

**COMPARATIVE ANALYSIS OF THE MAIN UNIT-LINKED INVESTMENT
PROGRAMS PROPOSED BY THE ROMANIAN LIFE INSURANCE
COMPANIES**

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JEL classification: G22, G17, G12, C58

Abstract

An important component of the activity carried out by the insurance companies is the investment of the premiums paid by policyholders in various types of assets, in order to obtain higher yields than those guaranteed by the insurance contracts, while providing the necessary liquidity for the payment of insurance claims in case of occurrence of the assumed risks. This research contributes to the existing literature regarding the study of investment alternatives, with an exclusive focus on the investment in unit-linked life insurance. A special place in this study is the comparative analysis of the main unit-linked investment programs offered by Romanian insurance companies.

Keywords: insurance companies, unit-linked products, investment programs, financial instruments.

1. Introduction

Unit-linked life insurance contracts are very popular and widely used on the insurance market. They provide either death benefit or maturity benefit or both. The benefits are linked to an underlying asset with or without certain guarantees so that the policyholders have the opportunity to participate in the financial market and (eventually) be protected from the downside development of the financial market (Li and Szimayer, 2011) [10].

This paper addresses the issue of the main investment programs proposed by the Romanian life insurance companies offering unit-linked life insurance products. Insurance companies offer a number of types of financial instruments (as can be seen in Figure no. 1, p. 3) to which a certain level of risk and profit are associated, and the policyholder opts for those investment programs according to his risk aversion and willingness to earn.

The **structure** of this paper is as follows: Section 2 discusses some previous research on the issue. Section 3 outlines the theoretical framework and the empirical results regarding the profitability of these programs. Section 4 provides a summary of the main findings and some concluding remarks.

2. Literature review

There is an extensive number of studies on the pricing, hedging and risk management of unit-linked contracts. See for example: Boyle and Schwartz (1977) [5], Brennan and Schwartz (1979) [7], Bacinello and Ortu (1993) [2], Boyle and Hardy (1997) [4], Tiong (2000) [14], Hardy (2003) [9], Argeşanu (2004) [1], Romanyuk (2006) [13], Boyle and Tian (2008) [6], Mao and Ostaszewski (2008) [11], Dickson, Hardy and Waters (2009) [8], Pinon and Randrianarivony (2009) [12], Bernard and Boyle (2011) [3], Li and Szimayer (2011) [10], etc.

3. Methods and materials applied

The investment programs of 12 insurance companies were analyzed, as follows: NN, ALLIANZ TIRIAC, METROPOLITAN, AXA, BCR, EUREKO, GRAWE, SIGNAL IDUNA, GENERALI, ERGO, EUROLIFE ERB and GROUPAMA.

For low risk, investment programs available to an insured person with low risk appetite, but in steady secure, stable earnings are provided by 10 insurers, less Eurolife ERB and Groupama.

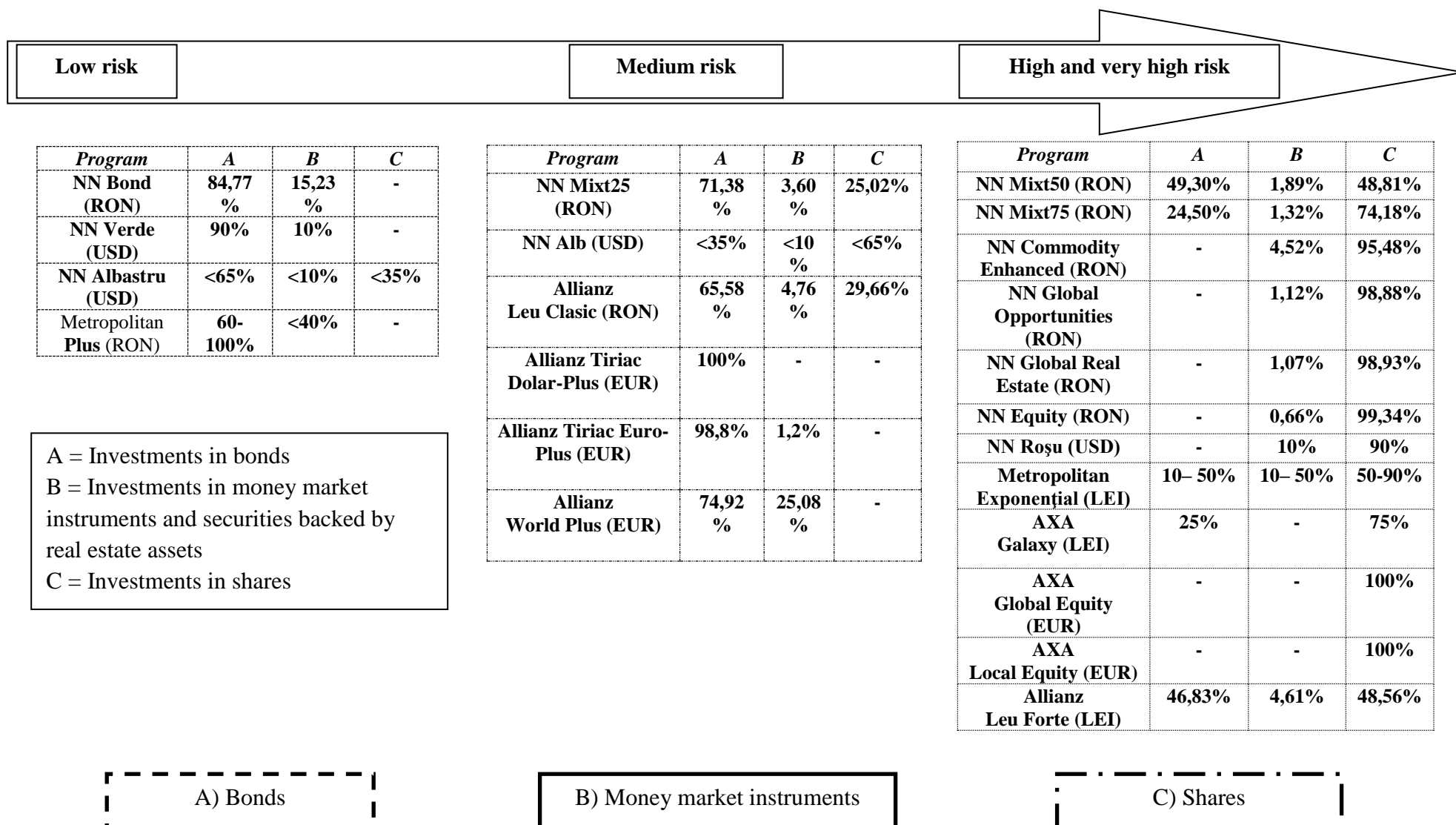
At the same time, for a medium risk profile, investment programs available to an insured person with moderate risk appetite and relatively stable earnings are offered by 10 insurers, less Eurolife ERB and Groupama. NN (former ING insurance company), the market leader for this segment of clients has 3 offers.

The same generous offer of 7 out of 12 programs is subject to the subscription of potential insured persons and those with a high risk profile. Instead, Signal Iduna comes with the highest number of investment programs: 3 for the low risk profile, 3 for the medium risk profile and the remaining 14 for the high risk profile. The results are presented in Figure 1.

For the analyzed period of time (2014-2015), the most profitable investment programs were those expressed in foreign currency (EURO), but also in the national currency, which held in the portfolio of the investment fund a significant part of the shares belonging to companies listed on the international and national stock exchanges. NN life insurance company recorded the highest return rate of 37.99% for the NN Global Real Estate investment program denominated in the national currency and the Signal Iduna Life Insurance Company had the highest rate of return of 62,07% for the investment program denominated in the foreign currency.

By making a comparative analysis of the less profitable investment programs proposed by the Romanian unit-linked life insurance companies, we noticed that for the analyzed period the least profitable investment programs are: the NN Enhanced Commodities program denominated in national currency, proposed by the NN life insurance company with a negative rate of return of -26,73% and the Signal Iduna HANSAGold EUR-Klasse program denominated in the foreign currency with a negative profitability rate of -11,68%, offered by the company Signal Iduna Life Insurance. All these less profitable investment funds hold a significant part of the shares of companies listed on international stock exchange markets. In other words, the negative evolution of these respective Romanian investment funds is correlated with the unsatisfactory evolution of those capital markets.

Figure 1: Comparative presentation of the investment programs proposed by the main Romanian life insurance companies according to the associated risk degrees and the composition of the portfolio of the unit-linked investment programs



Low risk

Medium risk

High and very high risk

<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
Allianz Tiriac Protective (RON)	100%	-	-
Allianz Tiriac Leu Simplu (RON)	87%	13%	-
AXA Ron Bonds (RON)	99%	1%	-
AXA Euro Cash (EUR)	49%	51%	-

<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
Allianz Tiriac Conservator (EUR)	69,2%	3,2%	27,6%
Allianz Tiriac Clasic (EUR)	52%	1%	47%
Metropolitan Multiplu (RON)	20-50%	10-50%	20-40%
AXA Planet (RON)	90%	-	10%
AXA Star (RON)	50%	-	50%

<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
Allianz Tiriac Dinamic (EUR)	18,9%	3,1%	78%
Allianz Tiriac World Equity (EUR)	4,2%	3,3%	92,5%
Allianz Tiriac Progresiv (EUR)	-	1,8%	98,2%
Allianz Europe Equity (EUR)	-	-	100%
BCR Fortissimo LEI (LEI)	10%	5%	85%
BCR Fortissimo Euro (EUR)	57%	4%	39%
EUREKO Ronplus (RON)	10%	10%	80%
EUREKO Euroextra (EUR)	-	-	100%
GRAWE Security Romania (RON)	-	-	100%

A = Investments in bonds
 B = Investments in money market instruments and securities backed by real estate assets
 C = Investments in shares

A) Bonds

B) Money market instruments

C) Shares

Low risk

Medium risk

High and very high risk

<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
BCR Piano LEI (RON)	85%	15%	-
EUREKO Ronsafe (RON)	70%	30%	-
EUREKO Eurosafte (EUR)	40%	60%	-
GRAWE Apollo Conservativ (EUR)	67%	-	33%

<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
BCR Forte LEI (RON)	35%	15%	50%
BCR Piano Euro (EUR)	85%	10%	5%
BCR Forte Euro (EUR)	80%	5%	15%
EUREKO Ronmediu (RON)	50%	20%	30%
EUREKO Euromedium (EUR)	100%	-	-
EUREKO Europlus (EUR)	100%	-	-
GRAWE Apollo Echilibrat (EUR)	33%	-	67%

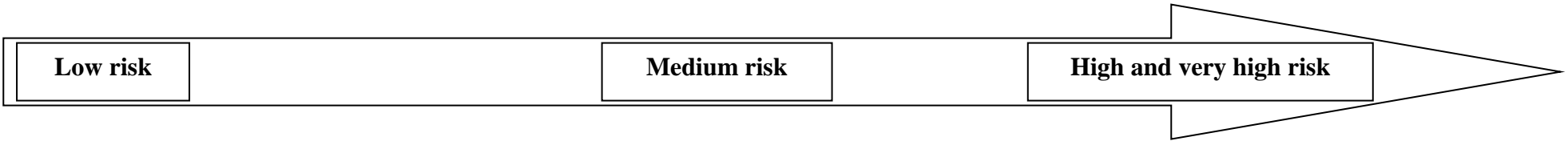
<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
GRAWE Apollo Dinamic (EUR)	-	-	100%
Signal Iduna Attraktiv (RON)	-	-	100%
Signal Iduna HI Topselect W (EUR)	46,6%	0,2%	53,2%
Signal Iduna Global Balanced Class A EUR ND (EUR)	-	0-15%	85-100%
Signal Iduna HANSAEuropa (EUR)	-	7,5%	92,5%
Signal Iduna SI BestSelect (EUR)	-	2,4%	97,6%
Signal Iduna HI Topselect D (EUR)	-	0,2%	99,8%
Signal Iduna HANSAGold, EUR-Klasse (EUR)	-	-	100%

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A) Bonds

B) Money market instruments

C) Shares



<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
Signal Iduna Konservativ (RON)	0-100%	0-100%	-
Signal Iduna HANSAzins (EUR)	100%	-	-
Signal Iduna HANSAgeldma rkt (EUR)	-	100%	-

<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
Signal Iduna Komfort (RON)	0-50%	0-50%	50%
Signal Iduna HANSainternational (EUR)	97,7%	2,3%	-
Signal Iduna Strategic Income Class A EUR ND (EUR)	-	80 - 100%	0-20%

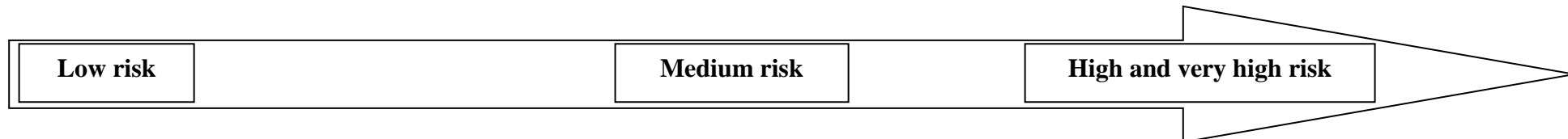
<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
Signal Iduna Asia (Ex. Japan) Equity Class A EUR ND (EUR)	-	-	100%
Signal Iduna China Equity Class A EUR ND (EUR)	-	-	100%
Signal Iduna Emerging Europe and Mediterranean Equity Class A EUR ND (EUR)	-	-	100%
Signal Iduna Emerging Markets Equity Class A EUR ND (EUR)	-	-	100%
Signal Iduna HANSasecur (EUR)	-	-	100%
Signal Iduna Indian Equity Class A EUR ND (EUR)	-	-	100%
Signal Iduna Asia (Ex. Japan) Equity Class A EUR ND (EUR)	-	-	100%

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 C = Investments in shares

A) Bonds

B) Money market instruments

C) Shares



<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
Generali Confident (RON)	25%	75%	-
ERGO Bond Garant 5 (RON)	100%	-	-

<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
Generali Armonie (RON)	75%	25%	-
ERGO Capital Activ (EUR)	100%	-	-
ERGO Live Invest Moderat (EUR)	70%	-	30%
ERGO Live Invest Echilibrat (EUR)	50%	-	50%

<i>Program</i>	<i>A</i>	<i>B</i>	<i>C</i>
Generali Activ (RON)	0-25%	0-25%	75%
ERGO Live Invest Dinamic (EUR)	30%	-	70%
ERGO Oportun (EUR)	-	-	100%
Eurolife ERB EFG Invest Control (EUR)	-	20%	80%
Eurolife ERB EFG Invest 1 (EUR)	-	5%	95%
Eurolife ERB Perspective pentru banii tăi (RON)	-	-	100%
Groupama 5 Plus (RON)	-	-	100%
Groupama Protege Invest (RON)	-	-	100%

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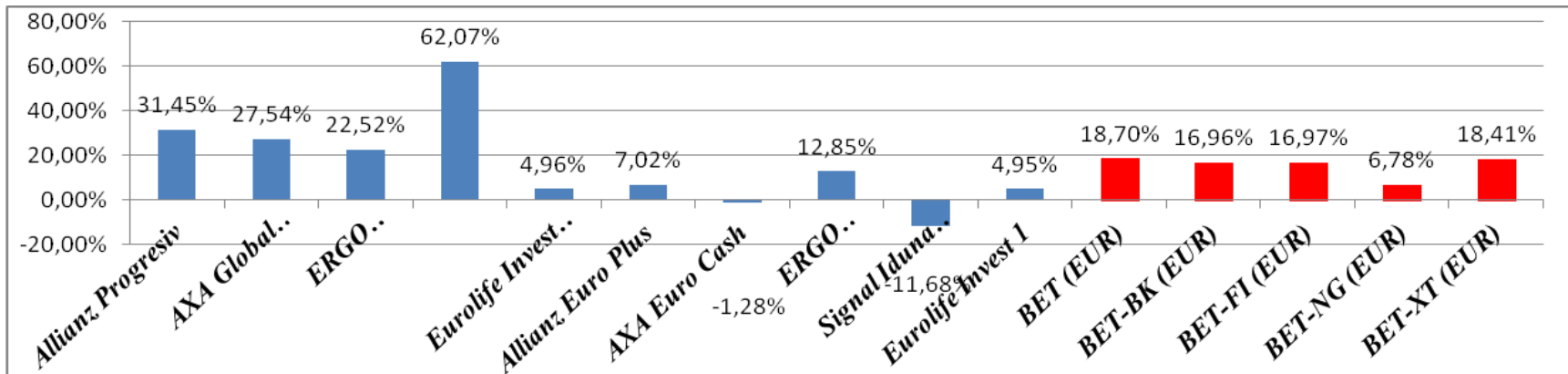
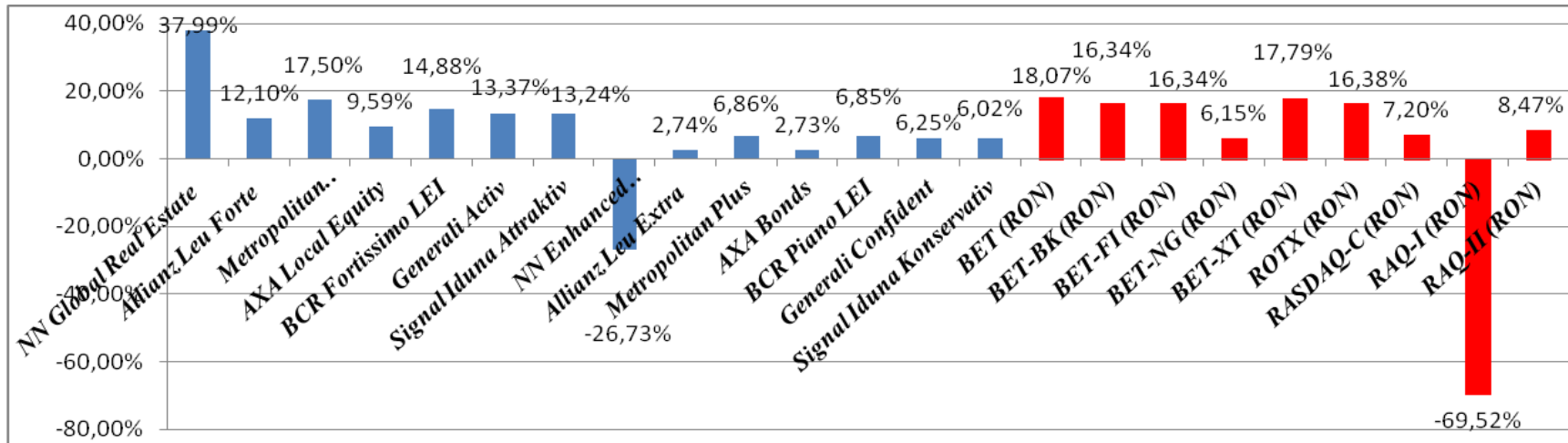
A) Bonds

B) Money market instruments

C) Shares

Source: The author's own computation based on the reports of insurance companies: NN, Allianz Tiriac, Metropolitan, AXA, BCR, EUREKO, GRAWE, Signal Iduna, Generali, ERGO, Eurolife ERB and Groupama.

Figure 2: Evolution of return ratios of unit-linked investment programs (in RON and EUR) and stock indices (in RON and EUR) in 2015 as compared to 2014



Source: Authors' processing based on insurance company reports: NN, Allianz Tiriac, Metropolitan, AXA, BCR, EUREKO, GRAWE, Signal Iduna, Generali, ERGO, Eurolife ERB and Groupama

4. Conclusions

Unit-linked life insurance contracts are popular and widely used on the insurance market. Figure 2 shows the comparative evolution of the performance of investment programs and of the main stock indices on the Romanian capital market for the analyzed period - the end of the first quarter of 2015 as against the end of the first quarter of 2014.

After the immediate period following the Global Financial Crisis, it was observed that the depreciation of unit-linked fund units was lower than the fall in the value of the main stock market indices of the Bucharest Stock Exchange. The reason for which the Romanian unit-linked investment programs suffered a lower depreciation compared to the stock indices is the fact that the life insurance companies that launched these insurance-investment products have avoided investing 100% of the capital in the shares of the companies listed on the stock exchange markets.

During the analyzed period we can notice a revival of the Romanian stock market and, implicitly, an improvement of the evolution of the main investment programs denominated in national currency and in foreign currency - euro. At the same time, investment programs that are above or below the increase in stock market indices of the Bucharest Stock Exchange are those investment programs denominated in foreign currency and whose asset portfolios contain shares and derivatives on international stock markets.

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Rezumat

O componentă importantă a activității desfășurate de către companiile de asigurări este plasarea primelor de asigurare în diferite tipuri de active cu scopul de a obține randamente mai mari decât cele garantate de contractele de asigurare, oferind în același timp lichiditatea necesară pentru plata creanțelor de asigurare, în caz de apariție a riscurilor asumate. Această cercetare contribuie la literatura existentă privind studiul alternativelor de investiții, acordând o atenție exclusivă investiției în asigurarea de viață unit-linked. Un loc special în acest studiu îl are analiza comparativă a principalelor programe de investiții unit-linked oferite de companiile de asigurări din România.

Cuvinte-cheie: *companii de asigurare, produse unit-linked, programe de investiții, instrumente financiare.*

Аннотация

Важной составляющей деятельности страховых компаний является инвестирование премий, выплачиваемых держателями страховых полисов, в различные виды активов, с целью получения более высокой доходности, чем та которая гарантирована договорами страхования, при этом обеспечивая необходимую ликвидность для выплаты страховых обязательств в случае возникновения предполагаемых рисков. Данное исследование представляет дополнение к существующим источникам изучения инвестиционных альтернатив с исключительной ориентацией на инвестиции по страхованию unit-linked. Особое место в исследовании уделено сравнительному анализу основных инвестиционных программ, связанных с продуктами unit-linked, предлагаемые румынскими страховыми компаниями.

Ключевые слова: *страховые компании, продукты unit-linked, инвестиционные программы, финансовые инструменты.*

Received 08.06.2017

Accepted 19.06.2017

Published 30.06.2017