
Interest Rate Risk Hedge Ratio	58%
Hedge via Fixed Income Assets	30%
Average duration of these Fixed Income Assets	8 years
Hedge via Interest Rate Derivatives	28%
Duration gap	17 years

35. It also proves insightful to look at the impact of a 1bp change in the curve (also known as “DV01”), clearly showing that the biggest part of the interest rate hedge needs to come from derivatives such as interest rate swaps.

Table 2: DV01 of the gap to be hedged with OTC derivatives for baskets of Dutch PSAs¹¹

DV01 (in mEUR) / Baskets of Pension Fund Clients ¹²	Basket 1	Basket 2	Basket 3
Liabilities	253	35	10
Liabilities to hedge	143	19	6
IR Risk Hedge Ratio	57%	54%	63%
Hedge via FI assets	36	6	1
Share of FI assets in total hedge	25%	31%	15%
Gap to be hedged with derivatives	107	13	5

36. All these factors lead to the fact that, unlike US pension funds, in a few Member States an integral part of the investment approach of a substantial proportion of the European pension fund sector (in terms of assets), yet limited to relatively few actors, is to use

⁹ Data anonymised as submitted as confidential to ESMA

¹⁰ Source: response to ESMA's public consultation

¹¹ Source: response to ESMA's public consultation

¹² This table shows the impacts in million EUR of a 1 bp change in the rate curve: on the second row the impact from the total liabilities to hedge, on the fourth row the contribution in dv01 terms of the different fixed income portfolios and on the last row the resulting DV01 gap which needs to be filled with derivatives

OTC derivatives to manage their interest rate risk as their liabilities are often long-dated, unidirectional and linked to interest rates and/or inflation. Pension funds are allowed to use these derivatives only for managing risks¹³.

37. Consequently, such European PSAs typically have derivative portfolios which are large, long-dated and unidirectional to offset risk relating to their liability profiles.
38. On the one hand, derivatives portfolios with such characteristics of size, duration and directionality amount to a sizable level of counterparty risk, and, considered from the angle of the aggregate position of the industry, potentially even of systemic risk. This has precisely been the type of risk that led to the introduction of the clearing obligation in the first place.
39. But on the other hand, an array of factors mitigate the systemic nature of this risk:
 - a) Derivatives portfolios of PSAs are held to reflect and offset their liabilities, generally leading to a risk-neutral position overall.
 - b) PSAs are subject to stringent prudential supervision¹⁴ requiring them to be able to withstand extreme shocks to the value of their assets and liabilities and still be able to meet their financial obligations. In addition, national regulations aim at ensuring the highest possible level of protection for policyholders and beneficiaries.
 - c) They are asset-rich long-term investors holding a significant proportion of high-quality government bonds.
 - d) PSAs can rely on different recovery mechanisms such as benefit cuts, increased premiums or sponsor support, to restore funding levels in the case of underfunding.
 - e) In certain EU jurisdictions, quasi-governmental organisations or protection funds are established to ensure that the assets and liabilities of pension funds are protected in the event of default of the corporate sponsor.
 - f) Such characteristics tend to magnify the implications of OTC derivatives regulations for pension funds, in particular the magnitude of initial margin required due to their long-term unidirectional cleared portfolios.
40. In conclusion, PSAs may have a structural need for engaging in OTC derivatives and specifically in standardised OTC derivatives, which are also the ones mandated to be cleared. Even if a larger availability of long-dated bonds, both from sovereign and corporate issuers, would likely mitigate the potential need for long-dated derivatives, the other considerations mentioned earlier would still likely result in the potential need to use derivatives to most efficiently align the portfolio to the strategic objectives of PSAs. The use of derivatives by PSAs are however impacted by bank capital rules on

¹³ Article 18.1(d) of the IORP Directive (2003/41/EC) stipulates that "investment in derivative instruments shall be possible insofar as they contribute to a reduction of investment risks or facilitate efficient portfolio management". This requirement is carried over into the IORP II Directive, which applies from January 2019.

¹⁴ Via the two frameworks IORP II and Solvency II, which however do not include explicit liquidity requirements

non-cleared trades, the posting of cash VM in both cleared and non-cleared markets and other challenges related to clearing.

6 Central clearing requirement applied to PSAs' derivatives portfolios

6.1 Benefits and Reasons to clear

41. A very large majority of respondents to the public consultation are supportive of central clearing and expressed their strong interest in central clearing solutions. Most have highlighted that the benefits of central clearing outweigh the significant operational costs incurred by market participants and end-investors to comply with clearing mandates. There are indeed many drivers as to why PSAs voluntarily choose to clear today: increasing liquidity in cleared products, counterparty credit risk reduction and trading efficiency, economics of the trade and cost advantages and netting margin efficiencies.
42. Enough liquidity in a cleared product is one of the most important factors driving end-investors' willingness to voluntarily clear derivatives. A moderate increase in liquidity increases the likelihood of voluntary clearing.
43. Access to a broader set of liquidity providers aids best execution and improves the likelihood and efficiency of execution. Compared to the bilateral market where an end-investor must assess the creditworthiness of its counterparty as well as other factors such as the execution price, the executing broker for a cleared trade presents minimal credit risk, which opens up a larger universe of dealers.
44. The cleared price across asset classes is in general cheaper at execution. Though this can vary depending on the specific trade and executing broker, it is likely to be one of the main factors behind greater adoption of voluntary clearing going forward.
45. Netting margin efficiencies for end-users are another potential significant and positive cost advantage. Against arguments related to its embedded cost, clearing has the significant advantage of reducing collateral requirements in case of a non-directional position in derivatives. A long and short contract with exact same details will show near zero required initial margin, while traded bilaterally with two different counterparties they will lead to double collateral requirements.
46. In addition to the above recognised benefits of reduction in bilateral counterparty credit risk, respondents argue that central clearing also ensures proper collateralization of risks, facilitates the standardization of contracts/instruments, provides regulators with transparent reporting and decreases the likelihood of public bail outs in case of defaults.

47. A concrete illustration of the benefits of standardization can be observed in the Eonia/€STR transition. While for cleared trades the process is transparent, for bilateral derivatives this switch of index requires some negotiations between the two parties.

6.2 Access to clearing

48. PSAs are currently using clearing members to access CCPs for many reasons that go beyond the posting of cash margins, and, based on the responses to the consultation, it sounds unlikely that they would become direct clearing members of CCPs at this juncture to clear swaps.

49. Indeed, clearing members provide their clients, including PSAs, with a wide suite of ancillary services on top of the core clearing services¹⁵, including the funding of cash margins and collateral transformation services. In addition, clearing members also provide vital operational support in terms of technology to manage messaging systems and protocols, collateral, treasury planning and margin calls. These ancillary services are a vital component of the clearing service, as most PSAs do not have the technical or operational capacity to replicate these functionalities and become direct members.

50. Some PSAs are currently direct clearing members to CCPs for repo and/or securities lending clearing, unlike in OTC derivatives markets. Where PSAs do so, they typically use the recently introduced sponsored clearing models (sometimes referred to as hybrid clearing model¹⁶), as obligations for sponsored members have been adapted to address the challenges that PSAs face regarding access to cash, where for instance VM can be posted in securities after the IM and VM obligations have been netted down.

51. In a sponsored clearing model, the PSA needs to rely on the services of a broker/dealer acting as 'clearing agent'. Since under the sponsored clearing models a clearing agent typically guarantees the (basic) clearing member's performance (i.e. that of the PSA), the contractual arrangements that PSAs have in place with clearing agents contain a large number of substantially similar provisions to the contractual arrangement with a clearing member in a traditional clearing model.

52. While a hybrid direct access clearing model via sponsored CM is available for repo clearing for some large pension funds, it is not straightforward to copy that model across for OTC derivatives clearing. In particular, given the short-term nature of repo transactions, the arrangement is more sustainable than it is for OTC derivatives where the duration is longer and VM calls can be quite substantial.

¹⁵

https://www.esrb.europa.eu/pub/pdf/reports/esrb.report_200109_mitigating_proccyclicity_margins_haricuts~0f3e9f9e48.en.pdf

¹⁶ ESMA issued a Q&A on the implementation of EMIR with regards to sponsored models and the question of the EMIR definitions regarding clearing members and clients.

6.3 Current & projected cleared volumes of PSAs

53. While some PSAs continue to take advantage of their exemption from the swaps clearing obligation, some large PSAs are today voluntarily clearing what they can so that they can reduce their uncleared derivatives exposures, bringing exposure below the threshold in order to delay or avoid being brought into scope for the IM requirement. Other smaller end-users which wouldn't be caught by the IM rules today, are nevertheless also voluntarily clearing in preparation. Where PSAs decide to voluntarily clear, they do so primarily due to liquidity in cleared products, execution efficiency and various cost considerations. This indicates that clearing mandates are not the only drivers in having a broad adoption of central clearing and that these firms actually see benefits in clearing.
54. Responses to the consultation have shown that while some Dutch asset managers noted that their PSA clients clear on average 32% of their interest rate swaps portfolio and even estimate that this share could easily increase to 50% or more if the impediments to clearing were to be removed, others reported that only a very limited share (1%) of their large PSA clients has been cleared to date, even though both their interest rate swaps and inflation swaps portfolios are suited for clearing, most likely due to the fact that for these specific clients impediments for clearing (including this cash VM issue but not only) have not been removed yet.
55. The Netherlands Bank (DNB), based on reported data, provided some further granularity with respect to the above clearing rates for Dutch PSAs. According to EMIR reporting data, the clearing rates for Euribor and Libor IRS for the Dutch PSAs in Q3 2020 amounted to:
- for large pension funds: 22% on average (ranging from 3-26%)
 - for middle-large pension funds: 25% on average (ranging from 0-46%)
 - for small pension funds: 37% on average (range from 0-100%)
56. Furthermore, based on an analysis from the Danmarks Nationalbank, Danish PSAs are also already using central clearing to some extent: overall, approximately 42% of their interest rate derivatives are cleared by a CCP¹⁷, while this share varies considerably across companies.
57. The perception across asset managers is that the bilateral interest rate swap market will gradually move to central clearing given that uncleared margin rules incentivize clearing and can make it more expensive for banks to trade uncleared.

¹⁷ Chart 4 of Danmarks Nationalbank's analysis:

https://www.nationalbanken.dk/en/publications/Documents/2019/11/ANALYSIS_No%2023_Pension%20companies%20will%20have%20large%20liquidity%20needs%20if%20interest%20rates%20rise.pdf

58. Moreover, with respect to the range of products offered to be cleared by CCPs, it looks like for most of the small and medium-sized Dutch PSAs, cleared derivatives would be sufficiently available.

6.4 Impact on Portfolios allocations

59. Responses from the consultation revealed that it is not uncommon for pension funds to have a cash allocation as low as 0%-3% and most of this will be cash held for the purpose of paying out retirement income. In the Netherlands for instance, where most pension funds are defined benefit pension funds, an asset allocation of zero cash is typical¹⁸, while In Ireland, cash accounted for 3% of assets in 2018¹⁹, and here as well most of it is dedicated to pay out retirement income.

60. Due to new regulations, not only EMIR but also bank capital regulation, in recent years the collateral obligations have had an increasing impact on the liquidity needs for PSAs, not only in absolute terms due to higher collateral demands but also in the type of collateral required. Certain Dutch asset managers confirmed that they already advise their PSA clients to hold an immediately available cash buffer to protect against a sudden rise of a few bps in interest rates.

61. The requirement for EU PSAs to clear all new interest rate swaps would be expected to lead to a gradual shift of part of their available collateral from bond collateral to cash collateral, as VM of cleared positions must be posted in cash. This would have negative consequences on the expected return on their total portfolio as cash has a lower expected return than other asset classes, and which will also expose PSAs to concentrated credit risks to the banking sector, as opposed to sovereign or non-financial corporate risk. And with regards to PSAs having long-dated liabilities, their preference goes to investing in long-dated assets as well.

62. Moreover, as long-term investors, there is no need for PSAs to be very liquid as incoming pension premia are generally larger than outgoing pension payments. Thus, from an investment perspective, PSAs prefer to invest as much as possible in illiquid assets with large liquidity premia.

63. However, the Dutch Fund and Asset Management Association (DUFAS) recognised that the consequences of fulfilling the clearing VM cash requirements will differ between PSAs as this depends on multiple factors, including the current investment strategy, the hedge ratio of the PSA's liabilities and the cash management policy, and highlighted that an integrated cash management approach could limit the negative impact of

¹⁸ <https://www.thinkingaheadinstitute.org/en/Library/Public/Research-and-Ideas/2020/01/Global-Pension-Asset-Study-2020> (page 16)

¹⁹ Defined Benefit schemes Review of 2018 statistics by the Pensions Authority:
https://www.pensionsauthority.ie/en/news_press/news_press_archive/defined_benefit_schemes_-_review_of_2018_statistics.pdf

additional cash holdings for small and medium-sized Dutch PSAs. To achieve this, cash management should be part of the strategic asset allocation of PSAs. A clear cash management with sufficient high buffers with the objective to fulfil cash requirements in case of extreme market movements should be set up.

64. DUFAS further explained that the cash buffer depends on the interest rate sensitivity of the swap portfolio, so that the cash buffer moves with the size of the swap portfolio. Upper and lower limits for the cash buffer provide for a high degree of certainty that collateral obligations can be fulfilled under normal circumstances and that the cash buffer is not too large. Those limits can be based on the initial margin requirements and on historical interest rate movements. Because future interest rate movements can vary from historical ones, the minimum buffer should be efficient enough to deal with more extreme market movements than historically seen. On the other hand, PSAs should have a maximum buffer to ensure that cash positions won't become too high.
65. DUFAS added in their response to the consultation that PSAs, by combining their cash requirements from the VM OTC clearing requirements with the cash collateral requirements of FX instruments, may lower the required cash buffers.
66. Asset managers who submitted a response to the consultation noted that, even if it would be difficult to calculate what the investment portfolio would have looked like without any liquidity constraints, it is fair to say that PSAs hold more liquid assets than necessary from an asset and liability management perspective. The yield drag resulting from this is also hard to quantify but is expected to be significant.

6.5 Other challenges

67. Cleared trades require VM calls to be settled on a same-day (T+0) basis, versus a T+1 basis for non-cleared trades. It has however been reported that clearing members may apply more relaxed timeline for clients, so those may not necessarily pass through the margin calls on a same-day basis.
68. Although posting cash VM remains the most significant issue for PSAs relating to central clearing, clearing also results in other second-order risks that are not present in the bilateral markets and that PSAs cannot mitigate by themselves as it would require structural and industry changes.
69. Another consideration constraining the use of cleared derivatives comes from the capital rules for banks. Some Dutch asset management firms described their experience: the cost of clearing is relatively high because of the capital that clearing members need to hold against client positions, even for PSAs and their high

creditworthiness. These capital constraints²⁰ also make it more difficult to have a broader number of clearing members and/or to get higher trading limits for PSAs.

70. The risk related to the clearing activity with one clearing member remains prominent for large PSAs and can only be partially mitigated by selecting multiple clearing members. In the event that one of their clearing members would fail, large PSAs still fear that the chance of having their cleared portfolios successfully ported is small. Should this not occur, a large part of their strategic hedge would be lost, with the resulting financial losses. Besides a default, PSAs also fear the scenario where one of their clearing members decides to stop providing such services. With often a 90-day termination notice clause²¹ in their contracts, PSAs may run the risk to be unable to hedge their positions.
71. Still with respect to clearing brokers offering clearing services for OTC swaps, their concentration could increase the cost of interest rate hedging for clients and may lead to concentration risk concerns, such as a limitation on the volume of derivatives clients would be able to clear via each clearing member. This is particularly true for large clients with directional positions such as PSAs, where their capacity to hedge with OTC swaps could be impacted.
72. It must however be noted that this last issue is not specific to CCP cleared transactions and exist as well in the bilateral world. For instance, operational and credit risk considerations already limit the number of banks executing 30 or 40 year-long OTC swaps with PSAs bilaterally.
73. PSAs also reported that, for cleared derivatives, concentration risk and capacity constraints are important considerations and limitations. In the current clearing environment running high concentration risks in a very limited number of CCPs is a concern to them as the potential loss resulting from the default of a CCP would be very significant. However, not only the risk of a CCP getting into default is very low but also this consideration is common to all CCP's participants.
74. Lastly, while the incentives to clear have successfully led to a gradual shift of the market to cleared trades, respondents argue that the cost to the financial institutions (the clearing members) providing access to clients has increased, coupled with significant administrative and legal costs associated with setting up central clearing. They indicate that the process of having to switch to central clearing can therefore be quite burdensome, especially for small PSAs which have only a few derivatives in portfolio (although the figures in paragraph 55 seem to indicate differently with larger clearing rates for the smaller PSAs category, but in any case, this would need to be considered at a more granular level). However an accurate assessment of the impact of central clearing for PSAs should not look at the costs they would have to bear in isolation but

²⁰ It should be noted though that CRR was amended in 2019, including with respect to the Leverage Ratio Framework in order to align the incentives for a broad clearing obligation, as is explained in Section 8 of the report.

²¹ ESMA submitted technical advice to the Commission on the FRANDT principles as input for the related Delegated Act that is under the responsibility of the Commission.

should equally take into account the costs for pensioners resulting from failed risk management and potential defaults of PSA trading counterparts.

6.6 Estimated impact

6.6.1 In terms of baseline Initial Margin and possible add-ons

75. The 2018 study by ISDA and Pension Europe on the “Potential demand for clearing by EU Pension Funds”²² estimated that a clearing mandate capturing Dutch and Danish pension funds (excluding UK funds) would increase cleared IM by approximately €7.4bn if only new trades had to be cleared, by €26bn if 50% of the back-book were to be cleared, and by €44bn if 100% of the back-book were to be cleared.

76. Moreover, a large Dutch PSA with a one-directional swap position could typically be assessed as a large risk contributor by CCPs. One of them provided ESMA with an estimate that its additional liquidity add-ons on IM could quickly be as large as 2 to 3 times its standard IM, so significant that they could cause the PSA to consider the implementation of a ceiling on the number of swaps it would be able to clear.

6.6.2 In terms of cash holdings

77. From the responses to the consultation, in the Netherlands, some asset managers estimate that their pension fund clients hold on average approximately 2% in cash so that they can withstand a sudden increase in interest rates. If all interest rate swaps would be cleared, this would need to be increased to approximately 6%.

78. For some others, however, the strategic allocation to cash is zero so it is safe to assume that they will not hold any large structural or permanent cash positions, other than a limited amount of ‘friction’ cash. The below table presents, for a given confidence interval of expected shortfall and a given share of liquid assets available on a one-day horizon, the allocation of assets to a cash portfolio. This means that if the PSA wants to be able to meet the VM calls estimated on the basis of the expected shortfall calculations with a confidence interval of 99.8% and assumes that 30% of its cash allocation is available on a one-day horizon²³, it needs to allocate 7.8% of its assets to a cash portfolio.

²²https://www.pensionseurope.eu/system/files/Joint%20Paper%20ISDA%20and%20PensionsEurope%20paper%20on%20pension%20fund%20clearing%20demand_0.pdf

²³ In the absence of any guaranteed collateral transformation mechanism, not all HQLA on the balance sheet can be used to meet the estimated cash outflow. Not all assets of this portfolio could be liquidated on a one-day horizon. If money market funds provide an example, a conservative estimate could be in the range of 10-30%. So the total size of the cash portfolio needs to be (at most) tenfold the estimated outflow.

Table 3: Cash allocation for a given confidence interval of meeting VM call and a given share of assets available daily²⁴

Expected Shortfall (%Confidence) / Daily available	10%	20%	30%	40%	50%	100%
99.95%	32.8%	16.4%	10.9%	8.2%	6.6%	3.3%
99.90%	27.6%	13.8%	9.2%	6.9%	5.5%	2.8%
99.80%	23.4%	11.7%	7.8%	5.9%	4.7%	2.3%
99.70%	21.1%	10.5%	7%	5.3%	4.2%	2.1%
99.50%	18.6%	9.3%	6.2%	4.6%	3.7%	1.9%
99.00%	16%	8%	5.3%	4%	3.2%	1.6%
98.00%	13.4%	6.7%	4.5%	3.3%	2.7%	1.34%

6.6.3 In terms of yield drag

79. The OECD pointed out in its annual pension report statistics²⁵ that the Dutch pension sector had an annual average return over the past 15 years of around 6.1%. An extra allocation to cash of 5%-10% would mean a drag on annual returns of around 0.3%-0.6%, assuming the return on cash is negligible. With assets of around €1.55 trillion as of end 2019, this would imply a negative impact of €4.7 billion to €9.4 billion in expected returns for the Dutch pension sector.

Table 4: Potential drag on PSAs returns for a given allocation to cash for the Dutch PSA sector (for AUM of €1.55 trillion as of end 2019)²⁶

Cash holding	Reduction in annual return in %	Reduction in annual return in € billions
5%	0.3%	4.7
10%	0.6%	9.4
15%	0.9%	14.1
20%	1.2%	18.8

²⁴ Source: response to ESMA's public consultation

²⁵ <http://www.oecd.org/finance/private-pensions/survey-large-pension-funds.htm> & <http://www.oecd.org/daf/fin/private-pensions/globalpensionstatistics.htm>

²⁶ Source: response to ESMA's public consultation

80. Contributions from Dutch asset managers counting PSAs as their key clients however reflect a very diverse reality with regard to current cash buffer levels and yield drag.
81. As shown above at national level, some asset managers calculated the difference in expected return should a PSA have to allocate 5% or 10% of its current investment portfolio to cash and this allocation is pro-rata funded by all other asset classes. Given that both the current economic environment expected returns and risk premia were lower than normal at the time of the consultation, the estimated yield drag is on the lower end of what this would be in longer term perspective.

Table 5: Illustration of the potential drag on a PSA’s returns for a given allocation to cash²⁷

Allocation of portfolio to cash	Expected average return per annum (yield drag)
Compared to the current annual return of 3.17%	
+5%	3.00% (-0.17)
+10%	2.84% (-0.33)
Compared to a normal annual return of 6%	
+5%	5.70% (-0.30)
+10%	5.40% (-0.60)

82. Some others reported that their PSA clients already hold a sizeable cash buffer and therefore the costs of funding temporary high liquidity demands would be very low. It would moreover be possible to construct their total portfolio in such a way that the impact on the total risk and return parameters is minimal, especially when the required cash buffer is only a few percentage points of the total portfolio.

6.7 Increased Liquidity Risk in stressed conditions

83. The primary concern of PSAs being subject to mandatory clearing is the availability of liquidity in tail risk scenarios of extreme rates moves. Their main concern is the ability to achieve certainty of access to liquidity to pay cash VM and in particular connected to the reputational as well as commercial impacts of a potential technical default on margin calls²⁸. Indeed, PSAs typically minimise their allocation to cash in order to maximise efficiency and increase the certainty of being able to afford their obligations

²⁷ Source: response to ESMA’s public consultation

²⁸ Such default would be declared by the clearing member of the PSA, as part of the client-clearing member relationship. Indeed CCPs have a direct relationship with clearing members, who bear the contractual financial obligation vis-à-vis CCPs.

to policyholders. Requiring pension funds to clear OTC derivative contracts centrally could lead them to either disinvest a significant proportion of their assets for cash or face the risk of forced selling in stressed market conditions, in order to meet the cash VM requirements.

84. Following the implementation of regulatory reforms, some respondents argue that the shift to requiring counterparties, including pension funds, to post cash variation margin (VM) in a short timeframe, introduces the potential for increased liquidity risk, as a by-product of other objectives being sought out.
85. As all market participants, not pension funds only, will move to meet VM calls in cash, the demand for cash is likely to increase in stressed conditions, when VM calls are expected to be at their largest due to increased market volatility. PSAs fear that this could in turn result in the forced sale of physical assets (even high-quality liquid assets) to meet liquidity needs and exacerbate downward pressure on falling asset prices. In the worst scenarios, this may ultimately increase procyclicality and systemic risks and reduce financial stability.
86. It should be noted that some authorities have indicated that there would be room for individual PSAs to get better prepared for the use of market-based solutions in order to be able to meet significant VM calls in stressed market times. Enhancements to PSAs' liquidity management could, for instance, include the establishment of prearranged and highly reliable funding arrangements with multiple liquidity providers to convert assets into cash under stressed market conditions. This would increase the resilience of individual PSAs to funding variations during stressed periods. For instance, the ESRB flagged in recent reports²⁹ and publications³⁰ that liquidity requirements in the Solvency II framework should be strengthened and that similar considerations would also apply to IORP II.

6.7.1 Estimated impact of a 1% shift³¹ in rates to VM across EU PSAs

87. In terms of quantitative impact, assuming an average liability duration of 20 years and a full (100%) hedge of its liabilities with derivatives, a PSA would see, for a (conservative) 1% rate move, the mark-to-market move by circa 20% of notional exposure of swaps and would need to source cash equal to 20% of its assets if it is fully funded (assets equal to the present value of liabilities), or 28%³² if it has a funding level of 70% (if assets are 70% of the present value of liabilities). Where liabilities are hedged with swaps only up to 50%, the cash to be sourced will amount to 10% of assets

²⁹ ESRB Report of February 2020 on Enhancing the macroprudential dimension of Solvency II - Section 2. Liquidity tools addressing risks arising on the assets and liabilities side

(https://www.esrb.europa.eu/pub/pdf/reports/esrb.200226_enhancingmacroprudentialdimensionsolvency2~1264e30795.en.pdf)

³⁰ ESRB response to the EIOPA Consultation Paper on the 2020 review of Solvency II, and https://www.esrb.europa.eu/pub/pdf/other/esrb.letter201016_on_response_to_Solvency_II_review_consultation~8898c97469.en.pdf

³¹ While the size of the shock may be extreme, it is commonly used as a baseline stress scenario by the industry.

³² 70% of 20%

if the fund's funding level is 100%, or 14% of assets if the funding level is established at 70%.

88. Data provided in response to the consultation highlights that a 100bp (or 1%) parallel shift in the yield curve would cause a cash VM requirement of circa €95bn across Dutch, Danish and Irish PSAs using swaps (see Table 6). This is not far from the results of the Europe Economics and Bourse Consult report estimate of approximately €105 to €130billion of potential cash collateral needed for EU27 pension funds.

Table 6: Estimated impact of a shift in rates on VM calls across EU PSAs³³

	Netherlands	Denmark	Ireland	TOTAL
Total liabilities (EUR bn)	1,291 ³⁴	595 ³⁵	91 ³⁶	1,988
Percentage of liabilities hedged³⁷	40%	40%	25%	N/A
Percentage use of swaps (for liability hedging)³⁸	63%	50%	65%	N/A
Swaps notional (EUR bn)	323	119	15	457
Average duration (years)³⁹	21	20	20	N/A
PV01 (EUR million)⁴⁰	678	238	29	
Potential VM call for 100 bps rate move (EUR bn)	67.8	23.8	2.9	94.5

89. The European Central Bank also published in May 2020 a study on 'Derivatives-related liquidity risk facing investment funds'⁴¹, including a box on 'Liquidity stress simulations of euro area pension funds' interest rate swap portfolios. While the estimated magnitude of potential VM calls following a 100bps shift in the yield curve is revised downwards for Dutch PSAs, from €67.8 bn above to a range of €36 - 47 bn, the impact

³³ Source: response to ESMA's public consultation

³⁴ Table 1.19 of statistical tables from OECD report 'Pensions Markets in Focus 2019' (<http://www.oecd.org/daf/fin/private-pensions/globalpensionstatistics.htm>)

³⁵ <https://www.forsikringopension.dk/media/4693/pension-assets-held-by-institutional-investors-dkkbn.pdf>

³⁶ IAPF Pensions Investment Survey 2018 <https://www.iapf.ie/publications/surveys/annualinvestmentssurvey/>

Defined benefit schemes: Review of 2018 statistics by The Pensions Authority https://www.pensionsauthority.ie/en/news_press/news_press_archive/defined_benefit_schemes_-_review_of_2018_statistics.pdf

³⁷ Industry estimates

³⁸ Industry estimates

³⁹ Industry estimates

⁴⁰ Estimate of the mark-to-market move (or potential VM call) for a 0.01% rate move = "Total liabilities x Percentage of liabilities hedged x Percentage use of swaps x Average duration / 10,000

⁴¹ https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart202005_02~d48451c1cb.en.html#toc6

remains sizeable and would result in an aggregate cash shortfall of €6 billion to €15 billion across Dutch PSAs.

90. The ECB analysis also raises an issue linked to the concentration of this shortfall across Dutch PSAs. Under the most pessimistic scenario (cash shortfall worth €15 billion), circa 55% of Dutch PSAs would not have sufficient cash to cover their VM calls. The cash shortfalls would be concentrated within a small number of pension funds with relatively low VM payments: 61% of the overall cash shortfall would be attributed to ten pension funds only, for a share in VM payments of 32%.

7 Exemption from clearing for PSAs

91. The 2008 financial crisis has underlined the importance of central clearing as an effective risk mitigation tool. Central clearing has an important role to play in reducing systemic risk in the OTC derivatives markets and remains a cornerstone of safe and transparent markets. All respondents to this consultation have confirmed that they fundamentally support central clearing. A majority of financial institutions are now centrally clearing significant shares of their OTC derivative transaction portfolios, thereby reducing systemic risk in line with the G20 commitments.
92. At the same time, the ongoing exemption from the clearing obligation for PSAs means that PSAs continue to be exposed to the risks of under-collateralization and potential defaults of large and systemic trading counterparties. This is particularly true in light of the recent extensions of the phase-in for initial margin requirements.
93. Taking into consideration the long-term nature of the PSAs' activities and the structural difficulties they face in meeting largely one-sided variation margin cash calls for the clearing of their OTC derivatives through CCPs, EU policymakers provided a temporary exemption from the requirement to centrally clear derivatives for PSAs within the initial EMIR framework⁴².
94. The transitional provision also aimed at providing further time to find an alternative solution which would allow pension funds to use their high-quality securities, to ultimately meet their VM obligations for cleared derivatives. As of today, VM calls for cleared derivatives must be fulfilled exclusively in cash for three main reasons: the need for valuation certainty on the long maturities of many swap transactions; the fact that swap portfolios typically contain trades in multiple currencies; and the fact that the pass-through of VM is a critical component of financial stability given potential long-term price fluctuations.

⁴² In terms of the exemption from the clearing obligation for PSAs, Capital Requirements Regulation envisages a similar exemption for banks' capital requirements for CVA risk on trades entered with PSAs. Such exemption is specified under Article 382(4)(c) of the CRR, and is closely linked to the clearing obligation under EMIR, also in terms of timing for its application/expiry.

95. More specifically, Recital 26 and Article 85(2) of EMIR establish that the clearing obligation is not to apply to PSAs until an appropriate technical solution is developed by CCPs for the transfer of non-cash collateral as variation margins.
96. This initial temporary exemption under EMIR for European pension funds expired on 16 August 2018. With the objective to avoid a disruption to certain PSAs who may have faced potential challenges clearing their OTC derivative contracts between 17 August 2018 and the entry into force of the new temporary exemption under EMIR Refit, ESMA publicly communicated that it expected national competent authorities to not prioritise their supervisory actions towards entities that were expected to be exempted again in a relatively short period of time, and to generally apply their risk-based supervisory powers in their day-to-day enforcement of applicable legislation in a proportionate manner.
97. It is within this context that the European Commission organized a series of roundtables in 2017 and 2018 to facilitate the discussion between the relevant stakeholders, including not only representatives of the PSAs and CCPs but also representatives from the clearing members and from the Central Banks, to monitor progress of industry efforts in this regard and to explore the remaining obstacles to the deployment of central clearing solutions for PSAs.
98. As part of the EMIR review, the Commission recognised in its May 2017 legislative proposal (also known as the EMIR Refit legislative proposal), that no viable solution facilitating PSAs to centrally clear their OTC trades had been developed so far and that the temporary derogation should therefore be extended further. The purpose of this extension is to allow CCPs and other relevant stakeholders to develop a robust solution to enable PSAs to centrally clear – including in periods of market stress – without negatively impacting the revenues of future pensioners.
99. Following the entry into force of the amendments contained in EMIR Refit, EMIR now states that the transitional provision for European pension funds will expire on 18 June 2021, and further specifies that the Commission may adopt a delegated act to extend this exemption, possibly twice, each time by one year, where it concludes that no viable technical solution has been developed and that the adverse effect of centrally clearing derivative contracts on the retirement benefits of future pensioners of impacted member states remains unchanged.
100. EMIR Refit also provides for a new regime to determine when Financial counterparties (FC) and Non-Financial counterparties (NFC) are subject to the clearing obligation, depending on whether their positions exceed or not the clearing thresholds⁴³.

⁴³ The clearing thresholds are defined under Article 11 of Commission Delegated Regulation (EU) No 149/2013:

- EUR 1 billion for credit derivative contracts
- EUR 1 billion for equity derivative contracts
- EUR 3 billion for interest rate derivative contracts
- EUR 3 billion for foreign exchange derivative contracts
- EUR 3 billion for commodity derivative contracts and others

101. Differences between the two regimes exist not only with respect to the scope of application of the clearing obligation but also with respect to the calculation of the positions. As for the scope, when NFCs conduct the calculation, they are only subject to the clearing obligation for the OTC derivative contracts pertaining to those asset classes in respect of which the result of the calculation exceeds the clearing thresholds. As for the calculation, one important difference is that NFCs only need to include the OTC derivative contracts which are not objectively measurable as reducing risks, broadly speaking not entered into for hedging purposes as further specified in the Regulation, whereas FCs need to include all OTC derivative contracts they enter into or novate, in accordance with Article 4a(3) and Article 10(3) respectively. It is however unknown at this stage what the impact of the amendments in Article 4a of EMIR will be with respect to the numbers of pension funds subject to the clearing obligation.
102. Central clearing however remains the ultimate aim, provided that regulatory and market developments enable market participants to develop appropriate technical solutions within that transitional period.
103. European PSAs are indeed expected to clear in the near future, not only because they are mandated to clear, but also due to regulatory and market forces, driven in part by clearing obligations, bilateral margining requirements or capital requirements, expected to contribute to the gradual shift of liquidity to cleared trades.
104. As the 2019 ESMA Annual Statistical Report on EU Derivatives Markets⁴⁴ indicates, clearing rates varied throughout 2018 between 57% and 58% of outstanding notional amount for Interest Rate Derivatives (while on average 4% of the total notional amount outstanding was cleared by CCPs located in a third country). The ESMA Report on Trends, Risks and Vulnerabilities No. 2, 2019⁴⁵ also highlights the visible impact of the regulatory obligations, with an increase of quarterly volumes of interest rate derivatives cleared during the last two years, from a low of EUR 107tn in 3Q17 to EUR 170tn in 1Q19. Indeed, beyond the clearing obligation, while IM for non-cleared swaps encourages clearing in certain market segments, regulatory capital requirements for cleared versus non-cleared swaps as well as the significant benefits flowing from the ability to net a large and diverse swaps portfolio with a single CCP also constitute great economic incentives to clear.
105. Respondents indicated that a price difference between the bilateral and cleared markets is already experienced currently by PSAs. As a way of illustration⁴⁶, executing a bilateral 30y interest rate swap with nominal of EUR 50 million can be done at marginally higher costs than executing a centrally cleared 30y interest rate swap. However, unwinding a 30y bilateral interest rate swap can easily be 5x-10x as expensive, particularly if the trade has a significant mark-to-market and if the underlying CSA accepts bonds as VM. In terms of yield drag, for a PSA whose liabilities have a duration of 25, which has 40% of its interest rate risk hedged by OTC interest rate

⁴⁴ https://www.esma.europa.eu/sites/default/files/library/esma50_157_2025_asr_derivatives.pdf

⁴⁵ https://www.esma.europa.eu/sites/default/files/library/esma_50-165-883_report_on_trends_risks_and_vulnerabilities_no.2_2019.pdf

⁴⁶ Data provided by a Dutch asset manager during the consultation

derivatives and the average lifetime an interest rate swap is 5 year, if the cost of unwinding is 2 times the dv01 of an interest rate swap, the total cost would be 4 bps per annum.

8 A combination of improved available services

8.1 Pre-conditions for a workable solution

106. There are a number of reasons why no viable solution that would cater for all the scenarios and for the entire spectrum of PSAs could be provided to date. The main one has been that technically it is a complex problem to solve, which is why it has required an extensive effort and collaboration from a range of stakeholders from the industry and an open dialogue with policymakers.
107. During the last few years, and in particular following the introduction of roundtable discussions by the Commission, many stakeholders have engaged extensively on this cash VM issue, exploring various solutions. Obviously, the pension industry participated, but also the CCPs, banks, other market participants and EU policymakers.
108. Financial stability is at the heart of the issue: consequently, any solution should ensure the financial stability of the overall system.
109. In addition, if there is a clear and logical awareness that increasing financial stability and resilience would necessarily entail some increase in costs for users, one of the characteristics of the solution looked for is that the impact of PSAs net costs on pensioners remains reasonable, compared to the status quo.
110. While no single "silver bullet" solution has emerged so far, participants agreed on a set of required pre-conditions for a workable solution:
- the solution should strike the right balance between the objectives (i) of financial system resilience and (ii) that the PSAs' participation in central clearing does not impose a cost on end users which is disproportionate compared to the policy objectives;
 - the solution can only be deemed functional if it is robust enough to be relied upon in both normal and stressed market conditions.
111. It is also worth highlighting that, even though this report focuses on PSAs, the challenges highlighted in this report are not specific to PSAs only, but are also faced by funds, insurance companies, or even other entities indirectly accessing clearing. This also means that any improvements that will help facilitate clearing for PSAs will also be of benefit for a wider set of counterparties.

112. At this juncture, following the various discussions of the Expert Groups and the responses to the public consultation, we therefore seem to be moving away from the fact that a 'silver bullet' one-size-fits-all (including PSAs) solution could be fulfilling all the necessary criteria, including that to be also viable in extreme stressed conditions. Instead, we seem to be moving towards the optimization by different actors (regulators, CCPs, clearing members and PSAs as their clients) of a range of solutions already existing, the addition of which would improve the conditions for this global approach functioning in the different states of the market that have been considered.
113. This solution, or combination of solutions, would revolve around two axes: one market-based - enhanced collateral transformation services (via the funding markets) offered by banks thanks in part to regulatory measures -, and one CCP-based - the wider offer by CCPs and adoption by PSAs of the sponsored clearing type of membership for repos.
114. The different components of the global solution are detailed in the following sections: collateral transformation services by clearing members, market-based repo and repo clearing via direct or sponsored membership models (respectively in sections 8.2 to 8.4). The regulatory measures suggested by the industry to optimise each part of the solution are listed in section 8.5.
115. Lastly, as per the first report, some possible approaches have been considered that could involve central banks, but these are not developed in this report beyond what had been mentioned before as they are in the remit of central bank mandates to consider.

8.2 Collateral transformation services by clearing members

116. Relying on collateral transformation services already offered by clearing members to their direct clients should be central to the solution, alongside the cleared repo. Banks are well positioned to facilitate the collateral transformation in normal market conditions and have been providing these services for a long time on a commercial basis.
117. This option has many benefits: not only it does not require PSAs to increase their cash buffer, but also it relies on the ancillary service of collateral transformation already offered by clearing members, and thus would only require a small amount of adjustment to be implemented as banks are already particularly equipped to provide such services.
118. Today, insurers are already relying on collateral transformation services in this way where they typically enter into repo transactions on a regular basis on both liquid and illiquid collateral. They also enter into liquidity facilities that provide an additional buffer in case of a stressed scenario. Banks remain well positioned to facilitate the collateral transformation and have been doing this for a long time.

119. At present, banks acting as clearing member have indicated that the following constraints hinder both clearing members and PSAs to support the clearing obligation for PSAs: the leverage, risk weighted assets, balance sheet size and funding.
120. The way the leverage ratio was originally designed made it less convenient for banks to provide client clearing services as margins posted by clients could not be used to offset the amount of the exposure (which would feed into the denominator of the ratio).
121. The amendment of the Capital Requirement Regulation (CRR-II) has changed the leverage ratio treatment for client cleared derivatives such as to 'permit cash and non-cash forms of initial and variation margin received from a client to offset the replacement cost and potential future exposure for client cleared derivatives'. This amendment is expected to help making central clearing more economic in terms of capital requirements. Further adjustments to the leverage ratio framework would logically leave more room for clearing members to provide collateral transformation services.
122. Respondents indicated that with the current regulations, banks will have to hold additional capital for repo (intermediation) activities resulting in a less liquid repo market and less favourable rates for PSAs than there would have been if further changes to the leverage ratio calculation had been introduced. According to these respondents, without a modification of the calculation methodology of the leverage ratio, repos could only become a bigger solution for PSAs if these could engage in repos off-market without a capital charge for banks.
123. Some responses indicated that the current methodology for the leverage ratio calculation is subject to possible window dressing by certain banks. In these cases, the outstanding repos at the end of the month, quarter and year are input to the leverage ratio calculation, while intra month repos are out of consideration. Although repos are seen as very low risk, the risk during the month is not taken into consideration and certain banks would limit their repo book over month end to keep the leverage ratio artificially low.
124. The amendments of the Capital Requirement Regulation in May 2019 as well as the changes brought by the Basel Committee on Banking Supervision ('BCBS') in June 2019 aimed at changing the leverage ratio treatment of client cleared derivatives have only been recently implemented, keeping in mind that the Covid-19 turmoil in financial markets started in February 2020. Some market participants to the consultation believe that it may also be a question of time for their efficiency to be noteworthy and that more time is necessary to assess whether this change has been successful.
125. Expressing their views on the extent to which the constraint on the bank clearing members' capital requirements have been eased and now allow for their role of collateral transformation to be better fulfilled, some asset managers have not witnessed substantial reductions in the clearing members fees and still see a reluctance to offer

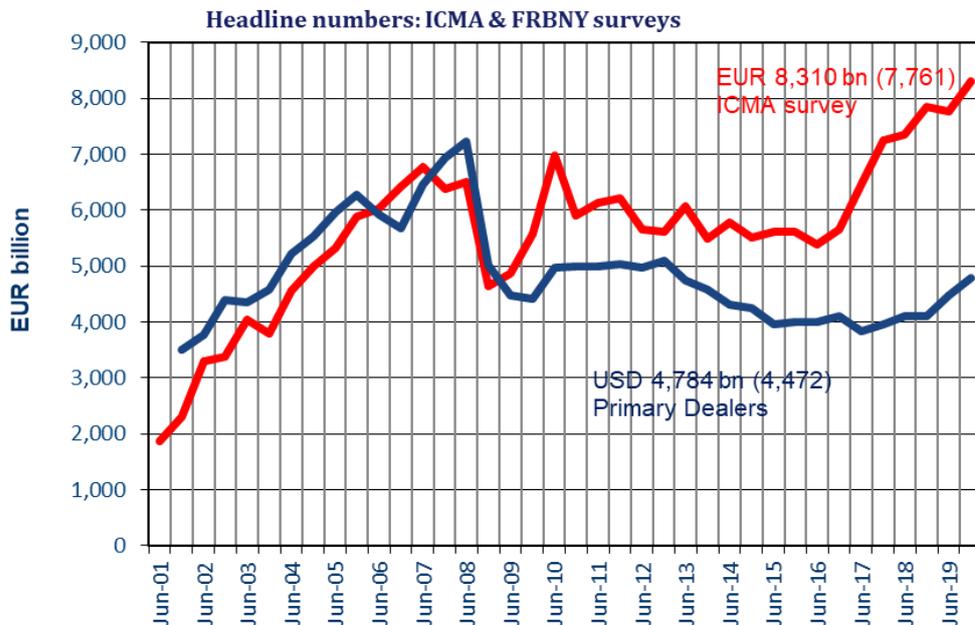
repo transactions. Market associations on their side refer to the recent COVID-19 crisis and the issues experienced by the buy-side with respect to banks' capacity to intermediate access to the repo market. For both, this as an indication that capital requirements have not been eased enough.

126. Most respondents to the consultation believe that an improved calibration of the leverage ratio framework would leave more room to conduct collateral transformation services that may require less capital and would be part of the global solution. A more favourable capital treatment for repo/reverse repo would certainly come in support to stimulate repo intermediation by banks and clearing agents.
127. A limitation of constraints with the aim to ease the pressure on the repo markets has also been mentioned as a way to provide more availability of bank repo services to clients.
128. Central counterparties however seem concerned that any further changes to the leverage ratio could limit its function as a backstop to excessive leverage building.
129. These proposals from the respondents to the consultation would in any case first need to be further assessed in order to determine their overall impact on financial stability or on the resilience of banks.
130. The consultation however highlighted that according to PSAs, under stressed conditions, only a reliable provider of cash which is not balance sheet constrained and is willing to provide funding would provide sufficient robustness to the solution.

8.3 The market-based repo solution

131. With respect to the size and functioning of the EU repo market, the ICMA ERCC confirms the observation of a steady growth in the size of the European repo market in recent years, as highlighted by the semi-annual ERCC European Repo Market Surveys. This growth can largely be attributed to four main factors: (i) increased demand for collateral management and collateral transformation due to regulatory requirements (including Liquidity Coverage Ratio and various clearing/margin rules); (ii) improved netting efficiencies and balance sheet management by bank intermediaries; (iii) expansionary monetary policy with a ballooning of banks' excess reserves; and (iv) continued growth in the size of the underlying bond markets.
132. As reported by ICMA ERCC in its recent semi-annual survey and special report on the European Repo Crisis during the COVID-19 crisis in April 2020, European centrally cleared repo markets are of significant size (EUR 8,310.3 billion as of December 2019) and provided ample liquidity to market participants during extreme volatility.

Figure 3: Growth in the size of EU markets in recent years⁴⁷



133. The second point of concern relates to the capacity of the European repo market to absorb a significant increase in demand (whether cleared or bilateral) resulting from large and sustained margin calls to PSAs.

134. With respect to the suitability of the repo market for PSAs' needs, Eurosystem simulations suggest that the repo market has capacity to absorb PSAs' cash funding needs. The results of the Eurosystem simulations show that the VM calls on interest rate swaps held by Dutch PSAs would be in the range of EUR 36bn to EUR 47bn, resulting in an aggregate cash shortfall of EUR 6bn to EUR 15bn. If it is assumed that the Dutch PSAs could source their additional cash needs via the repo market, the estimated cash shortfalls will remain small as compared to the amount of reverse repo transactions outstanding⁴⁸, used as a measure to estimate the overall size of the repo market. Outstanding reverse repo transactions in December 2019 amounted to about EUR 1.9 trillion. Assuming that the borrowing needs of other euro area PSAs are similar to those of Dutch PSAs, the cash borrowing needs for all euro area PSAs are likely to remain below 2% of the overall outstanding reverse repo transactions.⁴⁹

135. Overall, euro area repo markets have been functioning well over the past years, even during increased market stress. Volumes in the repo market have been on an

⁴⁷ Source: ICMA ERCC

⁴⁸ As measured from the perspective of the MMSR reporting banks

⁴⁹ PSAs may use only a subset of the repo market as a first step to source liquidity to meet VM calls, in particular the short-term funding market, which according to MMSR data represents around 90% of overall turnover (EUR 550 bn) and 30% of the outstanding repo market funding. It is noted that in times of heightened market volatility, turnover in repo markets might be lower

increasing trend, despite the high levels of excess liquidity.⁵⁰ Some respondents pointed to the results and implications of the Italian general elections of 2018 which caused some turmoil in the bond markets with a sharp increase in interest rates, while repo market volumes and interest rates for Italian and non-Italian collateral remained stable, indicating a healthy market functioning. Also, during the COVID-19 crisis that began in late February/ early March 2020, euro area repo markets have shown to be resilient compared to other market segments in terms of volumes and rates.

136. The latest evidence on quarter-end and year-end developments suggests that market participants are able to deal with the implications of the window-dressing constraints on repo markets mentioned above. The reduction in repo trading volumes over quarter-ends was often matched by a decline in repo interest rates at the period-end, resulting in an increase in repo borrowing costs for certain types of euro area collateral.
137. The end-of-year effect on repo rate premia have declined significantly since 2017, mainly driven by increased balance sheet availability, pre-funding by market participants and a better usage of the Eurosystem cash/securities lending facilities. To the extent that concerns remain about the reduction of repo market activity at quarter ends due to window dressing of banks, the BCBS and EU legislators have recently taken action to limit the incentives for banks to use repos for window dressing purposes.
138. In particular, it was agreed to enhance the disclosure requirements for the leverage ratio, requiring banks to calculate and disclose their ratios based on quarterly averages of daily values of their securities financing transactions (SFTs), including repos. Banks in the EU will have to provide such additional disclosure from 2022 onwards, as well as other averaged exposures to be specified by the EBA.
139. On the offer side, banks servicing access for PSAs to the repo markets will have a positive impact on the reduction of the liquidity challenges to support the CCP OTC derivatives markets. Some respondents indicated that some EU banks are developing solutions to provide such service to their clients. As for the other components of the global solution, although this might not solve the total liquidity issue for PSAs clearing OTC derivatives, it would help at least covering a part of the liquidity constraints.
140. The consultation also allowed to bring further input on the existence of a timing gap between the repo market, where most transactions are done in the morning, and intraday margin calls, which can happen over the whole day. To solve this timing mismatch the processing of the variation margin settlement and the settlement of the repo instrument need to be aligned.
141. A solution has been proposed, consisting in creating a repo instrument that settles at the time the variation margin needs to be paid is being looked into by multiple CCPs. Eurex has developed a GC pooling product that settles at the same time as the

⁵⁰ Daily turnover increased from EUR 450 bn in 2016 to around EUR 650 bn in 2019 according to MMSR data. See Euro money market study 2018: https://www.ecb.europa.eu/pub/euromoneymarket/html/ecb.euromoneymarket201909_study.en.html.

VM calls for the IRS instrument. The obvious benefit of such a product is that if repo and derivatives are traded on the same platform it ensures settlement of the VM. However, trading the two products on different CCPs or even the repo leg on bilateral basis, will create operational and settlement risk and it will be difficult to ensure timely payments of the VM. Although this is a very promising option, at this stage it is difficult to predict whether there will be enough liquidity in the IRS instruments.

8.4 Repo clearing via Direct or Sponsored Membership models

8.4.1 Presentation of the model

142. CCPs recently sought to find ways to open memberships to non-bank participants to facilitate greater access to the cash and collateral present within the clearing system, not only allowing for loss mutualization and daily cash margin flow to remain with an intermediary, but also allowing PSAs and CCPs to have a direct relationship upon an event of default.

143. CCPs expressed during the consultation that established solutions are already available for adoption. According to them the initial reason to grant PSAs an exemption from the clearing obligation has successfully been alleviated by the introduction of an appropriate, cost effective and reliable technical industry led solution. Providing access to cleared repo facilities is described as a critical tool by CCPs as it provides not only access to liquidity but also the appropriate service to transform non-cash into cash collateral for PSAs' further usage. Moreover, their view is that it would require a clear signal from regulators, via regulatory amendments and a defined end-date of the exemption for PSAs, for this solution to be more widely adopted.

8.4.2 Benefits of the model for PSAs

144. Such models offer PSAs access to repo clearing services as a direct clearing member while being sponsored into the service by a bank who acts as a sponsoring agent. PSAs are then able to use the operational services of the sponsoring agent, in particular to post VM or pay VM directly as and when possible, whilst still benefiting from all other functionalities which are offered to direct members. Through this clearing model, members are thus able to limit certain costs of a clearing membership and are not subject to the bottleneck effect of a concentrated number of banks providing client clearing services. Moreover, PSAs joining CCPs as Sponsored Members can enable dealers to free up some of the banks' balance sheet capacity.

145. This type of clearing membership model is also designed to alleviate some of the typical membership requirements that have been identified as barriers for PSAs to access clearing as direct clearing members, such as:

- a) the obligation to post a Default Fund contribution, and the risk mutualisation to which this gives rise;
 - b) the liability towards further assessments should the Default Fund be exhausted;
 - c) the obligations relating to the CCP Default Management Process, such as the provision of hedges to the CCP to neutralise the defaulter clearing member's open risk and the provision of bids to acquire the defaulter's (hedged) portfolio;
 - d) a technologically and operationally link to the CCP, for instance to allow multiple margin calls per day.
146. On this topic, ESMA would like to mention CCP Question and Answer 23 in the ESMA Q&A document on the implementation of EMIR⁵¹, which provides certain clarifications on EMIR and such sponsor models with regards to questions such as who bears the responsibility to comply with the financial obligations vis-à-vis the CCP. In particular, the Q&A clarified that although a CCP can establish different clearing models for different categories of clearing members, clients and indirect clients, EMIR only envisages clearing through three possibilities of access (being a clearing member, being a client or clearing through indirect clearing arrangements) and does not contemplate mixing the status and features of a clearing member and a client or an indirect client. However, the Q&A also clarifies that a third party can fulfil an obligation of a clearing member, but that this should not transform the clearing member's liability vis-à-vis the CCP.
147. Gaining access to cleared repo facilities through direct or sponsored membership models can thus help address the issue of the concentration of clearing members and provide the appropriate tools to turn non-cash into cash collateral for PSAs' further usage. Furthermore, coupling the access to cleared repo markets with the central clearing of interest rate swaps may provide other benefits to PSAs, such as increasing netting efficiency, decreasing capital requirement or reducing settlement fails.

8.4.3 Limitations of the model

148. The most obvious limitation is the limited offer, in particular with only one CCP proposing such model amongst the EU CCPs. Although, taking into account TC-CCPs or services in development at other EU CCPs, this limitation could be mitigated. It was however raised to ESMA's attention that, without EU CCPs being encouraged to swiftly develop and offer such a service, the expiration of the exemption may lead to an increased reliance of EU PSAs to some third-country CCPs.

⁵¹ Q&A documents including the EMIR Q&A document are available at the following link: <https://www.esma.europa.eu/questions-and-answers>

149. Sponsored clearing models are rather sophisticated, only available to large pension funds and their capacity is to date limited as only a few banks are currently willing to provide this sponsoring agent service.
150. This set-up still requires the availability of a provider of cash (usually a bank but not necessarily) and might still have material balance sheet consequences for the sponsor (bank) which might limit the capacity to offer this service.
151. It has also been highlighted that incentives for a take-up of sponsored access models should not be limited to the repo market alone, but should be used more widely.

8.4.4 Offer in the EU and current take-up by PSAs

152. Eurex Clearing is offering PSAs to directly access centrally cleared OTC IRS and the cleared repo market via the clearing model “ISA Direct”. LCH S.A. is also developing a sponsored clearing model to facilitate the transformation of non-cash collateral into cash via access to the cleared liquidity pool in RepoClear S.A. Specificities of repo markets also allow having the Contingent Variation Margin (CVM) functionality (as opposed to VM) available at some CCPs⁵², which, by enabling non-cash to be posted as VM, may ease the challenges faced by PSAs.
153. Despite the limited take up of this new membership models in Europe, a few EU PSAs along with other significant firms as the pension administrator for multiple Dutch pension funds PGGM, already use this clearing access model to access the cleared repo market. Indeed, PGGM Treasury B.V. is a Basic Clearing Member at Eurex Clearing under the ISA Direct clearing model, allowing PGGM to centrally clear repos. Intraday and end of day margin calls can be met by pledging securities out of PGGM’s own CSD account. There is no cash VM call due to the very short tenors of the CCP cleared repos.
154. Some asset managers with large PSAs as clients expressed the view during the consultation that this type of membership model is an encouraging concept as it could provide end-investors, such as PSAs, with sufficient benefits, and thus should be part of the mix, which together form the global solution.
155. Furthermore, some respondents mentioned that the liquidity of the centrally cleared repo market has been reliable over the last 15 years. Even in times of market stress, EU repo markets have been particularly resilient – during the 2008 financial crisis, the European sovereign debt crises of 2011-2012 and most recently during the COVID-19 crisis.
156. Additionally, it should be noted that an increased participation of investment funds, in particular European Money Market (EU MMF) funds, insurance and

⁵² LCH S.A. for instance

corporates as traditional cash providers to the centrally cleared repo markets would likely further increase the availability of cash via cleared repos in the future.

157. It emerges from the responses received from CCPs that further improvements or refinements to the set-up of the above described services could be envisaged with the objective to facilitate further the access of PSAs to central clearing.
158. Some of the responses to the consultation brought forward some regulatory proposals which they argue may increase the attractiveness of centrally cleared repos for PSAs (and for the buy-side in general). These regulatory change proposals made by the industry are detailed in the below section.

8.5 Proposed regulatory measures

159. A number of suggestions to amend existing regulations have emerged from the consultation. They relate to the leverage ratio, capital rules and risk weights. These industry proposals will require further analysis, especially from a bank regulatory perspective and in terms of potential impact on bank resilience.
160. Some respondents indicated that an improved calibration of the leverage ratio framework would leave more room to conduct collateral transformation services that may require less capital. A more favourable capital treatment for repo/reverse repo would certainly come in support for stimulating repo intermediation by banks and clearing agents. However, taking into account the nature of the leverage ratio as a non-risk based backstop, this specific proposal from some respondents may not fit the concept of the leverage ratio as a non-risk based backstop nor the fact that it does not distinguish between different transactions or exposures based in the inherent risk. While the leverage ratio provisions could potentially be recalibrated as long as the same level of resilience is maintained, it would appear important to take into account that changes driven by the assessment at hand should not counteract the leverage ratio's general nature.
161. An amended and recalibrated methodology where all the repos during the month are taken into consideration (and not only those outstanding at the end of month, quarter or year) might be more efficient in overcoming the dip in supply in repo's at month end and avoid possible window dressing at the same time.
162. One could also consider establishing a new exposure class for pension funds, which could lower risk weights for these exposures significantly, improving alignment with the actual risks these exposures pose to clearing banks.
163. Capital rules (CRR/CRD) may be enhanced to reflect the role of Clearing Agents providing access for buy-side firms to CCP direct access models and clarify the treatment of pre- and unfunded default fund contributions, as well as default management obligations in the leverage ratio and risk weight exposure calculations.

This could help facilitate the use by buy-side firms (pension funds, insurance undertaking or asset managers) of the direct access models, some of which were specifically designed to try and address the capital requirement related constraints linked to central clearing.

164. PSAs and insurance companies which are direct members of CCPs via direct access models might be allowed to benefit under Solvency II from the same preferential treatment that is given to clearing members under CRR II (i.e. look-through criteria for clients).
165. Cash collateral provided by NFCs to banks acting as clearing members via the CCP should not be treated less favourably than cash collateral being provided to these banks via bilateral relationships.
166. In addition, in order to also consider the element of tools that could be adopted by PSAs to improve their own resilience to funding shocks under stress, the ESRB flagged in its February 2020 Report 'Enhancing the macroprudential dimension of Solvency II'⁵³ that the framework could be revised to better reflect macroprudential considerations and contribute to reducing systemic risk in the financial sector, including via the set of liquidity tools for addressing risks stemming from specific activities, such as hedging with derivatives. The framework for liquidity risk should be enhanced by better reporting and measurement, stress-testing requirements and Pillar 2 provisions that enable supervisors to require those that have been identified as having a vulnerable liquidity profile, to maintain a liquidity buffer, and similar considerations would also apply to IORP II
167. Other capital changes were proposed with the objective to incentivize further clearing for the buy-side and address existing regulatory barriers without building excessive leverage, such as:
 - a) Counterparty limits of 15% per counterparty for EU MMFs and 20% for UCITS/AIFs could include a specific treatment for CCPs (as they are buyer and seller to centrally cleared trades) to avoid breaching these limits too fast;
 - b) Counterparty risk limits for UCITS/ AIFs could recognize a valid netting sets across products, i.e. counterparty exposures from derivatives and securities financing are calculated on a gross basis even if a valid netting agreement exists. In effect, UCITS currently cannot net exposures when using repo markets to raise cash to meet cash VM requirements from centrally cleared derivatives;
 - c) UCITS/AIFs that have received collateral via title transfer in an SFT could be allowed to pledge back this collateral to the provider of collateral as long as the collateral is held bankruptcy remote from the initial collateral provider;

⁵³ https://www.esrb.europa.eu/pub/pdf/reports/esrb.200226_enhancingmacroprudentialdimensionsolvency2~1264e30795.en.pdf

- d) UCITS could be permitted to raise cash via repos in order to meet margin calls from centrally cleared derivatives.

9 The Covid-19 crisis impact on bilateral and cleared markets

168. As per the ICMA/ERCC Report 'The European repo market and the COVID-19 crisis'⁵⁴ published in April 2020, the general feedback from market participants is that the EU repo market, for the most part, has 'held up well' during the market turbulence stemming from the global COVID-19 pandemic that began in late February/early March 2020. However, this has not been without some strains.
169. In particular, as the demand for repo has increased, banks' capacity to intermediate has remained constrained. While the demand to access the repo market increased at the peak of the crisis, banks' capacity or willingness to intermediate that access did not. Buy-side participants reported an increased reliance on the repo market as fund outflows drove the need to generate cash against holdings, as well as to meet margin calls against derivatives positions as volatility increased. However, it would seem that banks struggled to keep pace with client demand. Many reported limiting business to top tier clients, with no capacity for new business. Banks further report that in light of the heightened volatility, it was more a case of risk weighted assets (RWA) limits becoming the binding constraint on business, rather than the Leverage Ratio, particularly for one-directional business flows (such as net borrowers of cash, which PSAs typically are).
170. While the analysis assuming a 1% rate move might seem conservative, spikes in rates to almost that level were witnessed during the Covid-19 market stress: over just one week, the EUR 20-year swap real rate increased by circa 0.63%, and over two weeks, the French 20-year government bond yield increased by approximately 0.90%. This can be seen as a classic case of a stressed period where all asset classes were impacted. A sell-off of all risk assets (equity and credit) and even high-quality government bonds, and dislocations of currency markets, led to sudden VM calls across a number of investment portfolios for many market participants. This increased demand for cash, and while the repo markets functioned well for intra-bank transactions, caused some issues for the buy-side.
171. In contrast, the cleared markets operated efficiently and effectively during the recent market volatility related to the COVID-19 pandemic, providing continued access to derivatives products. Spikes in margin calls, as a result of increased volatility, have however been reported.

⁵⁴ <https://www.icmagroup.org/assets/documents/Regulatory/Repo/The-European-repo-market-and-the-COVID-19-crisis-April-2020-270420v2.pdf>

10 Access to alternative emergency liquidity arrangements

172. In the first report, there was a brief mention of the eventuality of alternative arrangements that might involve the central banks and it is recalled that it was mentioned for completeness.
173. However, it is ESMA's view that central banks are exclusively competent for the assessment of the need, the potential decision and the establishment of central bank facilities and for the interpretation of their intended usage. Therefore, there is no need for ESMA to opine on such solutions relating to central bank facilities and those will not be discussed in this report⁵⁵. The Eurosystem took advantage of this consultation to reiterate its readiness to formally engage with relevant stakeholders on issues falling within its mandate.
174. However, in order to accurately reflect the opinions put forward by the stakeholders in the context of the discussions in the Commission Expert Group on PSAs, the proposal made is still mentioned in this report. It is important to highlight that such proposal is neither endorsed nor supported by the Eurosystem at this stage.
175. In previous discussions, market participants referred to the lack of certainty on the good functioning of the repo market in stressed times and thus advocated for a backstop role for central banks, whereby central banks would provide an access to liquidity to a regulated entity such as banks or CCPs for the benefit of providing access to cash to PSAs, for them to then be able to meet the VM calls for their OTC derivatives under stress.

11 Conclusion

176. Since the temporary exemption was first granted when EMIR entered into force in 2012, some solutions to mitigate the challenges faced by PSAs, as described in this report, have been explored. Individually, such solutions would not appear to be able to support PSAs in normal times and in stressed times. However, together they may be able to support PSAs at all times.
177. At this point, it is very unlikely that after so many efforts from all stakeholders and regulators since the start of the exemption a new and never thought of 'silver bullet' solution emerges at this stage.

⁵⁵ Regarding this aspect please refer to the European Commission's paper assessing whether viable technical solutions have been developed for the transfer by pension scheme arrangements of cash and non-cash collateral as variation margins and the need for any measures to facilitate those viable technical solutions (COM/2020/574 final).

178. Instead the solution towards which we are moving seems rather to be the optimisation by different actors (regulators, CCPs, clearing members) of already existing solutions. Although some of these existing solutions need to be further developed or might need regulatory consideration, their addition should provide the conditions for PSAs to be able to clear and meet variation margin calls in all states of the market that have been considered in the discussions.
179. However, the progress for adopting these solutions and ensuring readiness would still require some more time, and thus ESMA is of the view that a possible extension by the Commission of the temporary exemption would be beneficial to allow time to finalise these discussions and the timely implementation of the solutions.
180. Depending on whether the Commission decides to extend or not the exemption, it might help to try and give some visibility and aim for a defined end date for when clearing would be required as to ensure continued and managed progress on the readiness process.
181. While market-based tools like collateral transformation by clearing members or the repo market have demonstrated to date being able to support PSAs in normal times, the industry suggested that these tools are not guaranteed to work in extreme stressed markets unless certain changes are introduced, including potentially regulatory changes such as with respect to capital requirement rules. These suggested changes however require a further analysis and the involvement of bank regulatory and supervisory authorities.
182. Solutions available for client clearing or other forms of CCP access, such as sponsored access, by addressing many of the issues raised by PSAs, seem promising, and moreover potentially beneficial to other users of derivatives beyond PSAs. Some European PSAs already make use of sponsored access models to access the cleared repo markets, as European centrally cleared repo markets are of a significant size and have provided liquidity to market participants even in times of extreme market stress. Here as well, to be available to all PSAs some adjustments might need to be introduced, at CCPs and clearing members and potentially also in conjunction with some regulatory measures, the latter still requiring further assessment and ultimately agreement by regulatory and supervisory authorities.
183. Given that some of the issues faced by PSAs are not specific to PSAs, being instead common to all less sophisticated or simply less active entities than the bigger ones engaged in clearing, such as investment funds or insurance companies which do not benefit from a similar exemption under the EMIR framework, these services could be further adapted to also cater for the specificities of PSAs' needs.
184. For a thorough analysis and potential development of these operational changes and/or regulatory adjustments to be effective, the current exemption elapsing in June 2021 does not allow sufficient time. It is therefore ESMA's view that the temporary exemption could be renewed by one year as possible under EMIR, i.e. up to June 2022.

185. At the same time, ESMA, and more broadly the regulators involved in this topic, reiterate the view that exemptions, or extensions of exemptions, from the clearing obligation should be carefully considered, because of the strong conviction of the benefits of a broad adoption of the clearing obligation, including for PSAs. As a result, all efforts should be made to then avoid a further extension of the temporary exemption.

12 Next steps

186. ESMA has now submitted this second report to the Commission, which would serve as input for the Commission's own report.

187. As explained in the report, ESMA is of the view that more time is needed to make sufficient progress with the implementation of this mixture of solutions and thus that an extension by one year by the Commission of the temporary exemption, as provided for in EMIR Refit, would be beneficial.

13 Annex - EMIR Refit⁵⁶ articles relevant to the Clearing Obligation for Pension Scheme Arrangements

Article 1(24)(c) states that paragraph 2 of Article 85 of EMIR on developing technical solutions for the transfer by pension scheme arrangements of non-cash collateral as variation margin should be replaced by the following paragraphs:

Box 1: Article 1(24)(c) of EMIR Refit

2. By 18 June 2020, and every 12 months thereafter until the final extension referred to in the third subparagraph, the Commission shall prepare a report assessing whether viable technical solutions have been developed for the transfer by pension scheme arrangements of cash and non-cash collateral as variation margins and the need for any measures to facilitate those viable technical solutions.

ESMA shall, by 18 December 2019, and every 12 months thereafter until the final extension referred to in the third subparagraph, in cooperation with EIOPA, EBA and the ESRB, submit a report to the Commission, assessing the following:

- (a) whether CCPs, clearing members and pension scheme arrangements have undertaken an appropriate effort and have developed viable technical solutions facilitating the participation of such arrangements in central clearing by posting cash and non-cash collateral as variation margins, including the implications of those solutions on market liquidity and procyclicality and their potential legal or other implications;
- (b) the volume and the nature of the activity of pension scheme arrangements in cleared and non-cleared OTC derivatives markets, within each asset class, and any related systemic risk to the financial system;
- (c) the consequences of pension scheme arrangements fulfilling the clearing requirement on their investment strategies, including any shift in their cash and non-cash asset allocation;
- (d) the implications of the clearing thresholds specified pursuant to point (b) of Article 10(4) for pension scheme arrangements;
- (e) the impact of other legal requirements on the cost differentials between cleared and non-cleared OTC derivative contracts, including margin requirements for non-cleared derivatives and the calculation of the leverage ratio in accordance with Regulation (EU) No 575/2013;

⁵⁶ Regulation (EU) 2019/834 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 648/2012 (known as 'EMIR') as regards the Clearing obligation, the suspension of the clearing obligation, the reporting requirements, the risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty, the registration and supervision of trade repositories and the requirements for trade repositories --- OJ L 141, 28.5.2019, p. 42–63

(f) whether any further measures are necessary to facilitate a clearing solution for pension scheme arrangements.

The Commission may adopt a delegated act in accordance with Article 82 to extend the two-year period referred to in Article 89(1) twice, each time by one year, where it concludes that no viable technical solution has been developed and that the adverse effect of centrally clearing derivative contracts on the retirement benefits of future pensioners remains unchanged.

CCPs, clearing members and pension scheme arrangements shall make their best efforts to contribute to the development of viable technical solutions that facilitate the clearing of OTC derivative contracts by such arrangements.

The Commission shall set up an expert group composed of representatives of CCPs, clearing members, pension scheme arrangements and other relevant parties to such viable technical solutions to monitor their efforts and assess the progress made in the development of viable technical solutions that facilitate the clearing of OTC derivative contracts by pension scheme arrangements, including the transfer by such arrangements of cash and non-cash collateral as variation margins. That expert group shall meet at least every six months. The Commission shall consider the efforts made by CCPs, clearing members and pension scheme arrangements when drafting its report pursuant to the first subparagraph.

Article 1(26) states that paragraph 1 of Article 89 of EMIR on a transitional clearing exemption for pension scheme arrangements should be replaced by the following paragraph:

Box 2: Article 1(26) of EMIR Refit

Until 18 June 2021, the clearing obligation set out in Article 4 shall not apply to OTC derivative contracts that are objectively measurable as reducing investment risks that directly relate to the financial solvency of pension scheme arrangements, and to entities established to provide compensation to members of such arrangements in case of default.

The clearing obligation set out in Article 4 shall not apply to OTC derivative contracts as referred to in the first subparagraph of this paragraph entered into by pension scheme arrangements from 17 August 2018 until 16 June 2019.