

# Insurance sector investments and their impact on financial stability

an empirical study

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Anna Maria  
Secretary General

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# RECENT CONJECTURES AND RECOMMENDATIONS



analysis [ ] suggests that the behaviour of [life insurance companies] whether as a result of liability characteristics, regulation, accounting and valuation methodologies, or industry practices (including the tendency for similar investment strategies or [ ] could have important consequences for the economy as a whole. [ ] Although asset price volatility does not necessarily equate to financial instability, it can decrease the resilience of the financial system, and thereby potentially contribute to serious interruptions in the vital functions which the financial system as a whole performs in

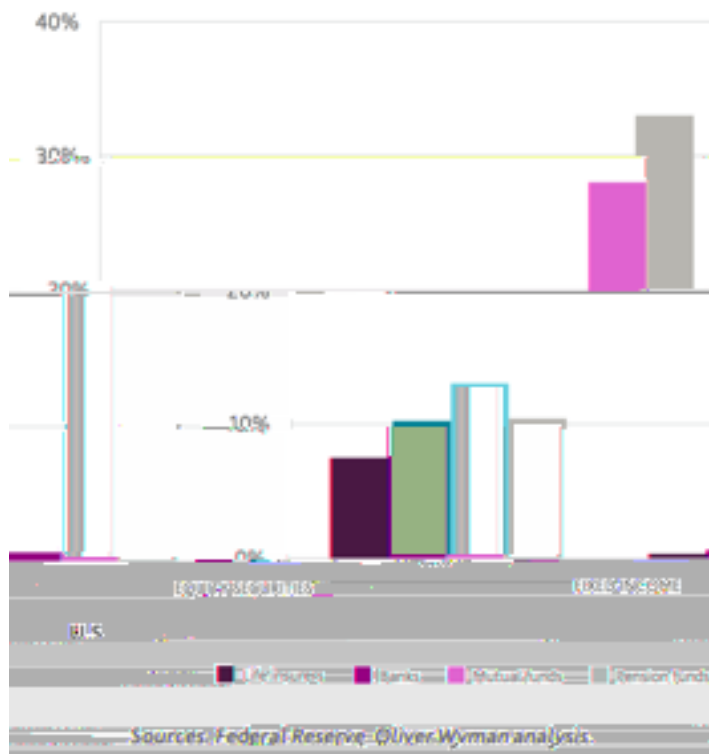


# OUR FINDINGS ON INSURERS AS MARKET PARTICIPANTS (STRUCTURAL)

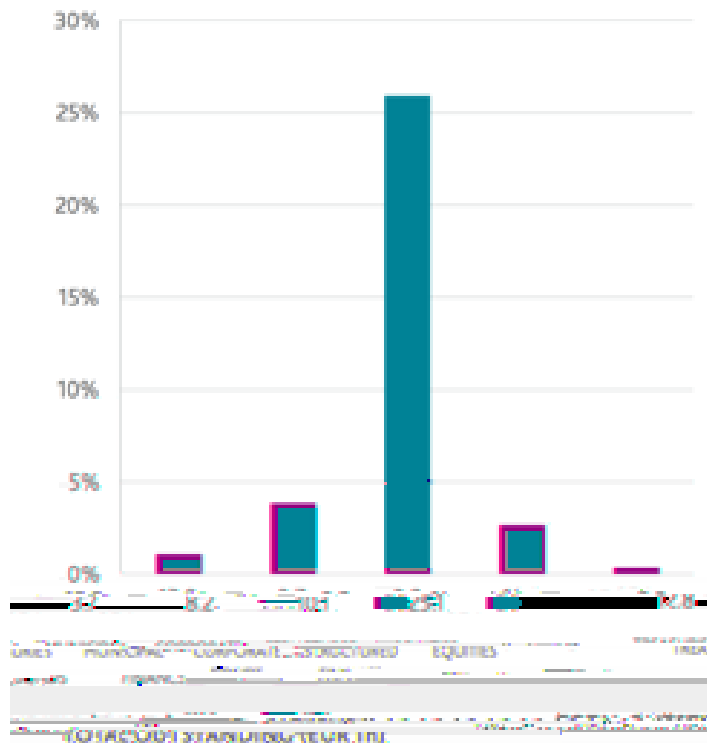


## EXAMPLE

Assets held by investors as per cent of total outstanding market (U.S. only, Q4 2014)



Insurers' invested assets as per cent of total outstanding market (U.S. only, Q3 2015)



Although insurers hold a significant portion of total outstanding financial assets in any given market, their **holdings represent a smaller proportion than those held by other financial services investors**

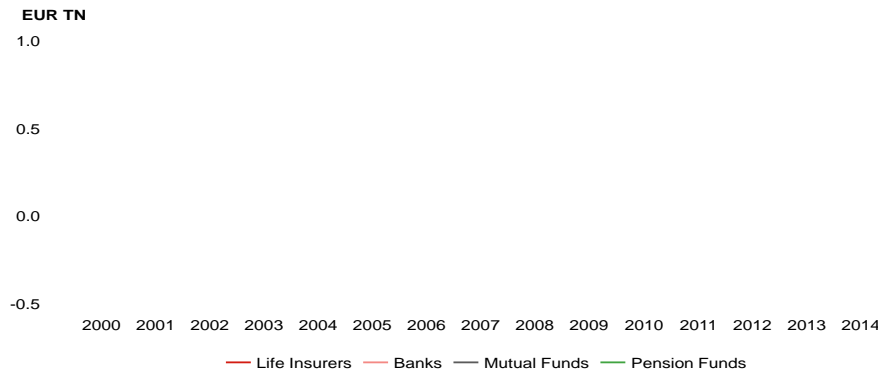
Based **the investment behaviour of insurers differs significantly from the behaviour of other financial services investors.** Insurers may therefore exhibit a stabilising impact on financial markets

# OUR FINDINGS ON INSURERS AS MARKET PARTICIPANTS (ASSET ALLOCATION)

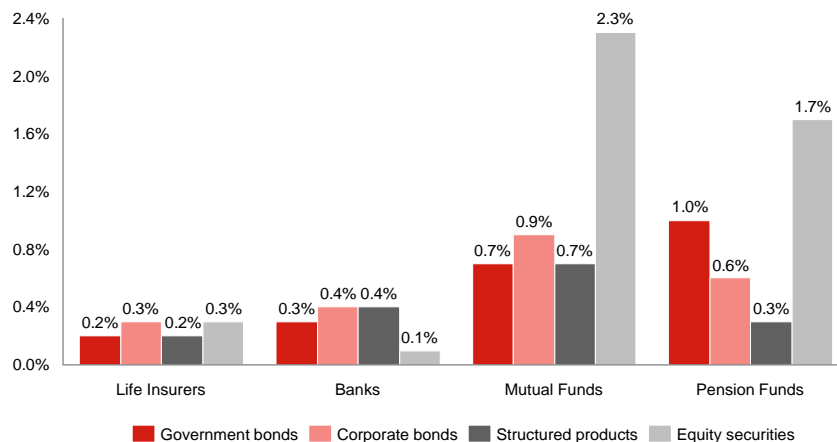


## A LOOK AT TOTAL AND RELATIVE CHANGES

Quarterly change in invested fixed income securities by industry, U.S. market, annualized changes in book values



Standard deviation of quarterly changes of asset allocation percentage points by asset class; U.S.; Q1 1998 to Q3 2015



### Total changes

Between 2000 and 2015 average changes in the total value of life insurers' holdings of bonds are similar to that of pension funds and significantly smaller than those of banks or mutual funds

A similar pattern is also seen when looking specifically at the periods **before**, **during** and **after** the Global Financial Crisis of 2007/08

### Relative changes

With respect to the **relative changes in asset allocation**<sup>1</sup>, **life insurers have the lowest values** across all asset classes with the exception of equity securities: in general they are low in particular compared to mutual funds and pension funds

Banks have similar values to life insurers







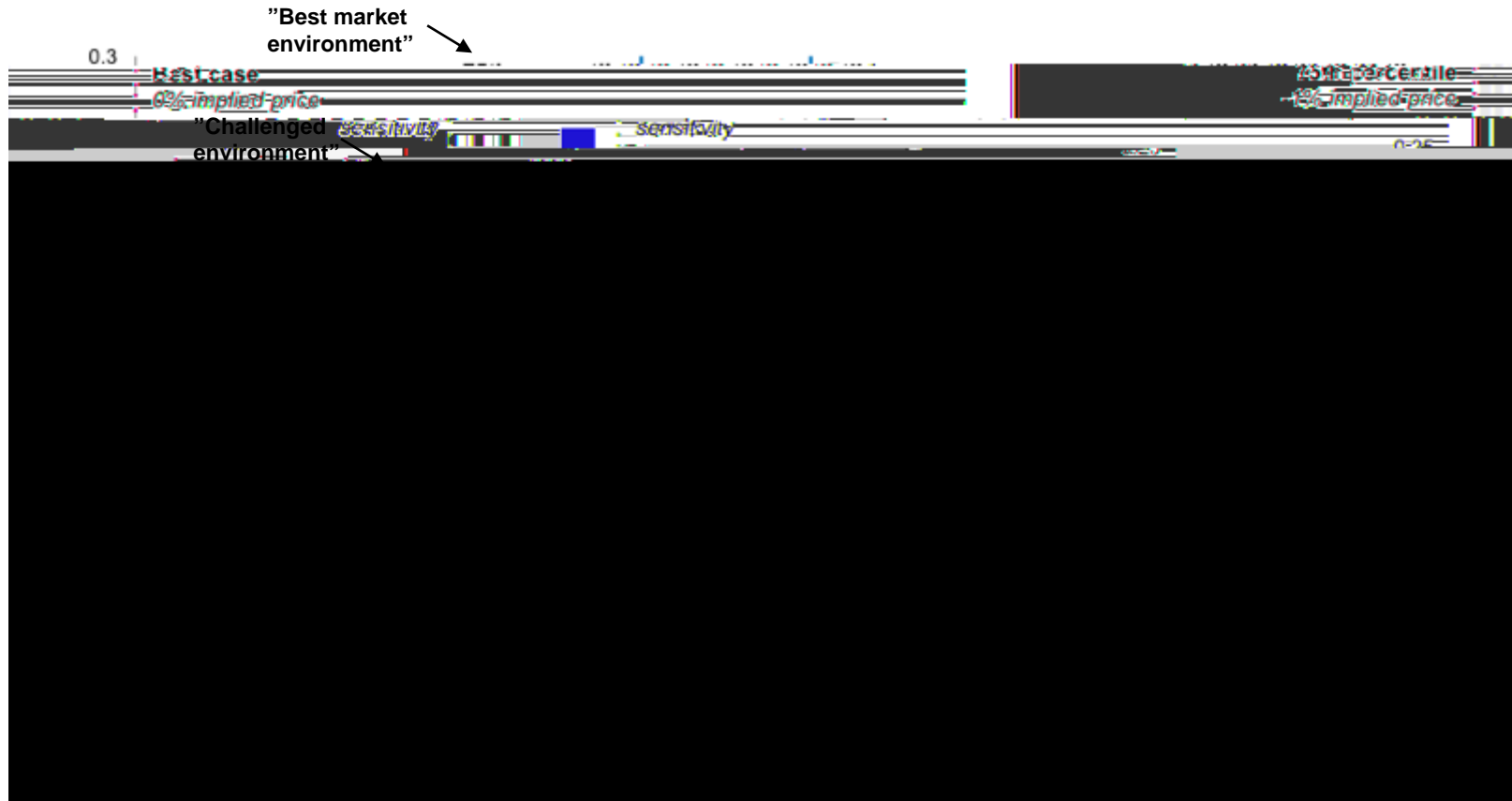


# CALIBRATION OF PRICE SENSITIVITY PARAMETERS (2/2)



## EXAMPLE: FREQUENCY DISTRIBUTION OF CORPORATE BONDS

Implied price sensitivity of U.S. corporate bonds based on changes in volume and price



Sources: Bloomberg Market Breadth Investment Grade Bond Dollar Volume (NTMBIV) index; Barclays U.S. Corporate Investment Grade index

# SUMMARY OF SCENARIO-BASED RESULTS



## PRICE IMPACT OF LARGE-SCALE ASSET SALES UNDER VARIOUS SCENARIOS

	Europe		United States	
	“Best market environment”	“Challenged environment”	“Best market environment”	“Challenged environment”
<b>Credit de-risking</b>	-0.2%	-0.6%	-0.2%	-0.8%
<b>Equity de-risking</b>	-1.0%	-4.0%	-0.1%	-0.2%
<b>Large surrenders</b>				
Equity securities		-0.1%		-0.05%
Corporate bonds		-0.03%		-0.03%
Agency bonds		n/a		-0.01%
Government bonds		-0.03%		-0.25%
Municipal securities		n/a		-0.25%
Structured products		n/a		-0.11%
<b>“Worst case” (Global Financial Crisis)</b>				
<b>Credit de-risking</b>		-7.1%	-8.0%	
<b>Equity de-risking</b>		-19.2%	-1.1%	
are based on the 95th percentile				

