EIOPA INSURANCE RISK DASHBOARD

May 2023

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15 May 2023

European Insurance and Occupational Pensions Authority

INSURANCE RISK DASHBOARD*

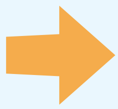
* The reference date for company data is Q4-2022 for quarterly indicators and 2021-YE for annual indicators. The cut-off date for most market indicators is end of March 2023. The Level (colour) corresponds to the level of risk as of the reference date, the Trend is displayed for the 3 months preceding the reference date and the Outlook is displayed for the 12 months after the reference date. The latter is based on the responses received from 27 national competent authorities (NCAs) and ranked accordingly to the expected change in the materiality of each risk (substantial decrease, decrease, unchanged, increase and substantial increase).

RISK DASHBOARD – KEY OBSERVATIONS

- Risk levels for the European insurance sector remain broadly constant. **Macro-related risks** remain among the most relevant for the insurance sector. Forecasted GDP growth at global level further increased to 0.53%. CPI forecasts hover around the high level of the latest assessment. Unemployment rates for the main geographical areas remained at low level. The weighted average of 10 years swap rates remains at higher level. Fiscal balances have deteriorated. The credit-to-GDP gap slightly increased. Central banks continue their contractionary monetary policy. **Credit risks** remain at medium level. The CDS spreads increased for financial unsecured bonds in the first quarter of 2023, after the recent turmoil in the banking sector, while insurers' median exposure this asset class had increased in Q4-2022. The median average credit quality of insurers' investments remained stable, however it deteriorated for the top percentile of the distribution. The median share of below investment grade assets (with a credit quality step higher than 3) in insurers' portfolios decreased. **Market risks** remain at high level. Volatility in the bond market increased and equity market remained at higher level compared to the previous assessment. The median for the indicator on the concentration of assets decreased.
- **Liquidity and funding risks** remain at medium level with an increasing trend. Cash holdings reported a drop in the last quarter of 2022. On the other hand, lapse rates increased. **Profitability and solvency risks** remain at medium level. Life insurers reported an increase in their SCR ratio, while the SCR ratio of non-life insurers experienced a slight decrease. Return on assets and return to premiums increased. The net combined ratio (for non-life insurers) deteriorated.
- **Interlinkage and imbalance risks** remain at medium level. Although to a lower extent, insurers continued realizing market to market losses on those derivatives positions aimed at hedging interest rates declines. The exposure to banks and other financial institutions increased. **Insurance risks** remain at medium level. The year-on-year premium growth for life insurance continued decreasing reaching the negative territory for the second consecutive quarter.
- **Market perceptions** remain at medium level. Insurance life stocks overperformed, while non-life underperformed the market. The median price-to-earnings ratio of insurance groups increased. The median of CDS spreads of insurers slightly decreased. Insurers' external ratings remained broadly stable since the last assessment.
- **ESG related risks** remain at medium level. The median exposure toward climate relevant assets slightly increased to 3.2 % of total assets. The share of insurers' investment in green bond over total green bonds outstanding slightly decreased compared to the previous quarter. The y-o-y growth of green bonds outstanding slightly decreased, while the median growth of insurers' investment in green bonds increased.
- **Digitalisation and cyber risks** are at medium level. The materiality of these risks for insurance as assessed by supervisors remains high. The frequency of cyber incidents impacting all sectors of activity, as measured by publicly available data, decreased since the same quarter of last year. Cyber negative sentiment indicates a high amid stable concern in the first quarter of 2023.

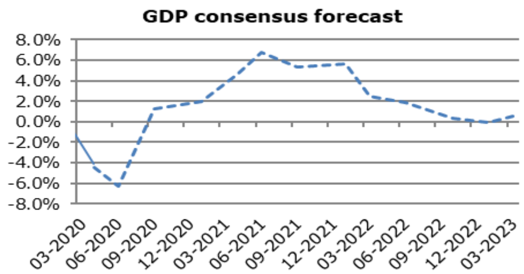
MACRO RISKS

Macro-related risks remain among the most relevant for the insurance sector. Forecasted GDP growth at global level further increased to 0.53%. CPI forecasts hover around the high level of the latest assessment. Unemployment rates for the main geographical areas remained at low level. The weighted average of 10 years swap rates remains at higher level. Fiscal balances have deteriorated. The credit-to-GDP gap slightly increased. Central banks continue the normalization of their monetary policy: the average global policy rates have increased to 2.7% and balance sheets' sizes have been decreasing.



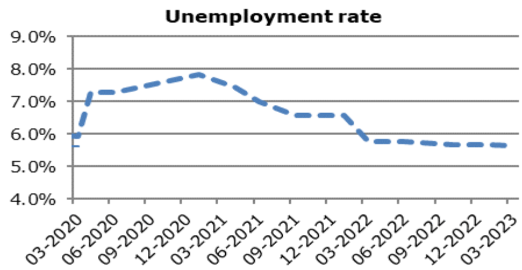
LEVEL: HIGH
TREND: CONSTANT

Forecasted GDP growth for the next four quarters decreased from 0.34% to -0.06%. Expectations of EU GDP growth for the forecast horizon are lower than the global average. Compared to the previous assessment, forecasts have been revised downward.



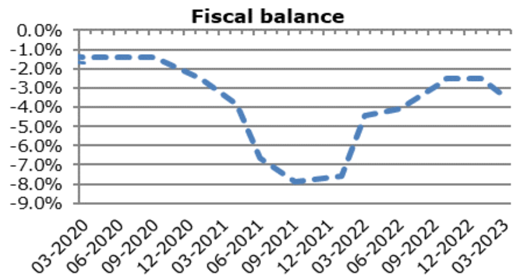
Note: Average of forecasts four quarters ahead, weighted average for Euro area, United Kingdom, Switzerland, United States, BRICS. Source: Bloomberg Finance L.P.

The latest data on unemployment rates across major geographical areas slightly decreased to 5.4% from 5.6% of the previous assessment.



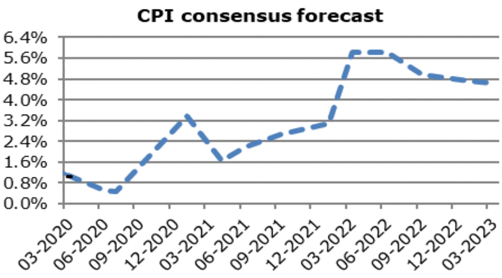
Note: Weighted average for EU, Switzerland, United States, China. Source: Refinitiv

Fiscal balances deteriorated to around -3.4% of GDP (compared to -2.5% in the previous quarter).



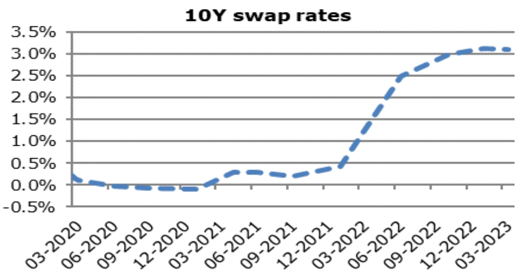
Note: Weighted average for EU, UK and United States.
Source: Refinitiv

Forecasted inflation for the next four quarters hover around 4.6%.



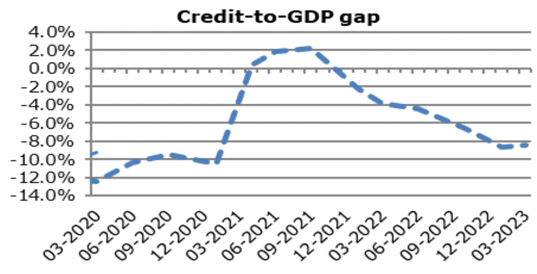
Note: Average of forecasts four quarters ahead, weighted average for Euro area, United Kingdom, Switzerland, United States, BRICS. Source: Bloomberg Finance L.P.

The indicator on the 10 years swap rates across main currencies hovers around 3.1% in the first quarter of 2023.



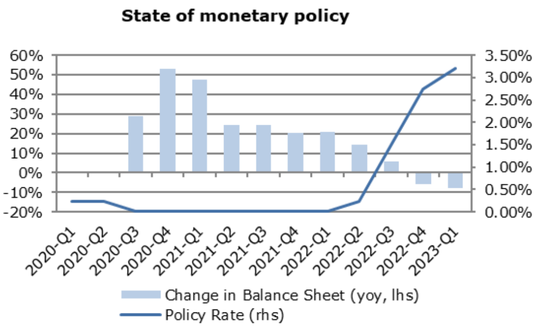
Note: Weighted average for EUR, GBP, CHF, USD. Source: Refinitiv

The credit to GDP gap across main geographical areas slightly increased to -8.4%.



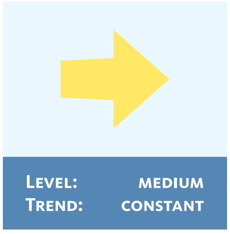
Note: Weighted average for Euro area, United Kingdom, Switzerland, United States, China. Source: BIS

Central banks continue to adjust their expansionary actions. The average policy rate significantly increased from 2.74% to 3.20%. The balance sheets of the major central banks have been decreasing.



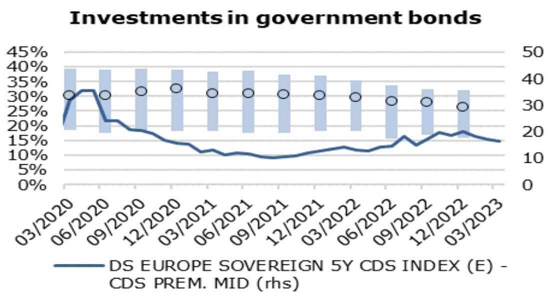
Note: Weighted average for Euro area, United Kingdom, Switzerland, United States. Source: Bloomberg Finance L.P.

CREDIT RISKS



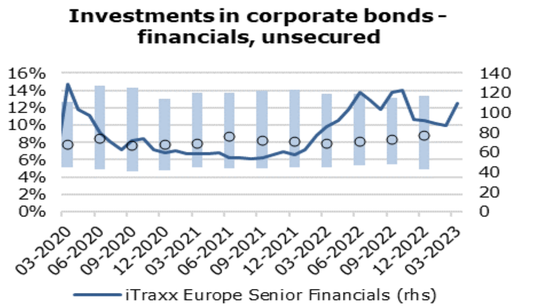
Credit risks remain at medium level. The CDS spreads slightly decreased for sovereigns, and non financial bonds, while increasing for financials in the first quarter of 2023. Insurers' exposure to government and non-financial bonds decreased, while it increased for financials unsecured in Q4-2022. The median average credit quality of insurers' investments remained stable, however it deteriorated for the top percentile of the distribution. The median share of below investment grade assets (with a credit quality step higher than 3) in insurers' portfolios decreased.

In the first quarter of 2023, CDS spreads for European sovereign bonds slightly decreased. Insurers' median exposures to this asset class decreased to 26% of total assets in Q4-2022 (from 28%).



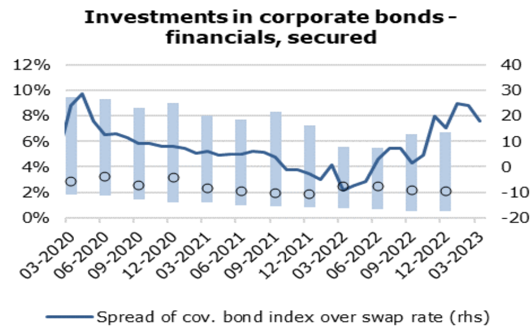
Note: Left scale shows the distribution of exposures (inter-quartile range and median), right scale the risk measure. Source: Refinitiv, QFG ($N_{2022\ Q4}$=95)

Spreads for unsecured financial bonds increased in the first quarter of 2023, reacting to the recent turmoil in the banking sector. The median exposures of EU27 insurers' investments slightly increased to 8.8% in Q4 2022 (from 8.3%).



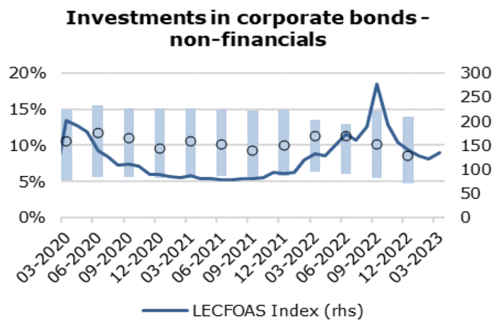
Note: Left scale shows the distribution of exposures (inter-quartile range and median), right scale the risk measure. Source: Refinitiv, QFG ($N_{2022\ Q4}$=82)

Spreads for secured financial bonds increased substantially and then decreased during the last three months, however overall they increased to higher level compared to the previous assessment, from 15bps to 18bpts. Median exposures of EU27 hover around to 2.2% of total assets in Q4-2022.



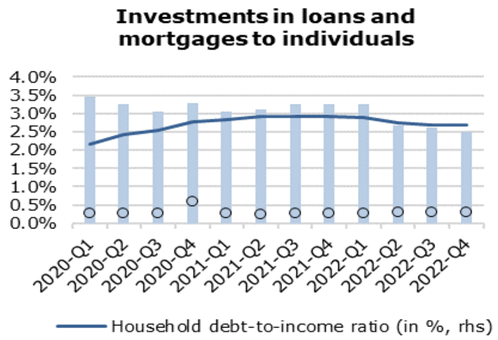
Note: Left scale shows the distribution of exposures (inter-quartile range and median), right scale the risk measure. Source: Bloomberg Finance L.P., QFG ($N_{2022\ Q4}$=76)

Spreads for non-financial corporate bonds slightly decreased to 135bpts, compared to end of 2022, despite the most recent upward trend. Median exposure to non-financial corporate bond for EU27 slightly decreased to 9% of total assets in Q4-2022.



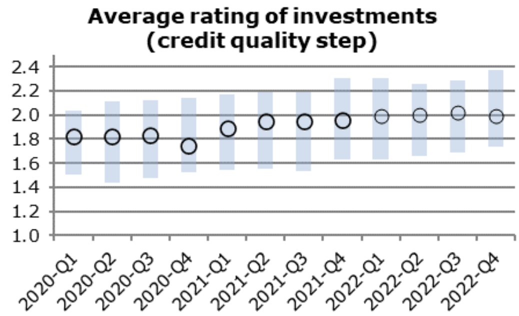
Note: Left scale shows the distribution of exposures (inter-quartile range and median), right scale the risk measure. Source: Bloomberg Finance L.P., QFG ($N_{2022\ Q4}$=82)

The household debt-to-income ratio hovered around 103%. The median exposures to loans and mortgages remained at 0.30% of total assets for Q4-2022.



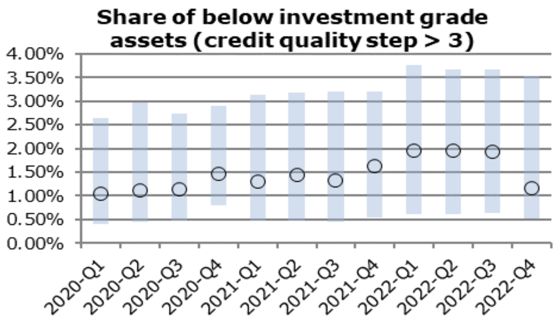
Note: Left scale shows the distribution of exposures (inter-quartile range and median), right scale the risk measure (weighted average of EA and UK). Source: QFG ($N_{2022\ Q4}$=95), ECB

The median average credit quality step hovered around 2, corresponding to an S&P rating between AA and A, however the 75th percentile increased from 2.6 to 3 indicating a decrease in credit quality.



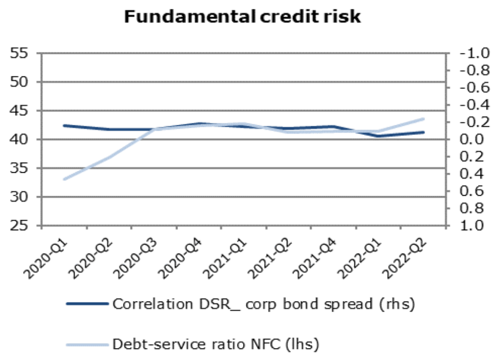
Note: Distribution of indicator (interquartile range, median). Source: QFG ($N_{2022\ Q4}$=91)

The median share of below investment grade assets (with a credit quality step higher than 3) decreased to around 1.17% in Q4-2022 (from 1.9%).



Note: Distribution of indicator (interquartile range, median). Includes both internal and external credit ratings. Source: QFG ($N_{2022\ Q4}$=93)

The correlation between the debt-service ratio of non-financial corporations and corporate bond spreads slightly increased. The debt service ratio hovers around the same level for all the countries considered.

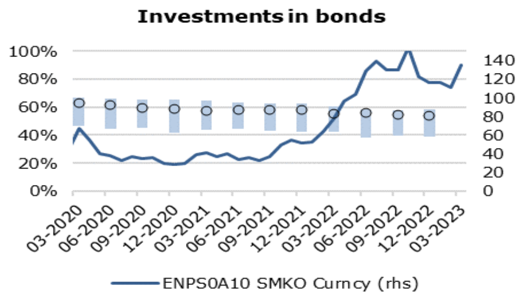


Note: Correlation between the debt-service ratio of non-financial corporates and the spread of non-financial corporate bonds based on a 12-quarter rolling window. Source: BIS, Bloomberg Finance L.P.

MARKET RISKS

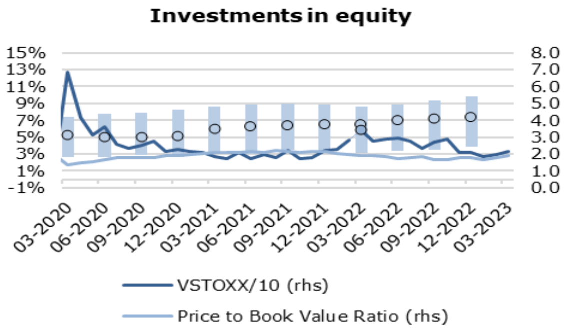
Market risks remain at high level. Volatility in the bond and in the equity markets increased in the first quarter of 2023. There were no significant changes in the relative exposures of insurers towards bonds, equity and property. The median for the indicator on the concentration of assets decreased.

The volatility in interest rates (proxied by the index on the swap option for the Euro) increased around 130bps in the first quarter of 2023. Median exposures to bonds slightly decreased to 53% of total assets in Q4-2022.



Note: Left scale shows the distribution of exposures (inter-quartile range and median), right scale the risk measure.The previous volatility indicator was discontinued and has been substituted by the swap option in this version of the risk dashboard. Source: Bloomberg Finance L.P., QFG ($N_{2022\ Q4}$=95)

Volatility of equity prices slightly increased compared to the level as in the last quarter of 2022. Median exposures to equity hover around 7% of total assets in Q4-2022.

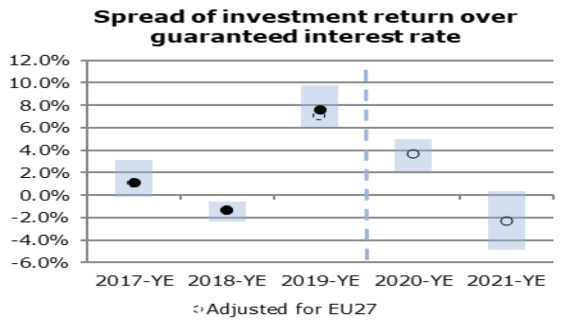


Note: Left scale shows the distribution of exposures (inter-quartile range and median), right scale the risk measure. Source: Bloomberg Finance L.P., QFG ($N_{2022\ Q4}$=95)

The indicator on the annual growth rate of real estate prices slightly decreased to 4 % in Q4-2022 (from 4.5%). Median exposures to property slightly decreased from 3.8% to 3.4% of total assets in Q4-2022.

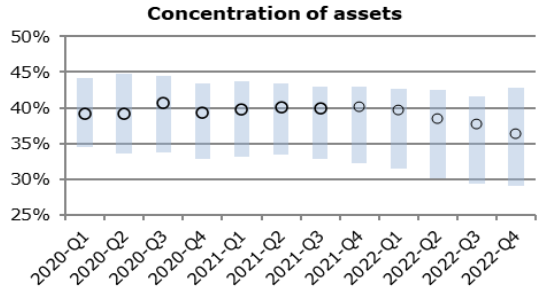
Note: Left scale shows the distribution of exposures (inter-quartile range and median), right scale the risk measure. From Q1-2019 time series revised due to changes in source data from the ECB. Latest observation for property prices is Q3-2022. Source: QFG ($N_{2022\ Q4}$=95); ECB

The median spread of investment returns over guaranteed rates decreased to -2% at the end of 2021.



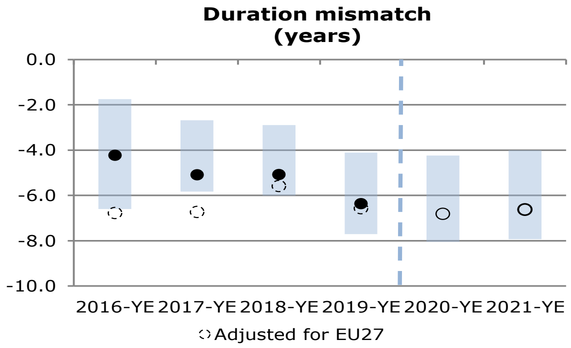
Note: Distribution of indicator (interquartile range, median). Figures have been updated for YE2021. Figures for 2021-YE have been revised. The numerator of the investment return ratio includes Solvency II reported unrealised gains and losses. Source: ARS (N_{2021}=396)

The median for the indicator on the concentration of assets decreased to 36% in Q4-2022 (from 37.7%).



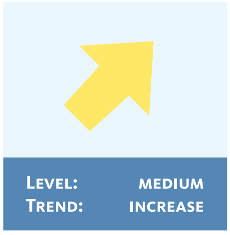
Note: Herfindal Hirshman index computed on six balance sheet asset classes (government bonds, corporate bonds, equities, properties, cash and cash equivalents and loans and mortgages). Distribution of indicator (interquartile range, median). Source: QFG ($N_{2022\ Q4}$=96)

The distribution of the duration mismatch indicator hovered from 2020 to 2021, with the median mismatch standing at around -7 years. Duration mismatch is based on the modified duration of the fixed income assets and of the liabilities. Duration of the liabilities does not take into account optionalities such as a future profit participation.



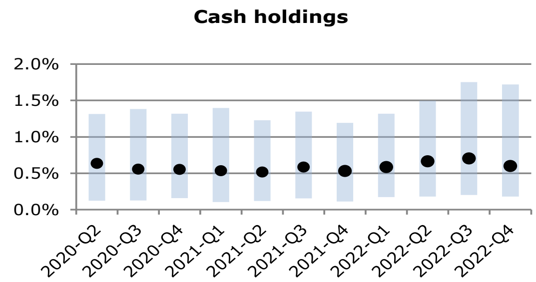
Note: Distribution of indicator (interquartile range, median). Source: Assets QFG ($N_{2021\ Q4}$=83); Liabilities AFG (N_{2021}=83)

LIQUIDITY AND FUNDING RISKS



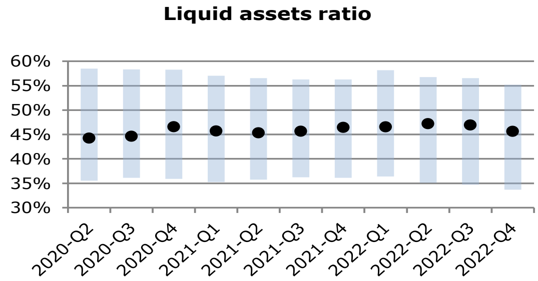
Liquidity and funding risks remain at medium level with an increasing trend. Cash holdings reported a drop in the last quarter of 2022, after the increasing in the previous quarters. Similarly, the liquid asset ratio decreased. On the other hand, lapse rates increased. Bond issuance remains overall unchanged. Catastrophe bond issuance increased following the seasonality experienced in the past years, with the majority of cat bonds covering US multi-risk natural catastrophe (earthquake and storm).

The median of cash holdings shifted downwards in the last quarter of 2022, after the increase reported in the pervious quarters. The median stands at 0.60% in Q4-2022 (0.70% in the previous quarter).



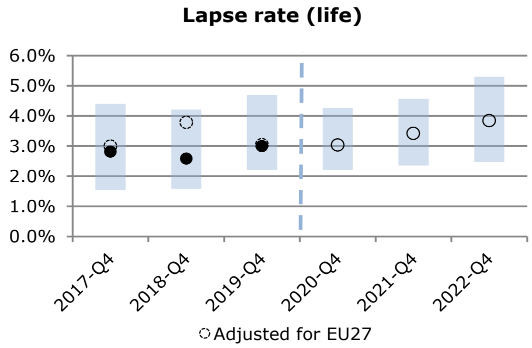
Note: Distribution of indicator (interquartile range, median). Source: QRS ($N_{2022\ Q4}$=1,766).

The distribution range of the liquid assets to total assets ratio shifted downwards, with the median standing at 45.6% in Q4-2022 (47% in Q3-2022).



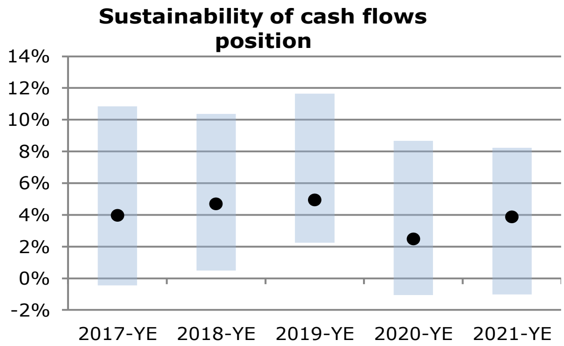
Note: Distribution of indicator (interquartile range, median). Source: QRS ($N_{2022\ Q4}$=1,735).

The distribution of lapse rates in life business shifted upwards, with a median standing at 3.8% in Q4-2022 (+0.4 p.p. compared to the previous year).



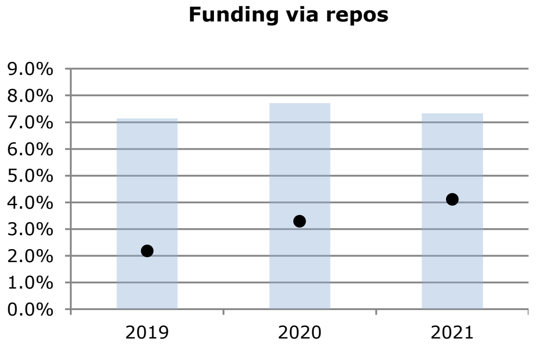
Note: Distribution of indicator (interquartile range, median). The dashed line indicates a break after UK exit and exclusion of UK undertakings from the distributions.Source: QFG (N2022 Q4=92)

The median of the sustainability of cash flow position increased to 3.9% in 2021 from 2.5% in 2020.



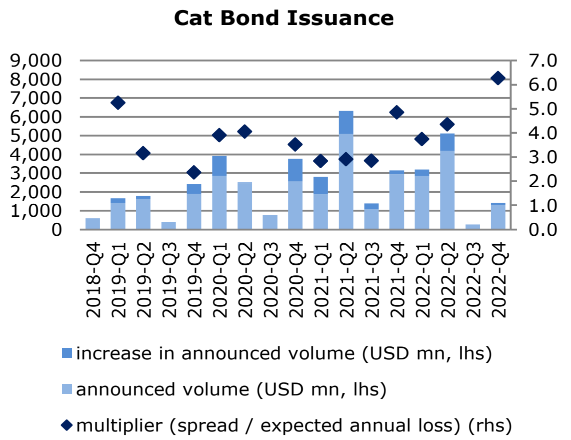
Note: Distribution of indicator (interquartile range, median). Source: ARS (N_{2021}=2,310).

The median of the funding via repos increased to 4.1% in 2021 from 3.3% in the previous year.



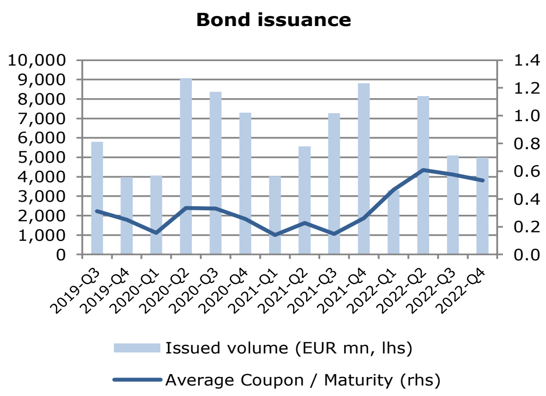
Note: Distribution of indicator (interquartile range, median). Source: ARS (N_{2021}=94).

Catastrophe bond issuance significantly increased in Q4-2022 to USD 1,311 million (267 million in Q3-2022), following the seasonality experienced in the past years. Also, the multiplier increased by 6.The majority of cat bonds issued covered US multi-risk natural catastrophe (earthquake and storm).



Note: Volumes in USD mn, spread in per cent. Source: http://artemis.bm

Bond issuance volumes remains stable to EUR 5 billion in Q4-2022. The average ratio of coupons to maturity slightly dropped to 0.53 from 0.58.



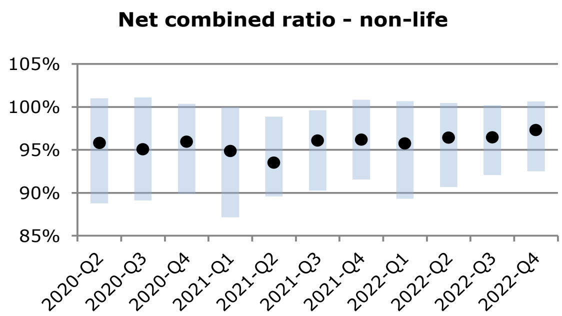
Note: Volume in EUR mn. Source: Bloomberg Finance L.P.

PROFITABILITY AND SOLVENCY

Profitability and solvency risks remain at medium level. Life insurers reported an increase in their SCR ratio, standing below the values reached at the beginning of the year due to the increase of risk-free rates. On the other hand, the SCR ratio of non-life insurers experienced a slight decrease. The return indicators such as return on assets and return to premiums increased. The net combined ratio (for non-life insurers) deteriorated.

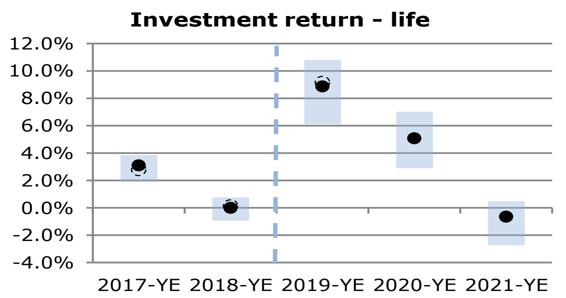
LEVEL: MEDIUM
TREND: CONSTANT

The median of the net combined ratio for non-life slightly increased to 97% in Q4-2022 (from 96.5% in the previous quarter), with the lower tail shrinking.



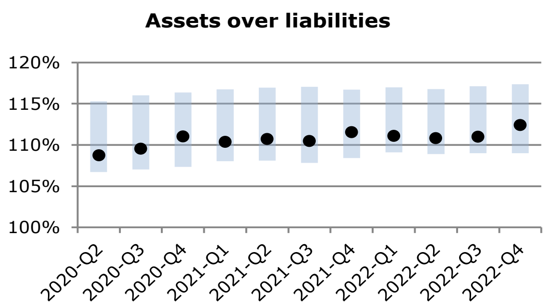
Note: Distribution of indicator (interquartile range, median). Source: QRS (N_{2022} Q4=1,351).

The distribution range of the return on investments for life solo undertakings shifted downwards, with a median of -0.6% in 2021 (-5.7 p.p. compared to the previous year).



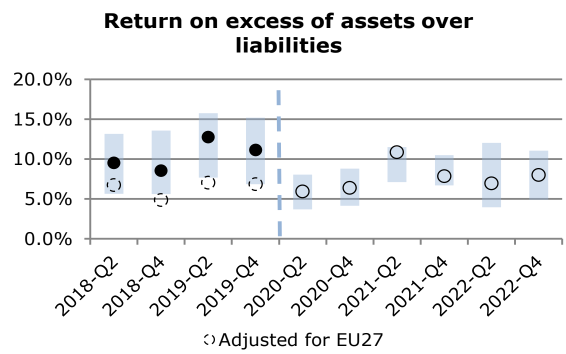
Note: Distribution of indicator (interquartile range, median). The numerator of the investment return ratio includes Solvency II reported unrealised gains and losses.Source: ARS (N_{2021}=389).

The median of the ratio of assets over liabilities increased to 112% in Q4-2022. Due to the higher interest rates, liabilities dropped to a higher extent than assets due to the duration gap.



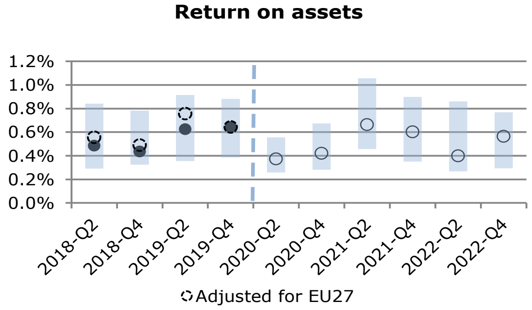
Note: Distribution of indicator (interquartile range, median). Source: QFG ($N_{2022\ Q4}$=95).

The median of return on excess of assets over liabilities (based on statutory accounts) shifted upwards to 8% in Q4-2022 due to the increase on returns.



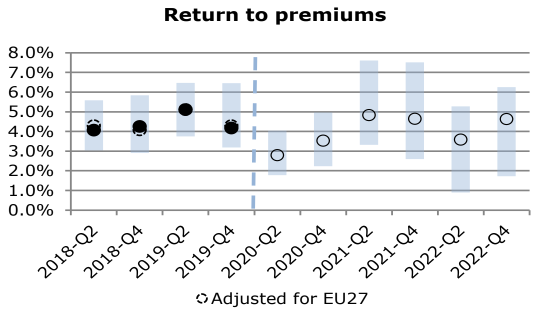
Note: Distribution of indicator (interquartile range, median). Q2 figures annualised. The dashed line indicates a break after UK exit and exclusion of UK undertakings from the distributions.Source: QFG and ARG ($N_{2022\ Q4}$=91).

The median ratio of return on assets (based on statutory accounts) increased to 0.6% (from 0.2% in Q2-2022) given the higher returns obtained in the last quarter of 2022.



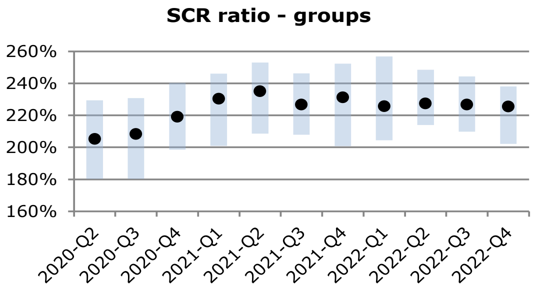
Note: Distribution of indicator (interquartile range, median). Q2 figures annualized. Source: QFG and ARG ($N_{2022\ Q4}$=92).

The distribution of return to premiums moved upwards, with a median around 4.6% in Q4-2022 (3.6% in Q2-2022).



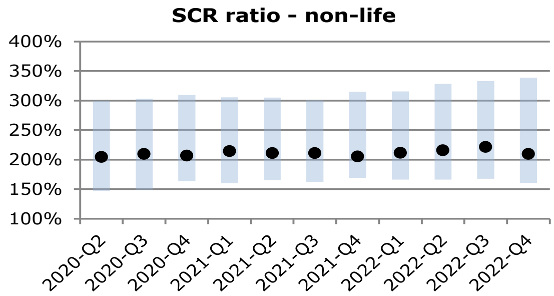
Note: Distribution of indicator (interquartile range, median). Source: “Total” QFG ($N_{2022\ Q4}$=95).

The median SCR ratio for groups slightly hover around 225% in Q4-2022. The lower tail of the distribution decreased by -7.7 p.p., indicating a continued deterioration of SCR ratios for the insurance groups with lower ratios.



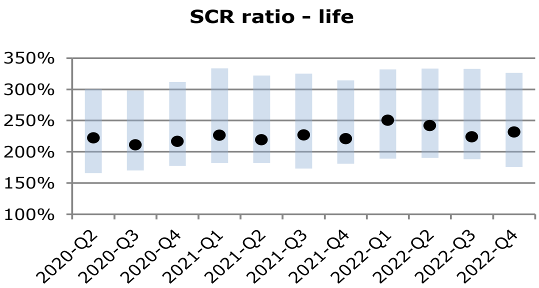
Note: Distribution of indicator (interquartile range, median). Source: “Total” QFG ($N_{2022\ Q4}$=94).

The median SCR ratio for non-life solo undertakings shifted downwards to 210% in Q4-2022 (221% in Q3-2022).



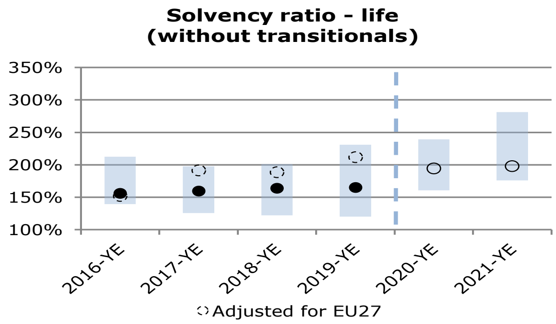
Note: Distribution of indicator (interquartile range, median).Source: QRS ($N_{2022\ Q4}$=1,069).

The median SCR ratio for life solo undertakings increased, standing around 231%, below the values reached at the beginning of 2022 as a result of the increase in the risk-free rates. Whereas, the lower tail of the distribution dropped.



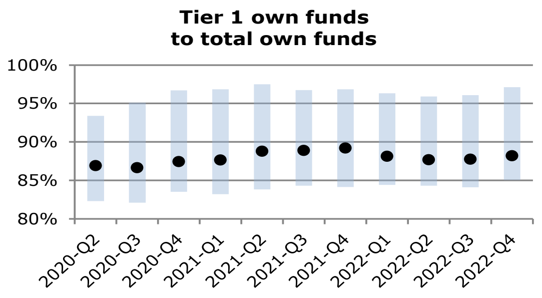
Note: Distribution of indicator (interquartile range, median). Source: QRS ($N_{2022\ Q4}$=372).

The median SCR ratio of life solo companies excluding the impact of transitional measures remains unchanged, around 197%, while the lower tail increased. The latter indicates an improvement for the life undertakings with lowest SCR ratios (without transitional).



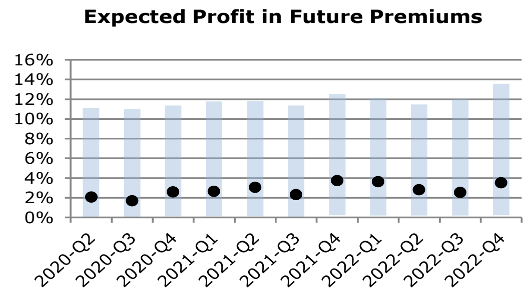
Note: Distribution of indicator (interquartile range, median). Source: ARS (N_{2021}=237).

The distribution range of tier 1 capital in total own funds remains overall stable, with a median standing around 88% in Q4-2022.



Note: Distribution of indicator (interquartile range, median). Source: QFG ($N_{2022\ Q4}$=96).

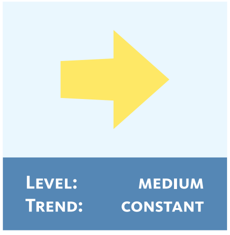
The median share of expected profit in future premiums as a percentage of total eligible own funds increased to 3.5% in Q4-2022 from 2.5% in the previous quarter. Whereas, the upper tail of the distribution continued increasing.



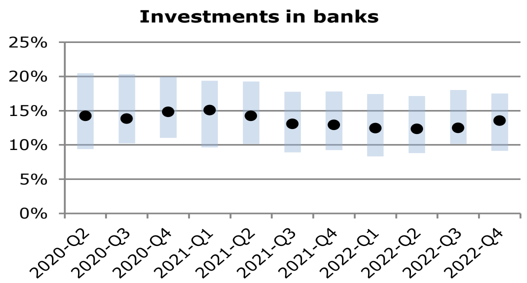
Note: Distribution of indicator (interquartile range, median).Source: QRS ($N_{2022\ Q4}$=1,835).

INTERLINKAGES AND IMBALANCES

Interlinkages and imbalances risks remain at medium level in Q4-2022. Although to a lower extent, insurers continued realizing market to market losses on those derivatives positions aimed at hedging interest rates declines. The exposure to banks and other financial institutions increased, while insurance groups' exposure in domestic sovereign debt continued dropping. "Non-insurance" liabilities of insurers slightly moved downwards.

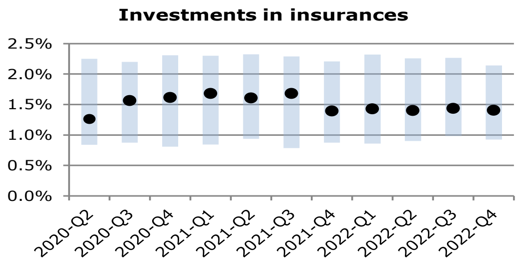


The median of investment in banks as a share of total assets moved upwards, standing at 13.5% in Q4-2022 from 12.5% in the previous quarter.



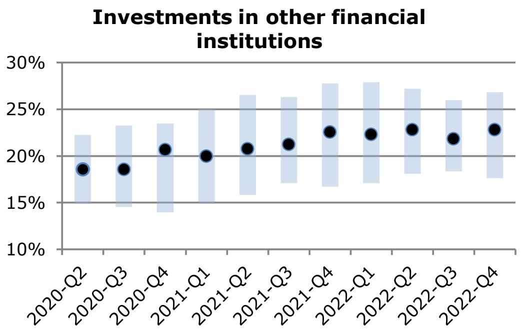
Note: Distribution of indicator (interquartile range, median). Banks comprise all activities identified with NACE code K.64.1.9. Source: QFG ($N_{2022\ Q4}$=94).

The median of investment exposures to insurers as a share of total assets slightly decreased, standing at 1.41% in Q4-2022.



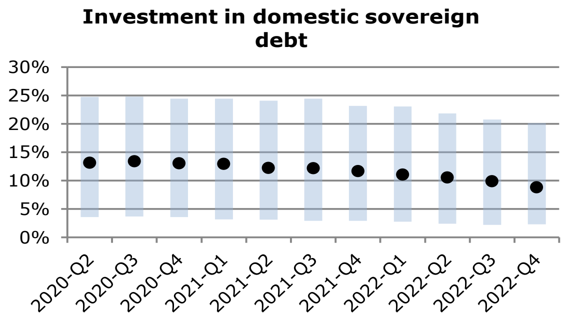
Note: Distribution of indicator (interquartile range, median). Insurances comprise all activities identified with NACE code K65, excluding K65.3. Source: QFG ($N_{2022\ Q4}$=90).

The median of investments in other financial institutions increased to 22.8% in Q4-2022 from 21.8% in the previous quarter. Similarly, the upper tail of the distribution increased.



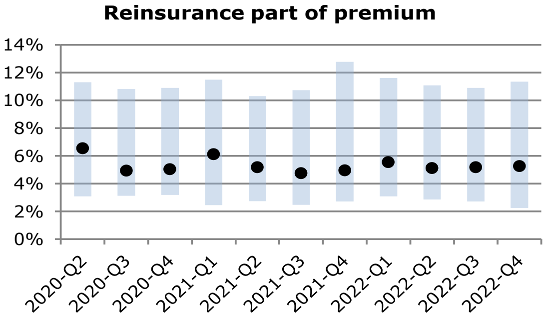
Note: Distribution of indicator (interquartile range, median). Other financial institutions comprise all activities identified with NACE codes K66, K65.3 and K64 excluding K64.1.9. Source: QFG ($N_{2022\ Q4}$=94).

The median share of investments in domestic sovereign debt continued dropping since the beginning of the year, standing at 8.8%.



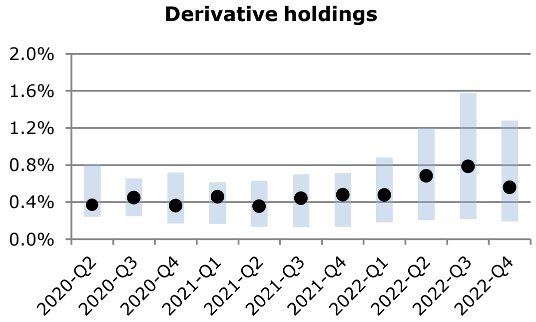
Note: Distribution of indicator (interquartile range, median). Source: QRS ($N_{2022\ Q4}$=1,173).

The distribution range of premiums ceded to reinsurers remains overall stable, with a median standing around 5% in Q4-2022.



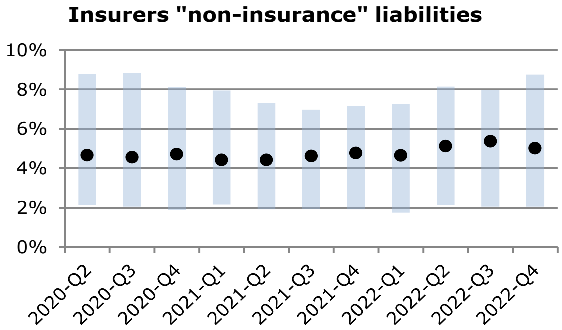
Note: Distribution of indicator (interquartile range, median). Source: QFG ($N_{2022\ Q4}$=95).

The distribution range of derivatives to total assets dropped after the increasing trend observed in the previous quarters, with a median standing at 0.56% (0.78% in the previous quarter). Although to a lower extend, insurers continued realizing market to market losses on those derivatives positions aimed at hedging interest rates declines.



Note: Distribution of indicator (interquartile range, median). Derivatives holdings are calculated as the total value of derivatives from the balance sheet (i.e. both asset and liability values in absolute terms). Source: QFG ($N_{2022\ Q4}$=95).

The median of "non-insurance" liabilities of insurers slightly moved downwards, standing at 5.0% in Q4-2022.



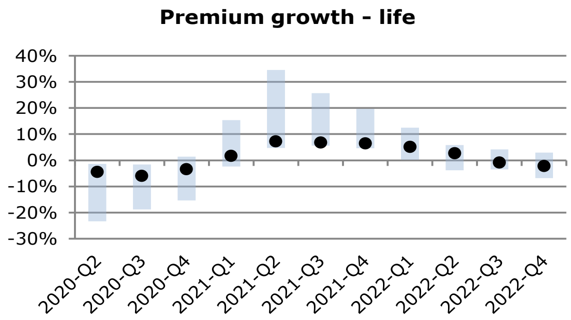
Note: Distribution of indicator (interquartile range, median). Source: QFG ($N_{2022\ Q4}$=95).

INSURANCE (UNDERWRITING) RISKS

Insurance risks remain at medium level in Q4-2022. The median year-on-year premium growth for life insurance continued decreasing reaching the negative territory for the second consecutive quarter, while for non-life no change was reported. The median loss ratio remained unchanged.

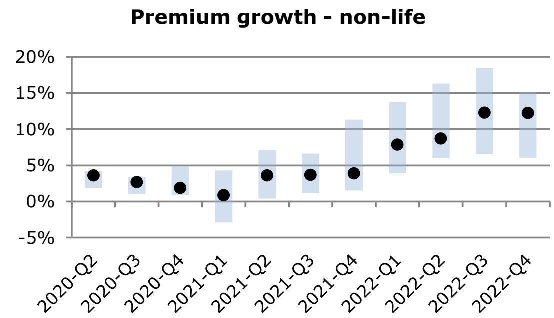
Level: MEDIUM
Trend: CONSTANT

The median life premium growth continued decreasing standing below zero at -2.2% for the second consecutive quarter.



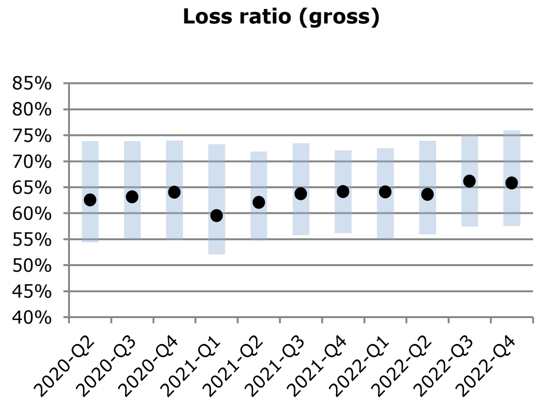
Note: Year-on-year change in gross written premiums. Distribution of indicator (interquartile range, median). Source: QFG ($N_{2022\ Q4}$=88).

The median non-life premium growth remains stable at 12% in Q4-2022. The upper tail of the distribution dropped to 15% (from 18% in the previous quarter).



Note: Year-on-year change in gross written premiums. Distribution of indicator (interquartile range, median). Source: QFG ($N_{2022\ Q4}$=83).

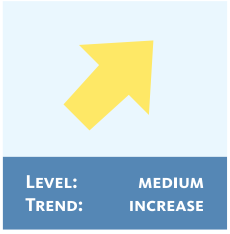
The distribution of the loss ratio remains overall unchanged with a median standing at around 66% in Q4-2022.



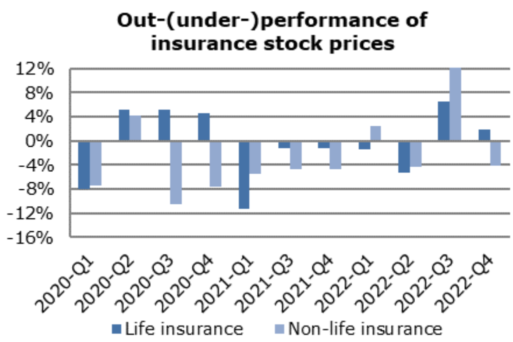
Note: Distribution of indicator (interquartile range, median). Source: QRS ($N_{2022\ Q4}$=1,344).

MARKET PERCEPTIONS

Market perceptions remain at medium level, with an increasing trend. Insurance life stocks overperformed the market, while non-life underperformed. The median price-to-earnings ratio of insurance groups increased. The median of CDS spreads of insurers slightly decreased. Insurers' external ratings remained broadly stable since the last assessment.

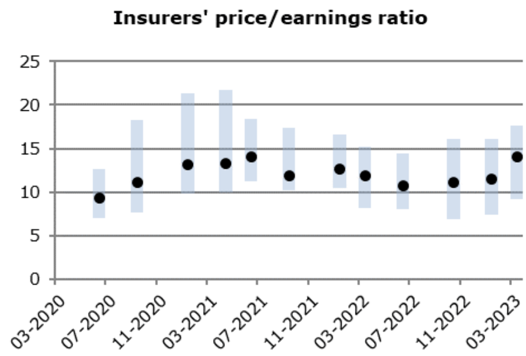


Life stocks overperformed and non-life underperformed the market.



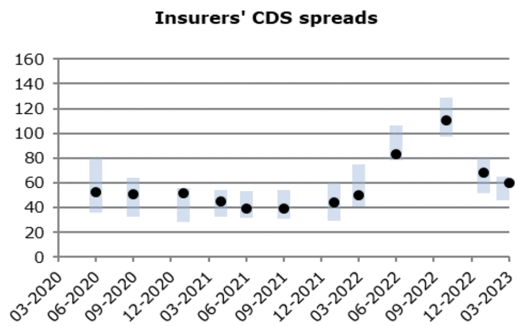
Note: Out-(under-)performance over 3-month periods vs Stoxx 600.Source: Refinitiv

The median price-to-earnings (P/E) ratio of insurance groups in the sample increased to 14% (from 11.4%).



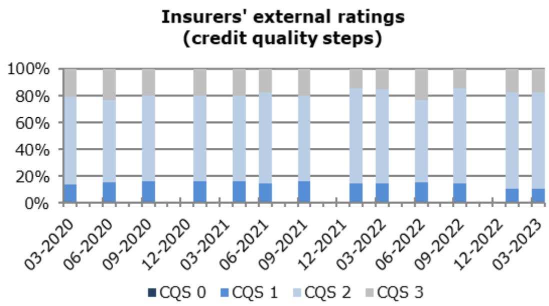
Note: Distribution of indicator (interquartile range, median).Source: Refinitiv

The distribution of insurers' CDS spreads slightly decreased amid remaining at higher levels than long term.



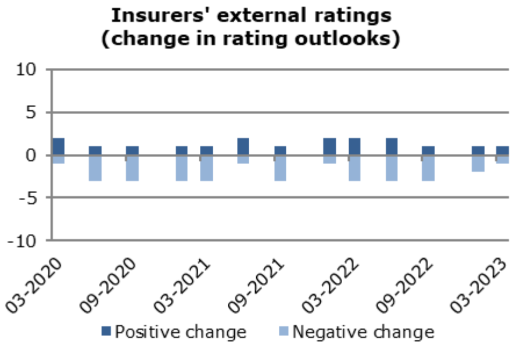
Note: Distribution of indicator (interquartile range, median).Source: Refinitiv

Insurers' external ratings remained stable since the previous risk assessment.



Source: Standard & Poor's via Refinitiv

Rating outlooks for insurers in the sample have remained mainly stable.



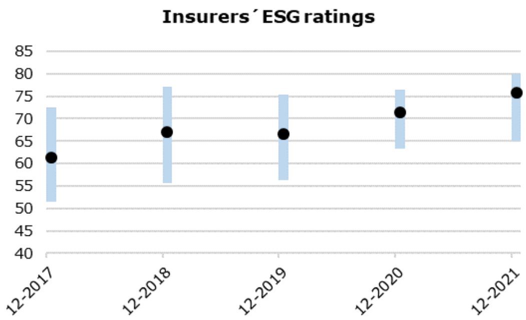
Source: Standard & Poor's via Refinitiv

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) RELATED RISKS

ESG related risks remain at medium level. The median exposure toward climate relevant assets slightly increased to 3.2 % of total assets. The share of insurers' investment in green bond over total green bonds outstanding slightly decreased compared to the previous quarter. The y-o-y growth of green bonds outstanding slightly decreased, while the median growth of insurers' investment in green bonds increased.

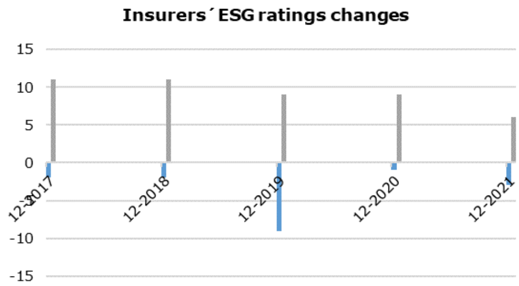
LEVEL: MEDIUM
TREND: CONSTANT

The median ESG ratings of the insurers in the sample increased to A- in 2021



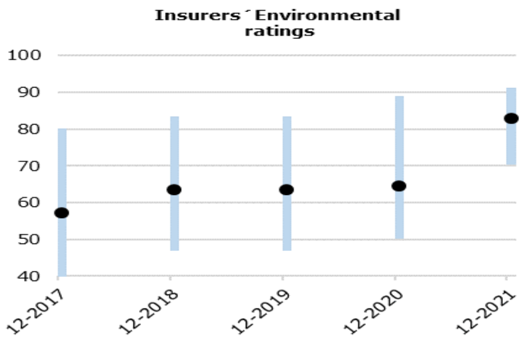
Note: Distribution of indicator (interquartile range, median). Higher rating scores corresponde to better ratings. Source: Refinitiv

The numbers of improvements in ESG ratings for the insurers in the sample have been higher than the negative changes in 2021.



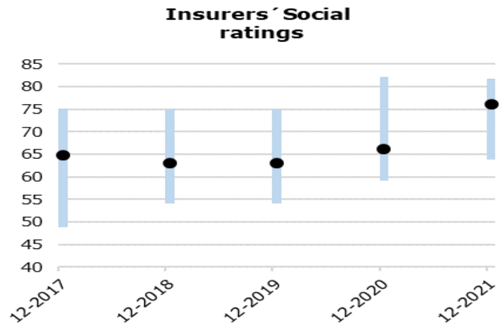
Note:Numbers of positive (grey bar) and negative (blue bar) changes. Source: Refinitiv

The median environmental ratings of the insurers in the sample increased to around A and it has been improving in the last years.



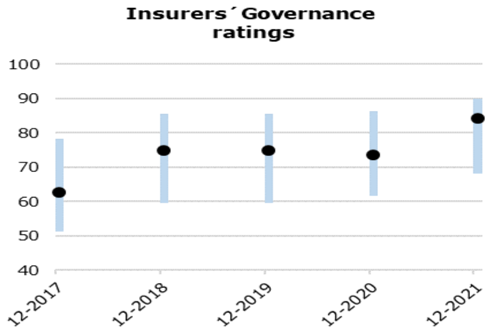
Note: Distribution of indicator (interquartile range, median). Higher rating scores corresponde to better ratings. Source: Refinitiv

The median social ratings of the insurers in the sample correspond to around A- and it improved in 2021.



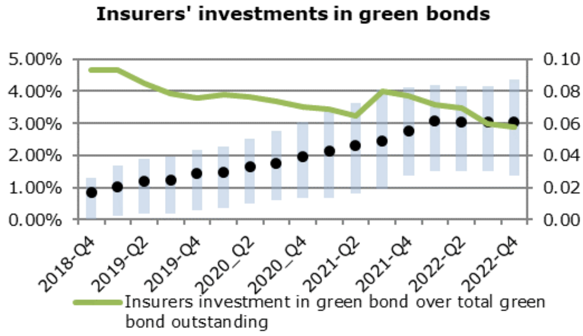
Note: Distribution of indicator (interquartile range, median). Higher rating scores corresponde to better ratings. Source: Refinitiv

The median governance ratings of the insurers in the sample correspond to around A and it improved on 2021.



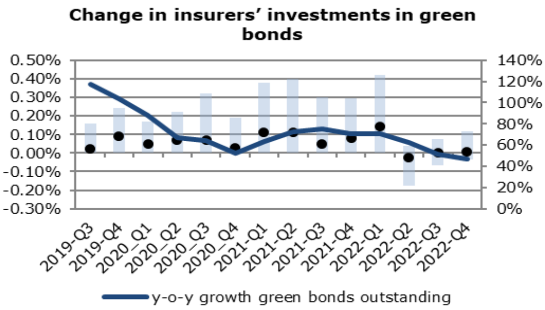
Note: Distribution of indicator (interquartile range, median). Higher rating scores corresponde to better ratings. Source: Refinitiv

The median investments in green bonds over corporate bonds have been hovering around 3 % in Q4 2022. The share of insurers' investment in green bond over total green bonds outstanding slightly decreased compared to the previous quarter.



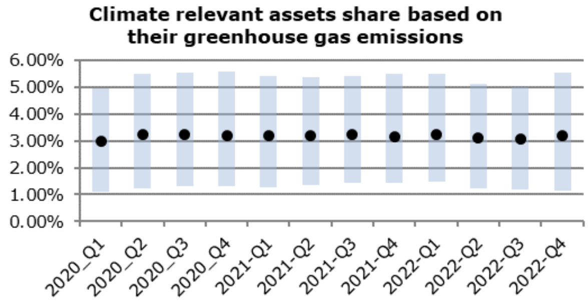
Note: Distribution of indicator (interquartile range, median). Source: Refinitiv, QRS ($N_{2022\ Q4}$=1,340).

The y-o-y growth of green bonds outstanding slightly decreased, while the median growth of insurers' investment in green bonds increased.



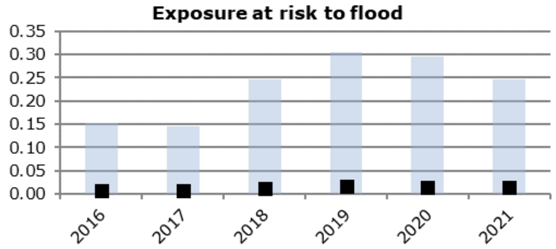
Note: Distribution of indicator (interquartile range, median). Source: Refinitiv, QRS ($N_{2022\ Q4}$=1,343).

The median exposure toward climate relevant assets slightly increased to 3.2 % of total assets.



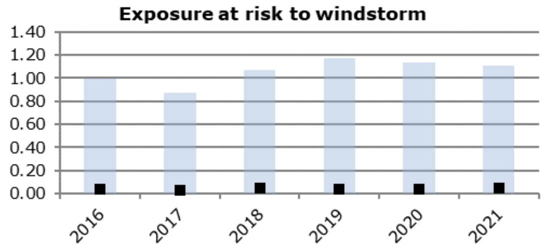
Note: The six climate-relevant sectors (agriculture, fossil fuel, utilities, energy-intensive, transport and housing) based on their greenhouse gas emissions and mapped at NACE Rev2 4-digit level. Due to data limitations, there are assets which cannot be entirely included in the "climate relevant" category and therefore they are currently excluded from the calculation of the indicator leading to a potential underestimation of the risk. We expect an upward shift of the distribution, when the new reporting requirements will be implemented. Source: QRS ($N_{2022\ Q4}$=1719).

The median exposure to flood risk remains the same, slightly decreasing in the high part of the distribution.



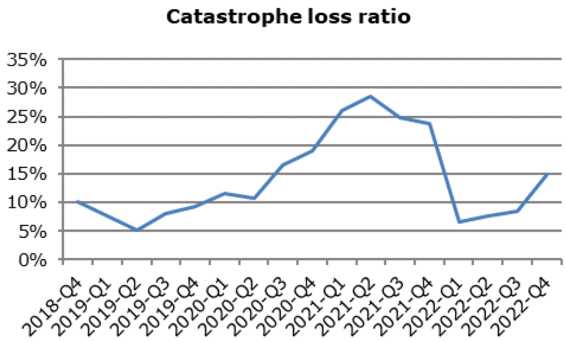
Source: EIOPA Pilot dashboard on insurance protection gap for natural catastrophes, Eurostat Refinitiv, ARG (N_{2021} =110).

The exposure to windstorm risk remains the same.



Source: EIOPA Pilot dashboard on insurance protection gap for natural catastrophes, Eurostat Refinitiv, ARG (N_{2021} =130).

The cumulative catastrophe loss ratio continued increasing.



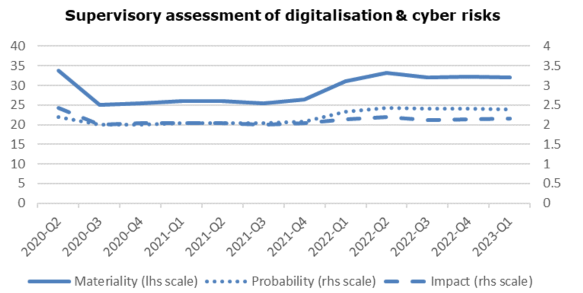
Note: Cumulative year-to-date loss ratio calculated based on Munich Re, Hannover Re and Everest Re. Source: Bloomberg Finance L.P.

DIGITALISATION & CYBER RISKS

Digitalisation and cyber risks are highly decreasing even if they remain at medium level. The materiality of these risks for insurance as assessed by supervisors remains high with cyber security and hybrid geopolitical conflict as main concerns. The frequency of cyber incidents impacting all sectors of activity, as measured by publically available data, decreased since the same quarter of last year. Cyber negative sentiment indicates a high amid stable concern in the first quarter of 2023.

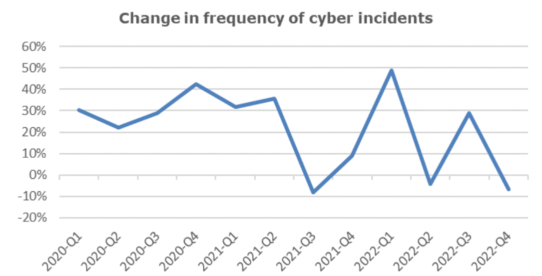
LEVEL: MEDIUM
TREND: DECREASE

The supervisory assessment of digitalisation and cyber risks remains high in the first quarter of 2023. Cyber-attacks are on a growing trend and concerns of a hybrid geopolitical conflict remain.



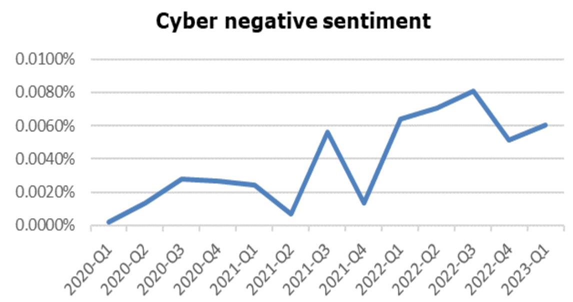
Note: Scores compiled based on the assessment of probability and impact (rhs: scale from 1 to 4) of digitalisation & cyber risks from National Competent Authorities. The country averages for each answer is then normalised (lhs: scale 0-100). Source: EIOPA's Insurance Bottom-up Survey

The y-o-y change in frequency of cyber incidents has decreased in the fourth quarter of 2022, with the number of cyber incidents affecting all sectors of activity in line with the long term average.



Note: Year-on-year change in frenquency of cyber incidents. Source: HACKMAGEDDON website

The cyber negative sentiment indicator, by counting the number of negative-sentiment and cyber-related terms in the earning calls transcripts of major insurance groups, indicates an high amid stable concern in the first quarter of 2023.



Note: Text analysis based indicator, calculated from earning calls transcripts ($N_{2023\ Q1}$=29). Source: Refinitiv, EIOPA calculations.

APPENDIX

Level of risk		Trend/Outlook	
	Very high	⇧	Large increase
	High	⬀	Increase
	Medium	⇨	Constant
	Low	⬂	Decrease
		⇩	Large decrease

Arrows for the Trend show changes when compared to the previous quarter, while arrows for the Outlook show expected developments for the next 12 months.

Description of risk categories

Macro risks

Macro risk is an overarching category affecting the whole economy. EIOPA's contribution focuses on factors such as economic growth, state of the monetary policies, consumer price indices and fiscal balances which directly impact the insurance industry. The indicators are developed encompassing information on the main jurisdictions where European insurers are exposed to both in terms of investments and product portfolios.

Credit risks

The category measures the vulnerability of the European insurance industry to credit risk. To achieve this aim, credit-relevant asset class exposures of the (re)insurers are combined with the relevant risk metrics applicable to these asset classes. For instance, the holdings of government securities are combined with the credit spreads on European sovereigns.

Market risks

Market risk is, for most asset classes, assessed by analysing both the investment exposure of the insurance sector and an underlying risk metric. The exposures give a picture of the vulnerability of the sector to adverse developments; the risk metric, usually the volatility of the yields of the associated indices, gives a picture of the current level of riskiness. The risk category is complemented by an indicator which captures the difference between guaranteed interest rates and investment returns.

Liquidity and funding risks

This category aims at assessing the vulnerability of the European insurance industry to liquidity shocks. The set of indicators encompasses the lapse rate of the life insurance sector with high lapse rate signalling a potential risk, holdings of cash & cash equivalents as a measure of the liquidity buffer available, and the issuance of catastrophe bonds, where a very low volume of issuance and/or high spreads signals a reduction in demand which could form a risk.

Profitability and solvency

The category scrutinises the level of solvency and profitability of the European insurance industry. Both dimensions are analysed for the overall industry (using group data) and include a breakdown for the life and non-life companies (using solo data). In detail, the solvency level is measured via solvency ratios and quality of own funds. Standard profitability measures for the whole industry are complemented by indicators such as the combined ratio and the return on investments specifically applied to the non-life and life industry respectively.

Interlinkages and imbalances

Under this section various kinds of interlinkages are assessed, both within the insurance sector, namely between primary insurers and reinsurers, between the insurance sector and the banking sector, as well as interlinkages created via derivative holdings. Exposure towards domestic sovereign debt is included as well.

Insurance (underwriting) risks

As indicators for insurance risks gross written premiums of both life and non-life business are an important input. Both significant expansion and contraction are taken as indicators of risks in the sector; the former due to concerns over sustainability and the latter as an indicator of widespread contraction of insurance markets.

Market perception

This category encompasses the financial markets' perception of the healthiness and profitability of the European insurance sector. For this purpose, relative stock market performances of European insurance indices against the total market are assessed, as well as fundamental valuations of insurance stocks (price/earnings ratio), CDS spreads and external ratings/rating outlooks.

Environmental, Social and Governance (ESG) related risks

This risk category aims at assessing the vulnerability of the European insurance industry to Environmental, Social and Governance (ESG) risks but also to capture these kind of risks that may emerge and rise in the near future. The set of indicators encompasses ESG ratings of listed insurers signalling low insurers' attention to ESG factors and hence could increase their reputational and operational risk, the share of green bonds in insurers' portfolios and share of climate relevant assets based on their greenhouse gas emissions as a measure of exposure towards transition risk, exposure at risk of NatCat events, economic damage caused by weather and climate-related extreme events and catastrophe loss ratio as a flag for potential physical risk. Information on claims and insurance losses due to natural catastrophes also contribute to this risk category.

Digitalisation & Cyber risks

This risk category aims to capture potential financial stability risks related to an increased digitalisation, which exposes the insurance sector to risks both from an operational resilience perspective (as insurers themselves can be targets of cyber-attacks) and from an underwriting perspective (related to the provision of cyber insurance products). The set of indicators encompasses the supervisors' assessment of digitalisation & cyber risks considering different aspects such as cyber security risks, cyber underwriting risks and Insurtech competition, the year-on–year change in the frequency of cyber incidents as reported in the Hackmageddon.com database and, finally, the negative sentiment of European insurers against cyber risk. This section will be further developed as new data becomes available.

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