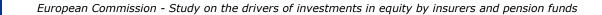
# PORTUGAL

# Key characteristics of the insurance market

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# **1** Introduction

#### **1.1 General**

At the end of 2017 (2017 Q4), 40 insurance companies<sup>1</sup> in Portugal submitted their Solvency II related reporting package to the Portuguese National Supervisory Authority (NSA). These companies accounted for 0,470% of Total assets of insurance undertakings operating within the European Union (EU).

The table below illustrates the number of Solvency II reporting submissions in Portugal by insurance activities and the importance of the country within the EU, based on Total assets.

Insurance reporting submissions	#
Life undertakings	14
Non-Life undertakings	21
Reinsurance undertakings	0
Composite undertakings	5
Total	40
Total assets PT / Total assets EU %	0,470%
Ranking PT based on Total assets EU	14

#### Table 1 - Insurance reporting submissions

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

#### **1.2 Balance sheet**

At the end of 2017 (2017 Q4), Portugal was the number 14 country in the EU insurance market in terms of assets held with an amount of 53 031 million EUR reported under Solvency II rules.

With regards to the Assets held for index-linked and unit-linked contracts, Portugal ranked number 15 in terms of absolute amount with 12 287 million EUR invested in this category. However, with 23,2% of Total assets of this category, Portugal was slightly below the EU average, i.e. 24,3% in terms of Total assets.

In terms of technical provisions, 53,2% of the total balance sheet relates to the life business (i.e. non index-linked and unit-linked business), while 6,0% represented non-life obligations.

in Mio EUR		РТ				EU		
	Amount	Rank	%	%	Avg	Min	Мах	StD
Investments, deposits, cash and cash equivalents	38 446	13	72,5%	67,8%	67,3%	22,6%	90,1%	17,2%
Assets held for index-linked and unit-linked contracts	12 287	15	23,2%	24,2%	24,3%	2,5%	59,3%	16,2%
Other assets	2 297	14	4,3%	8,1%	8,4%	2,1%	19,5%	4,9%
Total assets	53 031	14	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%
Technical provisions - life	28 226	13	53,2%	46,3%	32,2%	3,0%	64,2%	17,9%
Technical provisions - non-life	3 165	14	6,0%	6,6%	12,9%	2,4%	38,5%	9,1%
Technical provisions - index-linked and unit-linked	12 172	14	23,0%	25,1%	23,4%	2,4%	58,4%	16,0%
Other liabilities	3 053	16	5,8%	8,9%	9,0%	4,0%	21,3%	3,9%
Total liabilities	46 618	14	87,9%	86,9%	77,6%	49,1%	92,7%	11,1%
Excess of assets over liabilities	6 413	15	12,1%	13,1%	22,4%	7,3%	50,9%	11,1%
Total liabilities + Excess of assets over liabilities	53 031	14	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%

#### Table 2 - Solvency II balance sheet (S.02.01) and EU comparison (solo)

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

<sup>&</sup>lt;sup>1</sup> In the report, the term 'insurance companies' indicates both direct insurance and reinsurance companies. The insurance market covered in this factsheet therefore refers to insurers and reinsurers.



The balance sheet item Investments, deposits, cash and cash equivalents will be further detailed in section 2 while section 3 will focus on Assets held for index-linked and unit-linked contracts.

## **1.3 Solvency II ratios**

At the end of 2017 (2017 Q4), the Portuguese insurance market as a whole had available own funds that were significantly above the Solvency Capital Requirement (SCR) levels required by the European Solvency II Directive. The reported SCR ratio amounted to 174% with long-term guarantee (LTG) and transitional measures, and is significantly below the EU, which amounted to 237% at year-end 2017. Out of the 28 EU Member States, Portugal is ranked at the 25<sup>th</sup> position in terms of the reported SCR ratios.

Table 3 - Solvency II own funds and SCR (S.23.01) and EU comparison (solo)

in Mio EUR	PT				EU		
	Amount	Rank	%	Avg	Min	Max	StD
Total available own funds to meet the SCR	6 726	15	-	-	-	-	-
SCR	3 844	15	-	-	-	-	-
Surplus available own funds	2 883	16	-	-	-	-	-
Ratio of Eligible own funds to SCR	174%	25	237%	225%	135%	361%	52%
Ratio of Eligible own funds to SCR (10th percentile)	126%	22	136%	138%	110%	193%	19%
Ratio of Eligible own funds to SCR (25th percentile)	146%	22	162%	164%	128%	214%	24%
Ratio of Eligible own funds to SCR (50th percentile)	183%	21	215%	208%	144%	300%	37%
Ratio of Eligible own funds to SCR (75th percentile)	216%	26	306%	280%	164%	445%	59%
Ratio of Eligible own funds to SCR (90th percentile)	316%	22	457%	396%	173%	643%	99%
Ratio of Eligible own funds to MCR	533%	18	640%	613%	282%	933%	170%

Source: EIOPA statistics and Deloitte-CEPS analysis

EIOPA's report on long-term guarantees measures and measures on equity risk published on 18 December 2018 mentions the average impact of the use of LTG and transitional measures. According to that report, at year-end 2017, Portuguese participants reported an SCR ratio of 175% including the application of LTGs and transitionals. Removing the measures caused a significant decrease of the SCR ratio to 131%.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> https://eiopa.europa.eu/Publications/Reports/2018-12-18%20\_LTG%20AnnualReport2018.pdf

## 2 Investments, deposits, cash and cash equivalents

#### 2.1 Scope

The asset allocation of Portuguese insurance undertakings is mainly analysed through the reported Solvency II Exposure List (S.06.02). The classification of the Solvency II Balance Sheet (S.02.01) follows the legal nature of the assets in terms of classification which can differ from the exposures reporting.

Based upon the comparative view below, we note that amounts reported in the Solvency II Exposure List (S.06.02) and Solvency II Balance Sheet (S.02.01) differ<sup>3</sup> slightly with the latter being lower than the former. In terms of allocation in percentage, we note a small shift from Holdings in related undertakings (including participations and equities) towards Collective Investments Undertakings, when going from Solvency II Balance Sheet to the Exposure list. Furthermore, we also note a small shift from Deposits towards Cash and cash equivalents, when going from Solvency II Balance Sheet to the Exposure list.

in number	Exposu	e list PT	Solvency II balan	ce sheet PT	Difference
	#	%	#	%	#
Life undertakings	14	35,0%	14	35,0%	0
Non-Life undertakings	21	52,5%	21	52,5%	0
Reinsurance undertakings	0	0,0%	0	0,0%	0
Undertakings pursuing both life and non-life insurance activity	5	12,5%	5	12,5%	0
Total	40	100,0%	40	100,0%	0

in Mio EUR	Exposu	e list PT	Solvency II balance	e sheet PT	Difference
	Amount	%	Amount	%	%
Holdings in related undertakings, incl. participations and equities	3 382	8,8%	3 801	9,9%	-1,1%
Holdings in related undertakings, including participations	n/a	n/a	2 260	5,9%	n/a
Equities	n/a	n/a	1 541	4,0%	n/a
Equities - listed	n/a	n/a	1 519	4,0%	n/a
Equities - unlisted	n/a	n/a	22	0,1%	n/a
Collective Investments Undertakings	2 309	6,0%	1 891	4,9%	1,1%
Bonds	29 636	77,1%	29 636	77,1%	0,0%
Loans and mortgages	103	0,3%	103	0,3%	0,0%
Property	832	2,2%	832	2,2%	0,0%
Deposits	1 309	3,4%	1 381	3,6%	-0,2%
Cash and cash equivalents	874	2,3%	802	2,1%	0,2%
Other investments	0	0,0%	0	0,0%	0,0%
Total	38 447	100,0%	38 446	100,0%	0,0%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

#### 2.1.1 Listed and unlisted equity

The distinction between listed and unlisted equity is made based upon the reported Solvency II Balance Sheet (S.02.01). Table 5 compares the listed and unlisted equity, whereby Holdings in related undertakings (including participations) are excluded.

#### Table 5 - Listed and unlisted equity exposure based upon Solvency II balance sheet (S.02.01)

in Mio EUR		PT		EU				
	Amount	Rank	%	%	Avg	Min	Мах	StD
Equities - listed	1 519	12	98,6%	83,7%	75,0%	12,8%	99,6%	21,1%
Equities - unlisted	22	16	1,4%	16,3%	25,0%	0,4%	87,0%	21,1%
Total equities	1 541	12	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%
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Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

<sup>&</sup>lt;sup>3</sup> Some companies reporting under Solvency II are exempted from reporting the Solvency II Exposure List. The decision to exempt certain companies from particular reporting obligations lies with individual National Competent Authorities.



Based upon the quarterly reporting as of Q4 2017, Portuguese insurers invested 98,6% of their directly-held equity positions in listed equity in comparison to an average of 75,0% in the EU. With an amount of 1 519 million EUR, Portugal ranked number 12 in the EU.

With an invested amount of 22 million EUR, unlisted equity constituted a non-significant portion of the equity investment category of the directly-held equity investments, i.e. 1,4%. This placed Portugal as the number 16 in the EU.

## **2.2 Asset exposure**

From an asset exposure perspective, the insurance market in Portugal mainly invested in Government bonds and Corporate bonds (in total 76,5% of Total Investments, deposits, cash and cash equivalents), Collective Investment Undertakings (6,0%), and Equity (8,8%).

Within the bond categories, the insurance market was not equally exposed to government securities (47,5%) and corporate debt (29,0%),categories for which Portugal ranked number 12 and number 14 in the EU, respectively. Comparing the different assets classes, we note that the government bonds asset class shows the highest standard deviation of 18,9%.

The category of Collective Investment Undertakings was the fourth most important for the Portuguese Insurance market in terms of asset exposures. Within this category, the industry was mainly exposed to Real estate funds, Debt funds, and Equity funds for which Portugal ranked respectively number 9, number 15, and number 16 in the EU.

Equity was the third category to which the Portuguese insurers had the most exposure. Equity of real estate related corporation constitutes 3,9% within the 8,8% of the total equity exposure.



in Mio EUR		PT				EU		
	Amount	Rank	%	%	Avg	Min	Мах	StD
Equity	3 382	14	8,8%	12,0%	9,5%	1,1%	28,1%	6,5%
Common equity	1 840	14	4,8%	10,4%	7,8%	1,0%	22,5%	6,0%
Equity of real estate related corporation	1 504	9	3,9%	1,0%	1,1%	0,0%	4,0%	1,2%
Other equity	38	17	0,1%	0,6%	0,6%	0,0%	2,0%	0,7%
Collective Investment Undertakings	2 309	15	6,0%	19,2%	12,8%	1,5%	41,6%	9,3%
Equity funds	385	16	1,0%	3,2%	2,7%	0,4%	10,9%	2,4%
Private equity funds	80	13	0,2%	0,5%	0,5%	0,0%	6,9%	1,3%
Debt funds	764	15	2,0%	7,8%	5,6%	0,8%	18,0%	4,9%
Money market funds	58	18	0,2%	2,3%	1,1%	0,0%	6,3%	1,6%
Asset allocation funds	65	16	0,2%	1,1%	0,8%	0,0%	3,9%	1,0%
Real estate funds	843	9	2,2%	1,6%	0,8%	0,0%	3,3%	0,9%
Alternative funds	4	16	0,0%	0,4%	0,3%	0,0%	3,1%	0,6%
Infrastructure funds	45	12	0,1%	0,2%	0,1%	0,0%	0,9%	0,2%
Other	65	14	0,2%	2,0%	0,9%	0,0%	7,2%	1,7%
Government bonds	18 248	12	47,5%	28,7%	39,7%	10,0%	77,0%	18,9%
Corporate bonds	11 131	14	29,0%	26,9%	21,6%	1,8%	47,3%	11,2%
Structured notes	212	12	0,6%	1,3%	0,5%	0,0%	2,5%	0,6%
Collateralised securities	46	13	0,1%	0,6%	0,6%	0,0%	9,3%	1,8%
Mortgages and loans	103	19	0,3%	4,8%	3,8%	0,3%	26,3%	5,2%
Property	832	13	2,2%	2,0%	3,5%	0,8%	11,6%	2,6%
Deposits	1 309	12	3,4%	2,8%	3,6%	0,2%	16,6%	3,6%
Cash and cash equivalents	874	14	2,3%	1,4%	4,3%	0,5%	16,6%	3,5%
Other investments	0	-	0,0%	0,1%	0,1%	0,0%	0,9%	0,3%
Not reported	0	-	0,0%	0,0%	0,0%	0,0%	0,3%	0,1%
Total Investments, deposits, cash and cash equivalents	38 447	13	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%

#### Table 6 - Asset exposure based upon Solvency II exposure list (S.06.02)

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

#### 2.2.1 Asset exposures between Life, Non-Life and Composite insurance undertakings, and reinsurers

Table 7, based upon the Asset Exposure reporting (S.06.02) of Q4 2017, gives further insight into the investment behaviour of Life, Non-Life and Composite insurance companies, and reinsurers in Portugal.



in %		PT			EU Non-life 18,3% 16,2% 0,8% 1,3% 22,3% 2,9% 0,5% 9,7% 1,4% 1,2% 1,8% 0,3% 0,2% 4,3% 19,1% 29,3% 0,6% 3,2% 2,5% 1,6%	
			Composite			Composite
	Life	Non-life	and reinsurance	Life	Non-life	and reinsurance
Equity	1,7%	4,3%	16,2%	6,6%	18.3%	16,5%
Common equity	1,7%	4,1%	7,9%	5,0%	-	14,9%
Equity of real estate related corporation	0,0%	0,2%	8,2%	1,0%	0,8%	1,2%
Other equity	0,0%	0,0%	0,2%	0,6%	1,3%	0,4%
Collective Investment Undertakings	6,8%	6,5%	5,2%	22,4%	22,3%	13,8%
Equity funds	1,8%	2,5%	0,0%	3,7%	2,9%	2,7%
Private equity funds	0,2%	0,0%	0,3%	0,5%	0,5%	0,5%
Debt funds	1,2%	2,6%	2,7%	9,7%	9,7%	4,7%
Money market funds	0,2%	0,4%	0,1%	2,8%	1,4%	2,0%
Asset allocation funds	0,0%	0,1%	0,3%	1,3%	1,2%	0,9%
Real estate funds	2,9%	0,7%	1,8%	1,6%	1,8%	1,4%
Alternative funds	0,0%	0,1%	0,0%	0,3%	0,3%	0,5%
Infrastructure funds	0,2%	0,0%	0,0%	0,2%	0,2%	0,3%
Other	0,4%	0,0%	0,0%	2,3%	4,3%	0,8%
Government bonds	55,1%	55,4%	39,1%	28,1%	19,1%	33,4%
Corporate bonds	30,3%	19,2%	29,1%	29,2%	29,3%	22,9%
Structured notes	0,9%	0,7%	0,2%	1,4%	0,6%	1,5%
Collateralised securities	0,2%	0,0%	0,0%	0,8%	0,6%	0,5%
Mortgages and loans	0,3%	0,1%	0,3%	7,4%	3,2%	2,3%
Property	0,8%	5,5%	3,0%	2,0%	2,5%	1,7%
Deposits	1,7%	3,5%	5,4%	0,8%	1,6%	5,8%
Cash and cash equivalents	2,2%	4,7%	1,6%	1,0%	2,5%	1,4%
Other investments	0,0%	0,0%	0,0%	0,2%	0,0%	0,1%
Not reported	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Total Investments, deposits, cash and cash equivalen	ts 100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

# Table 7 - Asset exposure based upon Solvency II exposure list (S.06.02) for Life, Non-Life and Composite insurance undertakings, and reinsurers

otal Investments, deposits, cash and cash equivalents 100,0% 100,0% Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

At EU level Non-Life insurers invested a significantly higher portion of their Investments in Equity (18,3% equity investments) in comparison to pure Life insurers (6,6% equity investments). In Portugal this difference was not apparent, and we note that Composite insurers invested 3 to 9 times more of their assets into this category than their Life and Non-Life counterparts.

On the other hand, at EU level, pure Life insurers and also Composite insurers allocated a larger share of their investments to government bonds as compared to Non-Life insurers. A difference in behaviour between Portuguese Non-life insurers and their counterpart at EU level with regard to the government bonds can be noted: Portuguese Non-life insurers reported 55,4% of their investments in this category, in sharp contrast to the EU level which amounted to 19,6%.

#### **2.3 Equity exposure**

Based upon the information included in the Solvency II Exposure List (S.06.02) and Balance Sheet (S.02.01), equity exposures can be calculated and presented in different ways:

- Equity exposure as the sum of Equity (Common equity, Equity of real estate related corporation and Other equity), Equity and Private equity funds, and Equity risk included in structured notes;
- Equity of real estate related corporation could be seen as a property exposure. Therefore equity exposures are presented including and excluding Equity of real estate related corporation;
- The equity amounts of the Solvency II Exposure List does not provide further details whether the equity exposures relate to listed or unlisted equity positions. In addition, the Solvency II Exposure List does not mention whether the equity relates to Holdings in related undertakings, including participations;
- Therefore, the listed and unlisted share amounts reported in the Solvency II Balance Sheet are considered and integrated as an equity exposure indicator. A rescaling is performed in case a difference is noted between the two Solvency II information sets (Exposure List versus Balance Sheet). The adjusted equity exposure stemming from this analysis excludes the Equity exposure coming from Holdings in related undertakings, including participations. These holdings can potentially be important within insurance groups.

# Table 8 - Equity exposure based upon Solvency II balance sheet (S.02.01) and Solvency II exposure list (S.06.02)

in Mio EUR		PT				EU		
	Amount	Rank	%	%	Avg	Min	Мах	StD
Equity	3 382	14	8,8%	12,0%	9,5%	1,1%	28,1%	6,5%
Common equity	1 840	14	4,8%	10,4%	7,8%	1,0%	22,5%	6,0%
Equity of real estate related corporation	1 504	9	3,9%	1,0%	1,1%	0,0%	4,0%	1,2%
Other equity	38	17	0,1%	0,6%	0,6%	0,0%	2,0%	0,7%
Collective Investment Undertakings - Equity funds	464	15	1,2%	3,8%	3,2%	0,4%	14,7%	3,5%
Equity funds	385	16	1,0%	3,2%	2,7%	0,4%	10,9%	2,4%
Private equity funds	80	13	0,2%	0,5%	0,5%	0,0%	6,9%	1,3%
Structured notes - Equity risk	1	20	0,0%	0,2%	0,1%	0,0%	0,6%	0,1%
Total Equity exposure	3 848	15	10,0%	16,0%	12,7%	2,5%	37,4%	8,4%
Equity without Equity of real estate related corporation	1 878	15	4,9%	11,0%	8,4%	1,1%	24,1%	6,1%
Equity exposure without Equity of real estate related corporation	2 344	15	6,1%	15,0%	11,7%	2,4%	33,3%	7,9%
Equities market value balance sheet (rescaled to CIC scope)	1 541	12	4,0%	3,6%	3,2%	0,1%	20,6%	4,0%
Equities - listed (rescaled to CIC scope)	1 519	12	4,0%	3,0%	2,6%	0,0%	15,4%	3,2%
Equities - unlisted (rescaled to CIC scope)	22	16	0,1%	0,6%	0,6%	0,0%	5,2%	1,0%
Equity exposure based upon (Un)Listed equities (rescaled)	2 007	14	5,2%	7,6%	6,5%	1,2%	29,8%	6,7%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

The observed standard deviations at EU level are relatively high given the asset allocation in percentage between the different asset classes at EU level.

In Portugal, we note that equity exposures coming from Collective Investment Undertakings amount to 1,2% and are higher than the listed and unlisted equity exposures which in total amount to 4,0%. Hereby the listed and unlisted equities in Portugal are similar to the asset allocation at EU level.



#### 2.3.1 Direct and indirect equity exposure

#### Table 9 - Direct and indirect equity exposure based upon Solvency II exposure list (S.06.02)

in Mio EUR		РТ				EU		
	Amount	Rank	%	%	Avg	Min	Мах	StD
Direct equity	3 382	14	87,9%	75,2%	73,4%	39,2%	94,5%	15,9%
Common equity	1 840	14	47,8%	64,8%	59,4%	28,6%	93,3%	19,0%
Equity of real estate related corporation	1 504	9	39,1%	6,4%	8,4%	0,0%	39,1%	9,6%
Other equity	38	17	1,0%	3,9%	5,7%	0,0%	35,3%	8,8%
Indirect equity	466	16	12,1%	24,8%	26,6%	5,5%	60,8%	15,9%
Collective Investment Undertakings – Equity funds	464	16	12,1%	23,6%	25,9%	4,6%	60,6%	15,7%
Equity funds	385	16	10,0%	20,2%	22,8%	4,6%	52,9%	13,4%
Private equity funds	80	13	2,1%	3,3%	3,1%	0,0%	28,4%	5,7%
Structured notes - Equity risk	1	20	0,0%	1,3%	0,7%	0,0%	4,0%	1,0%
Total Equity exposure	3 848	15	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

In 2017 Q4, the insurance market in Portugal was invested more than seven times as much in Direct equity (87,9% of Total equity) than in Indirect equity (12,1% of Total equity).

In terms of direct equity exposure, Portugal ranked number 14 and number 9 in the EU, with regards respectively to the exposure amount to Common equity and Equity of real estate related corporation.

Within the Indirect equity category, Equity funds constituted the bulk of investments with 10,0% of Total equity, more than 4 times the amount invested in Private equity funds.

#### 2.3.2 Equity by location

#### Table 10 - Equity exposure by location based upon Solvency II exposure list (S.06.02)

in Mio EUR			РТ	
	EU home	EU other	outside EU (1)	Total
Equity	1 763	673	945	3 382
Common equity	518	477	846	1 840
Equity of real estate related corporation	1 241	193	70	1 504
Other	4	4	30	38
Collective Investment Undertakings - Equity funds	53	311	101	464
Equity funds	4	284	97	385
Private equity funds	48	27	4	80
Structured notes - Equity risk	0	1	0	1
Total Equity exposure	1 816	986	1 046	3 848
in %			РТ	
	EU home	EU other	outside EU (1)	Total
Equity	52,1%	19,9%	28,0%	100,0%
Common equity	28,1%	25,9%	46,0%	100,0%
Equity of real estate related corporation	82,5%	12,8%	4,7%	100,0%
Other	10,7%	10,6%	78,7%	100,0%
Collective Investment Undertakings - Equity funds	11,3%	67,0%	21,7%	100,0%
Equity funds	1,1%	73,7%	25,1%	100,0%
Private equity funds	60,6%	34,2%	5,2%	100,0%
Structured notes - Equity risk	1,7%	98,3%	0,0%	100,0%
Total Equity exposure	47.2%	25,6%	27,2%	100.0%

(1) The following countries are included in the class 'outside EU': IS, LI, NO, AU, CA, JP, US, CH and countries grouped under the caption 'Rest of World'. In addition some investments are not assigned to an individual country and are also included in this class.

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis



Based upon the Q4 2017 reporting with regards to the location of equity investments, insurers established in Portugal favoured domestic investments to a large extent, dedicating to these 52,1% of their direct equity investments, and 11,3% of their indirect investments.

Table 10 also showed that besides the home market, Portugal insurers invested similar amounts in equity of other EU Member States and non-EU Member States. Ireland, Belgium and the United Kingdom were the preferred destinations.

in Mio EUR	PT	
	Amount	%
Home country	1 763	52,1%
РТ	1 763	52,1%
Top 5 countries (outside home country)	1 316	38,9%
Rest of World and unassigned	860	25,4%
IE	193	5,7%
BE	93	2,8%
GB	87	2,6%
DE	82	2,4%
Home + Top 5 countries (outside home country)	3 079	91,0%
Total Direct equity exposure (with real estate corporation)	3 382	100,0%
in Mio EUR	PT	
	Amount	%
Home country	522	27,8%
РТ	522	27,8%
Top 5 countries (outside home country)	1 195	63,6%
Past of World and unassigned	957	15 60/-

Top 5 countries (outside home country)	1 195	63,6%
Rest of World and unassigned	857	45,6%
BE	93	5,0%
GB	87	4,6%
DE	82	4,4%
FR	75	4,0%
Home + Top 5 countries (outside home country)	1 717	91,4%
Total Direct equity exposure (without real estate corporation)	1 878	100,0%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

# **3** Index-linked and unit-linked investments

#### 3.1 Scope

Based upon the comparative view below, we note a minor difference with respect to the Assets held for index-linked and unit-linked investments reported in the Solvency II Exposure List (S.06.02) and Solvency II Balance Sheet (S.02.01).

Table 12 - Solvency II balance sheet (S.02)	01) and Solvency II exposure list (S.06.02) comparison
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in number	Exposu	e list PT	Solvency II balance	Difference	
	#	%	#	%	#
Life undertakings	14	35,0%	14	35,0%	0
Non-Life undertakings	21	52,5%	21	52,5%	0
Reinsurance undertakings	0	0,0%	0	0,0%	0
Undertakings pursuing both life and non-life insurance activity	5	12,5%	5	12,5%	0
Total	40	100,0%	40	100,0%	0
in Mio EUR	Exposu	e list PT	Solvency II balance sheet PT		Difference
	Amount	%	Amount	%	%
Assets held for index-linked and unit-linked contracts	12 355	100,0%	12 287	100,0%	0,5%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

## **3.2 Asset exposure**

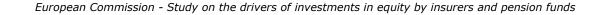
Table 13 depicts a more detailed view of the Assets held for index-linked and unit-linked contracts, based upon the Solvency II exposure list (S.06.02).

in Mio EUR		PT				EU		
	Amount	Rank	%	%	Avg	Min	Max	StD
Equity	58	17	0,5%	19,3%	4,5%	0,0%	30,1%	7,1%
Common equity	49	17	0,4%	18,0%	3,9%	0,0%	28,8%	6,3%
Equity of real estate related corporation	1	17	0,0%	0,8%	0,3%	0,0%	1,5%	0,5%
Other equity	9	10	0,1%	0,4%	0,3%	0,0%	4,1%	0,9%
Collective Investment Undertakings	3 721	15	30,1%	63,2%	73,1%	30,1%	97,5%	16,3%
Equity funds	1 378	15	11,2%	26,5%	29,2%	11,2%	57,5%	10,5%
Private equity funds	11	8	0,1%	0,1%	0,2%	0,0%	2,9%	0,6%
Debt funds	1 610	15	13,0%	12,1%	19,0%	4,8%	47,5%	11,4%
Money market funds	53	18	0,4%	2,2%	1,7%	0,0%	7,5%	1,8%
Asset allocation funds	165	19	1,3%	14,8%	13,1%	0,4%	30,5%	7,7%
Real estate funds	46	12	0,4%	1,4%	0,6%	0,0%	6,2%	1,2%
Alternative funds	380	9	3,1%	1,6%	2,4%	0,0%	16,3%	3,8%
Infrastructure funds	0	-	0,0%	0,0%	0,1%	0,0%	2,4%	0,5%
Other	78	17	0,6%	4,6%	6,9%	0,0%	44,3%	10,0%
Government bonds	3 882	5	31,4%	6,4%	6,9%	0,0%	31,4%	8,4%
Corporate bonds	2 804	7	22,7%	3,9%	6,0%	0,0%	22,7%	6,9%
Structured notes	112	16	0,9%	1,6%	4,1%	0,0%	18,9%	4,9%
Collateralised securities	11	7	0,1%	0,1%	0,1%	0,0%	0,9%	0,2%
Mortgages and loans	0	-	0,0%	0,2%	0,2%	-3,7%	2,5%	1,0%
Property	0	-	0,0%	1,3%	0,6%	0,0%	7,6%	1,5%
Deposits	747	8	6,0%	1,2%	2,0%	-0,3%	14,5%	3,3%
Cash and cash equivalents	1 019	7	8,2%	1,2%	2,2%	0,0%	8,5%	2,5%
Other investments	0	-	0,0%	0,4%	0,3%	0,0%	8,1%	1,5%
Not reported	0	-	0,0%	1,2%	0,1%	0,0%	2,3%	0,4%
Total Investments, deposits, cash and cash equivalents	12 355	15	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%

 Table 13 - Asset exposure based upon Solvency II exposure list (S.06.02)

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

The Government bonds (31,4%) and the Collective Investment Undertakings (30,1%) represent the most important asset classes of the unit-linked and index-linked investments. Overall, we note a significantly different asset exposure allocation in comparison to the



asset exposure for non index-linked and unit-linked investments. Hereby we refer to section 2 for further details.

Relatively to the EU average, we observe a significant difference between the portion of index-linked and unit-linked related assets that were invested in Government bonds, 31;4% in Portugal compared to 6,0% in the EU.

#### **3.3 Equity exposure**

The Solvency II balance sheet (S.02.01) does not include a further split in different asset classes for the Assets held for index-linked and unit-linked contracts. Hence the rescaling exercise as performed in section 2 can not be performed here.

in Mio EUR		PT			EU				
	Amount	Rank	%	%	Avg	Min	Max	StD	
Equity	58	17	0,5%	19,3%	4,5%	0,0%	30,1%	7,1%	
Common equity	49	17	0,4%	18,0%	3,9%	0,0%	28,8%	6,3%	
Equity of real estate related corporation	1	17	0,0%	0,8%	0,3%	0,0%	1,5%	0,5%	
Other equity	9	10	0,1%	0,4%	0,3%	0,0%	4,1%	0,9%	
Collective Investment Undertakings - Equity funds	1 390	15	11,2%	26,5%	29,3%	11,2%	57,5%	10,4%	
Equity funds	1 378	15	11,2%	26,5%	29,2%	11,2%	57,5%	10,5%	
Private equity funds	11	8	0,1%	0,1%	0,2%	0,0%	2,9%	0,6%	
Structured notes - Equity risk	0	-	0,0%	1,2%	2,7%	0,0%	15,0%	3,5%	
Total Equity exposure	1 448	16	11,7%	47,1%	36,5%	11,7%	58,6%	10,9%	
Equity without Equity of real estate related corporation	57	15	0,5%	16,0%	4,2%	0,0%	29,2%	6,8%	
Equity exposure without Equity of real estate related corporation	1 447	16	11,7%	40,0%	36,2%	11,7%	58,6%	10,8%	
Source: EIOPA Solvency II statistics and I	Deloitte-CE	PS ana	alysis						

Table 14 - Equity exposure based upon Solvency II exposure list (S.06.02)

In Portugal, we note that total equity exposures related to index-linked and unit-linked contracts (11,7%) are higher in comparison to non index-linked and unit-linked contracts (10,0%). Equity funds are the main contributors to the total equity exposures.

## 3.3.1 Direct and indirect equity exposure

#### Table 15 - Direct and indirect equity exposure based upon Solvency II exposure list (S.06.02)

	РТ				EU		
Amount	Rank	%	%	Avg	Min	Мах	StD
58	17	4,0%	38,3%	11,1%	0,0%	54,2%	15,2%
49	17	3,4%	35,4%	9,6%	0,0%	51,8%	13,2%
1	17	0,0%	1,7%	0,7%	0,0%	4,0%	1,1%
9	10	0,6%	1,3%	0,8%	0,0%	9,7%	2,2%
1 390	15	96,0%	61,7%	88,9%	45,8%	100,0%	15,2%
1 390	15	96,0%	59,1%	81,5%	45,7%	100,0%	15,5%
1 378	15	95,2%	58,6%	81,0%	44,9%	100,0%	16,0%
11	8	0,8%	0,5%	0,5%	0,0%	6,9%	1,4%
0	-	0,0%	2,6%	7,4%	0,0%	35,8%	9,6%
1 448	16	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%
	58 49 1 9 1 390 1 390 1 378 11 0	Amount         Rank           58         17           49         17           1         17           9         10           1 390         15           1 378         15           11         8           0         -	Amount         Rank         %           58         17         4,0%           49         17         3,4%           1         17         0,0%           9         10         0,6%           1 390         15         96,0%           1 378         15         95,2%           11         8         0,8%           0         -         0,0%	Amount         Rank         %           58         17         4,0%         38,3%           49         17         3,4%         35,4%           1         17         0,0%         1,7%           9         10         0,6%         1,3%           1 390         15         96,0%         61,7%           1 390         15         96,0%         59,1%           1 378         15         95,2%         58,6%           11         8         0,8%         0,5%           0         -         0,0%         2,6%	Amount         Rank         %         %         Avg           58         17         4,0%         38,3%         11,1%           49         17         3,4%         35,4%         9,6%           1         17         0,0%         1,7%         0,7%           9         10         0,6%         1,3%         0,8%           1 390         15         96,0%         61,7%         88,9%           1 390         15         96,0%         59,1%         81,5%           1 378         15         95,2%         58,6%         81,0%           11         8         0,8%         0,5%         0,5%           0         -         0,0%         2,6%         7,4%	Amount         Rank         %         %         Avg         Min           58         17         4,0%         38,3%         11,1%         0,0%           49         17         3,4%         35,4%         9,6%         0,0%           1         17         0,0%         1,7%         0,7%         0,0%           9         10         0,6%         1,3%         0,8%         0,0%           1 390         15         96,0%         61,7%         88,9%         45,8%           1 390         15         96,0%         59,1%         81,5%         45,7%           1 378         15         95,2%         58,6%         81,0%         44,9%           11         8         0,8%         0,5%         0,5%         0,0%           0         -         0,0%         2,6%         7,4%         0,0%	Amount         Rank         %         %         Avg         Min         Max           58         17         4,0%         38,3%         11,1%         0,0%         54,2%           49         17         3,4%         35,4%         9,6%         0,0%         51,8%           1         17         0,0%         1,7%         0,7%         0,0%         4,0%           9         10         0,6%         1,3%         0,8%         0,0%         9,7%           1 390         15         96,0%         61,7%         88,9%         45,8%         100,0%           1 390         15         96,0%         59,1%         81,5%         45,7%         100,0%           1 378         15         95,2%         58,6%         81,0%         44,9%         100,0%           11         8         0,8%         0,5%         0,5%         0,0%         6,9%           0         -         0,0%         2,6%         7,4%         0,0%         35,8%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

In 2017 Q4, Portuguese Insurers invested almost all of their Assets held for index and unitlinked contracts in Indirect equity (96,0% of Total equity), with Direct equity constituting the remaining 4,0% of Total equity.



In terms of direct equity exposure, Portugal ranked number 17 and number 17 in the EU, with regards respectively to the exposure amount to Common equity and Equity of real estate related corporation.

Within the Indirect equity category, Equity funds constituted the bulk of investments, amounting to 95,2% of Total equity whereas allocation to Private equity funds were negligible.

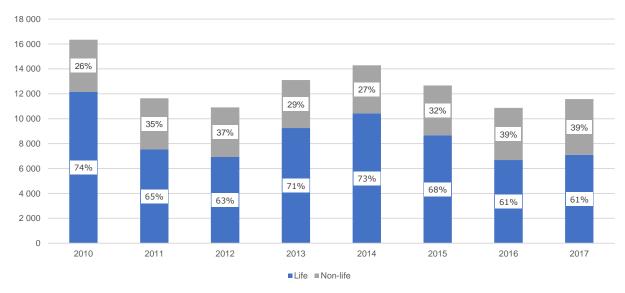


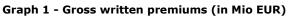
## **4 Insurance products**

#### 4.1 Overview

This section covers the most important insurance products offered in Portugal and the volume of the market. Data reported in this section obtained from the Association of Portuguese Insurers (APS) and the Portuguese Insurance and Pension Funds Supervisory Authority (ASF).<sup>4</sup>

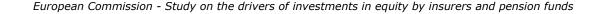
After two consecutive years in which gross written premiums fall by 11,4% (2015) and 14,2% (2016), income rebounded by 6,5% and close the year at 11 579 million EUR. While life insurance policies contribute most towards the yearly premium income, their share over the years has been falling. In particular, since 2014 when it represented 73,1% (or 10 439 million EUR) of the insurance market, life premium income dropped by 32,1% (to 7 089 million EUR) in 2017 and represented 61,2% of the market. On the other hand, over the same period, non-life insurance business grew at an average annual rate of 4%, and at the end of 2017 represented 38,7% of the market.





Source: ASP and ASF

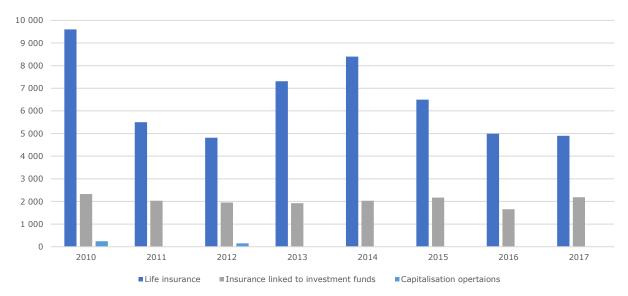
<sup>&</sup>lt;sup>4</sup> Available at https://www.apseguradores.pt/Portal/Portal.aspx?MicrositeId=1&PageId=1 and http://www.asf.com .pt/EN.



#### 4.2 Life insurance products

After decreasing by 23% in 2016, the life segment rebounded and close 2017 up by 6,6% to 7 089 million EUR. In the origin of this evolution was the increase in the contribution of insurance products linked to investment funds, which grew by 32% to 2 187 million EUR compared to 2016 (1 658 million EUR). These products have been generally perceived as less sensitive to the macroeconomic (i.e. low long-term interest rates) and prudential (i.e. new solvency regime) conditions.

On the other hand, life insurance products (which account for 70% of the life premium income) recorded a marginal fall of 1,8% to 4 901 million EUR. This was primarily due to an 11,2% decline in premium income from life insurance products other than Retirement Savings Pans (PPR). As for PPR products totalled 1 864 million EUR, up by 18,7% to 2016.





Source: ASP and ASF



#### **4.3 Non-Life insurance products**

The non-life segment continued its upward trend in 2017, with the highest annual growth rate of the last years (7,1%) and totalled 4 490 million EUR. However, going deeper into this analysis, there are very different behaviours among the main products offered.

#### 4.3.1 Accident and health insurance

The accident and health insurance premium consolidated in 2017 a growth rate of 10,2% to 1 634 million EUR. The two most important components of this segment are health insurance, which accounts for 45% of the premium, and workmen's compensation (40%). In 2017 the segment became the main contributor of the non-life income business, accounting for 36,4% of premiums.

#### 4.3.2 Motor insurance

Motor insurance, the second largest segment of the non-life insurance segment, registered a moderate growth rate of 5,8% and totalled 1 610 million EUR.

#### 4.3.3 Fire and other damage

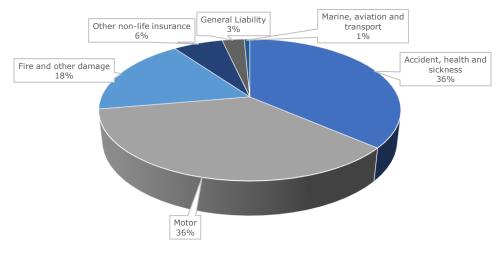
Regarding fire and other damages, there was also a positive but relatively moderate increase in premiums (3,3%). In 2017 income stood at 802 million EUR and accounted for approximately 18% of the non-life business.

#### 4.3.4 Other non-life insurance

Other classes of non-life business, such as credit and security deposit, financial loss, legal expenses and assistance, accounted for 285 million EUR in written premium in 2017.

#### 4.3.5 General liability

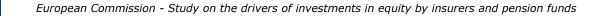
Contributing only 2,8% at the 2017 premium income, general liability premiums increased by 10% to 127 million EUR.



Graph 3 - Allocation of gross written premiums for non-life insurance products (in %)

Note: Accident and health includes workmen's compensation and health insurance. Other non-life insurance includes credit and security deposit, financial loss, legal expenses and assistance.

Source: ASP and ASF



#### 4.4 Average duration

In 2016, EIOPA published their Insurance Stress Test Report<sup>5</sup>, which resulted in the following conclusions for Portugal:

- The approximate effective duration for the TP life for all lines of business reported by the EIOPA 2016 stress test participants is 4,47;
- The Macaulay duration for the TP life for all lines of business reported by the EIOPA 2016 stress test participants is 5,23.

In comparison, the approximate effective duration and Macaulay duration for the TP life for all lines of business for the EU/EEA are 8,23 and 13,97, respectively.

<sup>&</sup>lt;sup>5</sup> EIOPA, 2016, 2016 EIOPA Insurance Stress Test Report. https://eiopa.europa.eu/publications/surveys/eiopa-bos-16-302%20insurance%20stress%20test%202016%20report.pdf



## **5** Accounting & Tax framework

## **5.1 Accounting framework**

The EU has introduced rules, as laid down in Directive 2013/34/EU, to promote the convergence of accounting standards at global level and to ensure consistent and comparable financial reporting across the EU. Regulation 1606/2002/EC requires all listed companies to prepare their consolidated financial statements in accordance with a single set of international standards, the so-called IFRS.<sup>6</sup>

- 1. Applicable GAAP at consolidated level: IFRS required for all companies<sup>7</sup>;
- Applicable GAAP at statutory level: IFRS required for all listed companies that do not prepare consolidated financial statements due to lack of subsidiaries, IFRS permitted for all other listed companies (if Portuguese GAAP is used, additional disclosure is required)<sup>7</sup>;
- 3. Prudential regulatory framework: Solvency II for the calculation of the Solvency Capital Requirement.

#### **5.2 Tax framework**

#### **5.2.1 Capital gains on shares**

Capital gains derived from the disposal of shares may be exempt from corporate income tax under the same conditions as dividends (see below).

If one or more of the conditions is not complied with, the taxation will be whereby capital gains are fully taxable at the standard corporate income tax rate: 21%

For small and medium-sized companies, a rate of 17% applies to the first 15 000 EUR of taxable income.

#### **5.2.2 Capital losses on shares**

Only 50% of the net capital loss incurred in the tax year on the sale of shares or other corporate rights is deductible.

The part of capital losses related to a shareholding in a subsidiary that benefited from a tax-free dividend distribution (under the participation exemption) made in the previous 4 years is not deductible.

#### **5.2.3 Taxation of dividends**

A 100% exemption applies on dividends received by resident corporate shareholders if the following conditions are met:

- 1. A holding requirement: minimum participation of 10%;
- 2. A holding period requirement: participation should be held uninterruptedly for at least one year;
- 3. A nationality requirement: the subsidiary may not be resident in a listed tax haven;

<sup>&</sup>lt;sup>6</sup> https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/financial-reporting\_en

<sup>&</sup>lt;sup>7</sup> https://www.ifrs.org/-/media/feature/around-the-world/jurisdiction-profiles/portugal-ifrs-profile.pdf



- 4. A taxation requirement: the subsidiary may not be exempt from an income tax listed in the EU parent-subsidiary directive or an income tax rate equal to at least 60% of the Portuguese income tax rate;
- 5. A deductibility requirement: the dividends may not have been tax deductible at the level of the distributing entity.

If one or more of the above conditions is not met, the dividend is taxed at the ordinary tax rate.

Portuguese source dividends are subject to 25% withholding tax (WHT), unless a tax treaty provides for a lower rate or the EU parent-subsidiary directive applies. The rate is 35% if paid to a resident of a listed tax haven.

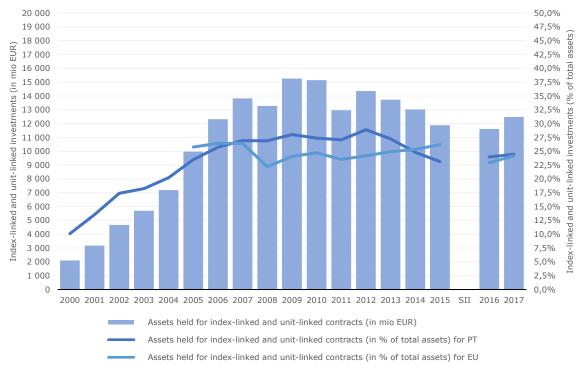
Portugal grants a tax credit up to the amount of Portuguese tax payable on foreign income, which is calculated net of expenses on a per-country basis.

## 6 Historical data

The following section contains historical overviews of Solvency I, Solvency II and ECB data in order to provide insights on possible short and long-term trends.

# 6.1 Index-linked and unit-linked investments in comparison to total assets

Based upon the Solvency I and Solvency II (S.02.01) historical information, the evolution of the index-linked and unit-linked investments in comparison to total assets of Portugal is compared to the EU. The break in Graph 4 shows the transition from the Solvency I to the Solvency II regulatory framework. Under Solvency II assets are presented based upon their market value.



Graph 4 - Evolution index-linked and unit-linked investments based upon Solvency I and Solvency II

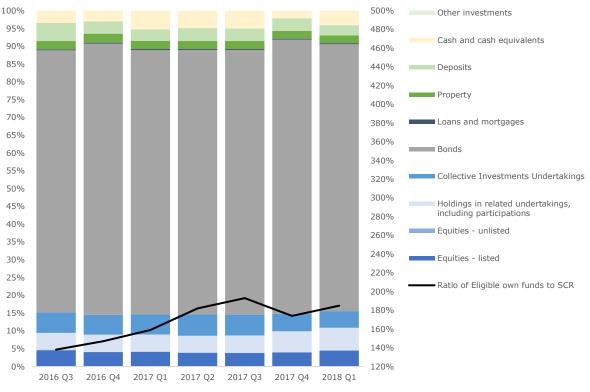
Note: Due to data quality issues for Portugal in the EIOPA Solvency I and Solvency II statistics, the data received from the Portuguese NSA have been used.

Source: EIOPA Solvency I and Solvency II statistics and Deloitte-CEPS analysis

As shown in Graph 4, the share of index-linked and unit-linked investments in comparison to total assets in Portugal has not been stable. The drop to zero in 2008 can be explained by missing data. Note that the graph for the EU shows a relatively stable behaviour over the observation period, with a slightly increasing trend as from 2011.

#### 6.2 Solvency II – excluding index-linked and unit-linked investments

Based upon the Solvency II (S.02.01) quarterly data from 2016 Q3 until 2018 Q1, the evolution of the different asset categories is depicted in Graph 5. Furthermore, the evolution of the SCR ratio is shown over the seven quarters.





The composition of the Portuguese insurers' balance sheet has remained relatively stable over the quarters since the introduction of Solvency II on 1 January 2016<sup>8</sup>. This seems to be confirmed by the fact that the most dominant assets classes such as Bonds, Holdings in related undertakings and Collective Investment Undertakings remain the most important balance sheet items, covering almost all the assets.

Bonds have constituted the major part of the Portuguese insurers' balance sheet since the introduction of Solvency II.

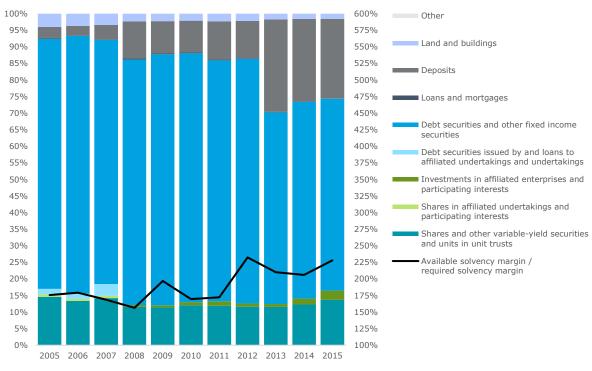
For Portugal, the SCR ratio experienced an increase over the entire observation period, dropping slightly in the fourth quarter of 2017 to recover in the first quarter 2018. Overall, the increase in SCR ration did not have noticeable changes in asset allocation for the Portuguese insurance market.

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

<sup>&</sup>lt;sup>8</sup> Day one reporting, 2016 Q1 and Q2 are not publicly available

#### 6.3 Solvency I – excluding index-linked and unit-linked assets

Based upon the Solvency I yearly data from 2005 until 2015, the evolution of the different investment asset categories is depicted in Graph 6. Furthermore, the evolution of the solvency ratio is shown over the history.

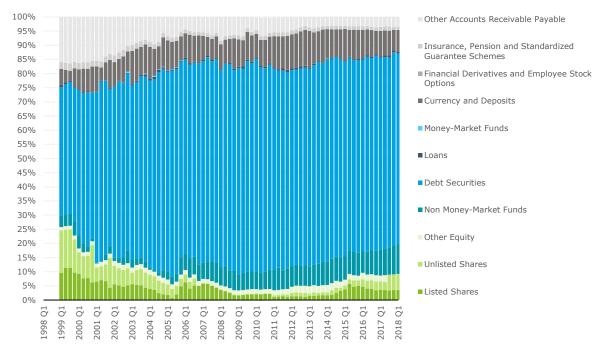




Graph 6, which relates to Solvency I figures suggests the following observations. The dominance of Bonds that we observed under the rules of Solvency II has been a characteristic of the Portuguese insurers' balance sheet for more than a decade. However, there is a notable drop in Debt securities in favour of Deposits in 2013. Furthermore, the solvency ratio shows a slightly increasing trend.

Source: EIOPA Solvency I statistics and Deloitte-CEPS analysis

# 6.4 European Central Bank – including index-linked and unit-linked assets



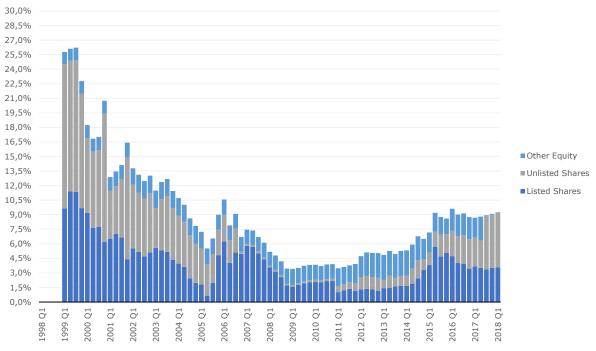
Graph 7 - Evolution ECB balance sheet items (asset categories)

Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis

Graph 7 relates to figures of investments by Portuguese Insurers since 1999 Q1 as reported by the ECB. It can be observed that Debt securities dominated the Portuguese balance sheets during the observation period. However, a decrease in the importance of Other Accounts Receivable Payable is observable. Additionally, there is a slight increase in Non Money-Market Funds starting from 2009 Q2.

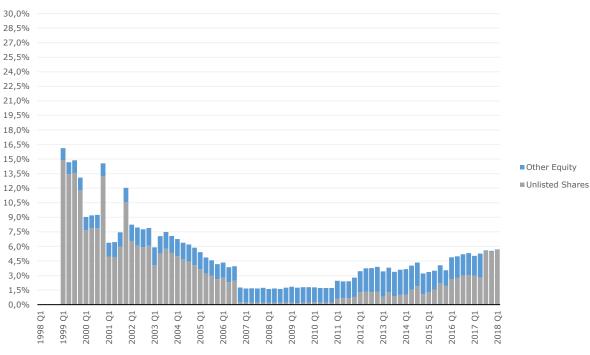
On the next page, the Equity asset classes are presented in a more detailed view. Furthermore, the evolution of the listed shares (normalised to a start value of 100) of Portugal is plotted against the aggregated EU data.

We remark that these graphs include index-linked and unit-linked assets, which cannot be individualised from the figures published by the ECB. Nevertheless, according to the Portuguese NSA, there is no link between the unit and index-linked investments and the trends in listed shares, unlisted shares and other equity.



#### Graph 8 - Evolution ECB balance sheet items (equity categories)

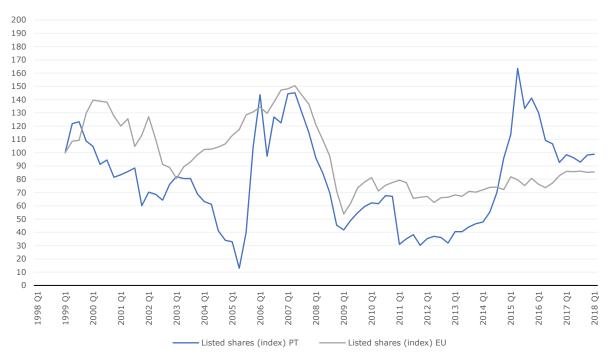
Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis



Graph 9 - Evolution ECB balance sheet items (Unlisted Shares and Other Equity)

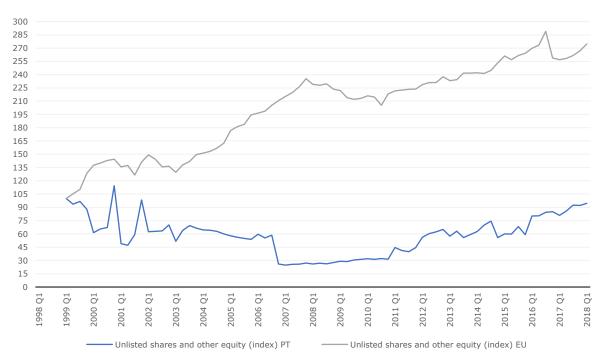
Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis







Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis



Graph 11 - Evolution ECB unlisted shares and other equity PT and EU (as index)

Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis



## 6.5 Trends in Equity Investments

This section provides a trend analysis of the equity investments of the Portuguese insurers using the balance sheet data of the insurance sector from the ECB Statistical Data Warehouse. Given the availability of the equity split in the ECB database, the analysis focuses on investments in listed shares and investments in unlisted shares and other equity.

#### 6.5.1 Listed Shares

In the analysis below, the listed shares of insurance corporations are plotted against the total assets in the industry both in amounts and in indexed values. The aim of this comparative analysis is to understand the evolution of listed shares in the overall insurance market. Similarity of the growth patterns in the listed shares and total assets can be considered as an indication of the extent to which the equity investments are driven by a good (or bad) economic environment in the industry at a certain point in time. A presentation of the variables only in amounts might dilute the magnitude of the growths for countries with large assets because in such a representation, the listed shares will be overstated. Therefore, we also plot each series as indexed to the initial point in their available history.

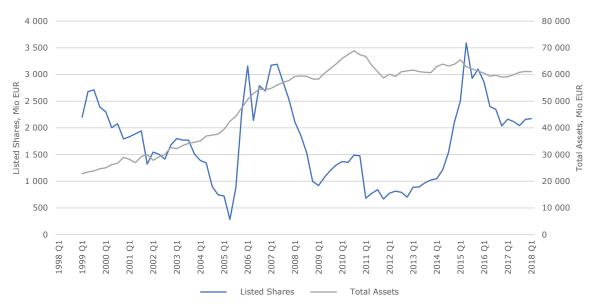
In the next step, we focus on the relationship with the listed shares and stock market indices. The ECB QSA balance sheet items are valued at market prices at the end of each quarter. Therefore, it is plausible to assume that the changes in the stock prices are reflected on the amounts held in listed shares. In order to remove this "price effect" from the observed amounts of listed shares and approximate the "real" amounts held in shares, we consider adjusting the observed amounts in listed shares. Even though we observe high correlations with listed shares and several stock indices, since the exact destinations of the portfolio invested in listed shares at each period is not observable, we build a "Weighted Equity Index" similar to the EIOPA Equity Dampener.

Amounts invested in listed shares and the total amount of assets of the insurance sector are plotted in Graph 12 while the indexed values of the series are presented in Graph 13. As seen on the first figure, total assets experience an overall increasing trend from 22 794 million EUR in 1999 Q1 to 51 239 million EUR in 2018 Q1 with a growth rate of 168%. On the other hand, listed shares do not display a similar increasing trend compared to total assets. Investments in listed shares exhibit a volatile behaviour with an average quarterly change of 4,07% with a standard deviation of 35,31% while total assets have an average quarterly growth of 1,35% with a standard deviation of 3,10%. In the second quarter of 2005, amounts invested in listed shares drop to 284 million EUR. The following year, listed shares already recover by 653%. After 2007, we observe a downward trend in listed shares; however, starting from 2013, a new upward trend starts and in 2015 Q2, investments in listed shares accumulates to 3 591 million EUR. Afterwards, the amounts decrease to 2 172 million EUR in the first quarter of 2018.

The differences between the growth patterns of listed shares and total assets become more pronounced on the indexed amounts. Over the period 1999 Q1 – 2018 Q1, indexed value total assets increases to a value of 268, while indexed value of listed shares decreases to 99.

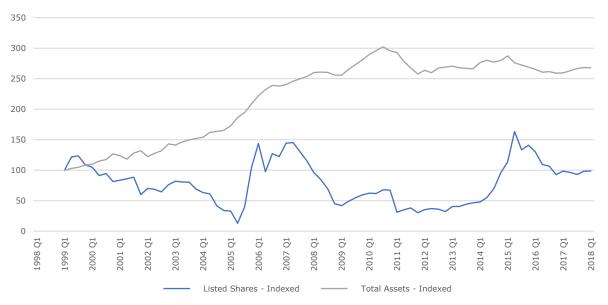
According to the Portuguese NSA, the downward trend in listed share as a percentage of total assets and the recovery that starts after 2014 is mainly explained by the financial crisis. The trend is explained by the fact that, with the financial crisis, the Portuguese

insurers have changed their investment strategy increasing their exposures towards bonds, in particular sovereign bonds, because the yield was not as depressed as in the northern European countries. More recently, in response to the persisting low yield environment, some insurers have increased their exposures to equity (listed shares).



Graph 12 – Evolution of Listed Shares and Total Assets (in Mio EUR)

Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis



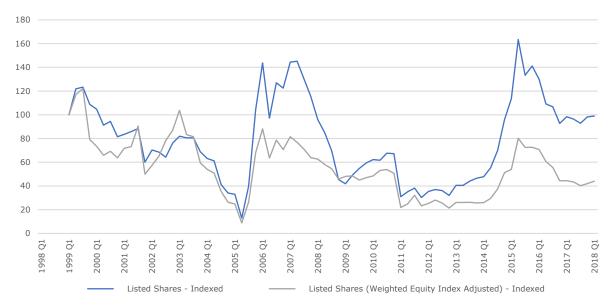
Graph 13 – Evolution of Listed Shares and Total Assets (indexed values)

Graph 14 presents the indexed values of the amounts invested in listed shares against its Weighted Equity Index adjusted counterpart. Overall, listed shares and adjusted values behave similarly. However, we do observe periods where indexed listed shares are larger

Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis



than the adjusted values (i.e. 2005 Q3 - 2008 Q3 and 2015 Q4 - 2018 Q1). This in turn points to a market price effect being present, inflating the amount of listed shares in these periods.



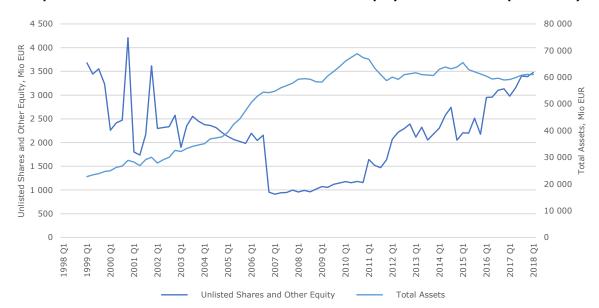
Graph 14 - Evolution of Listed Shares - Indexed (Weighted Equity Index Adjusted)

Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis

## 6.5.2 Unlisted Shares

Graph 15 depicts the amounts invested in unlisted shares and other equity plotted against the total assets in the insurance markets, while Graph 16 presents the indexed values of the series for an easier comparison of the movements in these two series. Investments in unlisted shares and other equity do not show a similar increasing trend as total assets. Unlisted shares and other equity present a volatile pattern: after reaching a minimum of 911 million EUR in the first quarter of 2007, unlisted shares and other equity exhibit an increasing trend. In the first quarter of 2018, investments in this category of equity amount to 3 478 million EUR.

The differences between the growth patterns of the series become more pronounced on indexed values. Total assets exhibit an increasing trend during the whole observation period while unlisted shares and other equity only present an increasing trend from 2007. Finally, over the period 1999 Q1 - 2018 Q1, total assets reach an indexed value of 268 while unlisted shares and other equity drop to an indexed value of 95.



Graph 15 – Evolution of Total Unlisted Shares and Other Equity and Total Assets (in Mio EUR)

Note: There is a sharp decrease in unlisted shares and other equity at the end of 2006. According to the Portuguese NSA, there is not a specific market event that would explain this change. However, the NSA also notes that the unlisted shares and other equity investments were mainly concentrated in two insurers; thus, a change in their portfolio allocations could be reflected as a sharp decrease at the country level.

Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis



Graph 16 – Evolution of Unlisted Shares and Other Equity (indexed values)

Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis

A.S.