

Statistical annex pensions

Disclaimer

This annex is based on quantitative information collected under the EIOPA Decision of the Board of Supervisors regarding regular data submissions from National Competent Authorities (NCAs)¹. Please note that data from Cyprus and Ireland were not received and are therefore not included in this annex.

IORPs that are exempt from full reporting requirements and only provide partial data have been excluded from the analysis, as the necessary level of detail is not available. Member States have the option to exempt undertakings with assets below €25 million from full reporting.

The findings presented are primarily based on pension data as of 31 December 2024 and received before 21 July 2025². However, it is important to acknowledge that not all IORPs have a financial year ending on this date. As a result, certain figures may reflect different reporting periods and may not correspond precisely to totals as of 31 December 2024.

Due to differences in objectives, scope, coverage, and timing of national data submissions, the information in this annex may not fully align with other national publications.

Furthermore, the information presented in the graphs is aggregated by country, scheme type or by size and is only included if it comprises data from at least three reporting entities. In cases where this criterion is not met, the data is included in the 'other countries' categories. Alternatively, if the data refers to less than three reporting entities of a particular type in the country, it may be indicated that 'no split is possible'. The annex does not provide information on the simultaneous breakdown by country, scheme type and size, since the limited number of combinations would make it difficult to draw robust conclusions.

Finally, when interpreting the results and drawing conclusions, it should be taken into account that the characteristics of the IORP sectors differ substantially between countries.

Introduction

This statistical annex provides additional evidence in relation to the Commission's request for technical input concerning the review of the IORP II Directive. In particular, this annex presents data on exposures to listed equity and alternative asset classes in relation to the size of IORPs as well as the type of pension scheme, i.e. DB and DC schemes. The last part of this annex analyses whether IORPs benefit from economies of scale by providing information on investment performance and cost levels in relation to the size of IORPs and the type of pension scheme.

The IAIS defines alternative assets which display a high degree of either valuation uncertainty, illiquidity or complexity, or combination of these. Taking into account these features, the IAIS considers the alternative asset category to cover private equity and debt, unlisted real estate,

¹<https://www.eiopa.europa.eu/document-library/decision/decision-eiopas-regular-information-requests-towards-ncas-regarding>

² Meaning that any data or resubmissions received after this date have not been taken into account for this annex.

infrastructure, hedge funds, commodities and structured assets.³ This annex provides information on a subset of these categories, namely unlisted equity, mortgages and loans, property, structured notes and collateralized securities, and alternative investment (or hedge) funds. This leaves out investments in infrastructure and commodities, implying that the annex does not cover the total exposure of IORPs to what are generally considered alternative assets. Some specific asset categories, like property, may be underestimated due to their classification as equity.

The information on alternative investments is largely based on look-through data. In contrast to medium- and large-sized IORPs, smaller IORPs are not required to report the full look-through. This may be another reason that allocations to alternative asset classes are underestimated, in particular for smaller IORPs.

The annex also employs a different approach to assess IORPs' exposures to alternative assets by providing information on allocations to investment funds subject to the Alternative Investment Fund Managers Directive (AIFMD). Alternative investment funds will often be used for illiquid investments, since such investments are not compatible investment funds subject to the UCITS Directive. However, alternative investment funds may also be used as non-retail asset pooling vehicles, including regular listed equities and bonds. As such, this approach would tend to overestimate allocation to alternative assets. On the other hand, this proxy ignores IORPs' direct exposures to alternative asset classes.

EIOPA regularly collects and publishes data on the IORP market. Quarterly and Annual statistical information is available in the occupational pension statistics section of EIOPA's website⁴. In addition, EIOPA publishes an annual descriptive report on the sector, the most recent of which was released in January 2025 and covers data as of end-2023⁵. This annex should be seen as a supplement to the 2024 report. The next report, based on data with a reference date of 31 December 2024, is expected before the end of the year.

Data

The table below provides a general overview of the number of IORPs in each Member State by size. Together, these IORPs account for approximately EUR 2.86 trillion in assets under management (AuM).

Table 1: Number of IORPs in each category

Row Labels	Less than 25 million	More than 25 million, less than 100 million	More than 100 million, less than 500 million	More than 500 million, less than 1000 million	More than 1000 million
AT	0	0	0	2	6
BE	25	37	48	11	11
DE	16	18	44	16	64
EL	17	7	0	0	0

³ See for more detail Table 1 on page 16 of IAIS, [Draft issues paper on structural shifts in the life assurance sector](#), March 2025.

⁴ https://www.eiopa.europa.eu/tools-and-data/occupational-pensions-statistics_en

⁵ [IORPs in Focus Report 2024 - EIOPA](#)

ES	191	113	50	7	5
FI	0	0	8	2	0
FR	0	0	1	1	21
HR	20	3	0	0	0
IT	37	24	42	23	49
LI	0	2	0	1	0
LU	2	5	3	2	0
NL	7	2	35	39	105
NO	8	18	25	13	10
PT	130	31	10	1	6
SE	0	0	0	1	13
SI	0	0	1	3	0
SK	2	7	10	1	0
Other ⁶	1	1	4	1	1

The scope of the annex is limited to IORPs that submitted individual-level data, given the granularity of the alternative asset categories. These include IORPs with more than EUR 1 billion in AuM, or, in each Member State, at least the five largest IORPs, provided they manage more than EUR 100 million in assets. In some cases, NCAs opted to submit all collected data as individual reports, rather than aggregating the information themselves.

The next table indicates the percentage of individual submissions received, relative to the total number of IORPs per country and by size. In total, these individual submissions cover approximately EUR 2.77 trillion in AuM. The table shows that while most assets are captured, assessments based solely on individual data may exclude smaller IORPs in countries where only aggregated reporting was provided (e.g. BE, DE, ES, IT, NO).

Table 2: Percentage of IORPs retained when considering individual information only

Row Labels	Less than 25 million	More than 25 million, less than 100 million	More than 100 million, less than 500 million	More than 500 million, less than 1000 million	More than 1000 million
AT				100%	100%
BE	0%	0%	0%	0%	82%
DE	0%	0%	0%	6%	86%
EL	100%	100%			
ES					100%
FI			100%	100%	
FR			100%	100%	100%
HR	100%	100%			
IT	0%	0%	0%	0%	88%
LI		100%		100%	
LU	100%	100%	100%	100%	
NL	100%	100%	100%	100%	100%
NO			8%	100%	100%

⁶ The category other includes BG, DK, LV, MT, PL.

PT	100%	100%	100%	100%	100%
SE				100%	100%
SI			100%	100%	
SK	100%	100%	100%	100%	
Other	100%	100%	75%	100%	100%

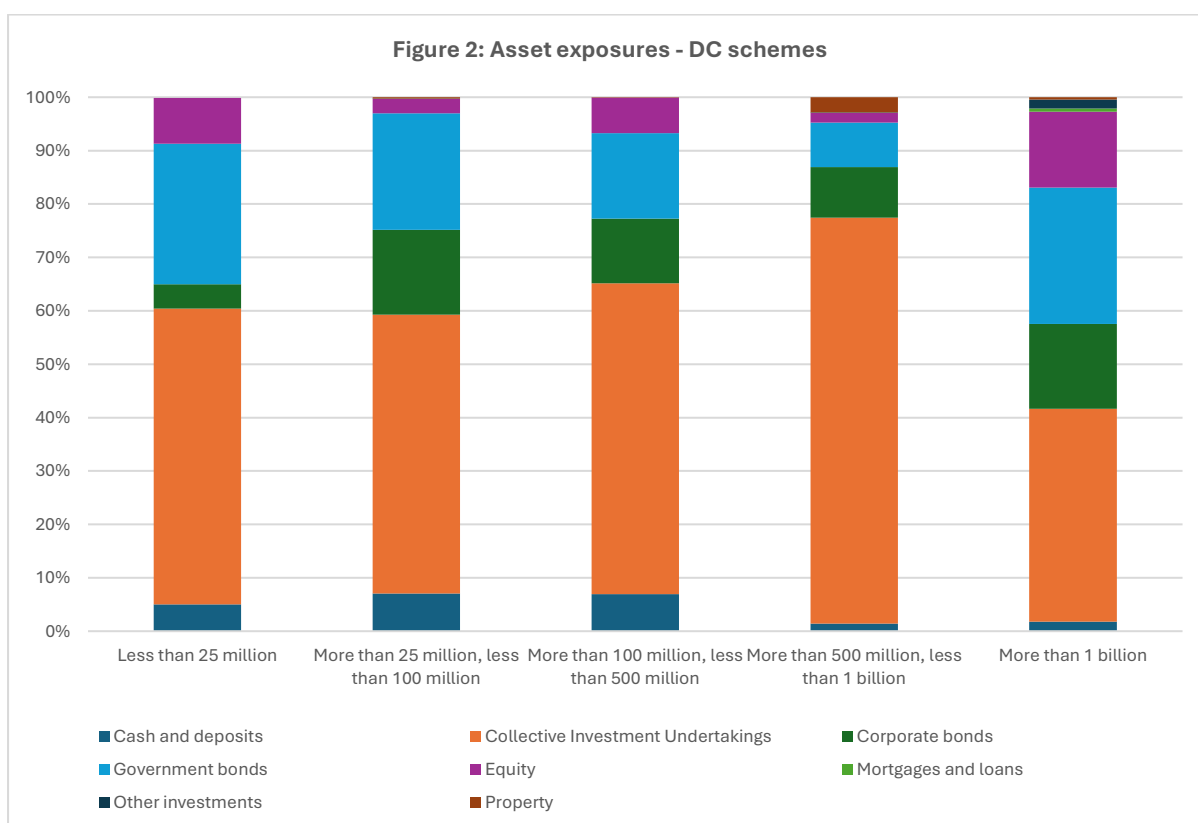
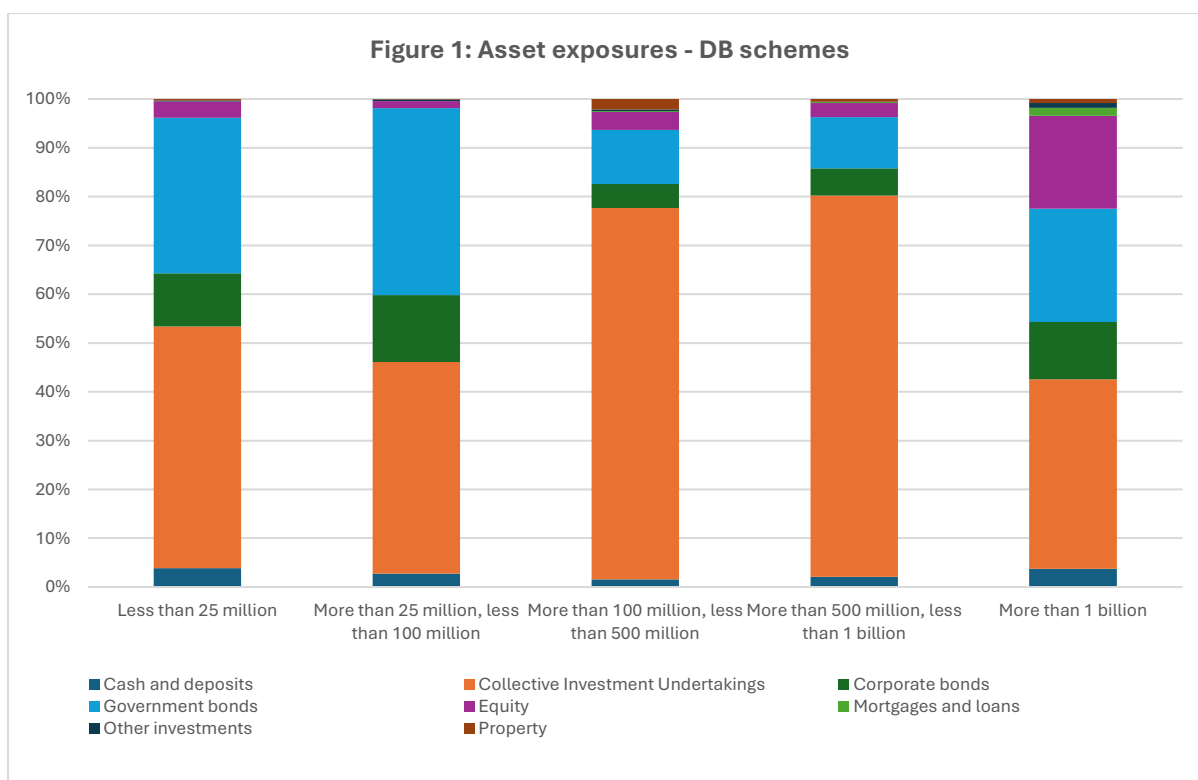
Investment exposures

The two graphs below present the breakdown of investments by scheme type and by size. For a cross-country comparison, the IORPs in Focus report highlights that investment strategies are often shaped more by national culture and regulatory frameworks than by scheme type. Nevertheless, the graphs also indicate that the size of the IORP plays a significant role in influencing investment behavior.

We observe that both DB and DC IORPs with less than EUR 100 million in AuM typically allocate around half of their portfolios to collective investment undertakings (CIUs). Among medium-sized IORPs (up to EUR 1 billion AuM), the share invested in CIUs increases further, before falling to around 40% for larger IORPs with more than EUR 1 billion AuM. These trends are generally more pronounced for DC schemes than for DB, although they are broadly consistent across most reporting countries, with only minor exceptions.

Larger IORPs also tend to invest more directly in equities than their smaller and medium-sized peers. They make broader use of a wider range of asset classes, including mortgages and loans, structured notes, and collateralised securities—grouped under the category of “other investments.”

When comparing DB and DC schemes, DC IORPs appear to allocate more to CIUs, corporate bonds, and equities, often at the expense of direct investments in government bonds. Moreover, smaller and medium-sized IORPs (up to EUR 500 million AuM) generally maintain higher levels of cash holdings.



In the following sections, we further analyze selected asset categories. It should be emphasized that the results sometimes reveal substantial differences across countries, which may also be due to different reporting approaches, i.e. all individual IORPs versus only the larger IORPs. The combination of country, scheme type, and size often leads to a limited number of observations,

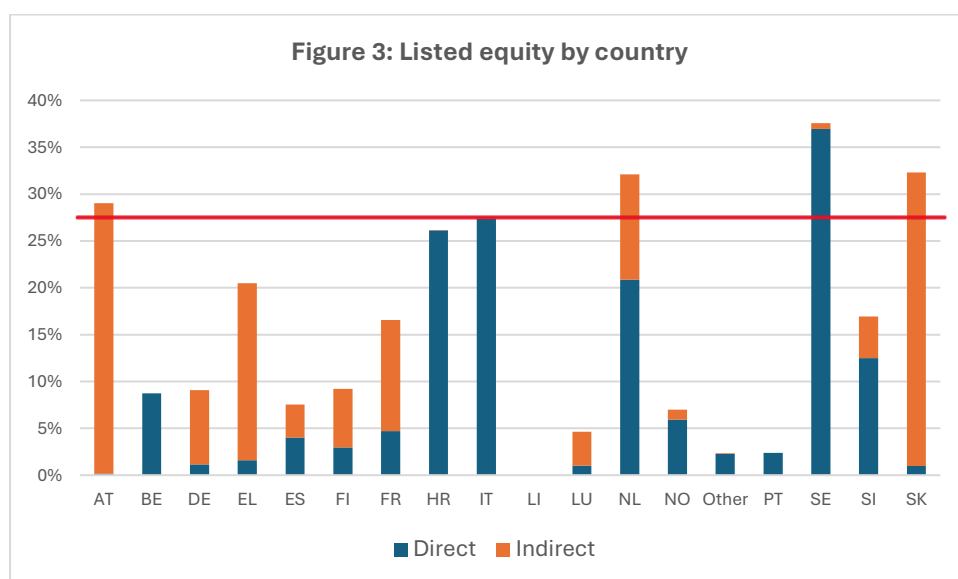
making it difficult to draw robust conclusions or publish reliable comparisons. As a result, the assessment below is based separately on Member State and on scheme type and IORP size. Please also remark that some IORPs were unable to provide a breakdown between DB and DC investments, particularly among smaller entities. Consequently, some figures including scheme type may underestimate the true exposure.

Listed equity

Figure 3 below shows the breakdown of listed equity investments by country, split between direct and indirect holdings⁷. It also shows the EU average by the red line. For listed equity the percentage investing in listed equity compared to its total investments is 28.1%. SE has the highest total exposure to listed equity, driven primarily by indirect holdings (nearly 40%), with a small direct component. SK and NL also show high exposures to listed equity, both slightly above 30%. However, in the case of SK, the main driver has been indirect investments. AT, DE, EL follow the same trend, with indirect holdings far exceeding direct ones.

In contrast, on top of SE, BE, HR and IT are the only countries where listed equity is held almost entirely directly, with virtually no indirect holdings. Some countries, like LI, PT and 'Other countries' show no visible holdings in listed equity—neither direct nor indirect.

These differences highlight the heterogeneity of investment practices across Europe, influenced by national regulations, investor preferences, and the structure of local capital markets.

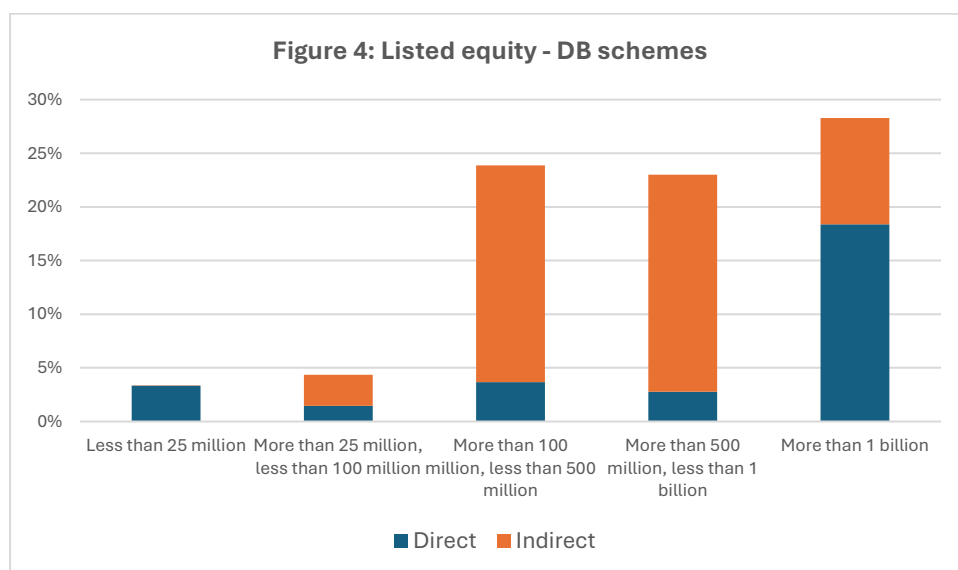


The two graphs below compare listed equity investments—broken down into direct and indirect holdings—by Defined Benefit (DB) and Defined Contribution (DC) pension schemes, across different size brackets.

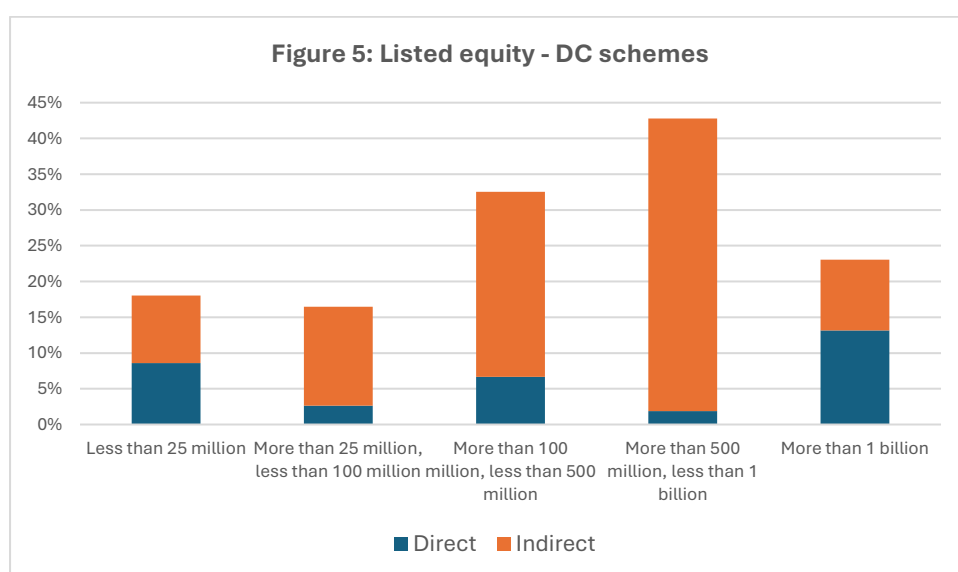
In DB schemes (Figure 4), the largest schemes (over €1 billion) have by far the highest exposure to listed equity, reaching over 20%, with a strong dominance of direct holdings. Mid-sized

⁷ Indirect investments solely apply to investment funds/shares other than UCITs and in case they exceed 10% of the IORP's total assets. Therefore, the figures reported here for certain Member States are potentially underestimated. Starting with the reference date end of 2025, EIOPA will collect IORPs' indirect investments from all type of CIUs, applying the same threshold of 10% to this new aggregate, leading to a broader coverage of indirect investments in all Member States.

schemes (€100 million to €500 million) also show notable equity exposure, but mostly indirect. Smaller DB schemes show limited exposure overall, with very low allocations in both forms.



In DC schemes (Figure 5), the pattern is quite different. The highest listed equity exposure is found in mid- to large-sized schemes (€100 million to €1 billion), but this time, the investment is dominated by indirect holdings. Direct holdings remain relatively small across all size categories. The very largest DC schemes (over €1 billion) have lower overall exposure to listed equity than mid-sized ones, and a more balanced mix of direct and indirect.



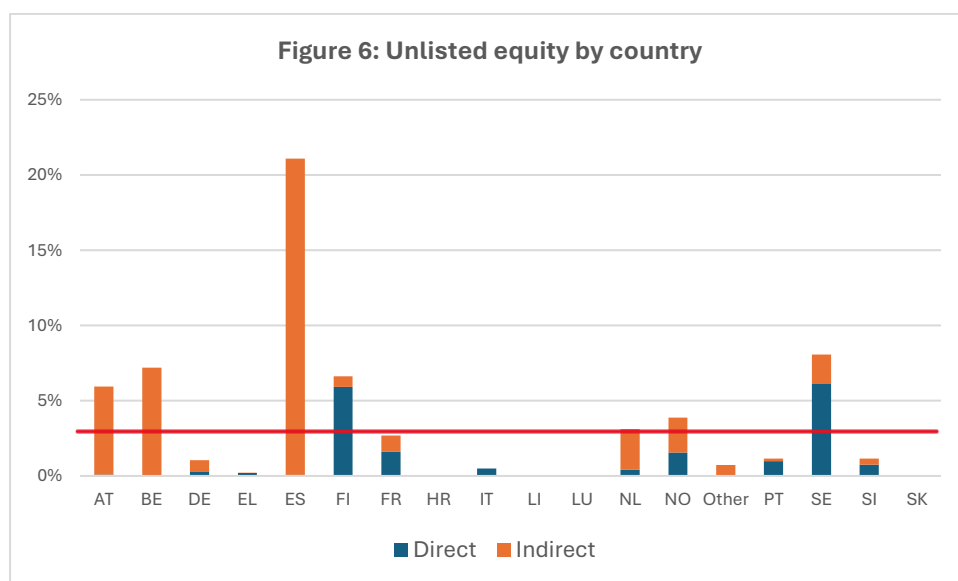
Comparing the two, DB schemes tend to rely more on direct equity investment, especially as their size increases. DC schemes, however, are more inclined to invest in listed equity indirectly, particularly in the mid-size range. This may reflect structural differences: DB schemes often have more internal investment capacity and long-term planning horizons, whereas DC schemes may delegate asset management via collective investment undertakings.

Smaller schemes in both categories show low exposure overall. However, this shows especially in DB schemes. The latter can also be caused by small funds not reporting all the details in the

look-through compared to medium sized and large IORPs. This is allowed as small IORPs are not required to report the full look through on a mandatory basis.

Unlisted equity

The data in figure 6 reveals stark differences in unlisted equity investments across European countries. The EU average stands at 3.3 percent. ES shows the highest allocations, followed by SE, AT and BE. These investments are predominantly channeled through indirect vehicles such as private equity funds. In contrast, other markets like EL, HR, IT, LI, LU and SK have minimal exposure. Indirect investments dominate in most countries. However, direct holdings are more pronounced in FI and SE.



DB schemes as demonstrated in figure 7 show a clear link between fund size and unlisted equity exposure. The largest funds allocate a small part of their investments to both direct and indirect unlisted equity. Their ability to invest directly in unlisted assets potentially stems from greater resources and advanced governance structures. Mid-sized DB funds prioritize indirect routes for diversification and have even more limited exposures. Small DB funds have negligible allocations to unlisted equity. This shows clearly how scale enables illiquid investments.

This size-dependent behavior is consistent with schemes' approach to listed equity, where larger DB schemes also exhibit higher direct investment activity. The key difference lies in the overall allocation levels, with unlisted equity representing a larger total proportion of portfolios compared to listed equity.

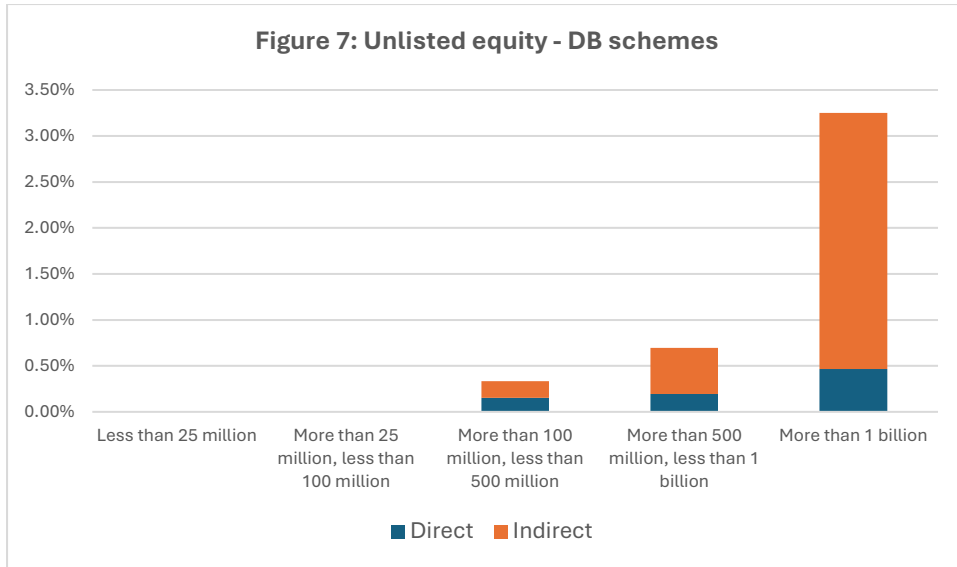
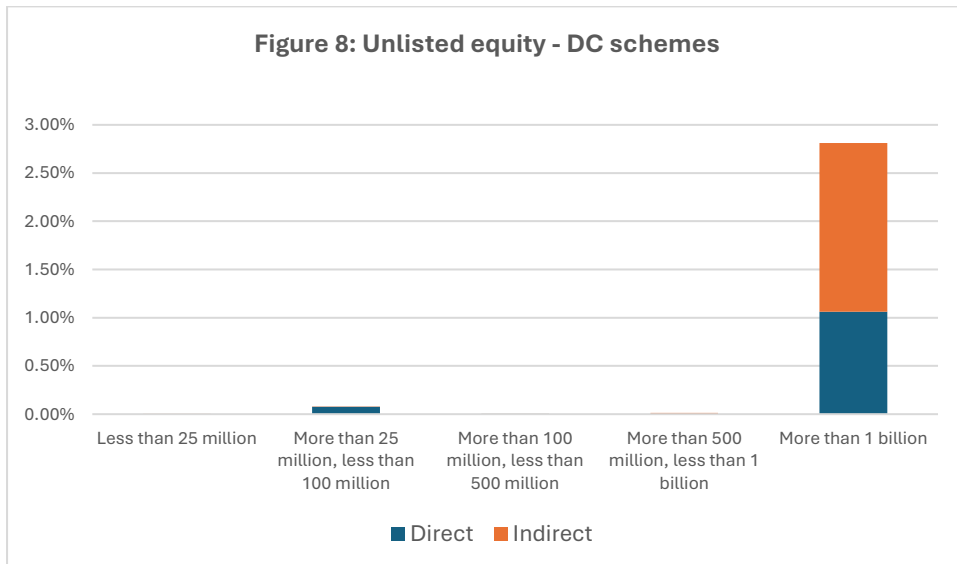


Figure 8 reveals that unlisted equity investments in DC schemes are markedly lower, with the highest allocation (1.6%) seen in the largest IORPs only. Other IORPs have negligible exposure, likely due to liquidity constraints or lack of resources to manage illiquid assets. The preference for indirect investments (e.g., through private equity funds) dominates across all fund sizes, suggesting DC schemes prioritize diversification and outsourced management over direct deals. The low overall allocation highlights DC schemes' cautious approach, possibly due to regulatory limits or risk aversion.

This size-dependent behavior for both DB and DC schemes is consistent with schemes' approach to listed equity, where larger funds also exhibit higher direct investment activity. The key difference lies in the overall allocation levels, with unlisted equity representing a smaller proportion of portfolios compared to listed equity.



The size as well as the scheme types allow for differences in investment strategies towards unlisted assets. DB schemes, especially large ones, invest twice the amount compared to DC schemes. Indirect investments could support the availability of unlisted equity to both, but

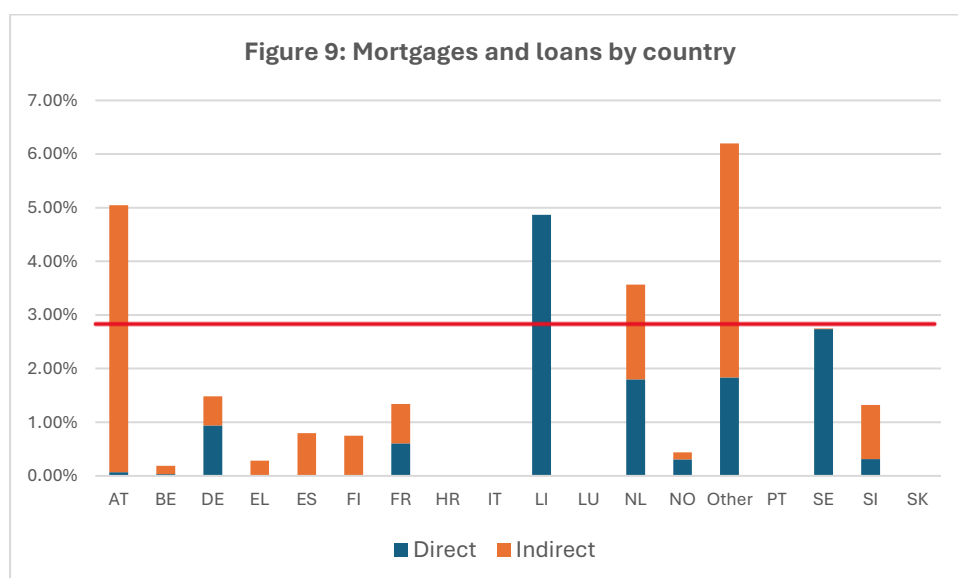
mainly DB schemes tend to invest in such private equity funds. DB schemes, with their long-term liability matching requirements, are better positioned to deal with the illiquidity of the unlisted equity. DC schemes, constrained by shorter time horizons, remain largely on the sidelines of private markets.

The data clearly shows that scale, liability structure, and local context continue to play a key role in shaping unlisted equity investment across Europe.

Mortgages and loans

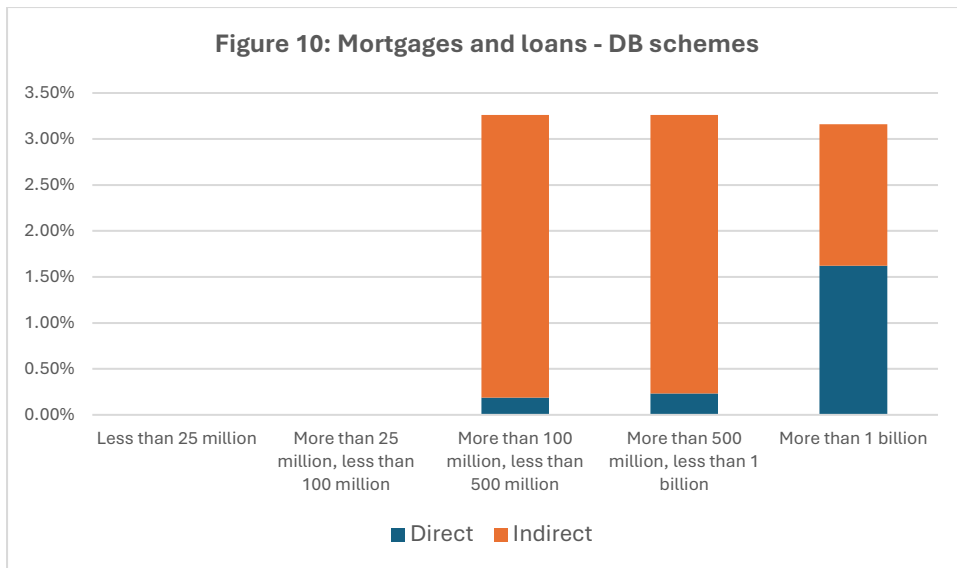
As with the investments in equity, the data included in Figure 9 shows significant variation in mortgage and loan investments across European markets. AT, LI, NL and 'other countries' show the highest allocations. DE, FR, SE and SI follow. In contrast, Southern and Eastern European countries like EL, HR, IT, PT and SK demonstrate minimal activity, likely due to less developed credit markets or regulatory constraints. The EU average stands at 2.9 percent.

Notably, SE and LI stand out with substantial direct mortgage holdings, suggesting pension funds' active participation in domestic financing. Most other countries favor indirect investments, highlighting the role of intermediaries in credit market participation.



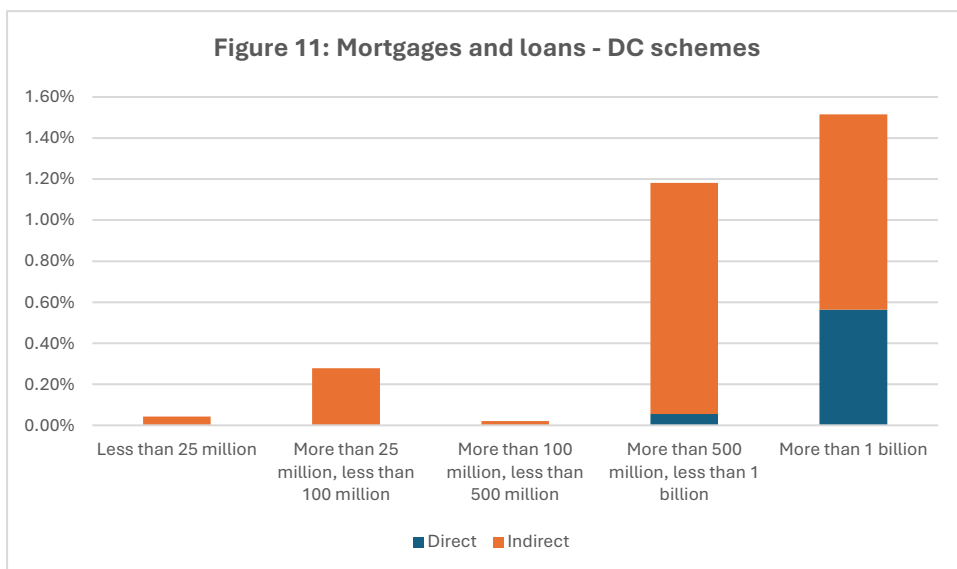
DB schemes as shown in Figure 10 exhibit clear size-dependent patterns in mortgage and loan investments. The largest DB funds maintain meaningful allocations to both direct loans and indirect credit instruments. Mid-sized DB funds focus predominantly on indirect exposures, while smaller DB schemes show negligible participation.

This graduated approach mirrors DB schemes' investment behaviour in other asset classes, where scale enables more complex strategies. The largest funds' direct lending activity particularly reflects their ability to underwrite and manage credit risk internally.



DC schemes demonstrate even more conservative positions, with only the funds larger than EUR 500 million allocating marginally to mortgages and loans - mainly through indirect vehicles. Smaller DC funds report virtually no exposure, likely constrained by liquidity requirements and risk management frameworks.

The limited amount in lending by smaller DC schemes aligns with their limited unlisted equity allocations, suggesting caution around illiquid credit instruments.



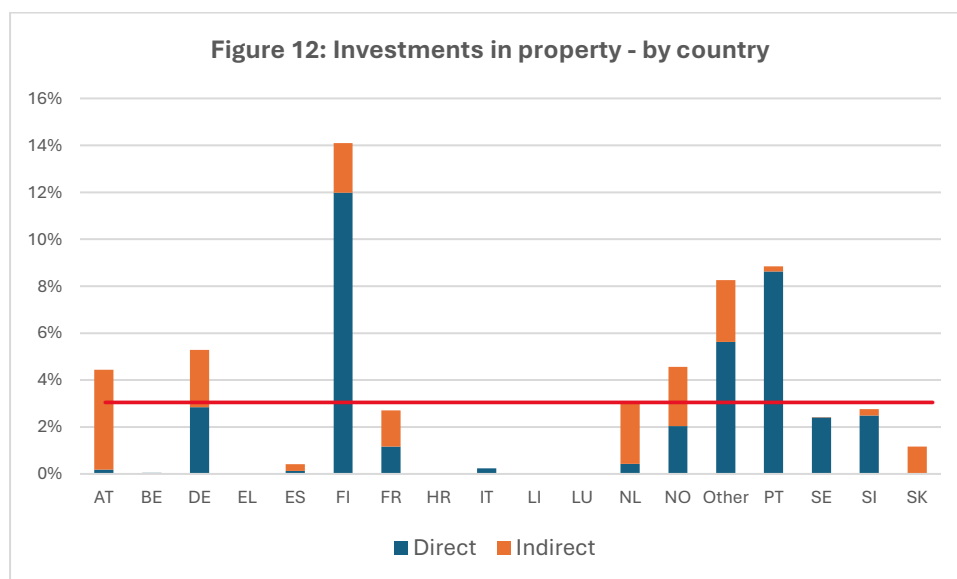
Comparing DB with DC schemes shows a clear division again. Large schemes invest twice as much as their DC counterparts and medium sized DB schemes even 3 to 5 times more. Direct lending is concentrated solely around the largest IORPs, both in DB and DC but still much more in DB schemes. Indirect investments dominate across all scheme types, but again much more for DB schemes.

This divergence underscores how liability structures shape credit market participation. DB schemes' more predictable cash flows enable more illiquid lending strategies, while DC schemes' needs make such assets largely incompatible, especially for smaller schemes.

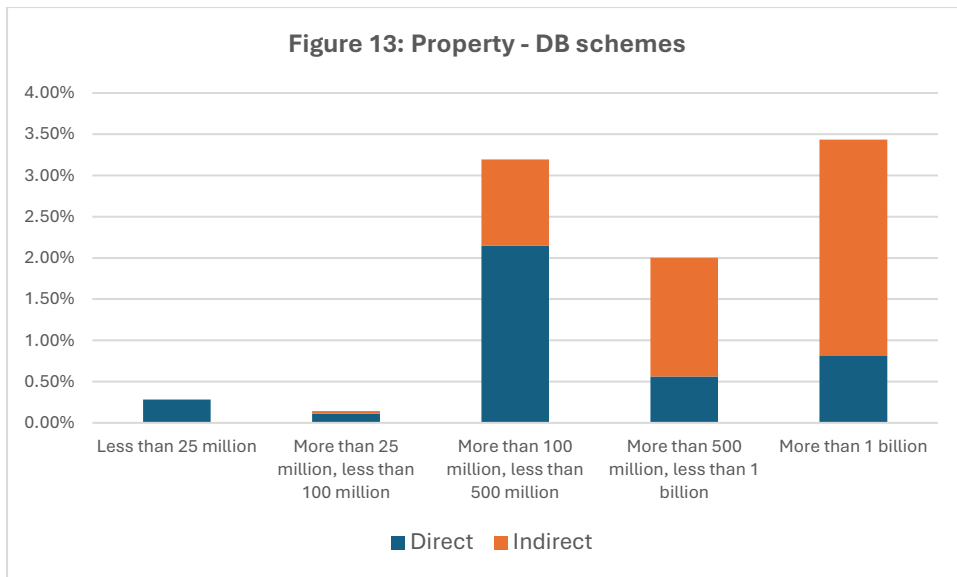
Property

As with other asset classes, Figure 12 reveals significant variation in property investments across European markets. FI, PT and 'other countries' show the highest allocations, with FI leading at over 14 percent of portfolio exposure. AT, DE and NO follow with moderate investments, while countries like BE, EL, HR, IT, LI and LU demonstrate minimal activity, likely due to less access to real estate developments or regulatory constraints. The EU average, shown by the red line in the graph below is 3.1 percent.

Notably, FI and PT stand out with substantial direct property holdings. Most other countries favor substantial indirect investments through property funds, highlighting the role of intermediaries in real estate market participation.

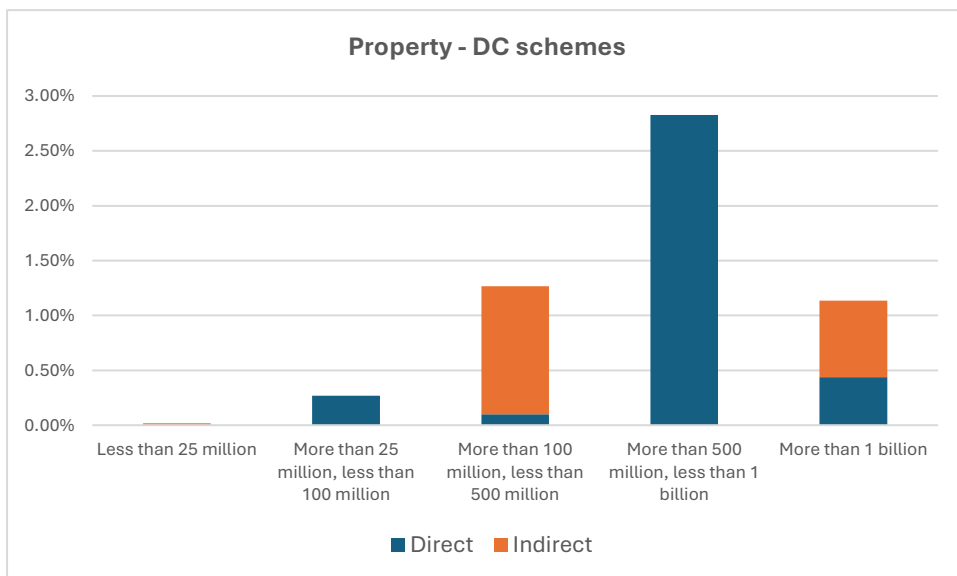


DB schemes exhibit patterns in property allocation, as shown in the property DB schemes figure 13. Large and medium sized DB funds maintain meaningful allocations to both direct property assets and indirect real estate instruments, while smaller DB schemes show negligible participation. Large DB schemes however, show less property investments, both directly and indirectly compared to medium-sized IORPs. However, further analysis shows that this is mainly country related.



DC schemes overall demonstrate more conservative positions, with only the largest part of the medium sized IORPs allocating significantly to property and mainly through indirect vehicles. Smaller DC funds report minimal exposure, constrained by liquidity requirements and risk management frameworks.

The limited property investment by DC schemes aligns with their cautious approach to other illiquid assets, suggesting structural barriers to real estate participation regardless of asset class.

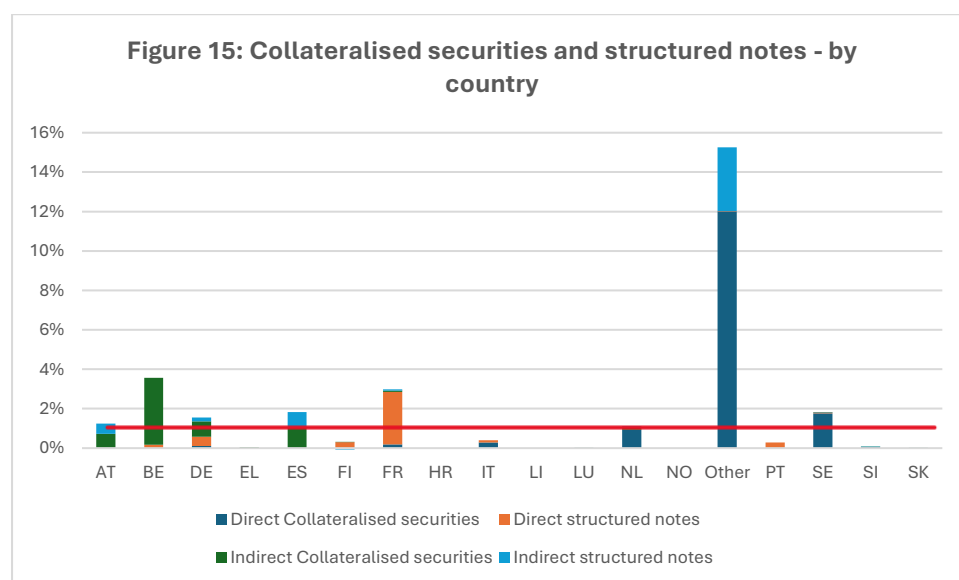


The DB - DC comparison highlights that while both scheme types use indirect vehicles, DB schemes achieve 2-3 times greater exposure overall. In addition, the data shows that medium-sized DC schemes maintain meaningful direct property investments, contradicting the typical expectation that DC funds avoid direct real estate exposure.

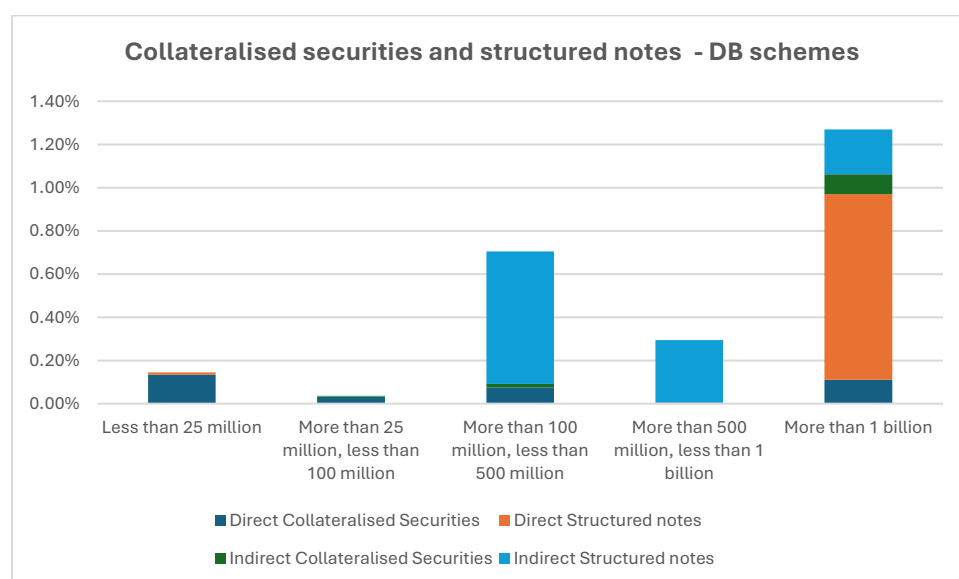
These findings suggest property investment depends on three factors: 1) fund size and resources, 2) liability structure (DB vs DC), and 3) domestic market conditions. However, in the case of property investments our assumption is that the market conditions are the main constraint.

Structured notes and collateralized securities

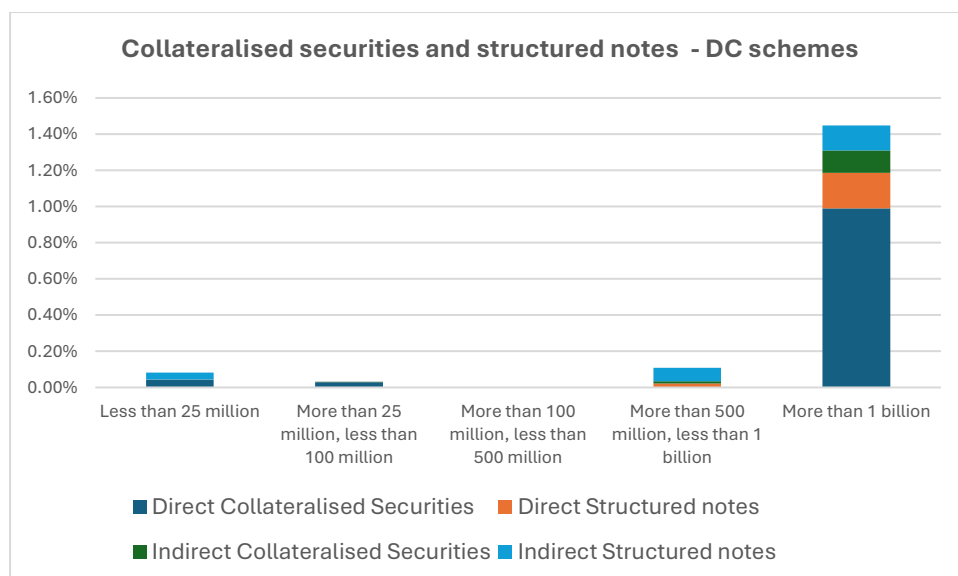
The data reveals a substantial variation in exposure to collateralised securities and structured notes across European markets. The EU average is 1.3 percent. 'Other countries' demonstrate the highest allocations, mainly due to the investment of one IORP in collateralised securities. BE and FR follow with moderate exposures (3-4%), other European countries show minimal activity. Most markets show a clear preference for indirect vehicles, though DE and FR maintain meaningful direct holdings of structured notes and NL and SE of collateralised securities.



Among DB schemes, we see a clear relationship between fund size and investment levels. The largest DB funds allocate around 1.2% to these instruments, typically combining direct and indirect investment in structured notes. Medium-sized DB funds maintain more modest allocations, focused primarily on indirect structured notes. The smallest DB funds show negligible participation with allocations far under 1% and mainly towards collateralised securities. This size-related investment suggests that only the largest DB funds possess the necessary resources and expertise to properly analyze and manage the risks associated with direct investments in these complex products.



Except for large schemes, DC schemes demonstrate an even more cautious approach to these asset classes. Large schemes invest primarily and directly in collateralised securities. Medium-sized and small DC funds are virtually absent from these markets. This conservative positioning reflects small DC schemes' typical risk aversion and liquidity requirements.



Comparing DB and DC schemes reveals particularly stark differences. Large DB schemes invest around the same percentage of their investments in collateralized securities and structured notes as comparable DC funds. However, where direct exposure exists mainly in the DC space, DB schemes tend to invest more indirectly. Whereas the focus of DB is mainly on structured notes, DC schemes tend to have a preference over collateralised securities. The data suggests that the 100 million threshold represents a critical mass for DB participation, while DC schemes show limited engagement regardless of size, except for large schemes.

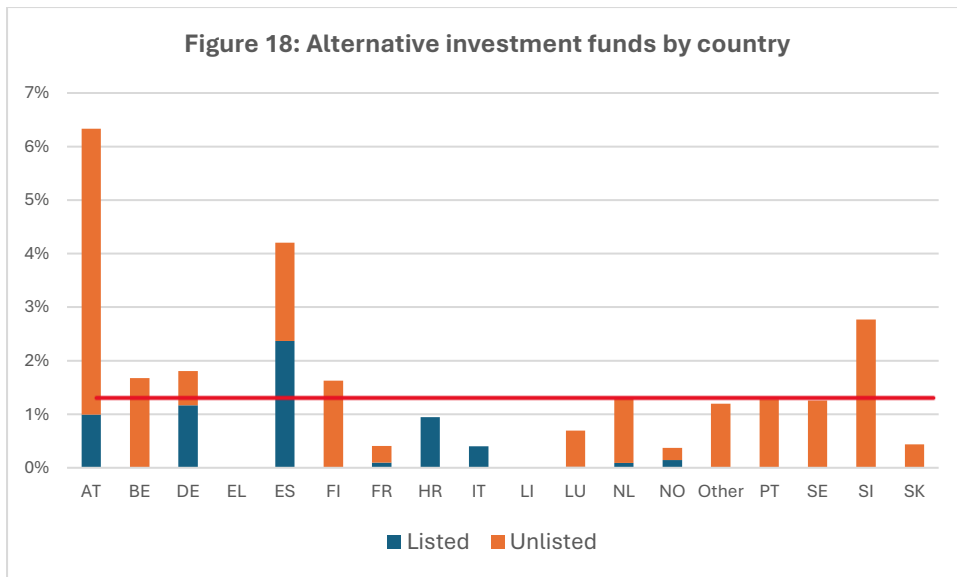
The data suggests these complex instruments are niche products primarily for large, sophisticated funds rather than becoming mainstream pension assets that can be bought by every IORP.

Alternative investments

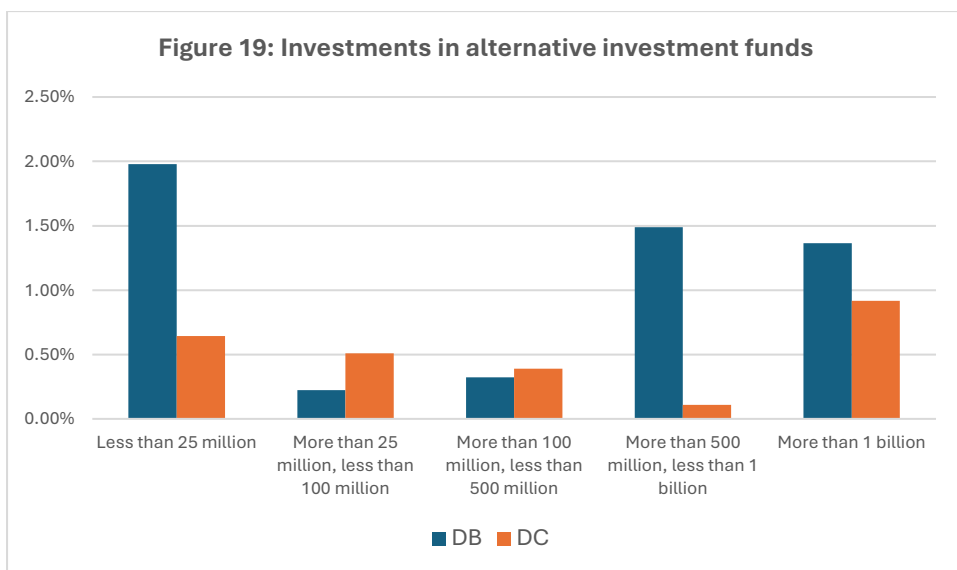
The data included in figure 18 reveals distinct geographic variations in alternative investment fund (AIF) exposure across European pension markets. These funds can be considered 'hedge funds' as the taxonomy defines them as collective investment undertakings whose investment strategies include such as hedging, event driven, fixed income directional and relative value, managed futures, commodities etc.

The EU average is 1.2 percent. AT emerges as the undisputed leader with approximately 6% exposure, followed by ES at 4% and SI at 2.9%. These three countries demonstrate significantly higher allocations than their European counterparts. EL, FR, IT, LI, NO and SK show minimal exposure below 0.5%.

The composition of these investments varies significantly by market. ES displays a balanced approach with nearly equal allocations to listed and unlisted alternative investment funds. In contrast, most other countries show a clear preference for unlisted investments in alternative investment funds.



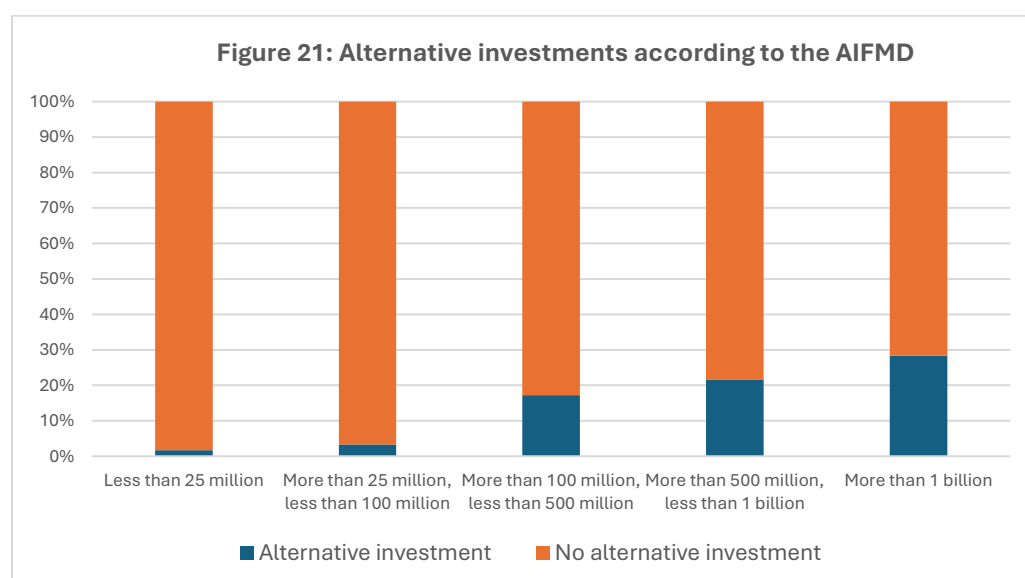
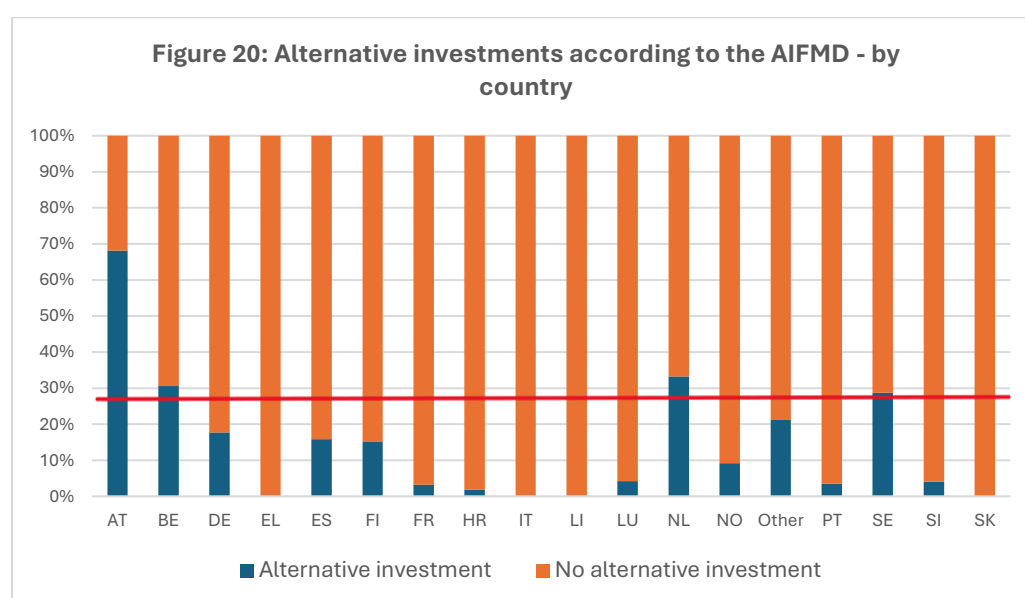
The size-stratified data reveals fundamental differences in allocation behavior between DB and DC schemes. Small and large pension funds demonstrate the most substantial AIF commitments, with DB schemes allocating approximately twice as much as comparable DC funds. This gap is the other way around for mid-sized funds, where DB allocations are slightly smaller than DC schemes.



The relatively high exposure to AIF in AT, ES and SI suggests these markets may have better access to alternative investment funds or benefit from favorable regulatory frameworks. The strong showing of unlisted AIF in general and in AT and SI in particular indicates potential for other markets to increase exposure through similar structures. The case of medium sized DC schemes and to lesser extent the large schemes also suggests structural barriers may be overcome through targeted product development and risk management solutions. However, the limited activity in many markets highlights significant untapped potential investments in alternative investment funds across European pension systems.

An alternative approach to assessing the volume of alternative investments is to use the classification defined under the Alternative Investment Fund Managers Directive (AIFMD)⁸. Figures 20 and 21 present the results based on this classification. They highlight significant differences in the interpretation of what constitutes alternative investments. Under the AIFMD classification, the share of such investments is considerably higher, with the EU average rising to 28%. The data also indicate that exposure to these investments tends to increase progressively with the size of the IORP.

However, the AIFMD classification may also include asset pooling vehicles, which are likely to hold not only alternative assets but also listed equities and bonds. In our dataset, we observe that roughly 25% of the investments classified as 'alternative' under AIFMD actually represent direct holdings in listed equities, corporate or government bonds, or are held as cash or deposits. This raises questions about whether the AIFMD classification, as used in our data, reliably captures what is typically understood as 'alternative investments'.



⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02011L0061-20250117>

Performance

EIOPA does not collect data on IORPs' returns directly. However, it does receive information on investment income from IORPs. Figure 22 shows the composition of investment income across the different scheme types, as well as the combined total. Investment income is disaggregated into six categories: realised and unrealised gains and losses, interest, dividends, rent, and other investment income. The chart highlights notable differences in income structure between scheme types⁹.

For DB schemes, investment income is overwhelmingly concentrated in realised gains and losses, which account for more than two-thirds of the total. This indicates a stronger reliance on the sale of assets at a profit (or loss), possibly reflecting more frequent portfolio rebalancing or a preference for crystallising gains over time. Income from interest and dividends is also present, though it represents a much smaller share. Unrealised gains and losses—which capture changes in asset values that have not yet been realised—play only a marginal role in the investment income of DB schemes. Income from rent and other sources is negligible.

In contrast, DC schemes show a more diversified income profile. While realised gains and losses still contribute a meaningful share, unrealised gains and losses make up a substantial portion—over one-third of total investment income. DC schemes also generate relatively more income from interest and dividends than DB schemes, indicating a broader mix of return-generating strategies. As with DB schemes, rent and other investment income remain minor components.

In the total column, which aggregates income across both DB and DC schemes, realised gains and losses remain the dominant category, although their share is diluted somewhat by the higher contribution of unrealised gains and other income sources in DC schemes. The total distribution therefore reflects the heavier weighting of DB schemes in the aggregate but also captures the relatively more diverse income structure of DC schemes.

These differences in income composition may reflect variations in investment strategy, asset allocation, maturity of the portfolios, or valuation approaches across scheme types.

⁹ In case of DB schemes, the realised gains and losses are attributable to NL in a proportion of approximately 87.76%.

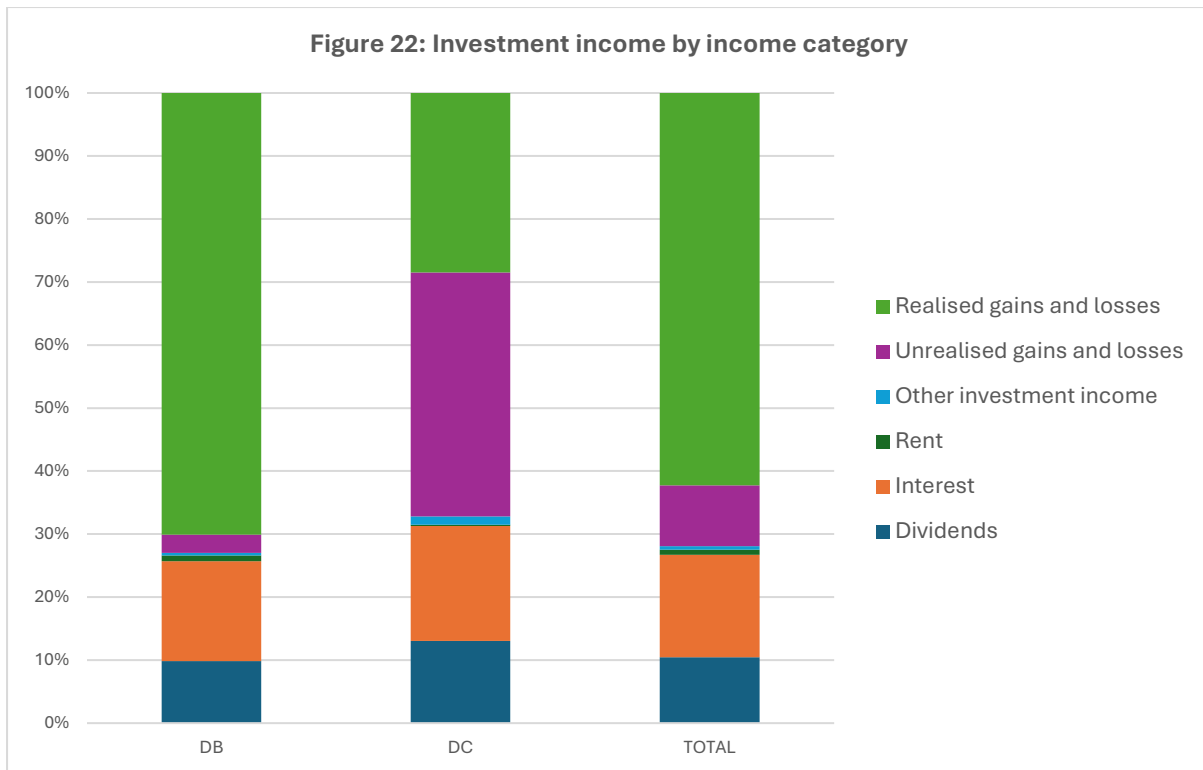


Figure 23 breaks down the composition of investment income for DB schemes by scheme size. The chart highlights minor differences in income structure across size brackets.

For the smallest DB schemes (less than €25 million), investment income is dominated by realised gains and losses, which account for nearly three-quarters of the total. Interest and dividend income make up a small but visible portion.

In the next bracket—schemes between €25 million and €100 million—unrealised gains and losses play a much larger role, reaching close to 40% of income. This group shows a more balanced mix across realised and unrealised gains, interest, and a small amount of other investment income and dividends.

For schemes between €100 million and €500 million, the share of unrealised gains decreases again, and the dominance of realised gains and losses resumes. The share of dividends and interest increases slightly with size.

Among the largest DB schemes, the share of realised gains and losses consistently exceeds 70%, with only small contributions from unrealised gains. Income from interest and dividends on the other hand continue to increase.

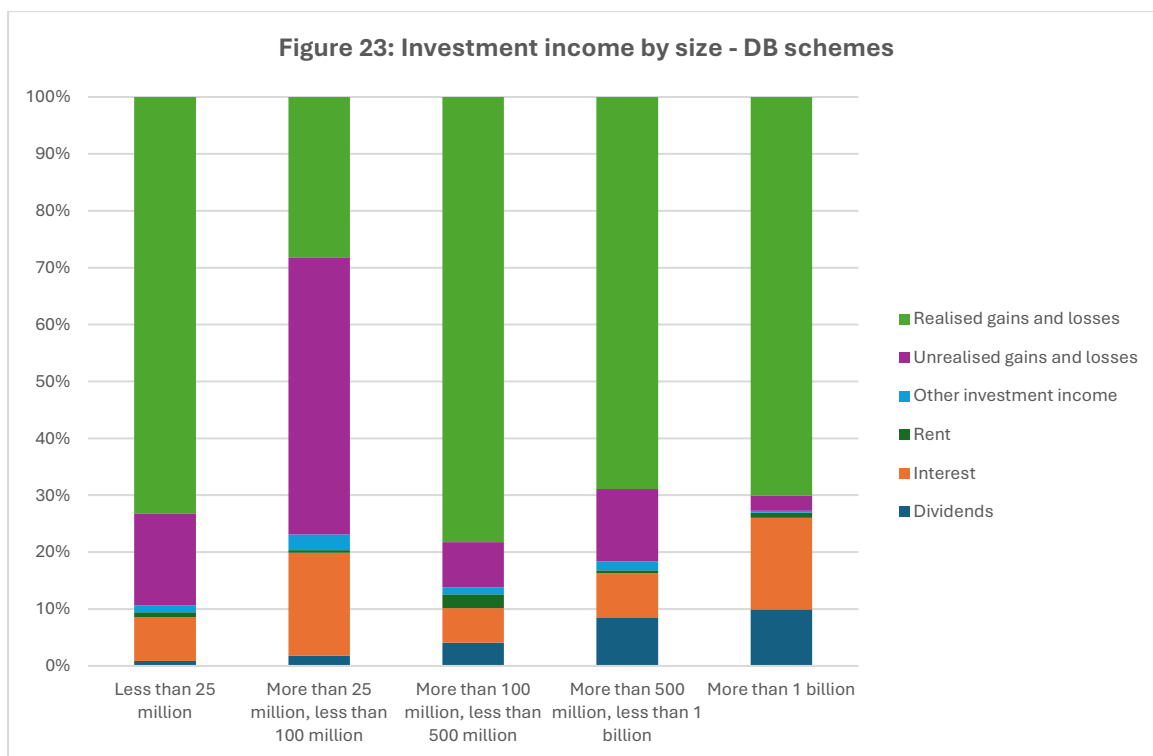


Figure 24 presents the distribution of investment income by scheme size for DC schemes. The data reveals distinct patterns compared to DB schemes, with unrealised gains playing a dominant role across most size brackets.

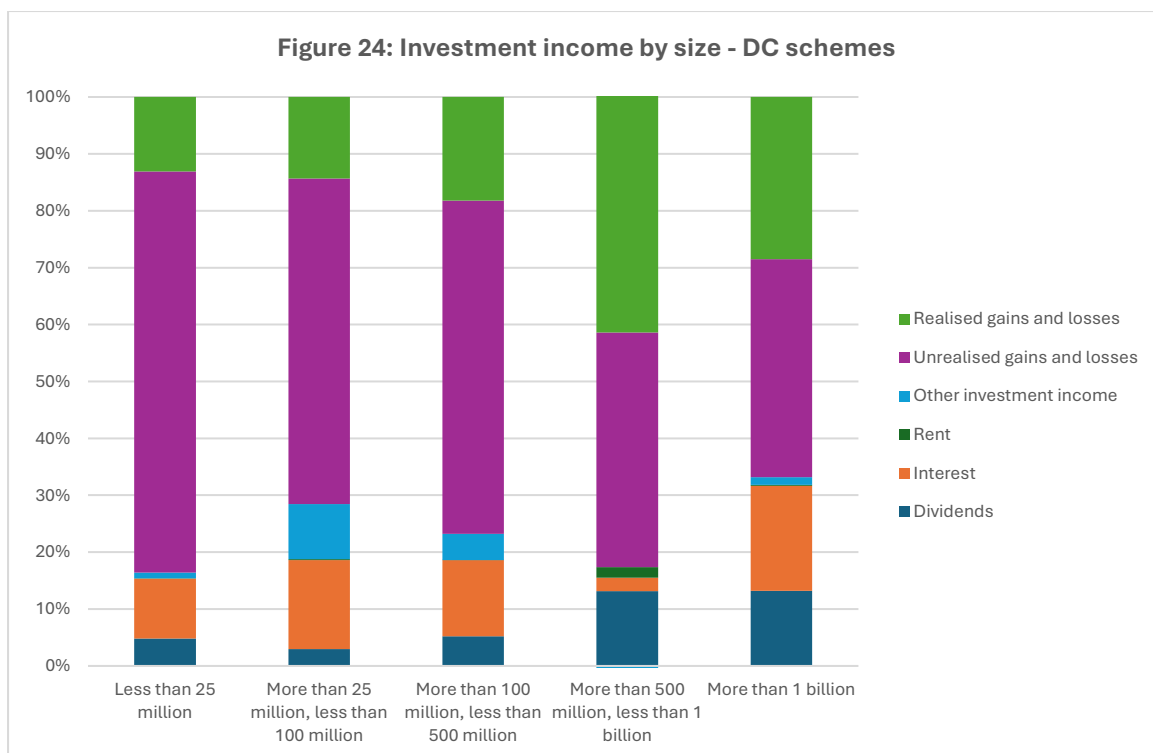
Among the smallest DC schemes (less than €25 million), unrealised gains and losses represent most of the investment income, amounting to nearly 90%. Other income categories—such as interest, dividends, and realised gains—account for only minor shares.

In the €25 million to €100 million bracket, unrealised gains remain dominant, but the share of other investment income becomes more noticeable—more than in any other group—alongside a slightly increased contribution from interest and dividends.

Mid-sized DC schemes (between €100 million and €500 million) continue to rely primarily on unrealised gains, though the proportion declines slightly, with a growing role for interest and dividends.

The top end of the medium sized schemes and the large schemes show a clear trend toward greater balance. The share of realised gains increases substantially, while the proportion of unrealised gains falls, reaching close to less than 40% in the largest bracket. Dividend and interest income also become more prominent, suggesting increased exposure to income-generating assets or a more mature investment approach.

Overall, as DC schemes grow in size, their income composition becomes more diversified, gradually shifting away from reliance on unrealised gains toward realised income and other sources.



The analysis of Figures 23 and 24 reveals distinct income profiles between DB and DC schemes, as well as differing patterns of evolution by scheme size. DB schemes, regardless of size, are consistently dominated by realised gains and losses, though mid-sized schemes show some variation with greater reliance on unrealised gains. DC schemes, by contrast, are more heavily weighted toward unrealised gains and losses, particularly among smaller schemes. However, as DC schemes grow larger, they shift toward a more balanced mix that includes realised gains, dividends, and interest.

DB schemes, especially larger ones, may pursue more stable, outcome-oriented strategies focused on managing liabilities and crystallising returns. Smaller DC schemes appear more exposed to market value fluctuations, perhaps due to more passive or growth-oriented investment approaches.

As DC schemes grow in scale, they tend to adopt income structures more akin to those of DB schemes, possibly reflecting increased investment sophistication, access to a broader range of asset classes, and a move toward risk management practices that favour diversification of return sources.

Figure 25 below illustrates annual investment returns – calculated as total investment income over total assets - for DB schemes across different size brackets between 2020 and 2024. Overall, the trend shows strong positive returns in 2020, a sharp decline in 2022, and subsequent recovery in 2023 and 2024.

In 2020 and 2021, returns were positive across all size categories, ranging from around 4% to 9%. Smaller DB schemes achieved the highest returns, close to 9%, while the largest schemes posted more moderate gains of about 5%.

In 2022, all size categories experienced substantial negative returns, reflecting market shocks during this period. On average, the largest schemes recorded the steepest decline (close to -24%), whereas the smallest schemes showed slightly less severe losses (around -12%). This suggests that larger DB schemes may have higher exposure to asset classes that were more adversely impacted, possibly due to their greater reliance on growth assets or liability-driven investment strategies sensitive to interest rate changes.

The rebound in 2023 was significant, with returns peaking at nearly 10% for the smallest schemes and slightly lower for larger ones. Recovery was broad-based, though the gap between the smallest and largest schemes persisted.

By 2024, returns converged toward a narrower range (approximately 6–7% across all sizes), indicating normalization after the volatile period.

Overall, smaller DB schemes showed less negative impact from a market downturn and also slightly higher returns during recovery phases, whereas larger schemes exhibited deeper drawdowns and slower rebounds.

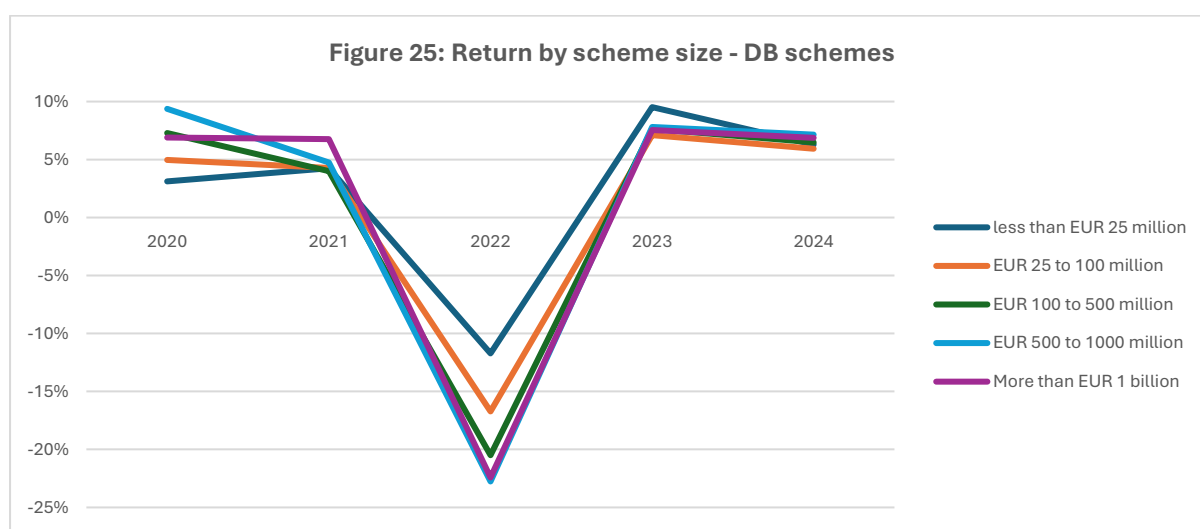


Figure 26 presents annual returns for DC schemes by size for the period 2020–2024. The pattern broadly mirrors DB schemes, but with some notable differences.

In 2020, returns were very similar cross all sizes and remained positive, around 3–4%.

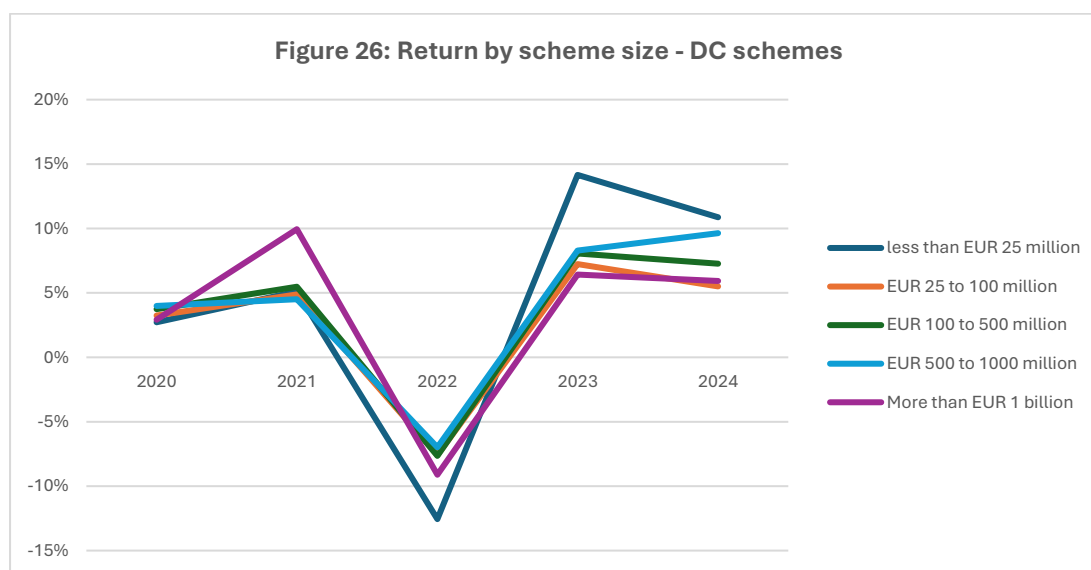
Performance was relatively uniform in 2021, with all categories posting moderate positive returns (4–6%), except for the largest DC schemes which showed a 10 percent increase.

Like DB schemes, 2022 saw significant losses, but the declines were less severe for DC schemes (ranging from -7% to -14%). Once again, contrary to DB schemes, the smallest schemes suffered the steepest drops.

Recovery was more pronounced for smaller DC schemes in 2023, which posted gains of around 14%, compared to 6–8% for the other schemes. This indicates higher responsiveness to equity market rebounds among smaller DC schemes.

By 2024, returns moderated across all sizes (roughly 5–11%), though smaller schemes continued to outperform larger ones.

Overall, DC schemes exhibit a clear size-return relationship, where smaller schemes take on higher risk and consequently experience greater volatility—both in downturns and recoveries.



When comparing DB and DC schemes, both scheme types faced significant negative returns in 2022 and strong rebounds in 2023. However, DC schemes, particularly smaller ones, were more sensitive to market movements, showing sharper gains in good years and deeper losses in downturns than DB schemes.

In both DB and DC schemes, smaller funds generally posted higher returns in positive years. But only in DC schemes, they showed larger losses during downturns, indicating a greater risk-return trade-off. Larger schemes tended to exhibit more conservative return patterns in DC schemes possibly reflecting more diversified or liability-matched portfolios. Large DB schemes on the other hand, were heavily impacted by the 2022 market shocks.

The differences between DB and DC schemes also reflect their underlying investment objectives—DB schemes prioritize liability management and stability, while DC schemes, particularly smaller ones, appear to pursue growth-oriented strategies with higher equity exposure.

These patterns highlight the importance of scheme size and investment strategy in shaping return outcomes. For supervisors and policymakers, this suggests that smaller schemes—especially DC—face higher risk exposures and may require stronger governance frameworks or diversification strategies to mitigate volatility. Meanwhile, larger DB schemes’ sensitivity to interest rate-driven market shocks underscores the need for robust risk management and hedging practices.

Figure 27 shows the relationship between investment return and scheme size for DB schemes at the end of 2024. Each point represents a scheme, and the red line indicates the trend¹⁰.

The data reveals a weak positive correlation between size and returns. While smaller schemes display a wide spread of returns—ranging from negative values to above 20%—larger schemes cluster around a narrower band, with returns generally between 4% and 8%. This suggests that

¹⁰ For graphical representation, the largest funds have been capped to EUR 50 million and the returns to 20 percent.

there is higher variability among smaller DB schemes, reflecting potentially less diversified portfolios or more concentrated risk exposures; and more stable, moderate returns for larger DB schemes, possibly due to greater diversification and potentially access to more enhanced risk management strategies.

The upward trend line indicates that larger DB schemes, on average, achieve slightly higher returns, though the difference is marginal.

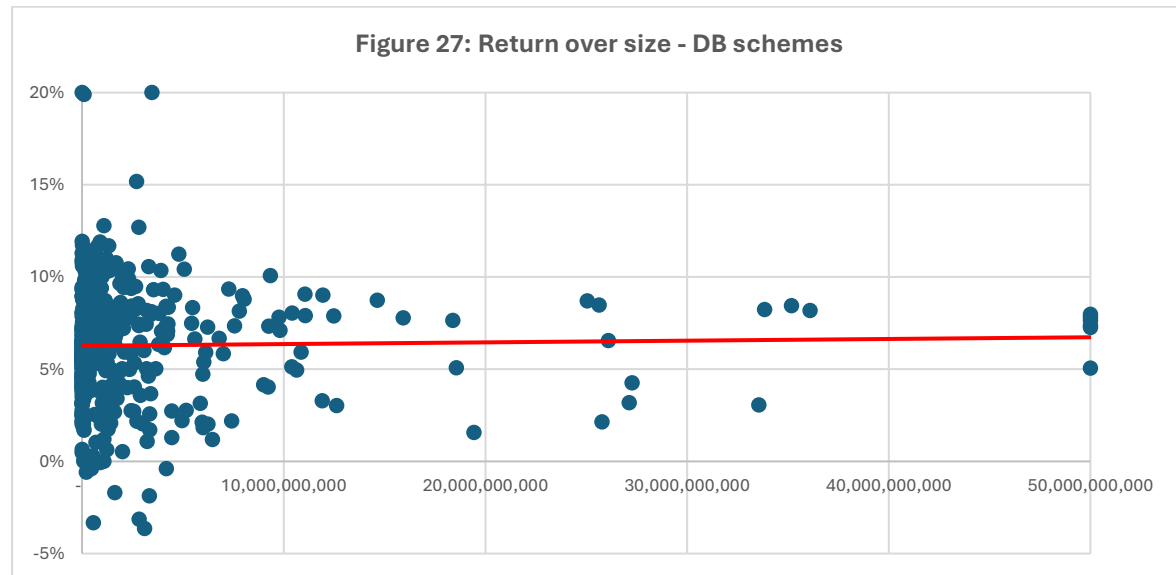
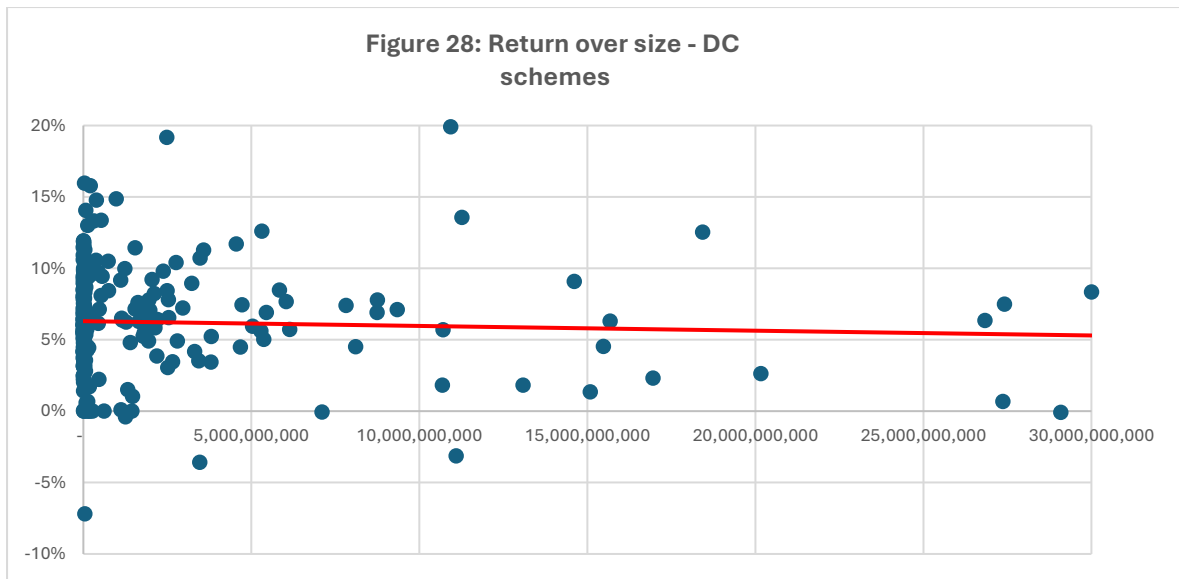


Figure 28 illustrates the same relationship for DC schemes. The distribution of points differs from DB schemes, showing a slight negative trend between size and returns.

Smaller DC schemes exhibit significant return variability, including very high positive outcomes (above 15%) and some negative returns, highlighting the higher risk-return profile in some instances. Larger DC schemes show more concentrated and lower returns, generally in the 3% –7% range, with fewer outliers. This may reflect a shift toward more conservative investment strategies as scheme size increases.

The downward-sloping trend line suggests that as DC schemes grow larger, their average returns tend to decline slightly, likely linked to diversification, governance, and a move toward strategies prioritizing risk management over income growth.



The analysis of Figures 27 and 28 indicates clear differences in how scheme size relates to return for DB and DC schemes. For DB schemes, size appears to bring marginal benefits in terms of returns and significantly reduces volatility, likely due to scale advantages in diversification, governance, and access to sophisticated risk management.

For DC schemes, size correlates with lower average returns, possibly reflecting a deliberate shift toward conservative allocations as schemes mature and governance structures might tighten.

In both scheme types, smaller schemes display higher volatility and a broader distribution of returns, indicating more aggressive investment approaches or less diversification. The higher variability in returns also suggests greater exposure to market risk and potentially weaker governance. For larger schemes, the challenge lies in balancing stability with the need to achieve adequate long-term returns, particularly in the low-interest-rate environment.

Costs

Figure 29 compares the composition of expenses between DB and DC schemes. It shows that DB schemes allocate most expenses to investment-related costs, which account for over two-thirds of total expenses. Administrative costs represent roughly a quarter, while other expenses are minimal. DC schemes, in contrast, show a more balanced distribution. Administrative expenses account for over 40% of total costs, investment expenses around 40%, and other expenses form a noticeable share (close to 20%).

These differences reflect the nature of each scheme type. DB schemes typically manage larger, more complex portfolios and employ liability-driven investment strategies, which often involve derivatives and active management, leading to higher investment costs. DC schemes, however, require more administrative processes related to member accounts, contributions, and individual choices, explaining the higher share of administrative expenses.

However, we would like to stress that the IORPs in Focus 2024 report emphasizes that these patterns mask significant differences across countries, with expense structures heavily influenced by local regulatory requirements, service models, and market practices. For example, some jurisdictions report very high administrative expenses due to individual member choice architecture and digital servicing, while others see investment costs dominating due to complex asset strategies or external asset management fees.

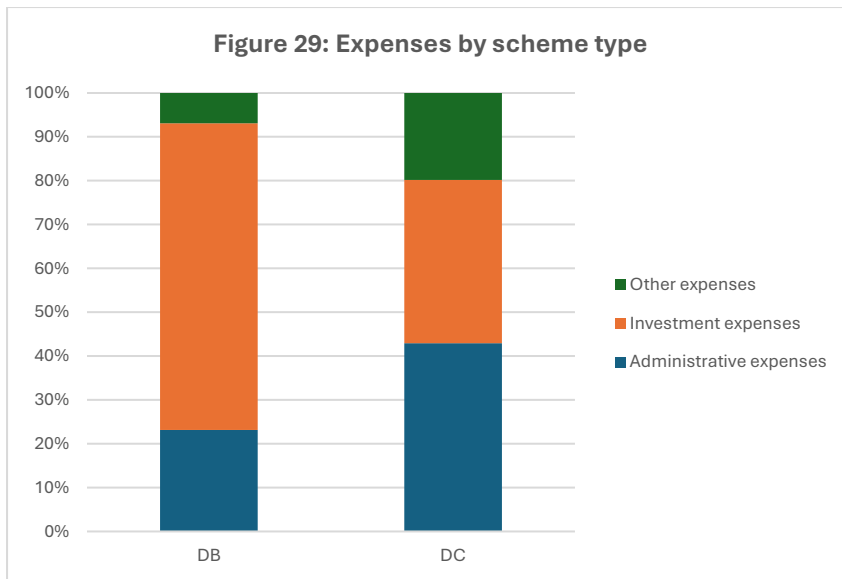


Figure 30 breaks down expenses by size for DB schemes. Across all size brackets, investment expenses dominate, accounting for most total costs. For small DB schemes, investment expenses represent about two-thirds of the total, with administrative and other expenses forming the rest. As scheme size increases, the share of investment expenses rises, reaching over 70% for the largest schemes, while administrative costs remain relatively stable or decline slightly in proportion. Other expenses are more relevant in smaller schemes but become negligible at the largest scale.

This pattern suggests economies of scale in administrative activities, while investment costs remain high due to complex strategies implemented by larger schemes.

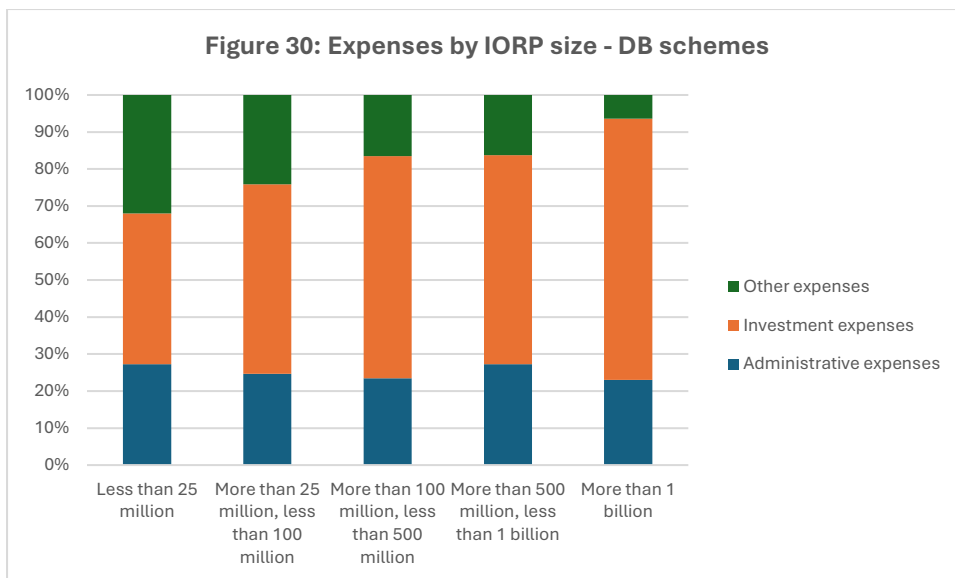
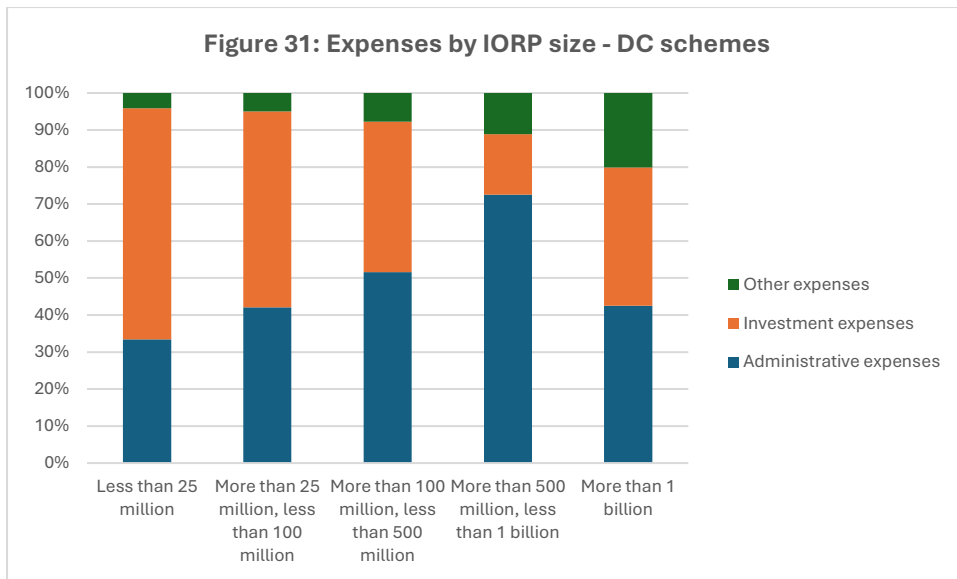


Figure 31 shows expenses by size for DC schemes, showing a different trend compared to DB. For small DC schemes, administrative expenses dominate, representing over one-third of costs, while investment expenses are also significant. As schemes grow larger, the share of administrative costs generally increases. This suggests higher servicing costs related to more complex benefit structures or individual account management. For the largest DC schemes administrative costs remain high while investment costs regain prominence, and other expenses also increase.



DB schemes show clearer economies of scale in administration, while DC schemes display mixed patterns, with some size categories incurring proportionally higher costs. However, the magnitude of expenses and their composition vary significantly across countries, as mentioned above. This variation underlines the importance of considering national context when assessing expense ratios or efficiency measures.

Figure 32 illustrates the relationship between total costs (as a percentage of assets) and scheme size for defined DB schemes¹¹. Each point represents a scheme, and the trend line shows the overall pattern.

The chart reveals a clear negative correlation between costs and size, suggesting that larger DB schemes benefit from significant economies of scale. Smaller DB schemes also display a wide dispersion of cost ratios, ranging from near zero to above 4–5% of assets, highlighting high variability in cost efficiency and potential operational inefficiencies among smaller players. Larger DB schemes show much lower cost ratios, clustering around 0.5%, reflecting scale advantages and more efficient cost structures.

The downward trend line confirms that as DB schemes grow in asset size, the proportion of costs to assets decreases significantly, which clearly shows cost variances linked to scale and market structure.

¹¹ For graphical representation, the largest funds have been capped to EUR 10 million and the costs percentages to 5 percent.

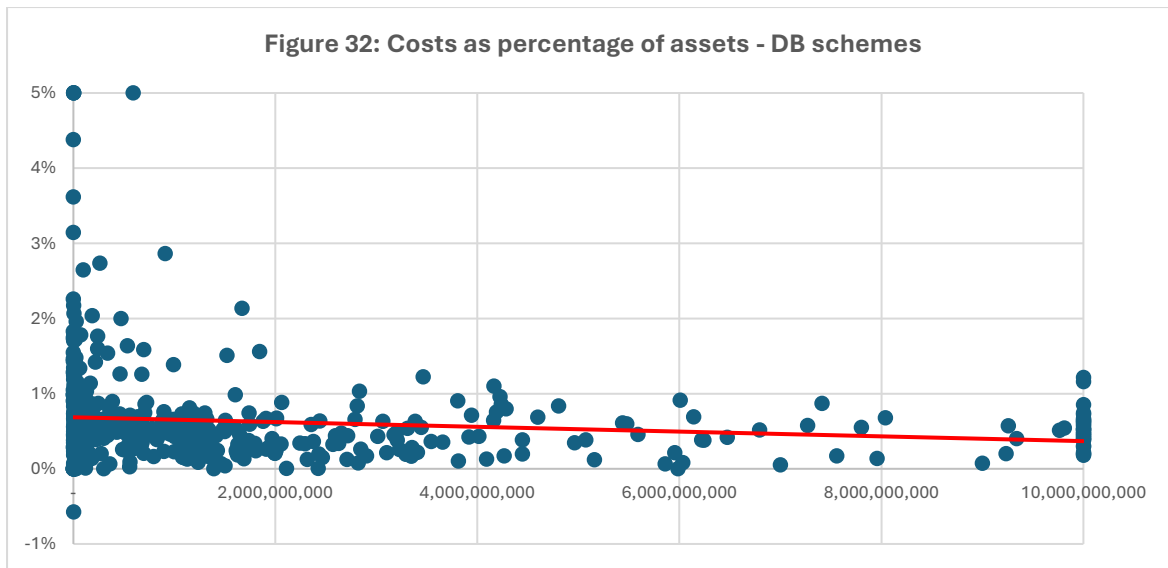
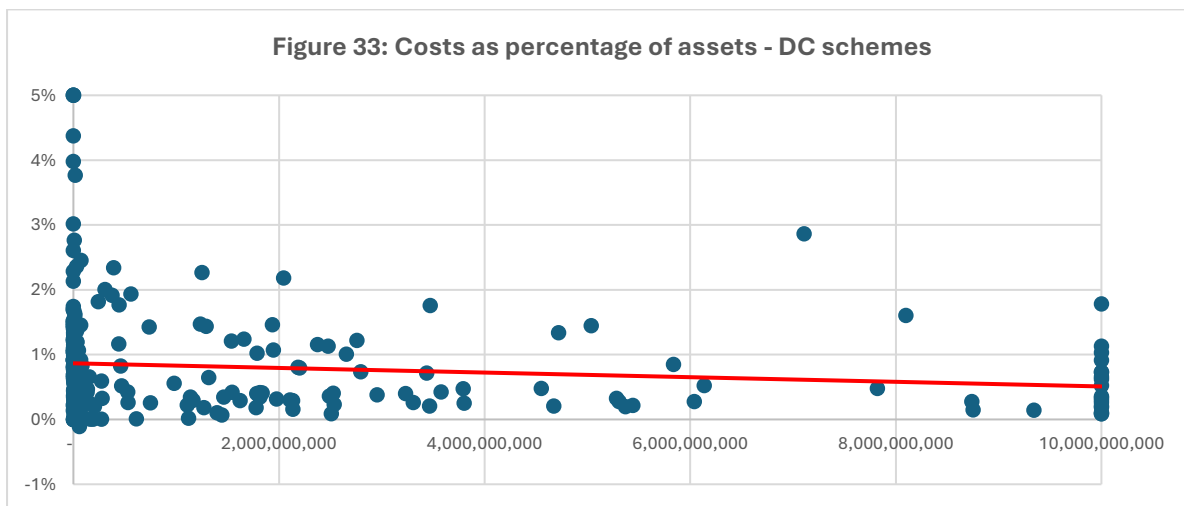


Figure 33 presents a similar analysis for DC schemes. The pattern broadly mirrors that of DB schemes but with some distinctions. Smaller DC schemes exhibit on average higher cost ratios with considerable variation across the sample. This potentially reflects higher fixed costs and administrative overhead when spread across smaller asset bases, as well as potentially less bargaining power for investment management fees.

Larger DC schemes generally report lower cost ratios, though the downward trend is less pronounced compared to DB schemes, possibly due to member-level administrative costs that remain significant even at larger sizes.



Overall, while size clearly helps reduce cost ratios for DC schemes, administrative complexity may limit the full realization of scale benefits compared to DB schemes. This evidence suggests merging or pooling smaller schemes could significantly reduce costs, especially in markets with a high prevalence of small IORPs. For DC schemes, automation and digitalization may also help achieve stronger scale effects on administrative expenses.