

GREECE

Key characteristics of the insurance market



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1 Introduction

1.1 General

At the end of 2017 (2017 Q4), 39 insurance companies¹ in Greece submitted their Solvency II related reporting package to the Greek National Supervisory Authority (NSA). These companies accounted for 0,150% of Total assets of insurance undertakings operating within the European Union (EU).

Table 1 depicts the number of Solvency II reporting submissions in Greece by insurance activities and the importance of the country within the EU, based on Total assets.

Table 1 - Insurance reporting submissions

Insurance reporting submissions	#
Life undertakings	3
Non-Life undertakings	19
Reinsurance undertakings	0
Composite undertakings	17
Total	39
Total assets GR / Total assets EU %	0,150%
Ranking GR based on Total assets EU	17

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

1.2 Balance sheet

At the end of 2017 (2017 Q4), Greece was the number 17 country in the EU insurance market in terms of assets held with an amount of 16 892 million EUR reported under Solvency II rules.

With regards to the Assets held for index-linked and unit-linked contracts, Greece ranked number 18 in terms of absolute amount with 2 353 million EUR invested in this category. However, with 13,9% of Total assets of this category, Greece was significantly below the EU average, i.e. 24,3% in terms of Total assets.

In terms of technical provisions, 39,8% of the total balance sheet relates to the life business (i.e. non index-linked and unit-linked business), while 18,3% represented non-life obligations.

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

in Mio EUR	GR			EU				
	Amount	Rank	%	%	Avg	Min	Max	StD
Investments, deposits, cash and cash equivalents	13 093	17	77,5%	67,8%	67,3%	22,6%	90,1%	17,2%
Assets held for index-linked and unit-linked contracts	2 353	18	13,9%	24,2%	24,3%	2,5%	59,3%	16,2%
Other assets	1 446	17	8,6%	8,1%	8,4%	2,1%	19,5%	4,9%
Total assets	16 892	17	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%
Technical provisions - life	6 721	15	39,8%	46,3%	32,2%	3,0%	64,2%	17,9%
Technical provisions - non-life	3 090	15	18,3%	6,6%	12,9%	2,4%	38,5%	9,1%
Technical provisions - index-linked and unit-linked	2 405	17	14,2%	25,1%	23,4%	2,4%	58,4%	16,0%
Other liabilities	1 204	18	7,1%	8,9%	9,0%	4,0%	21,3%	3,9%
Total liabilities	13 419	17	79,4%	86,9%	77,6%	49,1%	92,7%	11,1%
Excess of assets over liabilities	3 472	18	20,6%	13,1%	22,4%	7,3%	50,9%	11,1%
Total liabilities + Excess of assets over liabilities	16 892	17	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

¹ 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 Greek insurance market as a whole had available own funds that were less than double of the Solvency Capital Requirement (SCR) levels required by the European Solvency II Directive. The reported SCR ratio amounted to 175% with long-term guarantee (LTG) and transitional measures, and is significantly lower than that of the EU, which amounted to 237% at year-end 2017. Out of the 28 EU Member States, Greece is ranked at the 24th 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	GR		EU				
	Amount	Rank	%	Avg	Min	Max	StD
Total available own funds to meet the SCR	3 375	18	-	-	-	-	-
SCR	1 798	17	-	-	-	-	-
Surplus available own funds	1 577	18	-	-	-	-	-
Ratio of Eligible own funds to SCR	175%	24	237%	225%	135%	361%	52%
Ratio of Eligible own funds to SCR (10th percentile)	110%	28	136%	138%	110%	193%	19%
Ratio of Eligible own funds to SCR (25th percentile)	138%	26	162%	164%	128%	214%	24%
Ratio of Eligible own funds to SCR (50th percentile)	170%	25	215%	208%	144%	300%	37%
Ratio of Eligible own funds to SCR (75th percentile)	204%	27	306%	280%	164%	445%	59%
Ratio of Eligible own funds to SCR (90th percentile)	289%	26	457%	396%	173%	643%	99%
Ratio of Eligible own funds to MCR	450%	24	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. In that report, at year-end 2017, Greek participants reported an SCR ratio of 173% including the application of LTGs and transitionals. Removing the measures caused a significant decrease of the SCR ratio to 139%.²

² 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 Greek 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) do not differ.

Table 4 - Solvency II balance sheet (S.02.01) and Solvency II exposure list (S.06.02) comparison

in number	Exposure list GR		Solvency II balance sheet GR		Difference
	#	%	#	%	#
Life undertakings	3	7,7%	3	7,7%	0
Non-Life undertakings	19	48,7%	19	48,7%	0
Reinsurance undertakings	0	0,0%	0	0,0%	0
Undertakings pursuing both life and non-life insurance activity	17	43,6%	17	43,6%	0
Total	39	100,0%	39	100,0%	0

in Mio EUR	Exposure list GR		Solvency II balance sheet GR		Difference
	Amount	%	Amount	%	%
Holdings in related undertakings, incl. participations and equities	496	3,8%	496	3,8%	0,0%
Holdings in related undertakings, including participations	n/a	n/a	357	2,7%	n/a
Equities	n/a	n/a	139	1,1%	n/a
Equities - listed	n/a	n/a	119	0,9%	n/a
Equities - unlisted	n/a	n/a	19	0,1%	n/a
Collective Investments Undertakings	1 237	9,5%	1 238	9,5%	0,0%
Bonds	9 844	75,2%	9 845	75,2%	0,0%
Loans and mortgages	130	1,0%	130	1,0%	0,0%
Property	631	4,8%	631	4,8%	0,0%
Deposits	352	2,7%	352	2,7%	0,0%
Cash and cash equivalents	400	3,1%	400	3,1%	0,0%
Other investments	1	0,0%	1	0,0%	0,0%
Total	13 093	100,0%	13 093	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	GR			EU				
	Amount	Rank	%	%	Avg	Min	Max	StD
Equities - listed	119	18	86,1%	83,7%	75,0%	12,8%	99,6%	21,1%
Equities - unlisted	19	18	13,9%	16,3%	25,0%	0,4%	87,0%	21,1%
Total equities	139	18	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

Based upon the quarterly reporting as of Q4 2017, Greek insurers invested 86,1% of their directly-held equity positions in listed equity in comparison to an average of 75,0% in the EU. With an amount of 119 million EUR, Greece ranked number 18 in the EU.

With an invested amount of 19 million EUR, unlisted equity constituted a significant portion of the equity investment category of the directly-held equity investments, i.e. 13,9%. This placed Greece as the number 18 in the EU.



2.2 Asset exposure

From an asset exposure perspective, the insurance market in Greece mainly invested in Government bonds and Corporate bonds (in total 75,1% of Total Investments, deposits, cash and cash equivalents), Collective Investment Undertakings (9,5%), and Property (4,8%).

Within the bond categories, the insurance market was significantly more exposed to government securities (57,7%) than to corporate debt (17,4%), categories for which Greece ranked respectively number 15 in the EU. 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 third most important for the Greek insurance market in terms of asset exposures. Within this category, the industry was mainly exposed to Debt funds, Equity funds, and Money Market funds for which Greece ranked respectively number 14, number 18, and number 14 in the EU.

Equity was the fifth category to which the Greek insurers had the most exposure. Equity of real estate related corporation constitutes 0,4% within the 3,8% of the total equity exposure.

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

in Mio EUR	GR			EU				
	Amount	Rank	%	%	Avg	Min	Max	StD
Equity	496	19	3,8%	12,0%	9,5%	1,1%	28,1%	6,5%
Common equity	220	21	1,7%	10,4%	7,8%	1,0%	22,5%	6,0%
Equity of real estate related corporation	47	18	0,4%	1,0%	1,1%	0,0%	4,0%	1,2%
Other equity	229	13	1,7%	0,6%	0,6%	0,0%	2,0%	0,7%
Collective Investment Undertakings	1 237	16	9,5%	19,2%	12,8%	1,5%	41,6%	9,3%
Equity funds	150	18	1,1%	3,2%	2,7%	0,4%	10,9%	2,4%
Private equity funds	2	21	0,0%	0,5%	0,5%	0,0%	6,9%	1,3%
Debt funds	768	14	5,9%	7,8%	5,6%	0,8%	18,0%	4,9%
Money market funds	203	14	1,6%	2,3%	1,1%	0,0%	6,3%	1,6%
Asset allocation funds	80	14	0,6%	1,1%	0,8%	0,0%	3,9%	1,0%
Real estate funds	0	-	0,0%	1,6%	0,8%	0,0%	3,3%	0,9%
Alternative funds	5	15	0,0%	0,4%	0,3%	0,0%	3,1%	0,6%
Infrastructure funds	3	15	0,0%	0,2%	0,1%	0,0%	0,9%	0,2%
Other	27	16	0,2%	2,0%	0,9%	0,0%	7,2%	1,7%
Government bonds	7 560	15	57,7%	28,7%	39,7%	10,0%	77,0%	18,9%
Corporate bonds	2 283	16	17,4%	26,9%	21,6%	1,8%	47,3%	11,2%
Structured notes	1	27	0,0%	1,3%	0,5%	0,0%	2,5%	0,6%
Collateralised securities	0	-	0,0%	0,6%	0,6%	0,0%	9,3%	1,8%
Mortgages and loans	130	17	1,0%	4,8%	3,8%	0,3%	26,3%	5,2%
Property	631	14	4,8%	2,0%	3,5%	0,8%	11,6%	2,6%
Deposits	352	17	2,7%	2,8%	3,6%	0,2%	16,6%	3,6%
Cash and cash equivalents	400	18	3,1%	1,4%	4,3%	0,5%	16,6%	3,5%
Other investments	1	13	0,0%	0,1%	0,1%	0,0%	0,9%	0,3%
Not reported	1	14	0,0%	0,0%	0,0%	0,0%	0,3%	0,1%
Total Investments, deposits, cash and cash equivalents	13 093	17	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%

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 Greece.

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

in %	GR			EU		
	Life	Non-life	Composite and reinsurance	Life	Non-life	Composite and reinsurance
Equity	3,8%	3,4%	3,9%	6,6%	18,3%	16,5%
Common equity	0,9%	2,4%	1,8%	5,0%	16,2%	14,9%
Equity of real estate related corporation	1,5%	0,1%	0,0%	1,0%	0,8%	1,2%
Other equity	1,4%	0,9%	2,1%	0,6%	1,3%	0,4%
Collective Investment Undertakings	0,2%	15,9%	10,9%	22,4%	22,3%	13,8%
Equity funds	0,0%	2,0%	1,3%	3,7%	2,9%	2,7%
Private equity funds	0,0%	0,0%	0,0%	0,5%	0,5%	0,5%
Debt funds	0,0%	9,9%	6,8%	9,7%	9,7%	4,7%
Money market funds	0,0%	2,8%	1,8%	2,8%	1,4%	2,0%
Asset allocation funds	0,0%	0,6%	0,8%	1,3%	1,2%	0,9%
Real estate funds	0,0%	0,0%	0,0%	1,6%	1,8%	1,4%
Alternative funds	0,0%	0,2%	0,0%	0,3%	0,3%	0,5%
Infrastructure funds	0,0%	0,0%	0,0%	0,2%	0,2%	0,3%
Other	0,2%	0,3%	0,2%	2,3%	4,3%	0,8%
Government bonds	90,9%	40,0%	51,1%	28,1%	19,1%	33,4%
Corporate bonds	1,6%	17,1%	22,7%	29,2%	29,3%	22,9%
Structured notes	0,0%	0,0%	0,0%	1,4%	0,6%	1,5%
Collateralised securities	0,0%	0,0%	0,0%	0,8%	0,6%	0,5%
Mortgages and loans	0,0%	2,0%	1,1%	7,4%	3,2%	2,3%
Property	0,1%	8,5%	5,5%	2,0%	2,5%	1,7%
Deposits	3,3%	5,9%	1,8%	0,8%	1,6%	5,8%
Cash and cash equivalents	0,2%	7,2%	3,0%	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 equivalents	100,0%	100,0%	100,0%	100,0%	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 Greece the same conclusion can be drawn, and we note that Non-Life insurers invested 2 times more of their assets into this category than their composite and life counterparts did.

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. The size of the investments in Government bonds by Greek Life insurers compared to their counterpart at the EU level, gives the following result: Greek Life insurers reported 90,9% of their investments in this category, which is significantly higher than the EU level which amounted to 28,1%.

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 as to 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	GR			EU				
	Amount	Rank	%	%	Avg	Min	Max	StD
Equity	496	19	3,8%	12,0%	9,5%	1,1%	28,1%	6,5%
Common equity	220	21	1,7%	10,4%	7,8%	1,0%	22,5%	6,0%
Equity of real estate related corporation	47	18	0,4%	1,0%	1,1%	0,0%	4,0%	1,2%
Other equity	229	13	1,7%	0,6%	0,6%	0,0%	2,0%	0,7%
Collective Investment Undertakings - Equity funds	152	16	1,2%	3,8%	3,2%	0,4%	14,7%	3,5%
Equity funds	150	18	1,1%	3,2%	2,7%	0,4%	10,9%	2,4%
Private equity funds	2	21	0,0%	0,5%	0,5%	0,0%	6,9%	1,3%
Structured notes - Equity risk	0	-	0,0%	0,2%	0,1%	0,0%	0,6%	0,1%
Total Equity exposure	648	19	4,9%	16,0%	12,7%	2,5%	37,4%	8,4%
Equity without Equity of real estate related corporation	449	19	3,4%	11,0%	8,4%	1,1%	24,1%	6,1%
Equity exposure without Equity of real estate related corporation	601	19	4,6%	15,0%	11,7%	2,4%	33,3%	7,9%
Equities market value balance sheet (rescaled to CIC scope)	139	18	1,1%	3,6%	3,2%	0,1%	20,6%	4,0%
Equities - listed (rescaled to CIC scope)	119	18	0,9%	3,0%	2,6%	0,0%	15,4%	3,2%
Equities - unlisted (rescaled to CIC scope)	19	18	0,1%	0,6%	0,6%	0,0%	5,2%	1,0%
Equity exposure based upon (Un)Listed equities (rescaled)	291	19	2,2%	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 Greece, 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 1,1%. Hereby the listed and unlisted equities in Greece are very 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	GR			EU				
	Amount	Rank	%	%	Avg	Min	Max	StD
Direct equity	496	19	76,5%	75,2%	73,4%	39,2%	94,5%	15,9%
Common equity	220	21	33,9%	64,8%	59,4%	28,6%	93,3%	19,0%
Equity of real estate related corporation	47	18	7,3%	6,4%	8,4%	0,0%	39,1%	9,6%
Other equity	229	13	35,3%	3,9%	5,7%	0,0%	35,3%	8,8%
Indirect equity	152	18	23,5%	24,8%	26,6%	5,5%	60,8%	15,9%
Collective Investment Undertakings - Equity funds	152	18	23,4%	23,6%	25,9%	4,6%	60,6%	15,7%
Equity funds	150	18	23,1%	20,2%	22,8%	4,6%	52,9%	13,4%
Private equity funds	2	21	0,3%	3,3%	3,1%	0,0%	28,4%	5,7%
Structured notes - Equity risk	0	-	0,1%	1,3%	0,7%	0,0%	4,0%	1,0%
Total Equity exposure	648	19	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 Greece was invested more than twice as much in Direct equity (76,5% of Total equity) than in Indirect equity (23,5% of Total equity).

In terms of direct equity exposure, Greece ranked number 21 and number 18 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 23,1% of Total equity, significantly more than 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	GR			
	EU home	EU other	outside EU (1)	Total
Equity	384	103	8	496
Common equity	152	60	8	220
Equity of real estate related corporation	45	3	0	47
Other	188	41	0	229
Collective Investment Undertakings - Equity funds	46	98	7	152
Equity funds	45	98	7	150
Private equity funds	2	0	0	2
Structured notes - Equity risk	0	0	0	0
Total Equity exposure	431	202	16	648

in %	GR			
	EU home	EU other	outside EU (1)	Total
Equity	77,5%	20,8%	1,7%	100,0%
Common equity	69,0%	27,2%	3,8%	100,0%
Equity of real estate related corporation	94,5%	5,5%	0,0%	100,0%
Other	82,1%	17,9%	0,0%	100,0%
Collective Investment Undertakings - Equity funds	30,5%	64,7%	4,7%	100,0%
Equity funds	29,7%	65,5%	4,8%	100,0%
Private equity funds	100,0%	0,0%	0,0%	100,0%
Structured notes - Equity risk	0,0%	59,4%	40,6%	100,0%
Total Equity exposure	66,5%	31,1%	2,4%	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 Greece favoured domestic investments, dedicating to these 77,5% of their direct equity investments, and 64,7% of their indirect investments.

Table 10 also showed that besides the home market, Greece insurers invested significantly more in equity of other EU Member States than that of non-EU Member States. Luxemburg, Romania and Cyprus were the preferred destinations.

Table 11 - Direct equity exposure by location based upon Solvency II exposure list (S.06.02)

in Mio EUR	GR	
	Amount	%
Home country	384	77,5%
GR	384	77,5%
Top 5 countries (outside home country)	96	19,5%
LU	40	8,0%
RO	26	5,3%
CY	18	3,7%
FR	7	1,3%
DE	6	1,2%
Home + Top 5 countries (outside home country)	481	96,9%
Total Direct equity exposure (with real estate corporation)	496	100,0%

in Mio EUR	GR	
	Amount	%
Home country	340	75,7%
GR	340	75,7%
Top 5 countries (outside home country)	96	21,3%
LU	40	8,8%
RO	26	5,8%
CY	18	4,0%
DE	6	1,3%
US	6	1,3%
Home + Top 5 countries (outside home country)	435	97,0%
Total Direct equity exposure (without real estate corporation)	449	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 slight difference with respect to the Assets held for index-linked and unit-linked contracts 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

in number	Exposure list GR		Solvency II balance sheet GR		Difference
	#	%	#	%	#
Life undertakings	3	7,7%	3	7,7%	0
Non-Life undertakings	19	48,7%	19	48,7%	0
Reinsurance undertakings	0	0,0%	0	0,0%	0
Undertakings pursuing both life and non-life insurance activity	17	43,6%	17	43,6%	0
Total	39	100,0%	39	100,0%	0

in Mio EUR	Exposure list GR		Solvency II balance sheet GR		Difference
	Amount	%	Amount	%	%
Assets held for index-linked and unit-linked contracts	2 354	100,0%	2 353	100,0%	0,1%

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).

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

in Mio EUR	GR			EU				
	Amount	Rank	%	%	Avg	Min	Max	StD
Equity	25	20	1,1%	19,3%	4,5%	0,0%	30,1%	7,1%
Common equity	25	20	1,1%	18,0%	3,9%	0,0%	28,8%	6,3%
Equity of real estate related corporation	0	-	0,0%	0,8%	0,3%	0,0%	1,5%	0,5%
Other equity	0	-	0,0%	0,4%	0,3%	0,0%	4,1%	0,9%
Collective Investment Undertakings	1 613	18	68,5%	63,2%	73,1%	30,1%	97,5%	16,3%
Equity funds	547	19	23,2%	26,5%	29,2%	11,2%	57,5%	10,5%
Private equity funds	0	-	0,0%	0,1%	0,2%	0,0%	2,9%	0,6%
Debt funds	499	17	21,2%	12,1%	19,0%	4,8%	47,5%	11,4%
Money market funds	176	13	7,5%	2,2%	1,7%	0,0%	7,5%	1,8%
Asset allocation funds	345	16	14,6%	14,8%	13,1%	0,4%	30,5%	7,7%
Real estate funds	0	-	0,0%	1,4%	0,6%	0,0%	6,2%	1,2%
Alternative funds	28	18	1,2%	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	20	22	0,8%	4,6%	6,9%	0,0%	44,3%	10,0%
Government bonds	257	11	10,9%	6,4%	6,9%	0,0%	31,4%	8,4%
Corporate bonds	5	24	0,2%	3,9%	6,0%	0,0%	22,7%	6,9%
Structured notes	37	20	1,6%	1,6%	4,1%	0,0%	18,9%	4,9%
Collateralised securities	0	-	0,0%	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	342	11	14,5%	1,2%	2,0%	-0,3%	14,5%	3,3%
Cash and cash equivalents	75	16	3,2%	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	2 354	18	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

The Collective Investment Undertakings (68,5%), the Deposits (14,5%) and the Government bonds (10,9%) represent the most important asset classes of the index-linked and unit-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 Deposits, 14,5% in Greece compared to 2,0% 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 presented in section 2 cannot be performed here.

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

in Mio EUR	GR			EU				
	Amount	Rank	%	%	Avg	Min	Max	StD
Equity	25	20	1,1%	19,3%	4,5%	0,0%	30,1%	7,1%
Common equity	25	20	1,1%	18,0%	3,9%	0,0%	28,8%	6,3%
Equity of real estate related corporation	0	-	0,0%	0,8%	0,3%	0,0%	1,5%	0,5%
Other equity	0	-	0,0%	0,4%	0,3%	0,0%	4,1%	0,9%
Collective Investment Undertakings - Equity funds	547	19	23,2%	26,5%	29,3%	11,2%	57,5%	10,4%
Equity funds	547	19	23,2%	26,5%	29,2%	11,2%	57,5%	10,5%
Private equity funds	0	-	0,0%	0,1%	0,2%	0,0%	2,9%	0,6%
Structured notes - Equity risk	37	17	1,6%	1,2%	2,7%	0,0%	15,0%	3,5%
Total Equity exposure	609	19	25,9%	47,1%	36,5%	11,7%	58,6%	10,9%
Equity without Equity of real estate related corporation	25	19	1,1%	16,0%	4,2%	0,0%	29,2%	6,8%
Equity exposure without Equity of real estate related corporation	609	19	25,9%	40,0%	36,2%	11,7%	58,6%	10,8%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

In Greece, we note that total equity exposures related to index-linked and unit-linked contracts (25,9%) are significantly higher in comparison to non index-linked and unit-linked contracts (4,9%). 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)

in Mio EUR	GR			EU				
	Amount	Rank	%	%	Avg	Min	Max	StD
Direct equity	25	20	4,1%	38,3%	11,1%	0,0%	54,2%	15,2%
Common equity	25	20	4,1%	35,4%	9,6%	0,0%	51,8%	13,2%
Equity of real estate related corporation	0	-	0,0%	1,7%	0,7%	0,0%	4,0%	1,1%
Other equity	0	-	0,0%	1,3%	0,8%	0,0%	9,7%	2,2%
Indirect equity	584	19	95,9%	61,7%	88,9%	45,8%	100,0%	15,2%
Collective Investment Undertakings - Equity funds	547	19	89,8%	59,1%	81,5%	45,7%	100,0%	15,5%
Equity funds	547	19	89,8%	58,6%	81,0%	44,9%	100,0%	16,0%
Private equity funds	0	-	0,0%	0,5%	0,5%	0,0%	6,9%	1,4%
Structured notes - Equity risk	37	17	6,2%	2,6%	7,4%	0,0%	35,8%	9,6%
Total Equity exposure	609	19	100,0%	100,0%	100,0%	100,0%	100,0%	0,0%

Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

In 2017 Q4, Greek insurers invested almost all of their Assets held for index-linked and unit-linked contracts in Indirect equity (95,9% of Total equity). Direct equity constituting 4,1% of Total equity.

In terms of direct equity exposure, Greece ranked number 20 in the EU, with regards to the exposure amount to Common equity.

Within the Indirect equity category, Equity funds constituted the bulk of investments, amounting to 89,8% of Total equity whereas allocation to Private equity funds were inexistent.

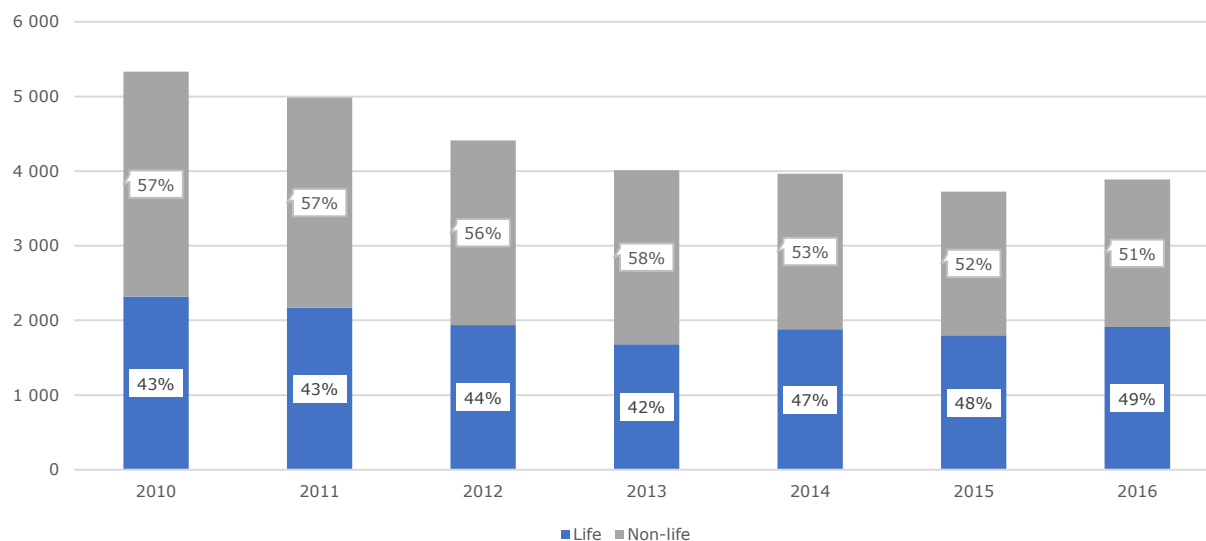
4 Insurance products

4.1 Overview

This section covers the most important insurance products offered in Greece and the volume of the market. Data reported in this section is obtained from the Hellenic Association of Insurance Companies (HAIC)³.

After six years of recession between 2010 and 2015, where gross written premiums dropped by 30% from 5 332 million EUR to 3 725 million EUR, premium income in 2016 was up by 4,4% to 3 887 million EUR. Non-life insurance products contributed approximately 51% (or 1 976 million EUR) towards total income, while the remaining 49% (or 1 911 million EUR) was due to life insurance business.

Graph 1 - Gross written premiums (in Mio EUR)



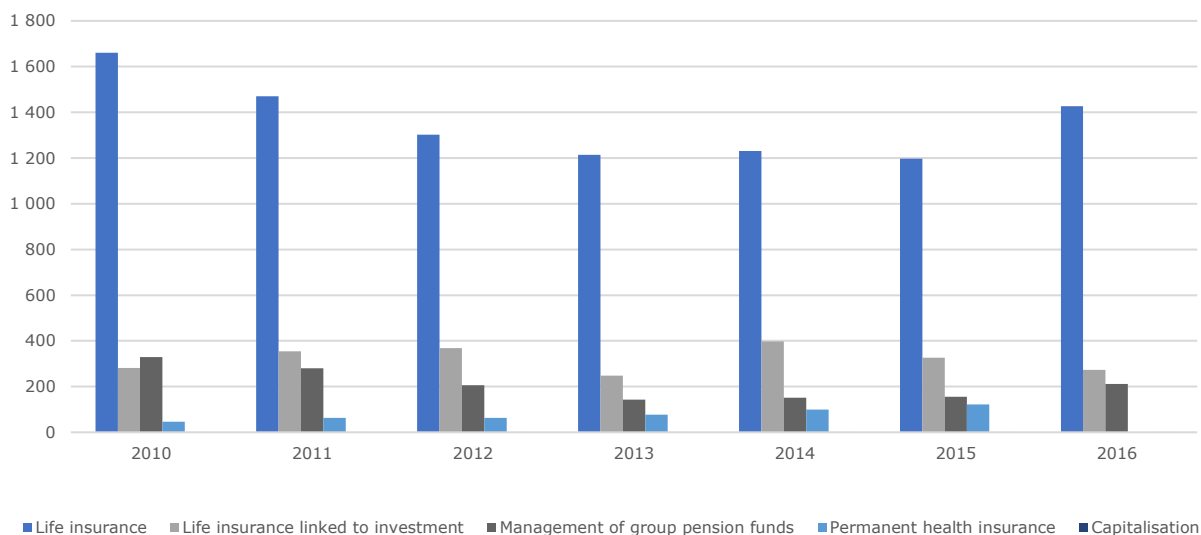
Source: HAIC

³ Available at <http://www.eaee.gr/cms/en>.

4.2 Life insurance products

Despite a decrease of 22,3% in life premium income from 2010 to 2015, in 2016 gross written premiums rose by 6,1%, reaching 1 911 million EUR. A share of 75% of the premium refers to individual contracts and the rest 25% to group contracts. In individual insurance, the proportion of traditional life insurance was greatly increased, while in group insurance the proportion of group pension schemes increased. Similarly, the premium allocation per type of insurance was 50% for savings/pensions contracts, 34% for health insurance contracts and 16% in other health insurance covers.

Graph 2 - Gross written premiums for life insurance products (in Mio EUR)



Source: HAIC



4.3 Non-Life insurance products

The non-life insurance sector increased marginally (2,7%) and stood at 1 976 million EUR. Moreover, the share non-life insurance in total gross premiums written continued its gradual downward trend over the years, and in 2016 represented 51, (from 56,5% in 2010).

4.3.1 Motor insurance

Motor insurance is one of the most important branches of the Greek insurance market, covering half of the income, is related to motor. In 2016 amounted to 986 million EUR, down by 8,7% compared to 2015. Of these, 81,7% or 806 million EUR is due to motor third party liability and the remaining (18,3% or 180 million EUR) due to land vehicles insurance.

4.3.2 Fire, natural forces and other damage to property

Property related insurance recorded a decline of 2,9% to 448 million EUR in 2016. However, it remained the second largest segment of the non-life business, representing 22,7% of total premiums.

4.3.3 Accident and sickness

Insurance related to accident and sickness, covering approximately 11% of the non-life premium income, increased more than twice during 2016, from 51 million EUR in 2015 to 215 million EUR.

4.3.4 Assistance

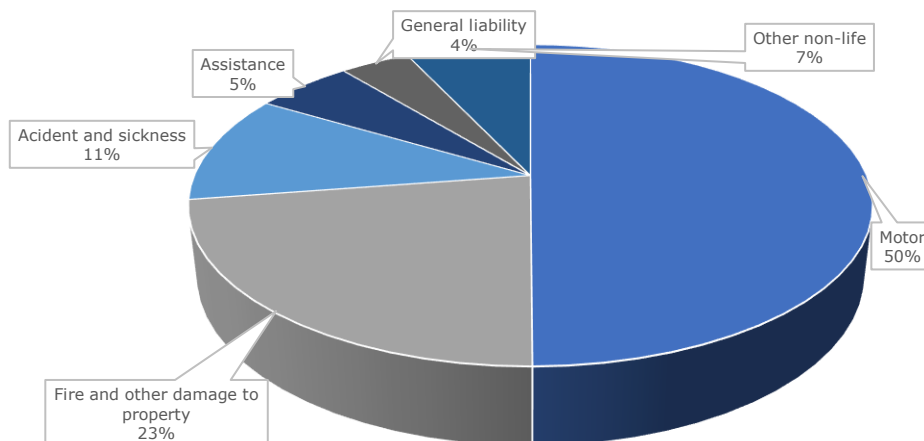
Assistance premium was up by 12,6% to 109 million EUR as of end-2016, and accounted for 5,5% of the total non-life premium income.

4.3.5 General liability

During 2016, general liability produced direct premium of 78 million EUR, lower than 2015 by 0,9%.

4.3.6 Other non-life insurance

Other forms of non-life insurance, which include credit and suretyship, financial loss, legal protection and marine, aviation and transport, had a total share of 7% or 139 million EUR (down by 4,5% to 2015).

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

Note: Motor includes motor vehicle liability and land vehicles. Other non-life insurance includes credit and suretyship, financial loss, legal protection and marine, aviation and transport.

Source: HAIC

4.4 Average duration

In 2016, EIOPA published their Insurance Stress Test Report⁴, which resulted in the following conclusions for Greece:

- The approximate effective duration for the TP life for all lines of business reported by the EIOPA 2016 stress test participants is 10,03;
- The Macaulay duration for the TP life for all lines of business reported by the EIOPA 2016 stress test participants is 9,78.

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.

⁴ 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.⁵

1. Applicable GAAP at consolidated level: IFRS required for all listed and non-listed companies, IFRS permitted for non-listed companies provided they have an independent audit by a Certified Public Accountant⁶;
2. Applicable GAAP at statutory level: IFRS required for all listed companies, IFRS permitted for non-listed companies provided they have an independent audit by a Certified Public Accountant⁶;
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 by companies are included in business income and taxed as such at the ordinary tax rate of 29%.

5.2.2 Capital losses on shares

Any loss realised from the sale of capital assets are deductible only from the profits of the year in which they are realised

5.2.3 Taxation of dividends

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

1. Distributing company requirements: the distributing company has one of the forms provided for in Annex Schedule I, Part A of the Parent-Subsidiary Directive, is an EU tax resident in accordance with local legislation, is not considered a resident of a non-EU Member State under applicable provisions of a tax treaty and is subject to (without being exempt or having the option to be exempt from) one of the taxes provided for by Schedule I Part B of the Parent Subsidiary Directive or any other tax substituting such taxes;
2. Receiving company requirements: the Greek corporate shareholder is a legal entity with legal personality, and subject to
 - A holding requirement: minimum participation of 10%;
 - A holding period requirement: participation should be held uninterruptedly for at least two years;

If one or more of the above conditions is not met, the dividend is taxed at the ordinary tax rate, with certain credits available for taxes already paid.

⁵ https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/financial-reporting_en

⁶ <https://www.ifrs.org/-/media/feature/around-the-world/jurisdiction-profiles/greece-ifrs-profile.pdf>



Greek source dividends are subject to 15% withholding tax, unless a tax treaty provides for a lower rate or the EU parent-subsidiary directive applies. Additional condition for the exemption under the parent-subsidiary directive to apply is that the (set of) transaction(s) may not be undertaken to benefit from a tax exemption while not reflecting economic reality.

An ordinary foreign tax credit is available for income tax paid abroad, up to the amount of tax that would be payable for the relevant income in Greece.

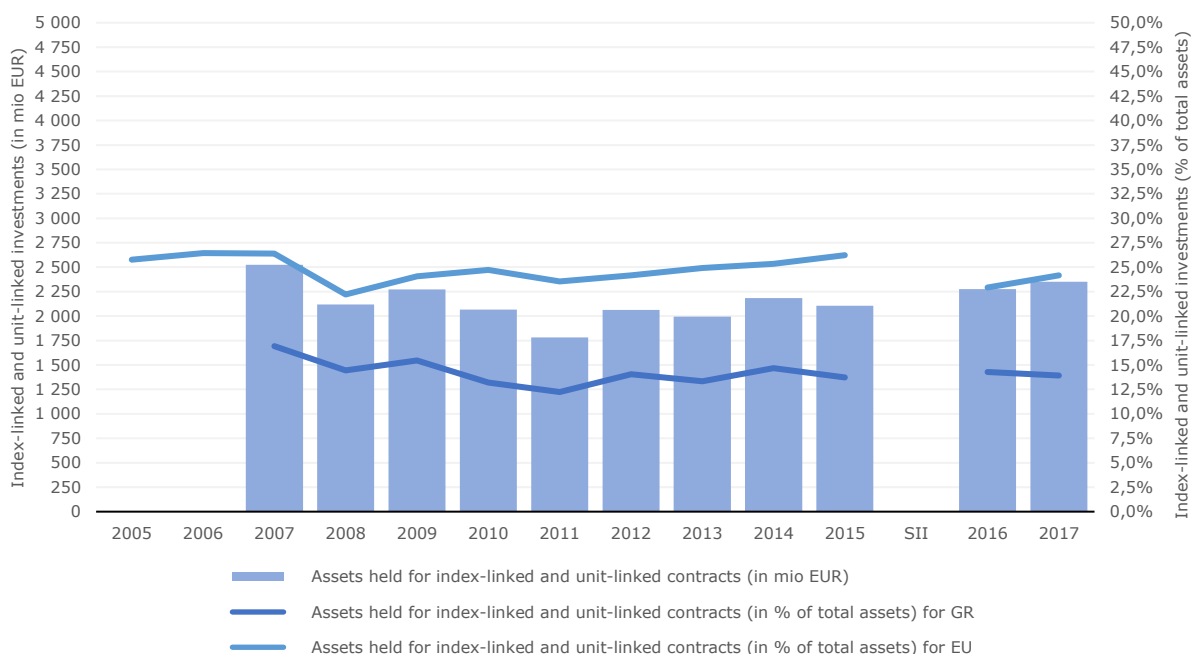
6 Historical data

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 Greece 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 of index-linked and unit-linked investments based upon Solvency I and Solvency II



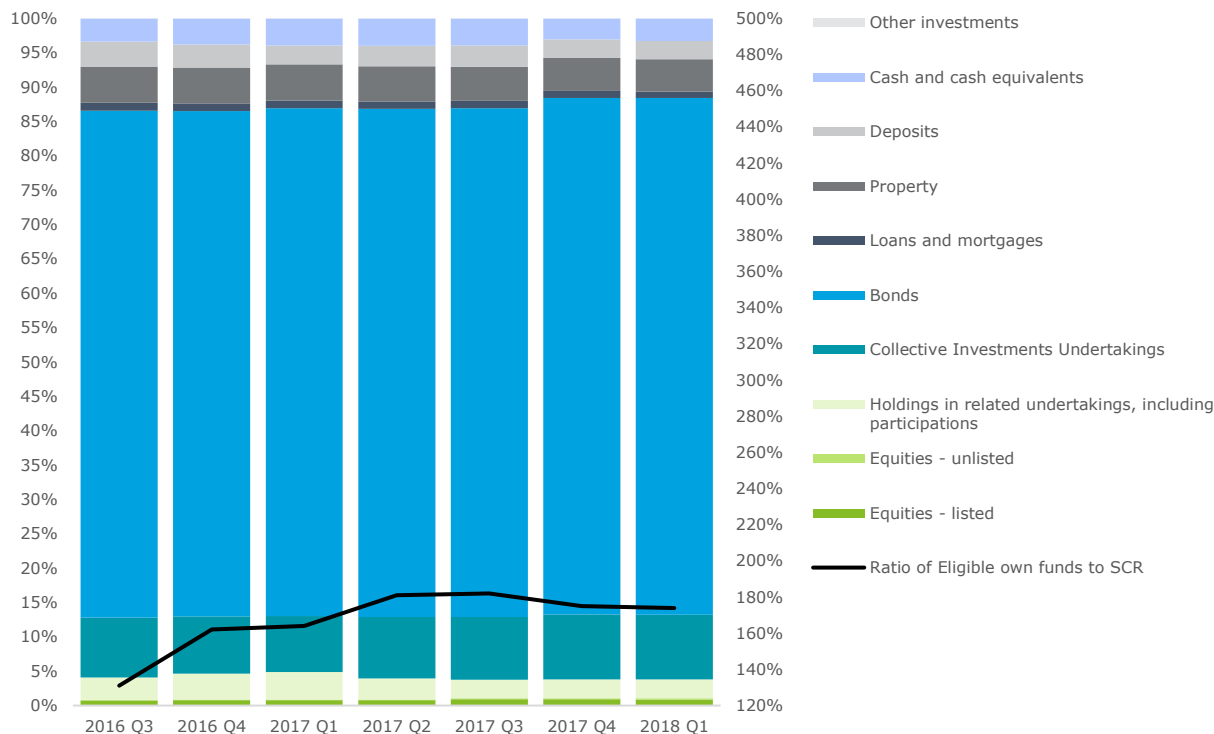
Source: EIOPA Solvency I and Solvency II statistics and Deloitte-CEPS analysis

As shown in Graph 4, the share of index-linked and unit-linked investments in comparison to total assets has been relatively stable as from 2007. There is no data available for 2005 and 2006. 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.

Graph 5 - Evolution Solvency II balance sheet (S.02.01) items (Total Investments, deposits, cash and cash equivalents) and SCR ratio



Source: EIOPA Solvency II statistics and Deloitte-CEPS analysis

The composition of the Greek insurers' balance sheet has remained relatively stable over the quarters since the introduction of Solvency II on 1 January 2016⁷. This seems to be confirmed by the fact that the most dominant assets classes Bonds and Collective Investment Undertakings do not suggest a clear trend whether it be downwards or upwards.

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

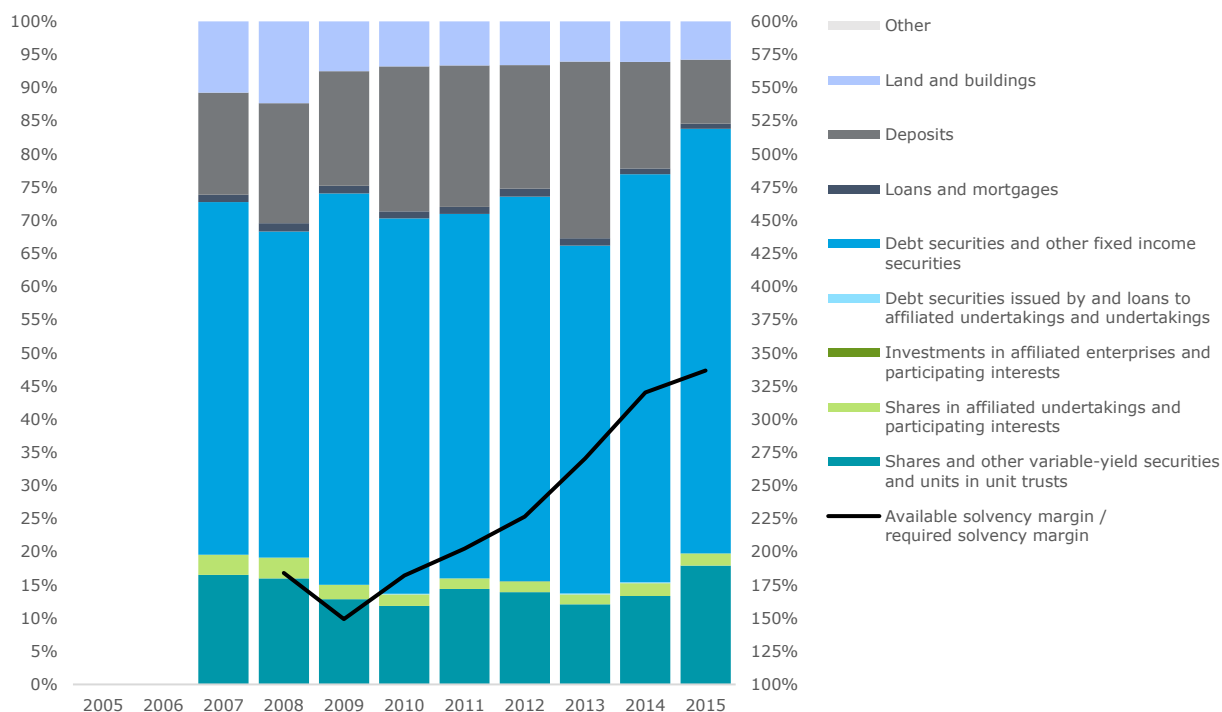
For Greece, the SCR ratio shows a steady increase over the period 2016 Q3 until 2017 Q2, but then remains relatively stable. Overall, this trend has not resulted into significant changes in the asset allocation of the overall Greek insurance market.

⁷ 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 - Evolution Solvency I balance sheet items (Total Investments, deposits, cash and cash equivalents)



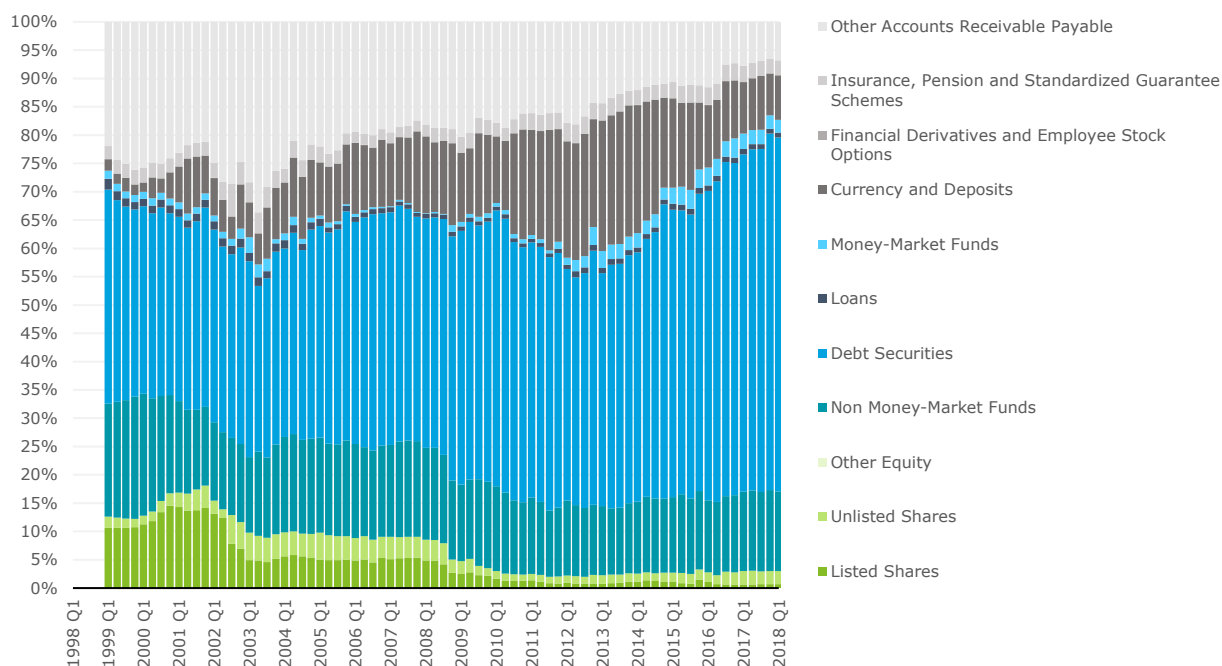
Note: There is no data available for the period between 2005 and 2006. Furthermore, note that there was no data available regarding the solvency margin for 2007.

Source: EIOPA Solvency I statistics and Deloitte-CEPS analysis

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 Greek insurers' balance sheet for more than a decade. Shares and other variable-yield securities and units in unit trusts also represent a significant share, and so does Deposits. Furthermore, the solvency ratio showed a very significant increase in 2007 and has since continued to grow significantly on a yearly basis.

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

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



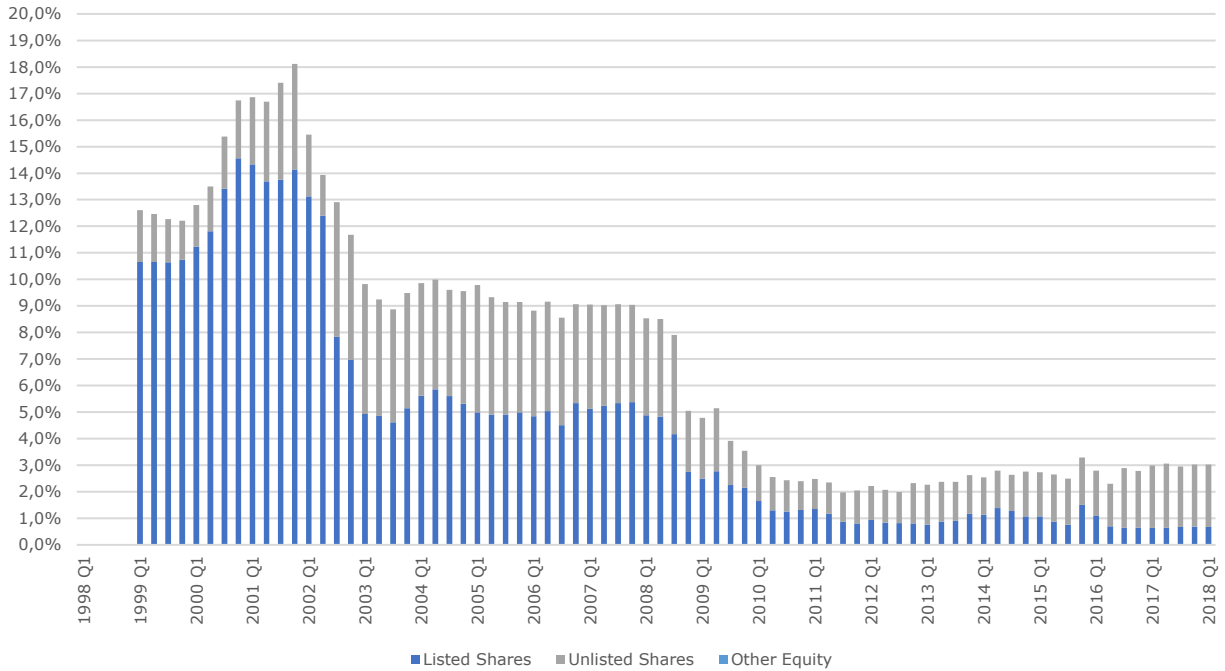
Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis

Graph 7 relates to figures of investments by Greek Insurers since 1999 Q1 as reported by the ECB. It can be observed that Debt Securities dominated the Greek balance sheets during the observation period, and gradually grew as Listed Shares, and Financial Derivatives and Employee Stock Options decreased significantly.

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 Greece 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.

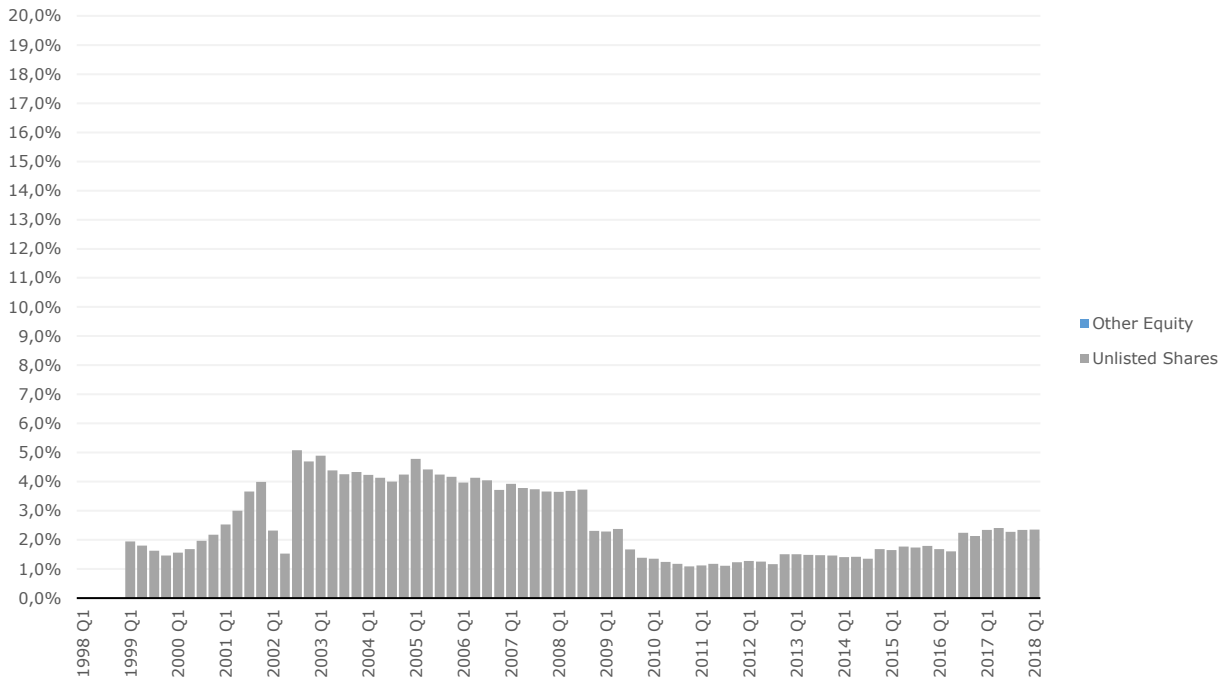
Graph 8 - Evolution ECB balance sheet items (equity categories)



Note: The NSA of Greece confirms that insurers in Greece used to invest in the past a greater portion of their assets to equities (end of '90s and beginning of '00s). The NSA also points out that the sharp decrease in 2002 is explained by the then sharp decrease of Athens stock exchange values that occurred in 2001 and 2002. The Athens stock exchange general index was at about 6200 as at September 1999 (its peak) and at the end of 2002 it had reached about 1500.

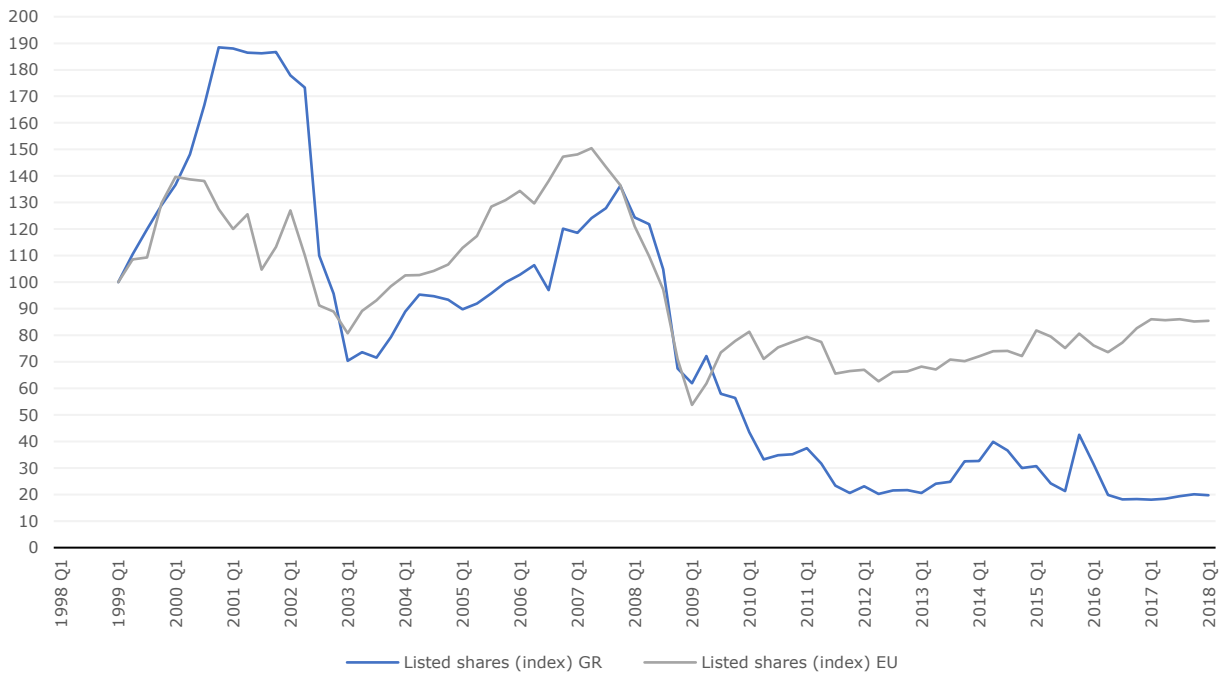
Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis

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



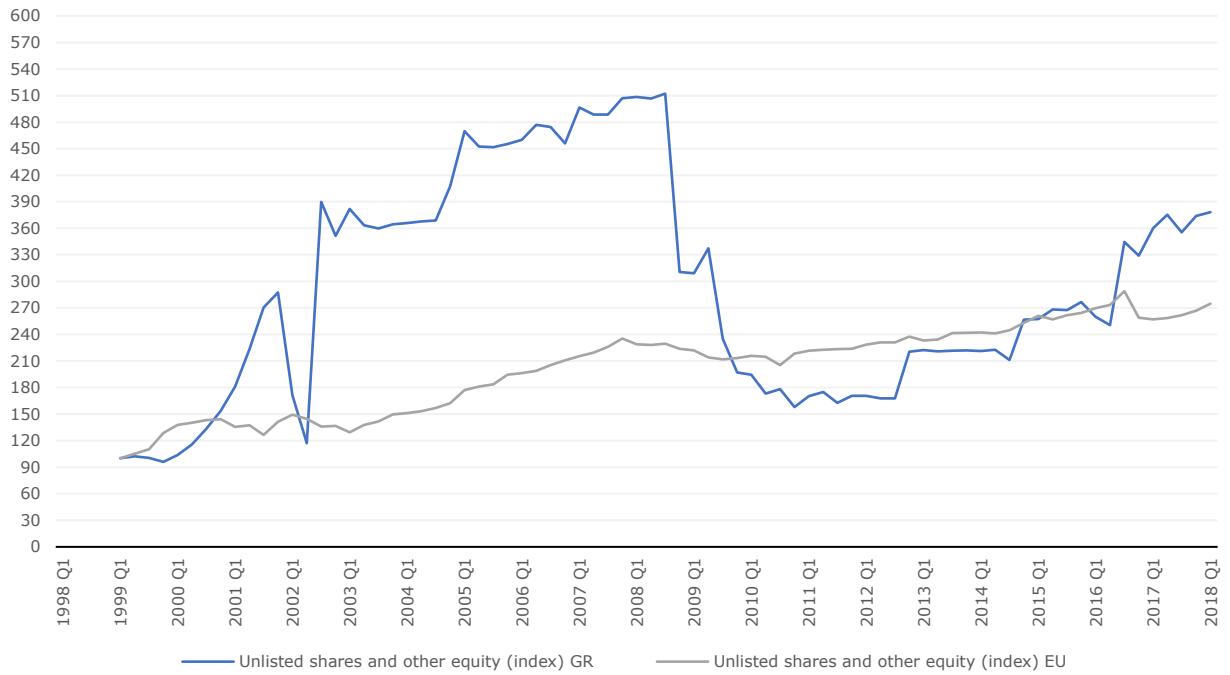
Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis

Graph 10 - Evolution ECB listed shares GR and EU (as index)



Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis

Graph 11 - Evolution ECB unlisted shares GR 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 insurers in Greece 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.

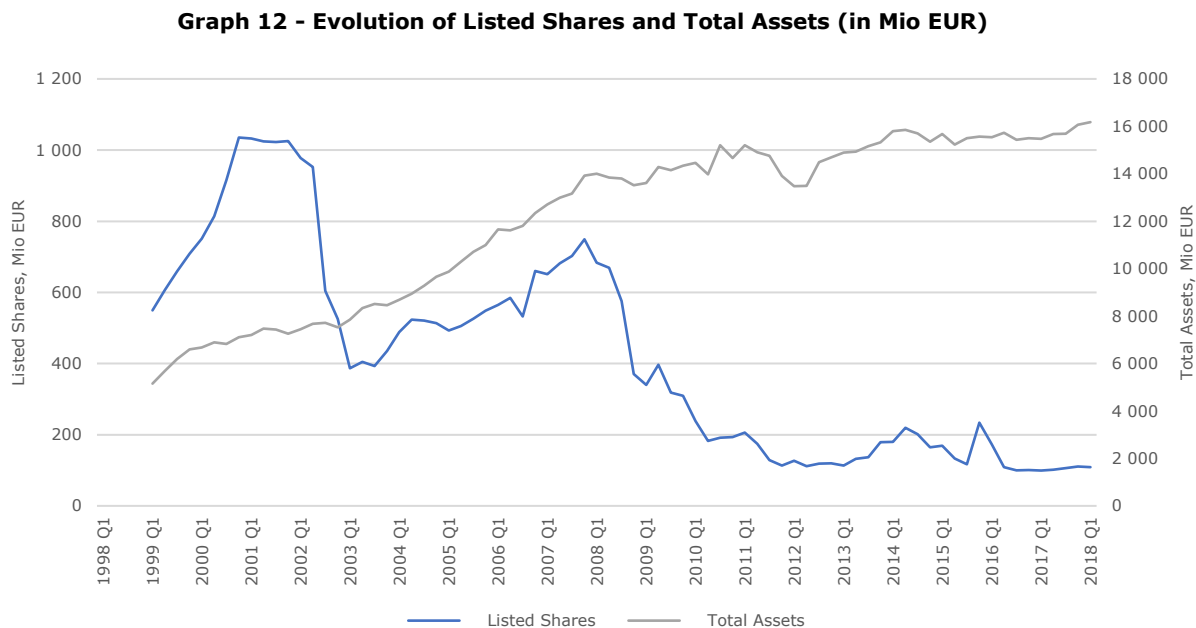
6.5.1 Listed Shares

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.

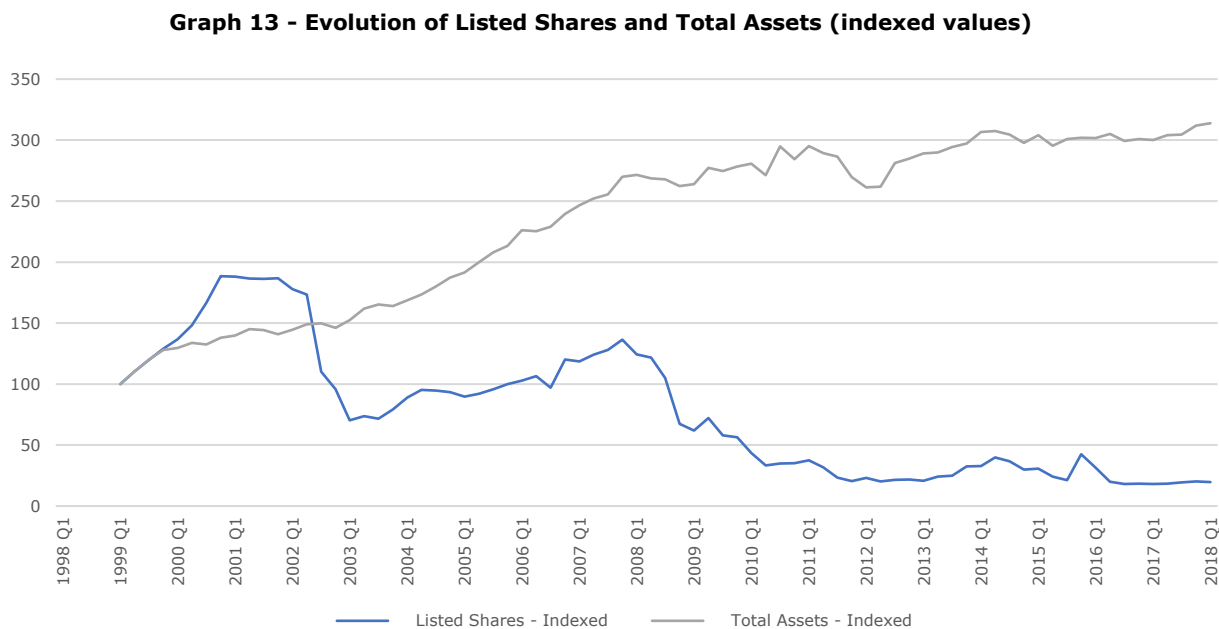
In the next step, we focus on the relationship with the listed shares and stock market indices. The ECB QSA balance sheet items are valued at market prices at the end of each quarter. Therefore, it is plausible to assume that the changes in the stock prices are reflected on the amounts held in listed 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. Over the period 1999 – 2000, investments in listed shares increase by 88,45% accumulating a total value of 1 035 million EUR. In the first quarter of 2003, listed shares reaches the lowest level until quarter by 387 million EUR. During the following 5 years, investments in listed shares exhibit an increasing trend; reaching a value of 749 million EUR in the last quarter of 2007. Between 2008 and 2012, listed shares experience a drop of 83,03%, stabilising at 127 million EUR in the first quarter of 2012. For the remaining period, investments in listed shares fluctuate around 138 million EUR.

On the indexed values of total assets and investments in listed shares, differences in the growth pattern of these two series can be better observed. Over the period of 1999 – 2018, indexed value of total assets increases by 214%, while indexed value of listed shares decrease by 80% of their initial starting value.

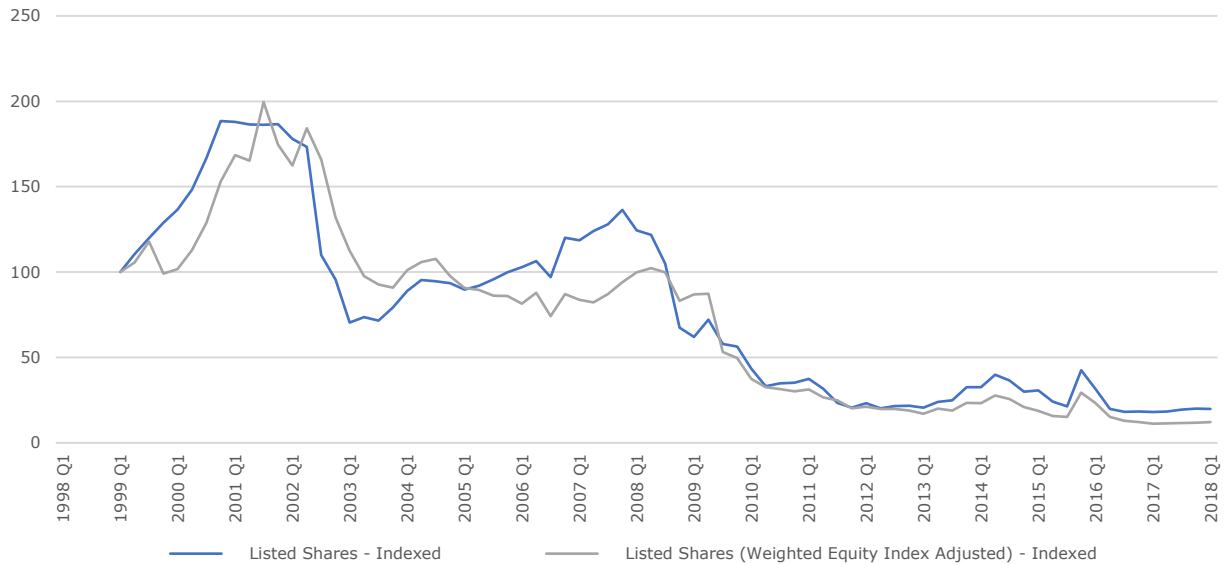


Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis



Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis

Graph 14 presents the indexed values of the amounts invested in listed shares against its Weighted Equity Index adjusted counterpart. Overall, adjusted and unadjusted listed shares follow a similar pattern meaning that the market price effect is, in general not apparent for Greek insurers. However, we do observe some periods of deviation, where indexed values of listed shares are larger than the adjusted values. This is the case for the period between 2005 and 2008. This in turn points to a market price effect being present during this particular period.

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

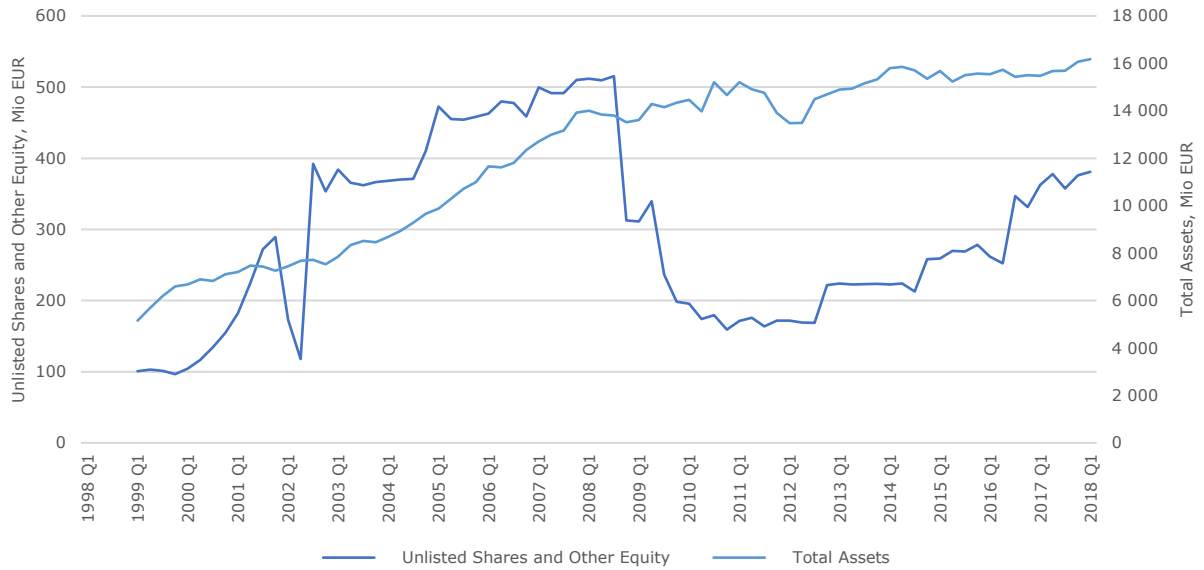
Source: ECB Statistical Data Warehouse and Deloitte-CEPS analysis

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 of 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 present a volatile behaviour. From 2001 Q4 to 2002 Q1, investments in this category drop from 289 million EUR to 173 million EUR while in the last quarter of 2002 investments already recover to 354 million EUR, which translates to an average quarterly change of 37,82% in 2002. In 2008 Q3, unlisted shares and other equity reaches a peak, amounting to a value of 515 million EUR. The following year, the amount of investments drops by 54,08% in value. Over the period of 1999 – 2018, unlisted shares and other equity exhibit an overall increasing trend, reaching 381 million EUR in the first quarter of 2018.

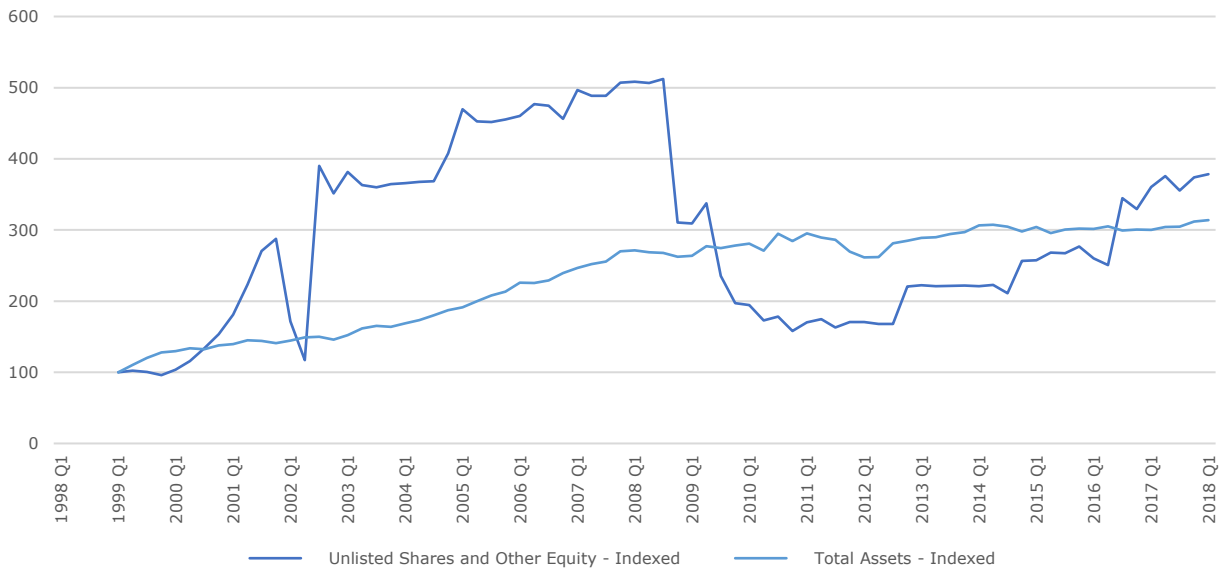
The growth patterns of total assets and unlisted shares and other equity can be compared on the indexed amounts. Over the period 1999 – 2018, indexed value of total assets reach 314 while indexed value of unlisted shares and other equity increases to 378.

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



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