

# DYNAMICS OF PROFITABILITY IN ROMANIAN PHARMACEUTICAL COMPANIES UNDER THE IMPACT OF CHANGES IN THE CONTEMPORARY BUSINESS ENVIRONMENT

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## **Abstract:**

*The pharmaceutical industry has become a large and very complex enterprise. Since its inception at the beginning of the 19th century, this industry has transformed into one of the most profitable and most influential industries considered to be one of the largest investors in research and development both at European and worldwide level, a globally connected market of healthcare. The pharmaceutical industry is operating on a highly profitable market, with large profit margins, differentiated, of course depending on the size of the business and the stage of development. Business challenges have imposed to adjust their business models to fit the new market requirements to ensure business success. How have Romanian companies behaved in the globalized business environment, and which is the level of profitability needed to ensure sustainability? To these questions the present study is looking to bring answers to.*

**Key words:** analysis, pharmaceutical companies, profitability, financial performance, business environment

**JEL classification:** D20, I15, M40

## **1. INTRODUCTION**

### **Pharmaceutical industry and the business environment Global**

Even if it operate in an extremely lucrative market, with sustained growth, an average by 4.5% annually, through 2016; growth in the emerging market will increase by almost 12% (Roland Berger, 2013) pharmaceutical companies are faced with many challenges, which requires them to adjust their business models to fit the new market requirements and ensuring business success.

Organizations are faced with problems that are affecting at the same time the development, the production and distribution- starting with the development of new products to meet the needs of patients, physicians, as well as the specific conditions of insurance companies; pressure to reduce costs recorded in the early stages of research and development, without sacrificing results; the reduction of clinical development risks, whilst generating high quality data; compliance with regulatory standards; the technology management in the health area, while simultaneously trying to satisfy investors' expectations (<http://www.politicidesanatate.ro/pacientul-incepe-sa-devina-actor-principal-in-industria-farmaceutica/>).

In an analysis by Deloitte on the global perspective on the Pharma industry in 2016 (<https://www2.deloitte.com/ro/ro/pages/life-sciences-and-healthcare/articles/global-life-sciences-sector-outlook.html#>) the market of this industry is seen as being volatile due to economic uncertainty, with fluctuating economic conditions in many regions where companies in the health sector operate, pressuring prices, higher demand for innovation and added value, a greater emphasis on consumer involvement and an ever-changing regulatory and risk environment.

The companies are also faced with the need to provide innovative therapies to ensure, on the one hand, the settlement of unmet patients' needs and treating diseases that put lives in jeopardy, and on the other hand, a profitable increase. To achieve those objectives, often conflicting, forces

companies to transform their operational and businesses models and adopt technologies that are capable of contributing to the reduction of costs and, simultaneously, the time taken for new products and services to reach the market.

On the other hand there are also positive challenges that offer real development potential and income growth: ageing population, increased incidence of chronic diseases, greater financial resources at the disposal of consumers and other changing demographic features will give an impetus to spending on health care and demand for pharmaceuticals.

In the figures, according to Medichub, (<https://www.medichub.ro/stiri/top-10-companii-farmaceutice-in-2018-id-1506-cmsid-2>) the pharmaceuticals market is estimated at about 1.11 trillion dollars at the level of the year 2017 and is expected to reach 1.43 trillion u.s. dollars by the year 2020.

In the year 2017, the top 10 pharmaceutical companies generated sales of 437.257 billion dollars representing approximately 40% of the global sales market.

Globally, the leaderboard made by Nature Reviews Drug Discovery, processed also by DCMedical ([https://www.dcmmedical.ro/top-10-companii-farmaceutice-vanzari-de-zeci-de-miliarde-de-dolari-fiecare\\_607202.html](https://www.dcmmedical.ro/top-10-companii-farmaceutice-vanzari-de-zeci-de-miliarde-de-dolari-fiecare_607202.html)), depending on sales of drugs with or without prescription, looks like this:

**Table no. 1. Top 5 pharmaceutical companies in the year 2017 globally**

Place	Explanation	Years		Evolution (%)
		2016	2017	
1	<b>Pfizer Inc (\$ million)</b>			
	a) Revenues	52,824	52,546	99.47
	b) Operating income	7,229	21,353	295.38
	- % of revenues	13.7	40.64	296.6
	c) Net income attributable to Pfizer Inc	7,215	21,308	295.33
	- % of revenues	13.7	40.6	296.35
2	<b>F. Hoffmann–La Roche, Ltd. (CHF million)</b>			
	a) Revenues	50,576	53,299	105.38
	b) Operating income	14,069	13,003	92.42
	- % of revenues	27.82	24.40	87.71
	c) Net income attributable to Roche shareholders	9,576	8,633	90.15
	% of revenue	18.93	16.20	85.58
3	<b>Novartis AG (\$ million)</b>			
	a) Revenues	48,518	49,109	101.22
	b) Operating income	8,268	8,629	104.37
	- % of revenues	17.0	17.6	103.53
	c) Net income attributable shareholders of Novartis	6,712	7,703	114.76
	- % of revenues	13.83	15.70	113.52
4	<b>Johnson &amp; Johnson ((\$ million)</b>			
	a) Revenues, total	71,890	76,450	106.34
	- pharmaceutical	33,464	36,256	108.34
	b) Net earnings (GAAP)	1,300	16,540	1272.31
	- % of revenues	1.80	21.64	1202.22
	c) Net earnings adjusted (Non-GAAP Financial Measures)	18,764	20,040	106.80
	- % of revenues	26.10	26.21	100.42
5	<b>Sanofi (€ million)</b>			
	a) Revenues	33,821	35,055	103.65
	b) Operating income	6,534	5,803	88.81
	- % of revenues	19.32	16.55	86.66
	c) Net income attributable shareholders of Sanofi	4,709	8,434	179.10
	- % of revenues	13.92	24.06	172.84

Source: The authors' own Development after data supplied by

<https://investors.pfizer.com/financials/annual-reports/default.aspx>

<https://www.roche.com/dam/jcr:b70415c0-954f-4a2a-a0e2-47f94bd280e0/en/fb17e.pdf>

<https://www.novartis.com/sites/www.novartis.com/files/novartis-annual-report-2017-en.pdf>

<https://johnsonandjohnson.gcs-web.com/news-releases/news-release-details/johnson-johnson-reports-2017-fourth-quarter-results>

[https://www.sanofi.com/-/media/Project/One-Sanofi-Web/Websites/Global/Sanofi-COM/Home/en/investors/docs/S-Z/Sanofi-20-F-2017-EN-PDF-e-accessible\\_01.pdf?la=en&hash=D0E72A3136750CBBC738C87495F0FF4651141027](https://www.sanofi.com/-/media/Project/One-Sanofi-Web/Websites/Global/Sanofi-COM/Home/en/investors/docs/S-Z/Sanofi-20-F-2017-EN-PDF-e-accessible_01.pdf?la=en&hash=D0E72A3136750CBBC738C87495F0FF4651141027)

It is noticed that for the first five producers in the world the net profit margin varies between 13-22%, well above the average recorded in 2016, higher in 2017 at Pfizer due to accounting adjustments.

The average net profit margin for drug companies, including pharmaceuticals and biotech, was about 12.5 percent to 14 percent, according to a January 2018 study by New York University's Stern School of Business (<https://yourbusiness.azcentral.com/average-profit-margin-pharmaceuticals-20671.html>).

According to the same study, the future of the pharmaceutical market is closely linked to the development of biotech companies, which are developing new treatments, especially on the immuno-oncology segment.

### Europe

At European level, the European Union is the world leader in the pharmaceutical industry and the world's largest trading power in pharmaceuticals and medicines

In Europe, Germany is the leader in terms of the production of medicines. The ranking follows companies in United Kingdom, Switzerland, France, Sweden, Denmark.

In a ranking conducted by europe.businesschief having the value of sales as criteria, in Europe, the first 5 companies are, in order: Bayer AG, f. Hoffman-La Roche AG, Novartis, GlaxoSmithKline, Sanofi (<https://europe.businesschief.com/top10/1543/Top-10-pharmaceutical-companies-in-Europe>).

Europe is also facing a number of specific challenges in the pharmaceutical field:

- advances in science and technology, who made the research-based pharmaceutical industry, one of Europe's top performing high-technology sectors, to entering into a new era in development topic finder.

- differences in how European countries assess health technology and the need to develop the collaborative research space (Andy Powrie-Smith, 2019).

- major changes in the business environment, with many uncertainties

- all drug companies are faced with tougher pricing negotiations that are driven by ever-tighter controls on national health system funding across Europe.

But the biggest challenge comes from Britain's exit from the coalition. This excludes one of the continent's biggest buyers from the EU's single market as from 2018 (and consequently obliging companies to start obtaining separate marketing authorizations for products there) (PharmExec.com, 2018). Brexit will also require major readjustment to existing and pending European initiatives on everything from clinical trials regulation to health technology assessment, and from digital pathways to health to modernized topic finder authorization.

### The Case Of Romania

According to data provided by market research firm *IMS Health*, the Romanian pharmaceutical market has registered the following values in the period 2015-2017:

**Table no. 2. The Romanian pharmaceutical market**

Explanations	Values (millions EUR)			Evolution (%)	
	2015	2016	2017	2016/2015	2017/2016
The Romanian Pharmaceutical Market	2,609	2,922	3,053	112	104.48

Source: The authors ' own Development after data supplied by *IMS Health*

As shown in the table above, the Romanian pharmaceutical market totaled in the year 2017 the value of 3,053 million EUR (at the manufacturer's price level), with an increase of 4.48% from the year 2016 and + 12% compared to the year 2015.

According to the experts at KeysFin, *an increase in turnover from pharmaceutical industry mainly comes from sustained expansion of pharmacy chains and aggressive promotion campaigns. Following the model successfully implemented in other countries, the pharmaceutical market became the primary consumer of promotional budgets, and the effects were seen quickly in business and clients numbers increase* ([https://www.dcnews.ro/pia-a-farmaceutica-din-romania-afaceri-record-in-2018\\_586158.html](https://www.dcnews.ro/pia-a-farmaceutica-din-romania-afaceri-record-in-2018_586158.html)).

From the perspective of producers' associations, the most important problem of the pharmaceutical industry from Romania remains the under financing of the health system, which continues to affect the major players in the market, and especially the patients ([http://www.forumpharma.ro/poze/2017/FIF\\_2017.pdf](http://www.forumpharma.ro/poze/2017/FIF_2017.pdf)).

According to data published in the report "Health at a Glance: Europe 2018", Romania has allocated in the year 2017 5.1% of GDP, *the lowest percentage in the European Union*. The average recorded at the community level block is 9.6%, the highest budget being allocated to France, 11.5% of GDP. ([https://read.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance-europe-2018\\_health\\_glance\\_eur-2018-en#page137](https://read.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance-europe-2018_health_glance_eur-2018-en#page137))

Added the fact that Romania has the lowest prices in Europe to which the Romanian Government reimburses medicine (on the principle of the lowest price in 12 countries) ([https://www.investingromania.com/static/i/analysts-reports/Antibiotice-Iasi-bate-pasul-pe-loc-in-2017-2017-Apr-19-ro-\(4\).pdf](https://www.investingromania.com/static/i/analysts-reports/Antibiotice-Iasi-bate-pasul-pe-loc-in-2017-2017-Apr-19-ro-(4).pdf)) which made that in 2017 the great producers of medicine to withdraw thousands of drugs and vaccines from the market because they could not agree on the price. The clawback tax remains at a fairly high level, 20% of the price of medicinal products, these being 80-90% of the problems the pharmaceutical market from Romania is facing.

However the rate of growth in production from the pharmaceutical sector in 2017 has exceeded more than two times the rate of increase in the Romanian industry overall, 3.5% in 2016. <https://360medical.ro/stiri/industria-farmaceutica-din-romania-si-a-marit-productia-cu-75-in-2018/2019/02/26/>

## 2. LITERATURE REVIEW

Various studies have been done on profit and profitability area.

Drury (Drury and Tayles, 2006), said that profitability analysis is regarded as "one of the most important management accounting practices".

Management uses profit and profitability as a performance measure (Charles H. Gibson, 2009). Although there are voices that claim that profitability is an old-fashioned concept, that in the new economy, the old fashioned principle of achieving sustained profitability is obsolete, as other elements described in the new economy, the performance of the enterprise, are authors (Erich Helfert, 2001) which demonstrate that the viability of any business depends on earnings and profitability becomes relevant and can be interpreted in terms of accounting, managerial, economic.

Otherwise in the whole economic literature profit and profitability occupy a special place.

Profits hold an exalted place in the business world and in economic theory. The necessity of producing profits imposes order and discipline on business organizations. It fosters cost-reducing innovations, which in turn promote the efficient use of scarce resources. The profit motive also encourages savings and risk-taking, two indispensable elements of economic development. In the same time profitability is a yardstick by which businesspeople can measure their achievements (M. Fridson, F. Alvarez, 2002).

J.b. Maverick, in an article published in 2018 on Investopedia regarding Key Financial Ratios for Pharmaceutical Companies (J.B. Maverick, 2018), enumerates and explains a number of indicators of profitability considered to be important in measuring it in pharmaceutical industry.

In his opinion the Key financial ratios for pharmaceutical companies has:

### a) Profit, profitability

*The profit* is often used as a measurement of performance or as a basis of reference for other indicators, such as profitability (activity-investment) or the result per share.

Profitability refers to the ability of the company to achieve a certain level of outcome for a *given volume of business (Return on Sale)*.

### b) Profitability Ratios: Return on Assets, Return on Equity, Return on Invested Capital and Return on Capital Employed, (Arthur s. Leahy, 2012)

Profitability reflects the ability of the company to extricate a certain result for a given size of capital engaged/advanced.

### *c) Return on Research Capital Ratio (RORC)*

R&D expenses are an important cost for pharmaceutical companies and examining the RORC investors has an idea of how well the company is managing to translate the previous year's R&D expenses into current year revenues. Thus, the ratio is calculated by dividing the current year's gross profit by the previous year's total R&D expenditures and it reveals the gross profit that a company realizes from each dollar of R&D expenditures.

Other authors (Bronwyn h. Hall, Jacques Mairesse, 2009) use in formula operating income instead of gross profit.

## **3. DATA AND METHODOLOGY**

The present research is considering the appreciation of profitability and the management of companies which have as their object of activity the manufacturing of basic pharmaceutical products and pharmaceutical preparations (code CAEN 21: manufacture of basic pharmaceutical products and Pharmaceuticals), listed on the stock exchange, under the impact of changes in the business environment, specifically in this field.

Three companies have fulfilled the criteria imposed by this research: S.C. Antibiotice S.A., S.C. Biofarm S.A., and S.C. Zentiva S.A. Profitability Analysis was performed by calculating the indicators mentioned by the specialized literature for a period of five years, 2013-2017.

In order to complete the picture regarding profitability, for better insight into environmental impact in the company's results I have added further information relating to other financial aspects: financial indicators, market structure, financing rates, liquidity, solvency.

Information required for the assessment of economic and financial performance were taken from the annual financial reports for the period 2013-2017, published on the websites of the Romanian pharmaceutical companies ([www.antibiotice.ro](http://www.antibiotice.ro), [www.biofarm.ro](http://www.biofarm.ro), [www.zentiva.ro](http://www.zentiva.ro)) and the site of the Bucharest Stock Exchange ([www.bvb.ro](http://www.bvb.ro)), being further processed in the computer program Excel.

## **4. DESCRIPTION OF COMPANIES**

The company ANTIBIOTICE, the main producer of generic drugs from Romania, was founded in December 1955, subsequently being listed on the stock exchange in April 1997. Ever since then it distinguishes itself as one of the most important companies with fully Romanian capital.

The main activity of the company is production of anti-infective in solid oral forms, as well as the only pharmaceutical company from Romania which divides sterile powder for anti-infective injectable treatments. The Company Antibiotics S.A. from Iasi is the leader of production destined for hospitals in Romania, having the most significant market share for topical products (ointments, creams, gels) to market in Romania, developing at the same time an important segment for the cardiovascular system, central nervous system, and Oncology (<http://bvb.ro/FinancialInstruments/Details/FinancialInstrumentsDetails.aspx?s=atb>).

Numerous international audits (in the European version, and from inspectors from the Food and Drug Alimentation, the U.S.A. Authority, in the field of medicinal products and food) ([http://www.economica.net/antibiotice-iasi-va-creste-exporturile-in-sua-firma-vinde-de-4-ori-mai-mult-ca-in-2007\\_44323.html](http://www.economica.net/antibiotice-iasi-va-creste-exporturile-in-sua-firma-vinde-de-4-ori-mai-mult-ca-in-2007_44323.html)), that always come to certify the best practices manufacturing system, has enabled the company to develop partnerships in over 80 countries in the world, approximately 30% of turnover being carried out on the international market. Also the company Antibiotics has become in recent years a world leader for the Nistatine product, product that is being sold on every continent of the world.

The main shareholders of the company Antibiotics are the Romanian State, with a participation of 53.02% of share capital, and Sif Oltenia, with a participation of 13.76% of the share capital. In recent years, the consolidation of participation for SIF Oltenia is noticed, through several



acquisitions of smaller packages ([https://www.investingromania.com/static/i/analysts-reports/Antibiotice-Iasi-bate-pasul-pe-loc-in-2017-2017-Apr-19-ro-\(4\).pdf](https://www.investingromania.com/static/i/analysts-reports/Antibiotice-Iasi-bate-pasul-pe-loc-in-2017-2017-Apr-19-ro-(4).pdf)).

Antibiotice company is a solid company, developed a durable economic foundation, which is reflected by the fact that the company's shares traded on the stock exchange in Bucharest:

a) Are included in the index BET-Plus, which includes the Romanian companies listed on BVB market which fulfil minimum criteria for selection with the exception of financial investment companies;

b) Are included in the index BET-BK, index which reflects the evolution of the prices of shares issued by foreign and local companies admitted to trading on a regulated market managed by BVB ([http://www.bvb.ro/infocont/infocont18/ATB\\_20180426171210\\_Raport-anual-2017.pdf](http://www.bvb.ro/infocont/infocont18/ATB_20180426171210_Raport-anual-2017.pdf), p.18).

**BIOFARM company**, founded in the year 1990 by transforming the medicine enterprise "BIOFARM" in S.C. BIOFARM S.A., has a competitive portfolio of over 200 products spanning 62 of therapeutic areas, 8 of which it is leading, and 3 having real opportunities to become leader by investing continuously in media, commercial and marketing campaigns to promote its own products.

Having a stable position in the pharmaceutical market, the Biofarm company seeks to improve its position also in the international arena, currently being present in 12 countries (<http://bvb.ro/FinancialInstruments/Details/FinancialInstrumentsDetails.aspx?s=bio>).

The launch of new products and the improvement of the portfolio are key points of the strategy for the development of the company. In order to improve its position both domestically (in the year 2017, Biofarm retained its position among the top 10 Romanian manufacturers in terms of sales in the commercial units, achieving a market share of about 75 percent of the total establishments sold to patients on the pharmaceutical market in Romanian) and Biofarm, will develop and launch about 10 products each year.

The main shareholders of Biofarm are SIF Muntenia (50.98%), followed by SIF Banat-Crişana (23.22%), SIF Moldova (13.62%) and other minority shareholders, legal and standard individuals (approximately 12%) ([http://www.bvb.ro/infocont/infocont18/BIO\\_20180419165954\\_Raportul-anual-2017.pdf](http://www.bvb.ro/infocont/infocont18/BIO_20180419165954_Raportul-anual-2017.pdf), p. 4).

**The Company ZENTIVA**, part of the Sanofi Group since March 2009, is targeted on the development, manufacture and marketing of generic modern pharmaceuticals, on quality and affordable prices.

With a tradition of over 50 years in the domestic market, Zentiva is one of the largest manufacturers of medicines from Romania in terms of volumes, conducting its industrial operations within the Bucharest factory, industrial unit which holds cutting-edge equipment, some of them unique on the market in Romania like technology based on pellets.

The company owns a portfolio of complex products, covering a wide range of therapeutic areas, with opening towards the market in Europe (Germany, France, the Czech Republic, Slovakia, Russia, etc.): exports accounted for 51% of the production plan in fulfilled in commercial units and 43% of total turnover). (<http://bvb.ro/FinancialInstruments/Details/FinancialInstrumentsDetails.aspx?s=SCD>)

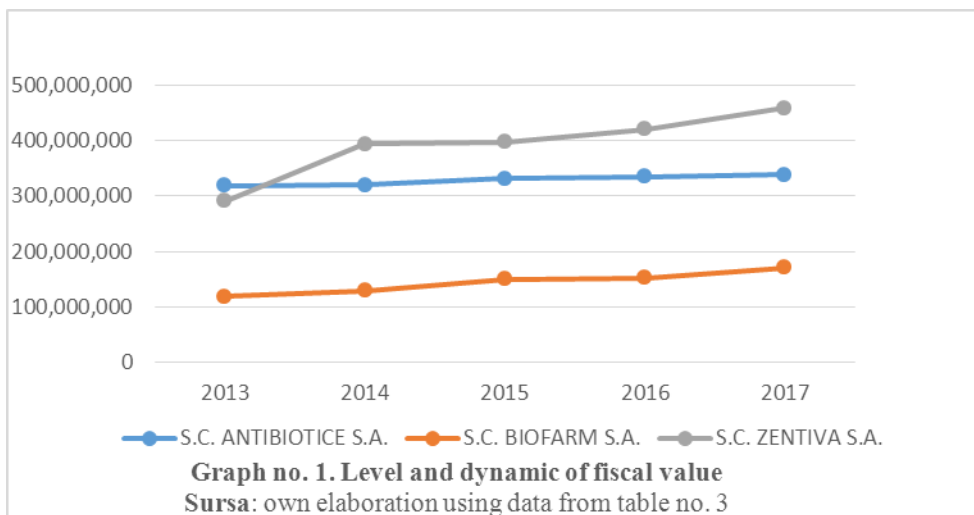
Synthetic structure of shareholding at 31 December 2017 was as follows: Venoma Holdings Limited (50.98%), Zentiva NV (23.93%), Sanofi Aventis Europe (6.68%) other minority shareholders in proportion of 18.40 percent. ([http://www.bvb.ro/infocont/infocont18/SCD\\_20180426102611\\_SCD-Zentiva-Raport-anual-2017.pdf](http://www.bvb.ro/infocont/infocont18/SCD_20180426102611_SCD-Zentiva-Raport-anual-2017.pdf), p. 2, accesat la 1.04.2019).

The economic and financial indicators calculated at the level of the 3 companies investigated for profitability and financial performance are systemized in the following tables:

**Table no. 3. Level and dynamics of fiscal value**

Company	Period of analyses				
	2013	2014	2015	2016	2017
S.C. ANTIBIOTICE S.A.	318,625,015	320,058,303	331,740,206	334,990,734	337,629,448
S.C. BIOFARM S.A.	119,072,518	128,508,056	149,691,393	152,304,091	170,256,235
S.C. ZENTIVA S.A.	290,362,767	394,072,622	396,824,592	420,004,308	458,377,044

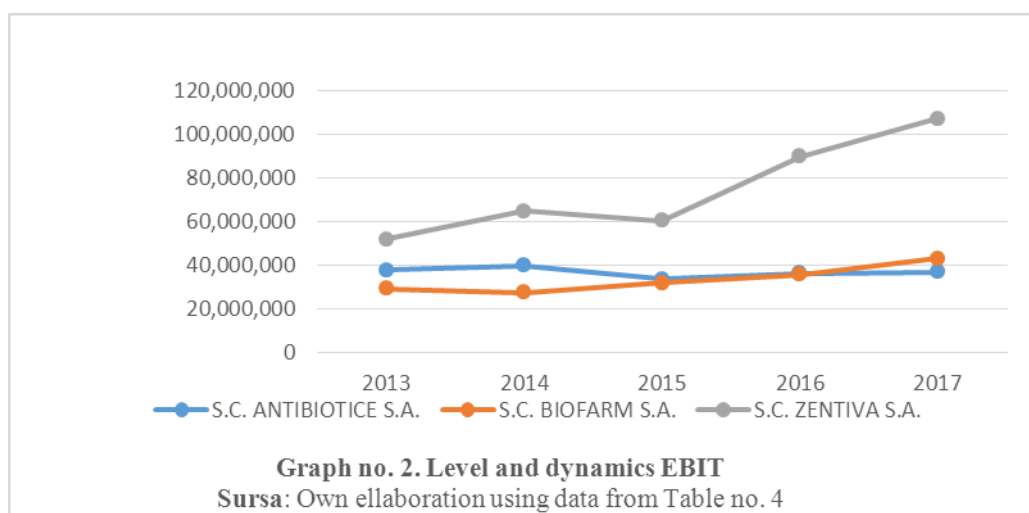
Source: own elaboration of an annual financial returns after the authors of the companies



**Table no. 4. Level and dynamics of EBIT**

Company	Period of analyses				
	2013	2014	2015	2016	2017
S.C. ANTIBIOTICE S.A.	37,489,730	39,492,317	33,532,973	35,917,356	36,709,260
S.C. BIOFARM S.A.	29,135,855	27,245,770	31,749,991	35,441,221	42,678,027
S.C. ZENTIVA S.A.	51,784,314	64,456,563	60,114,119	89,467,957	106,926,031

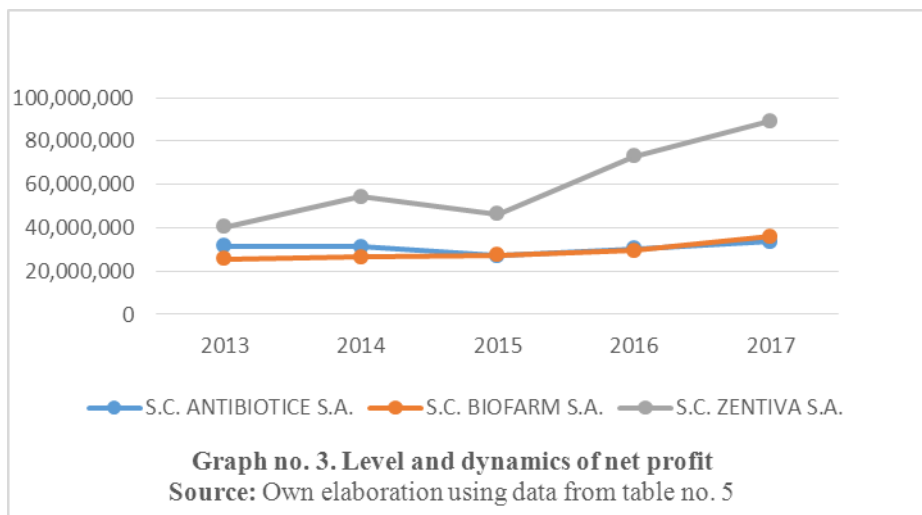
Source: Own elaboration of author after annual financial reports of companies



**Table no. 5. Level and dynamics of net profits**

Company	Period of analyses				
	2013	2014	2015	2016	2017
S.C. ANTIBIOTICE S.A.	31,380,855	31,138,739	27,178,823	30,370,811	33,558,354
S.C. BIOFARM S.A.	25,581,079	26,559,851	27,226,492	29,477,747	36,027,723
S.C. ZENTIVA S.A.	40,297,608	54,242,886	46,204,961	73,026,646	89,241,756

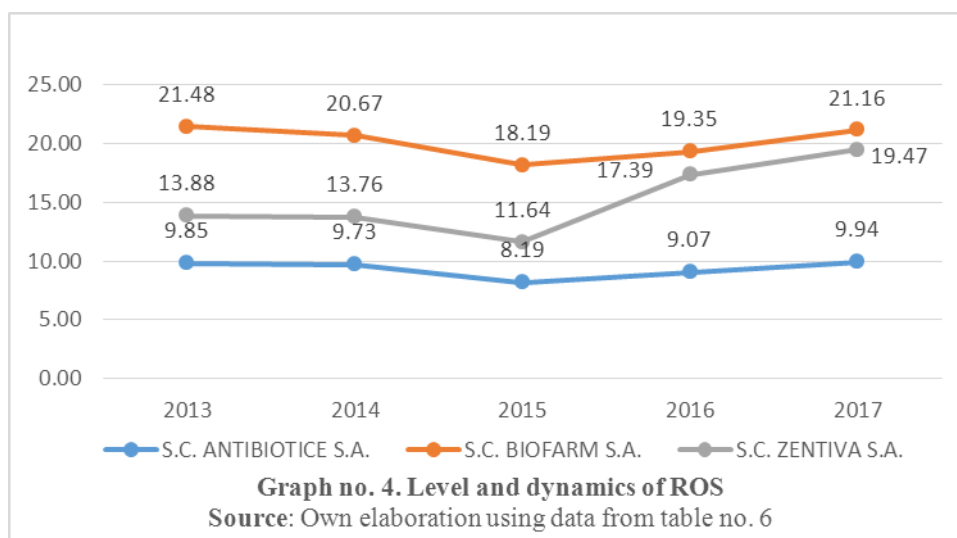
Source: Own elaboration of authors after the annual financial reports of companies



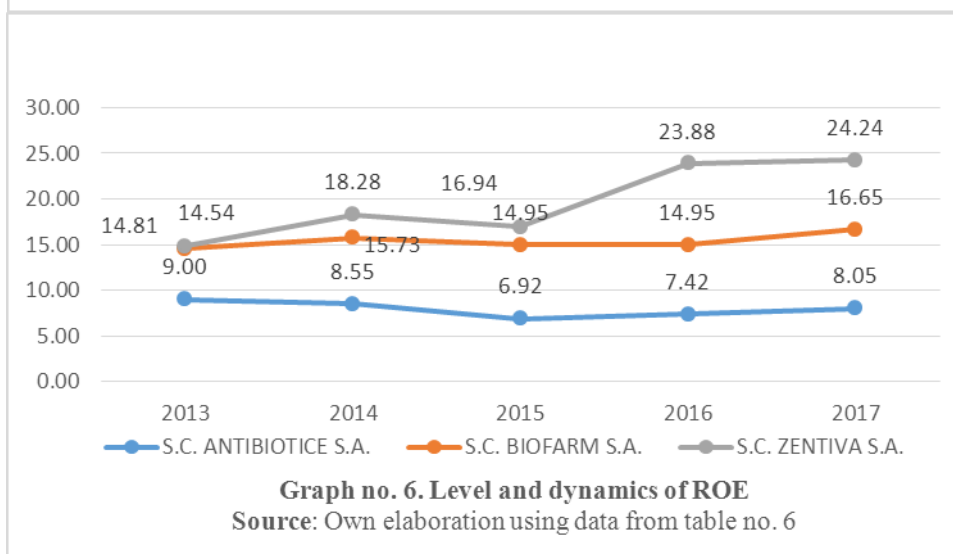
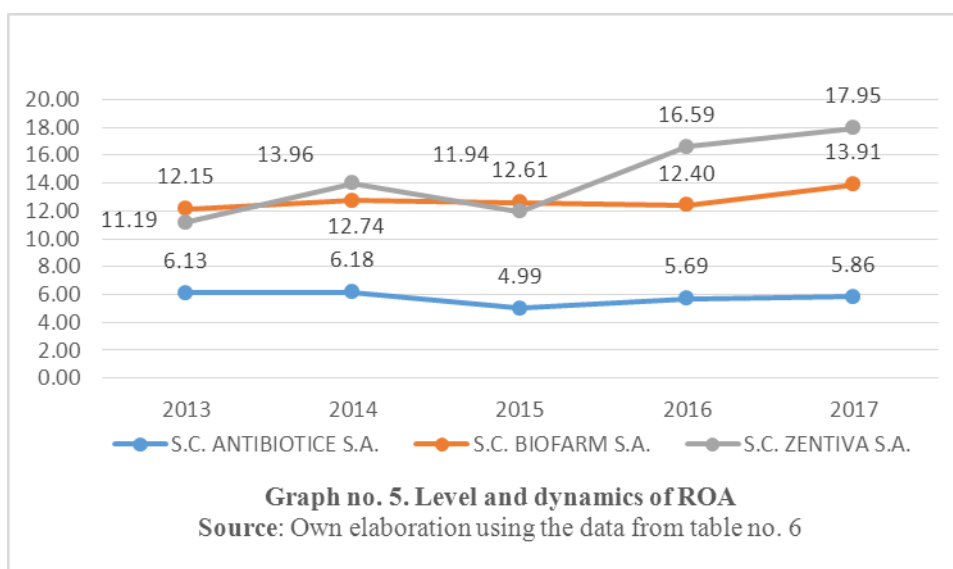
**Table no 6. The level and dynamics of rates of return**

Company	Indicators	The period of analyses				
		2013	2014	2015	2016	2017
S.C. ANTIBIOTICE S.A.	ROS	9.85	9.73	8.19	9.07	9.94
	ROA	6.13	6.18	4.99	5.69	5.86
	ROE	9.00	8.55	6.92	7.42	8.05
S.C. BIOFARM S.A.	ROS	21.48	20.67	18.19	19.35	21.16
	ROA	12.15	12.74	12.61	12.40	13.91
	ROE	14.54	15.73	14.95	14.95	16.65
S.C. ZENTIVA S.A.	ROS	13.88	13.76	11.64	17.39	19.47
	ROA	11.19	13.96	11.94	16.59	17.95
	ROE	14.81	18.28	16.94	23.88	24.24

Source: Own elaboration of author after the annual financial reports of companies







**Table no. 7. The level and dynamics of stock Indicators**

Company	Indicators	Period of analyses				
		31.12.2013	31.12.2014	31.12.2015	31.12.2016	31.12.2017
S.C. ANTIBIOTICE S.A.	Capitalization on stock market	374,606,626	392,732,753	357,151,837	349,095,781	361,179,866
	Evolution (%)	100	104.84	90.94	97.74	103.46
	Equity	348,651,360	364,331,008	392,649,884	409,066,368	416,877,824
	Evolution (%)	100	104.50	107.77	104.18	101.91
	Price earnings ratio (%)	12.6	11.43	12.84	11.89	9.8
	Evolution (%)	100	90.71	112.34	92.60	82.42
	Dividend yield (%)	3.91	4.43	4	7.13	5.42
	Evolution (%)	100	113.30	90.29	178.25	76.02
S.C. BIOFARM S.A.	Capitalization on stock market	330,648,173	306,670,706	277,875,849	266,051,345	287,729,602
	Evolution (%)	100	92.75	90.61	95.74	108.15
	Equity	175,887,136	168,798,960	182,130,615	197,146,496	216,422,832
	Evolution (%)	100	95.97	107.90	108.24	109.78
	Price earnings ratio (%)	11.98	10.46	9.74	9.66	9.33
	Evolution (%)	100	87.31	93.12	99.18	96.58

	Dividend yield (%)	0	5.32	5.95	5.88	5.57
	Evolution (%)	100	-	111.84	98.82	94.73
S.C. ZENTIVA S.A.	Capitalization on stock market	446,148,431	659,632,539	850,600,746	813,074,243	1,434,346,356
	Evolution (%)	100	147.85	128.95	95.59	176.41
	Equity	272,064,608	296,673,504	272,758,528	305,801,664	368,094,976
	Evolution (%)	100	109.05	91.94	112.11	120.37
	Price earnings ratio (%)	16.14	15.3	17.28	19.58	19.62
	Evolution (%)	100	94.80	112.94	113.31	100.20
	Dividend yield (%)	4.61	8.44	5.01	3.71	0
	Evolution (%)	100	183.08	59.36	74.05	0.00

Source: Compilation of annual financial reports to authors after companies

**Table no. 8. Rates of structure**

Company	Indicators	Period of analyses				
		2013	2014	2015	2016	2017
S.C. ANTIBIOTICE S.A.	Financial Stability Rate (%)	73.86	76.64	76.99	81.51	76.73
	Rate of financial autonomy (%)	68.15	72.34	72.09	76.69	72.76
	Debt ratio (%)	31.85	27.66	27.91	23.31	27.24
S.C. BIOFARM S.A.	Financial Stability Rate (%)	84.66	81.80	85.10	83.91	84.55
	Rate of financial autonomy (%)	83.51	80.95	84.38	82.91	83.56
	Debt ratio (%)	16.49	19.05	15.62	17.09	16.44
S.C. ZENTIVA S.A.	Financial Stability Rate (%)	81.58	82.82	79.43	77.63	79.77
	Rate of financial autonomy (%)	75.56	76.37	70.48	69.49	74.05
	Debt ratio (%)	24.44	23.63	29.52	30.51	25.95

Source: Compilation of annual financial reports to authors after companies

**Table no. 9. Rates of financing**

Company	Indicators	Period of analyses				
		2013	2014	2015	2016	2017
Rates stable funding (%)	S.C. ANTIBIOTICE S.A.	192.09	196.39	194.42	200.38	183.58
	S.C. BIOFARM S.A.	224.50	231.91	203.98	192.84	187.56
	S.C. ZENTIVA S.A.	322.18	332.41	308.93	352.46	288.20

Source: Compilation of annual financial reports to authors after companies.

**Table no. 10. Solvency ratios**

Company	Indicators	Period of analyses				
		2013	2014	2015	2016	2017
S.C. ANTIBIOTICE S.A.	Overall solvency ratio	3.14	3.62	3.58	4.29	3.67
S.C. BIOFARM S.A.	Overall solvency ratio	6.06	5.25	6.40	5.85	6.08
S.C. ZENTIVA S.A.	Overall solvency ratio	4.09	4.23	3.39	3.28	3.85

Source: own Elaboration of annual financial reporting after companies

**Table no. 11. Liquidity rates**

Company	Indicators	Period of analyses				
		2013	2014	2015	2016	2017
S.C. ANTIBIOTICE S.A.	General liquidity rate	2.35	2.68	2.68	3.29	2.54
	Intermediate liquidity rate	1.97	2.18	2.18	2.66	2.02
	Immediate liquidity rate	0.08	0.16	0.31	0.15	0.04
S.C. BIOFARM S.A.	General liquidity rate	4.05	3.53	3.88	3.49	3.54
	Intermediate liquidity rate	3.52	3.05	3.26	2.98	3.05
	Immediate liquidity rate	1.53	1.10	0.94	0.93	0.94
S.C. ZENTIVA S.A.	General liquidity rate	4.05	4.36	3.61	3.48	3.57
	Intermediate liquidity rate	3.30	3.69	2.98	3.05	3.17
	Immediate liquidity rate	0.59	0.58	0.09	1.30	1.60

Source: own Elaboration of annual financial reporting after companies

For ANTIBIOTICE, the values obtained, over those considered optimal, and the dynamics of financial indicators that characterize the profitability and financial performance highlights the financial stability and continuing concern for business efficiency and adaptation to changes in the business environment. The overall activity was carried out under the sign of continuity and performance, confirming the trend of constant growth that management proposed and supported.

Through an important effort of investment, intended to lead to the development of the capacity of production and maintaining quality standards for which it is recognized, the company consolidated its business nationally and internationally.

The massive investments made over the past 20 years - in refurbishment, modern equipment and align with international quality standards have enabled not only to strengthen the position on the local market but also the development of exports. Otherwise the soundness of the business Antibiotice is demonstrated by strategic orientation of the company's development strategies adapted to the international pharmaceutical market and the promptness with which it is able to react, developing accountable and transparent business practices.

The values and the dynamics of financial indicators confirm that also in the case of BIOFARM that company management implemented strategies have enabled the consolidation of its position in the pharmaceutical market in Romania, a very dynamic and in a constant change market.

The increases are based on, among other things, the changing of the commercial strategy, the reorganization of the sales force structure, namely the strengthening of the internal and external markets, the reconfiguring of some processes and decreasing certain costs. The margins of profitability with which Biofarm is operating shows that this is a stable company that is able to manage efficiently its activity and maintain a stable structure for its expenses.

The strategies adopted are supporting the process of consolidation of the company in the current context of the pharmaceutical market. For the following years the management team aims to increase market share and streamline operational activity in order to increase the share of profitability.

In regards to the company ZENTIVA it is significantly improving its financial results, having a profitability with a very good dynamic. Their growth is due to the performance from both the industrial zone, as well as an appropriate commercial and investment strategy.

For the year 2018 relatively large investments are foreseen (of EUR 4.1 million) in tangible mobilizations for increasing production capacities, the modernization of production equipment, ensuring compliance with the rules of good manufacturing practice and, last but not least, maintaining profitability

## 5. CONCLUSIONS

The pharmaceutical sector has been and remains a base strategic sector in the world.

All information sources studied reveals that the pharmaceutical market, both external and internal is a market with high profitability, with numerous opportunities for development and growth. At the same time the companies active in this field are faced with numerous challenges.

Europe is facing new challenges in the field of public health, scientific and economic: globalization of the sector and constantly growing internationalization of the value chain; the proper functioning of the internal market in a Europe in the course of enlargement; and progress in science and technology ([ec.europa.eu/DocsRoom/documents/2360/attachments/1/translations/ro](http://ec.europa.eu/DocsRoom/documents/2360/attachments/1/translations/ro)).

Technologies, new therapies and medicines are already appearing affecting already the development strategy of EU companies, industry structure, through the creation of small and medium-sized enterprises particularly innovative, the concept of clinical trials and how the medicines are prescribed.

It becomes obvious that innovation, response time to market and cost-efficiency are key elements for the success of pharmaceutical companies.

Regarding Romania, according to data published by the Organization for economic cooperation and development (OECD) in the report "Health at a Glance: Europe 2018", Romania

has allocated in the year 2017 only 5.1% of GDP, the lowest percentage of Union European, far below the European average (9.6%); the highest budget being allocated to France, 11.5% of GDP.

Romania thus ranks at the end of the ranking of the European Union and with regard to expenditure on health per capita and expenditure of hospital patients.

The budget allocated to health per capita accounts for a third of the European average and it is up to five times lower than in Luxembourg, which earmarks most of the money for health care from this point of view.

Prominent aspects in this article have been materialized in the analysis of the profitability and financial performance based on the information released from the annual financial reports of three pharmaceutical companies listed on the stock exchange in Bucharest, in 2013-2017 period.

The study on the three companies in the pharmaceutical industry, listed on the Bucharest Stock Exchange in the period 2013-2017, confirmed that they, with all the challenges of the business environment were performing throughout the period subject to research, even if it is found that some analyzed indicators have diminished. The strategies implemented by the management of the three companies have been successful in strengthening the position of pharmaceutical market from Romania, a very dynamic and constantly changing market.

The issues captured in this study are only a part of an investigation that can be achieved in this highly complex and dynamic field, leaving the future research horizons opened.

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