

INSURANCE COMPANIES IN THE EUROPEAN UNION: GENERAL CRITERIA AFFECTING INVESTMENT POLICIES

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Abstract

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Investments of insurance companies relate to assets that guarantee the insured the payment of benefits (liabilities assumed), so they are conditioned by the duration of contracts, the amount of the sums insured, and the level of technical reserves required. An entity shall preserve the value of the investment in time for benefits obligations to policyholders and maintain the solvency margin and capital to protect shareholder or participant/beneficiary. Some insurance investment policies are based on the consideration of risk and return on assets and have incorporated the outcome measures of investment expenses and cost of capital. This article provides an overview of the evolving investment strategies of insurers and identifies the opportunities and constraints they may face with respect to long-term investment activity. This research employs a qualitative method with a convenience sampling approach. The sample of this study was the portfolios of several insurance companies in the European Union (EU). The results showed that two types of general criteria when selecting investment assets are observed, at least theoretically: the ownership structure of the entities and the types of products that are managed (life and non-life). According to the results of this study, most of the investments correspond to the life insurance segment, where contractual obligations are long-term and the insured risk is less volatile, which are invested mainly in fixed income. In contrast, non-life entities have a greater preference to invest in equity and real income when compared to the previous. The relevance of this study is based on the repercussions in the financial markets, as insurers as the main institutional investor.

Keywords: Investment, Insurance, Capital, Risk

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1. INTRODUCTION

Insurance companies assume risk on behalf of their policyholders in exchange for a premium.

An insurance contract is a “contract under which one party (the insurer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if

a specified uncertain future event (the insured event) adversely affects the policyholder” (International Financial Reporting Standards Foundation [IFRS], 2013). While most companies tend to manage their operations by preventing and controlling most of the internal and external risks to which they are exposed, the nature of insurance operations is to accept and manage these risks in order to make a profit (Hernandez Barros, 2011). In this context, risk can be defined as the potential for an unexpected financial loss; and within the major risks that insurers face, both individually (subscription, insufficient provisions, reinsurance) and sectorial (juridical and legal) and economic, are the investment risks.

It is, therefore, considered that the management of investment risk has a great impact on the activity and solvency of insurance companies, which in turn includes the following subcategories of more specific risks:

- *Risk of pure investment*: unsatisfactory results due to improper mix of investments, over-valuation of assets, or focus on certain investment products.
- *Risk of asset-liability management*: disengagement from investments and commitments by cash-flow problems, currency, or duration of commitments/investments.
- *Risk of loss of value of assets*: when an insurer needs to divest an asset for a benefit, and the result is much smaller than provisioned, such as equity investments when the financial market is in a downturn.

Other risks:

- *Interest rate*: affects the valuation of assets and liabilities, as liabilities may be fixed and assets vary.
- *Re-investment risk*: when the fixed-income investments mature, there are mergers or acquisitions in the invested listed companies (equities), or property depreciation is made, so Insurers should invest again to maintain the level of technical provisions.

Therefore, as a matter prior to the financial analysis of these risks, which correspond to future areas of research, we wondered if there might be some common criteria to explain the investment policy of insurance companies, which in turn had influence to varying degrees on their risks, as they could be in particular two issues relevant to the sector: ownership structure (mutual or stock companies) and risk aversion, and the type of insurance products they sell (life and non-life), given the different characteristics of each product; which are further developed below.

This paper is structured as follows. Section 2 proposes the different aspects of the investment activities of insurance companies reflected in the scientific works. Section 3 analyses the methodology that has been used to conduct the research. Section 4 introduces the different investment policies of insurance companies to identify the two types of general criteria. We analyse both through the different securities that appear in their portfolios. We also investigate the importance of equities in the investment strategy. In the current low-interest rate environment, the risk appetites of

insurers and pension funds are increasing. Section 5 presents the most relevant conclusions of the study.

2. LITERATURE REVIEW

Various aspects of the investment activities of insurance companies are reflected in the scientific works of some researchers. In particular, Gründl et al. (2016) studied that long-term financing by insurance companies (and pension funds) is critical for global economic growth, particularly after the global financial crisis, which had a huge and negative impact on the supply of long-term investment financing. This report investigates the extent to which changes in macroeconomic conditions, market developments and insurance regulation may affect the role of insurers in long-term investment financing. It concludes that regulation should neither unduly favour nor hinder long-term investment as such, but place priority on incentivising prudent asset and liability management with mechanisms that allow for a “true and fair view” of insurers’ risk exposures. Agic-Sabeta (2017) concludes that the implementation of portfolio insurance strategies by asset managers may reduce financial risk if the implementation is done professionally and is monitored during the entire investment horizon. Kuzmenko (2013) states that the investment activity of insurance companies plays an important role in ensuring the supply and demand balance in the financial market and is an effective tool for the harmonious development of the national economy by financing both financial and industrial sectors of the national economy.

Researchers analyse the impact of the process of managing financial information of insurance companies on the development of innovation and investment processes. The objective of this research is to provide an overview of the evolving investment strategies of insurers, analysing the portfolios of insurer companies in the European Union (EU).

3. RESEARCH METHODOLOGY

During the research, general scientific and special methods of cognition of the essence of the phenomena were used: analysis and synthesis, to assess the indicators of the development of investment activity of insurers and disclose its essence; comparison, to determine the advantages and disadvantages of changing the structure of the volume and quality of assets included in the investment portfolio of insurance companies; graphic, for a visual presentation of theoretical and methodological material.

In order to properly assess the general investment criteria, the methodology implemented is based on analysing the balance sheets of the insurers’ companies in the European Union, and so the reports of the European Central Bank (ECB), trying to identify the main components of the investment portfolio of these entities.

Years of analysis cover until 2017, due to the data from the ECB. The last available report, worthy of our purposes was published in 2017. Somehow, we try to complete and update the gap using other aspects with more recent data.

4. RESULTS: INVESTMENT POLICIES OF INSURANCE COMPANIES

Investments of insurance companies relate to assets that guarantee the insured the payment of benefits (liabilities assumed), so they are conditioned by the duration of contracts, the amount of the sums insured, and the level of technical reserves required.

The interrelationship between investment policy and pricing is a particularly timely topic. Product innovations that have occurred in recent years combined with the extreme fluctuations of the financial markets have raised this question to a high level. The following items can be considered when looking at either insurance company products or investments which insurance companies may be considering:

1. Length of the contract or commitment.
2. Guarantees involved.
3. Cash flow risk.
4. Regulatory restrictions/requirements.
5. Degree of risk.

The insurer must preserve the value of the investment during the time to make the benefits from the obligations contracted with policyholders and maintain the solvency margin and the capital to protect the shareholder or participant/beneficiary.

Some insurers base their investment policies on the consideration of risk and return on assets and incorporate the investment expenses and the cost of capital into the outcome measures (Grépin et al., 2004).

After analysing the management of portfolios of insurance companies, and reviewing the related literature, two types of general criteria are observed, at least theoretically, when selecting investment assets, which are set forth below:

- the ownership structure of the entities;
- the types of products managed: life and non-life.

4.1. Investment policies according to the ownership structure

According to some researchers (Mayers & Smith, 1981; Fama & Jensen, 1983; Datta & Doherty, 1991), investment preferences differ depending on the ownership structure of insurance companies (mutual or listed insurers), that is, there is a relationship between corporate finance and investment policy (Camino, 2003). In general, it is postulated that:

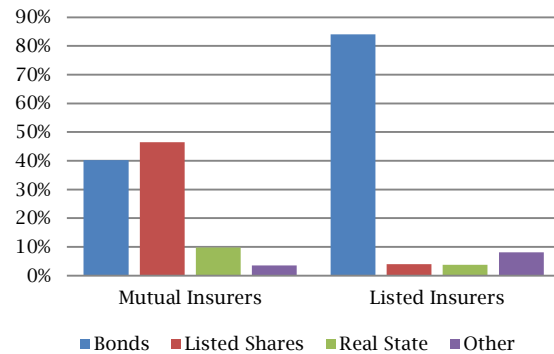
1. Mutual insurers tend to invest in more conservative assets since their objective is to increase and maintain the assets of the company and its solvency, and because they have limited access to capital.

2. By contrast, listed insurance companies look to optimize profitability, and, therefore, have more active portfolio management, leading them, in general, to invest in equities, such as stocks.

To contrast this theory, we have made a comparative analysis (Figure 1) of this theory among listed insurance companies (that have a higher percentage of business life and broader international presence) and mutual insurers in the European Union. The result is somewhat different from that proposed by the financial literature, which can be appreciated in the Figure 1. Listed companies are more conservative when investing their assets, perhaps to ensure solvency pressure from regulators and the capital markets;

and not having much pressure mutual insurers on the other hand; which may perhaps be in part attributable to the effects of the 2007–2011 financial crisis (Hernandez Barros & López Domínguez, 2013).

Figure 1. Structure of the investment portfolio: Mutual vs. listed companies, in %



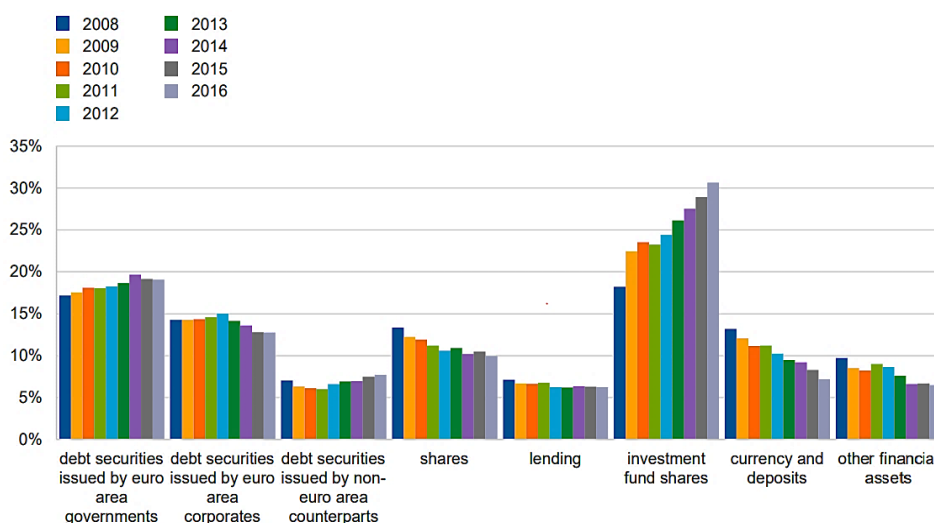
Source: Annual reports from mutual and listed companies.

In this sense, the ECB published the *Report on Financial Structures* (ECB, 2017). This is the last published report on this topic. The *Report on Financial Structures* follows the *Banking Structures Report* (ECB, 2014) and covers not only the banking sector but also other financial intermediaries, such as insurance corporations and pension funds (ICPFs) as well as non-bank and non-insurance financial intermediaries. The report states that the overall size of the euro area financial sector in March 2017 stood at €76.2 trillion, compared with €70.8 trillion in December 2015 and €55.0 trillion in December 2008. Between 2008 and 2016, the size of the financial sector increased from 5.3 to 6.4 times the gross domestic product (GDP). While the relative importance of non-banks (insurers, pension funds, money market funds (MMFs) and other financial intermediaries) has grown steadily since the onset of the financial crisis, there appears to have been a pause in this trend recently. In terms of total assets, the share of the non-bank financial sector has grown from 43% in 2008 to 55% in early 2017. A corresponding decline initially took place in the share of monetary financial institutions (MFIs), but that trend came to a halt recently, with the share of MFI total assets (excluding MMFs) remaining broadly unchanged, at around 45%, in 2016 and early 2017.

In the current low-yield environment, ICPFs in some countries have shifted their portfolios towards higher-yielding assets to boost investment income. The profitability of the insurance sector has been constrained in recent years, but its solvency position is well above the requirements of the EU's Solvency II supervisory regime.

The financial portfolio of euro-area ICPFs is dominated by fixed-income instruments (Figure 2). At the end of 2016, close to 40% of the ICPFs portfolio was invested in debt securities, with euro-area government bonds accounting for nearly half of this position. The second most prominent investment class was investment fund shares (over 30% at the end of 2016), which can serve as another (indirect) channel for ICPFs to invest in fixed-income instruments.

Figure 2. Breakdown of financial assets — euro area ICPFs (2008–2016, percentages of financial assets)



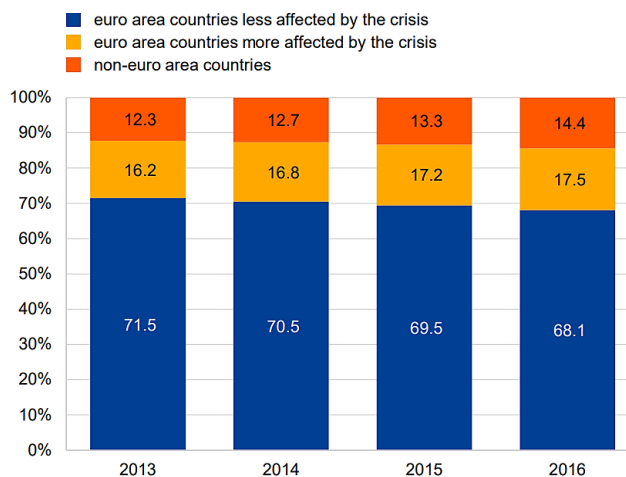
Source: ECB (2017, p. 50).

Note: Investment fund shares exclude MMF shares.

Facing profitability challenges in the protracted low-yield environment, ICPFs in some jurisdictions have recently shifted their portfolios towards higher-yielding but riskier assets in order to boost investment income. In 2016, euro-area ICPFs reduced the holdings of currency and deposits at the fastest pace since 2008. The share of these assets in the ICPF portfolio declined from 8.3% at the end of

2015 to 7.2% at the end of 2016. The decrease was mainly driven by deposits with maturities above one year, i.e., those maturities where alternative instruments such as debt securities are available. Euro area ICPFs also continued to increase their exposures to non-euro area countries and to euro area countries more affected by the crisis (Figure 3).

Figure 3. Breakdown of securities holdings by issuer country — euro area ICPFs (2008–2016, percentages of financial assets)



Source: ECB (2017, p. 51).

Note: Euro-area countries more affected by the crisis include Cyprus, Greece, Ireland, Italy, Portugal, Slovenia and Spain. Euro area countries less affected by the crisis include all other euro area countries.

Although the share of loans in the aggregate euro area ICPFs portfolio remained broadly unchanged in 2016, ICPFs in some euro area countries have become more active in granting loans. In addition to direct lending, ICPFs also finance loans indirectly, for instance through investments in mortgage funds. While lending by ICPFs is mainly concentrated on households, loans granted by ICPFs still constitute only a small fraction of total loans granted to households. One notable exception is the Netherlands, where ICPFs financed 28% of new Dutch mortgages in 2016. The shifts in ICPFs portfolios are also driven by regulatory

changes. For example, the long-term trend of reallocating investments from equities to debt securities and other fixed-income assets reduces asset-liability mismatches, which require more capital under Solvency II rules. By the same token, Solvency II capital requirements for non-securitised mortgage loans are lower than for securities loans. This may have provided some insurers with an incentive to increase their investment in direct mortgage loans. Moreover, as banks are adjusting to stricter capital requirements, they may have less appetite to invest in certain asset classes, creating market space for competitors including ICPFs.

Besides the higher capital charges for equities, investing in very long-term fixed-income assets, which are typically government bonds, can reduce asset-liability mismatches, which require more capital. It is also likely, however, that yield developments contributed to the asset distribution, as lower yields on fixed-income assets have resulted in valuation gains in available-for-sale portfolios.

Either way, it seems reasonable to infer that listed insurers compete more effectively in the market to have greater pressure on management performance, usually for the good of the company and the policyholders (Bushler et al., 2001).

4.2. Investment policies by type of contract: Life and non-life

Other criteria observed when selecting investment assets are the types of risks taken by insurance entities: life and non-life insurance (Martínez Torre-Enciso & Hernandez Barros, 2013). Their most important general characteristics are:

Life insurance:

1. Hardly volatile risks.
2. The obligations arising from life insurance contracts are generally long-lasting.

Non-life insurance:

3. These risks are much more volatile (uncertainty) than life: mortality is relatively predictable, but natural disasters or fires are less so; although non-life insurance consists of products with very different loss behaviour.

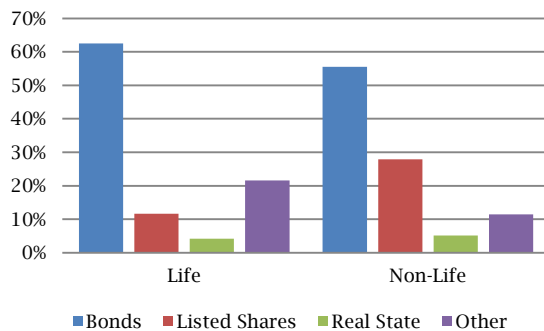
4. In many non-life companies, over the years, the value of investments exceeds their obligations.

5. The obligations of the contracts are short-term so liquidity is relevant.

The business model of insurance implies that the average maturity of liabilities is typically longer than that of the corresponding assets. This inverted maturity structure implies highly predictable, long-term outflows, in particular for life insurers and pension funds. For non-life insurers, the underwriting risks related to insured claims are typically limited to an acceptable level by the law of large numbers or, in the case of bulk claims, through the use of reinsurance.

As for the actual composition of the investment portfolio, European non-life insurance companies, in general, invest in a higher percentage in equities and property entities than life insurers, while the latter invest almost mostly in bonds, as shown in the sample in Figure 4.

Figure 4. Structure of the investment portfolio: Life insurance vs. non-life insurance, in %.



Source: Annual reports from the insurance associations of the EU countries.

The high exposure to fixed-income assets and the long-term nature of liabilities make ICPFs vulnerable to the protracted low-yield environment. First, low yields will hit investment income as the cash flows from paid premiums and maturing investments are gradually re-invested at lower rates. Second, a low discount rate implies an elevated value of liabilities. The valuation effect is typically larger on the liabilities side than on the assets side because the duration of the liabilities is often longer than that of the assets. A prolonged low-yield environment can thus ultimately affect the solvency of the ICPFs. Liquidity, in contrast, is rarely a problem for ICPFs, owing to the time lag between receiving premiums and making payments to policyholders, provided penalties are in place to deter policyholders from surrendering their policies easily.

The profitability of the insurance sector has, in recent years, been constrained by the low-interest rate environment despite the more supportive recent macroeconomic and financial developments. Specifically, the median return on equity (ROE) for the total insurance business, including both the life and non-life sectors, declined from 8.5% at end of 2015 to 5.8% at end of 2016 (ECB, 2017).

Non-life insurance companies are less affected by the current low-interest rate environment than life insurance companies owing to the shorter-term nature of their business. However, they can also be exposed to the low-interest rate environment via (re)investment risk. Furthermore, pressures on the profitability of the motor insurance sector continue given the high level of competition.

4.3. Investments in equity by insurers and pension funds

ICPFs play an important role as institutional investors in Europe, and more specifically as investors in equity. In terms of size, the sector collectively accounts for 12.8% of the overall euro area financial sector. At the end of 2017, the total investments reported by more than 2,000 individual insurance undertakings which apply Solvency II in the EU stood at €10.305 billion (incl. unit-linked investments), while the total investments of the EU pension market stood at €3.409 billion (ECB, 2017). Over the last two decades, two financial crises, namely the dot-com crisis and the global financial crisis, affected the markets. Coinciding with this, insurers' investments in (direct) listed equity have dropped significantly over the last 20 years, from 11.5% of total investments (excluding the UK) in 1999 to 3.3% after the financial crisis. Since 2011, listed equity investments have remained stable at around 3%, but never fully recovered to their pre-crisis levels (European Commission [EC], 2019). In contrast, EU insurers' investments in unlisted equity remained relatively stable between 1999 and 2018 at around 7% of total investments. We note that participation — defined as the ownership, direct or by way of control, of 20% or more of the voting rights or capital of an undertaking — currently has an important contribution to the balance sheet for most of the European Member States, coinciding with the importance of insurance groups in Europe. Based on European Insurance and Occupational Pensions Authority (EIOPA, 2019) data at year-end 2017, 'holdings in related undertakings, including participations' amount to €800 billion, or 10.5% of total non-unit-linked investments in the EU. Nevertheless, limited granular data exists on

the evolution of participation over the last 20 years. The decreasing trend in (listed) equity investments has occurred in parallel with an increasing trend towards indirect equity investments through funds. The trend analyses show an increase in non-money market funds from 14% in 1999 to 26% in 2018, especially after the financial crisis of 2008. Based on year-end 2017 data, approximately one-third of the investments through funds relate to equity funds. The lack of historical data does not allow for a discussion of the evolution of these funds. Hence, one could say that in broad terms, when funds are also considered, a 2018 theoretical 'average' insurer might invest in total — through both direct and indirect investments — up to 10 to 20% in equity. Unit-linked investments in the EU have remained stable at around 27% of total investments over the last two decades and equity investments related to unit-linked contracts are higher than those of traditional insurance products. Life insurance undertakings recently seem to be shifting more risk towards policyholders by increasing their unit-linked business. The current low-interest rate environment and the corresponding decrease in guaranteed interest rates offered in (life) insurance contracts, may be causing policyholders to search for higher yield, through unit-linked products. Finally, and specific to the pension fund sector, the EU share of equity in total investments was considerably higher (at 50%) before the global financial crisis than it is today. In recent years, the EU share of equity in total investments is stable at around 30%. The decreasing trend can be attributed to general derisking after the financial crisis (away from equity), and a decreasing trend in the UK, where they increasingly allocate investments towards debt securities instead. Listed equity of large defined benefit pension funds in the Netherlands and the UK was mainly invested in large-caps. Nearly a quarter was invested in companies active in financial and insurance services, and the geographical destination can differ substantially between pension funds. In addition, analyses indicate an increasing popularity towards offering defined contribution (DC) occupational pension plans. The drivers of insurers' equity investments interact with one another in such a way that it may be difficult to disentangle them. Trends in equity investments cannot be attributed to a single factor, but rather to a combination of several driver categories. As a result of the triangulation exercise for insurers — i.e., combining the quantitative analysis results, the literature review, the interviews, as well as the insights from our theoretical model — we come to the following conclusions. The regression results, the literature review, and the interviews concur that equity market returns and favourable market conditions, in general, are of utmost importance to insurers in conducting their investment decisions. An attractive risk-return profile is an important incentive to invest in equity, given that equity is still considered to deliver a higher return over the long run while taking into account the potential risks and volatility related to this kind of investment. Interviewees find the asset class also attractive from diversification and a hedging perspective to protect against inflation rate risk. Overall, insurers search for the optimal investment portfolio to maximize their returns, given the different constraints defined by their risk appetite. Whereas economic fundamentals and low-interest rate levels are positively associated with equity investments, market events negatively impact these, as part of

derisking behaviour. According to the interviews and the literature review, average dividend yield and market volatility also play a respectively positive and negative role in the equity investment behaviour of insurers, however, we were not able to run a regression analysis on the average dividend yield due to a lack of historical data. Finally, the absence of a national bond market with sufficiently long maturities may be a trigger to invest in equity. In Sweden, the bond market traditionally does not issue bonds with maturities over 10 years, leading to a duration mismatch, which can lead to equity investments. Insurers in Sweden have a significantly higher (direct) equity exposure than the EU average. However, the absence of supporting evidence and the lack of sufficient data to test this with regressions may bias the conclusion.

5. CONCLUSION

Insurance companies are large institutional investors. They provide the bulk of long-term funding to the economy. The sector has been growing in recent years and has become more interconnected with banks and other financial intermediaries. Therefore, insurers' response to changes in asset prices could have a significant direct impact on the availability of funding sources to the economy.

The volume of investments in the insurance sector is very significant within the European Union, which is an industry highly regulated at the national and European levels. The investment need by these financial entities stems from the obligation to pay benefits in an uncertain future in return for the payment of premiums of the insurance contracts.

According to the results of this study, most of these investments correspond to the life insurance segment, where contractual obligations are long-term and the insured risk is less volatile, which are invested mainly in fixed income. In contrast, non-life entities have a greater preference to invest in equity and real income when compared to the previous.

It should be noted that in the eurozone, fixed-income investments continue to maintain a preeminent position, to the extent that the insurance business model entails the need to implement liability-driven investment strategies, in order to achieve an adequate match in terms of maturity and interest rates between the liabilities assumed and the investment instruments that support them. Fixed income securities are characterized by a sharp rise in risk premiums having a direct impact on their valuation, which also falls sharply, with the most severe declines for portfolios containing bonds of longer duration. Risk premiums can be affected by various factors, but the two main ones are: 1) the liquidity conditions of financial markets and, related to this, 2) the perception of credit or insolvency risk of the counterparties of those bonds in which the investments are made. In the period of study, some central banks decided to reduce interest rates, seeking to stimulate the economy and offset the negative impact on both sovereign and corporate bond values, resulting from their increased risk premiums. However, though these rate cuts are an important measure to revive the economy, they

damage traditional savings and annuity Life insurance businesses, until such time as economic agents accept the new levels as being permanent and decide to invest in savings instruments at lower rates or choose to acquire risk products in which the policyholder assumes the risk of the investment. The policy shift raises the possibility of higher inflation, and it's certainly a plausible risk that insurers will need to consider in modelling and stress testing both the resilience of investment

portfolios and as a driver of liabilities and asset/liability matching.

This study is limited due to the data available, but it is also an opportunity to update the main findings as soon as a new report from the ECB will be published.

A future line of research could be the effect of a change in economic policy by central banks on the investment portfolio of insurance companies.

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