ΣfEE

HELLENIC ASSOCIATION OF
PHARMACEUTICAL COMPANIES

THE PHARMACEUTICAL MARKET IN GREECE

FACTS & FIGURES

2013

FOUNDATION FOR
ECONOMIC &
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JULY 2014

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FOREWORD BY SFEE'S PRESIDENT

"The Pharmaceutical Market in Greece: Facts and Figures 2013"

It is a great pleasure and honor for me to preface the present edition by SFEE entitled 'The Pharmaceutical Market in Greece: Facts & Figures 2013', conducted by the Health Economics Observatory of IOBE.

Its objective is to document and analyze current market trends in the pharmaceutical field, while focusing on the factors that affect the structure and function of the industry in a continuously changing environment. This year's edition is an extension of last year's study also produced by IOBE.

In an era where data collection is of significant priority to enable effective policy-making decisions, while following the international standards of sectorial organizations, SFEE provides concise and explicit data that can ensure transparency and improve information asymmetry.

Based on these data, the significance and contribution of both pharmaceutical companies and the overall industry's activity in the country is highlighted. The following sections describe in detail the specificities of the Greek pharmaceutical market, while clearly presenting the impact of the economic crisis and the way the industry has contributed to the government's efforts for cost-containment.

Additionally, the demographic changes and their impact on healthcare services are also shown, in order to demonstrate the need of an actuarial approach to be taken into account in the near future in shaping welfare policy. The value of pharmaceuticals for the country's overall industrial activity and trade (mainly exports) is also highlighted by the official statistical accounts of the state. In an era where the government is looking for resources that will allow the national economy to boost, the pharmaceutical industry can play a key role. This is the most optimistic message from this year edition.

I hope that the next edition will include data that will ascertain a course of improvement and the onset of a new constructive and beneficial period for both our industry and our country overall.

Enjoy your reading

Konstantinos M. Frouzis
President of SFEE

SFEE'S REPORT «THE PHARMACEUTICAL MARKET IN GREECE: FACTS & FIGURES 2013»

This edition was composed and reviewed by the research staff of the Health Economics Observatory at IOBE with the contribution of SFEE's correspondent working group. The Data Monitoring Committee would like to thank Mr. Aggelos Tsakanikas, Assistant Professor at the National Technical University of Athens and IOBE's Research Director, who along with the following IOBE researchers and associates have undertaken the study for this year.

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From SFEE's side we would like to thank the members of the Data Monitoring Committee.

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1 EXECUTIVE SUMMARY

The **Greek economy** in 2013 has gone through the sixth consecutive year of recession which has resulted in the fall of GDP by one quarter (-23.3%) compared to 2007. The deep recession has caused significant changes in the productivity of the economy, where a significant number of businesses have terminated their function, while employment has fallen by almost 20%, with a simultaneous explosion in the number of unemployed.

Economic crisis and the need for fiscal adjustment, has influenced in the past years, both the evolution of pharmaceutical expenditure and expenditure on health services and social protection overall, thus affecting the health status of the population, both directly and indirectly.

Specifically, **net pharmaceutical expenditure** in 2013 amounted to €2.37 billion, while 2014 is expected to fall at €1.94 billion. Overall, until 2014, pharmaceutical expenditure is expected to be reduced by 60.5% compared to 2009. Correspondingly, a downward trend was marked in public pharmaceutical expenditure per capita, namely from €456 per capita in 2009 to €214 per capita in 2013, while it is expected to be further reduced to €183 per capita in 2014, an amount which is 36% lower than the OECD average. At the same time, decline was also recorded on public health expenditure overall. In particular, hospital pharmaceutical expenditure was reduced by 49%, while outpatient care expenditure was reduced by 31% leading to spillover effects and an increase in public inpatient care expenditure at 3.4% of the GDP in 2012.

Based on the national System of Health Accounts, **total healthcare expenditure** has been reduced in 2012 by €2.4 billion, while as a proportion of GDP in 2012 they accounted for 9.2%, similar to the respective average of the OECD countries. However, it must be noted here that in 2009, total healthcare expenditure accounted for 10% of the GDP, which was though approximately 16% higher than 2012 GDP.

In 2013, total sales of medicinal products amounted to €5.29 billion recording a decline of 11.3% compared to 2012. Of total sales, 75% was distributed through wholesaler and pharmacies, while the remaining % was supplied by EOPYY pharmacies and hospitals.

Penetration in volume of **on-patent** products reaches 11.6%, a proportion higher than in other European markets. This is mainly due to the low prices of the products, which are established at lower levels than the European average, almost 50% below due to the national pricing regulations. On the contrary, prices of **generics** are among the highest in Europe and do not differ significantly from the prices of the off-patent products. Finally, **OTC** market share in volume has been increase at 11.9% compared to 10.7% in 2011.

The **pharmaceutical production** is one of the most dynamic sectors of Greek industry. Domestic production of drugs has increased its participation in both total domestic manufacturing, and among the OECD countries, occupying a high position to the share of total industrial production. More precisely, national production of medicinal products in 2012, in ex-factory prices, was estimated at €858 million, demonstrating a decline of 5.4% from the previous year.

Overall, in 2013 140.000 employees were engaged in the healthcare sector, of which **13.600 personnel of 31 different specialties** were employed in the pharmaceutical production. Overall, the Greek pharmaceutical industry is comprised of 56 multinational companies, 50 national companies, 120 wholesalers, 27 pharmaceutical co-operatives, 11.000 pharmacies and 26 EOPYY pharmacies, making the pharmaceutical sector a vital factor of growth for the national economy.

Finally, pharmaceutical companies play an equally important role in the country's external trade activity. **Imports and exports** of medicinal products in 2012 amounted to €2.9 billion and €964 million respectively. Compared to the previous year, imports were reduced by 10%, while exports increased by approximately 5% resulting in an overall reduction of the trade deficit by 16%.

Overall, based on Eurostat data, the pharmaceutical industry currently holds the 1st place in labor intensive investment among the manufacturing sectors in Greece.

In the following chapters, a description of the general macroeconomic evolutions in the Greek economy along with the development and the determinants of the domestic demand, the supply structure of the industry and trends of foreign trade of medicines are being presented. Additionally, the financial situation of the sector is presented, based on a representative sample of pharmaceutical industries, wholesalers and pharmaceutical co-operations. Finally, the existing institutional framework is studied, as well as, the international environment of the pharmaceutical industry and the problems faced by this sector.

2 KEY STATISTICS OF GREEK PHARMACEUTICAL MARKET

Table 1: The Greek pharmaceutical market in figures*

Number of companies	Manufacturers and Importers (2012)	~106
	Wholesalers (2012)	120
	Pharmacists Associations (2012)	27
Pharmaceutical Sales (EOF)	To wholesalers / pharmacies (at retail prices)	€3,965 mil.
	To hospital (at hospital prices)	€1,338 mil.
	Total Sales (2013)	€5,292 mil.
	% Change 2012/2013	-11.3%
Domestic Production	At ex-factory prices (2012)	€858 mil.
Exports**	Value (2012)	€965 mil.
	% Change 2011/2012	+5%
Imports**	Value (2012)	€2,939 mil.
	% Change 2011/2012	-10%
Parallel Exports	% of total sales (in value terms) (2012)	7%
Employment	Number of employees (2013)	13,600
	% Change 2009/2013	-3.6%
Public Pharmaceutical Expenditure	Expenditure 2009	€5,108 mil.
	Expenditure 2013	€2,371 mil.
	Clawback 2013	€152.5 mil.
	Rebate 2013	€222.0 mil.
	Change 2009/2013	-54%
	% of GDP (2013)	1.3%
	Net public pharmaceutical expenditure per capita (2013)	€214
	Public Pharmaceutical Expenditure/ Medicine Sales	49.6%
Public Health Expenditure	% of GDP(2012)	6,2%
	%Total Health Expenditure(2012)	17,8%
Price Structure	Ratio of ex-factory price to retail price (2012)	67,6%
Price Change	Medicines Price Index 2009/2013	-26,5%
Generics	% of total sales (in value terms) (IMS 2013)	15,0%
	% of total sales (in volume terms)(IMS 2013)	27,4%
Generics and off-patent	% of total sales (in volume terms) (IMS 2013)	61,8%
OTC	% of total sales (in value terms)	11.9%
R&D expenditure	National Ethics Committee (2012)	€84 mil.

* The table presents summary data on the Greek pharmaceutical sector. For further details, see the main text.

**Data from Eurostat

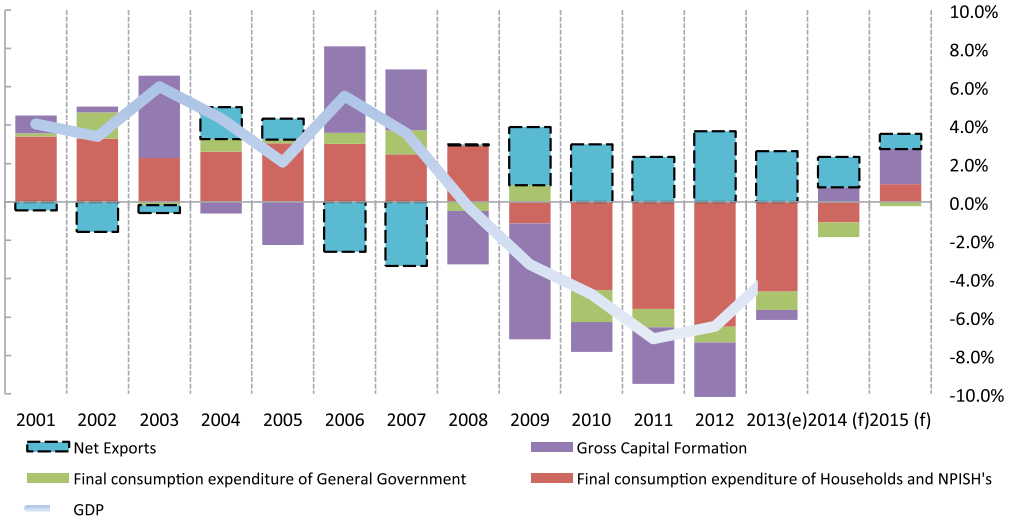
3 ECONOMIC ENVIRONMENT

Macroeconomic indicators

The Greek economy has been in an economic recession, already lasting for six years, during which GDP has shrunk by almost a quarter (23.3% contraction of GDP per capita between 2007 and 2013). The deep recession has caused notable changes in the productive sector of the economy, where a significant number of companies have shut down resulting in a decrease in employment by nearly 20% whilst leading to an explosion in the number of unemployed.

The crisis that afflicted the international markets in 2007-2008, did not seem to affect the Greek economy significantly, as the retreat that was recorded until 2009 was milder than in other European countries. However, the double debt crisis that broke in 2009-2010, when Greece asked for help from EU-ECB-IMF, as it could not finance its public debt, played a determinant role in the weakening of the national activity. The causes for the depth of this contraction can be found in the pervasive structural imbalances of the Greek economy prior to the crisis, such as persistent twin deficit (fiscal and current account), while having a large debt. **The low proportion of tax revenues to GDP in combination with the high level of public expenditures concluded to the fiscal derailment in 2009.** The most important factor though, was the type of the production model that was adopted in Greece for decades. **Consumption**, private and public, was the driving force in creating a positive rate of GDP until 2008, rather than investments and exports. In Figure 1, the variance of the 4 basic components of GDP for the period 2001-2012 is presented, inclusive of a forecast for 2013-2015.

Figure 1: GDP% change (2005=100)

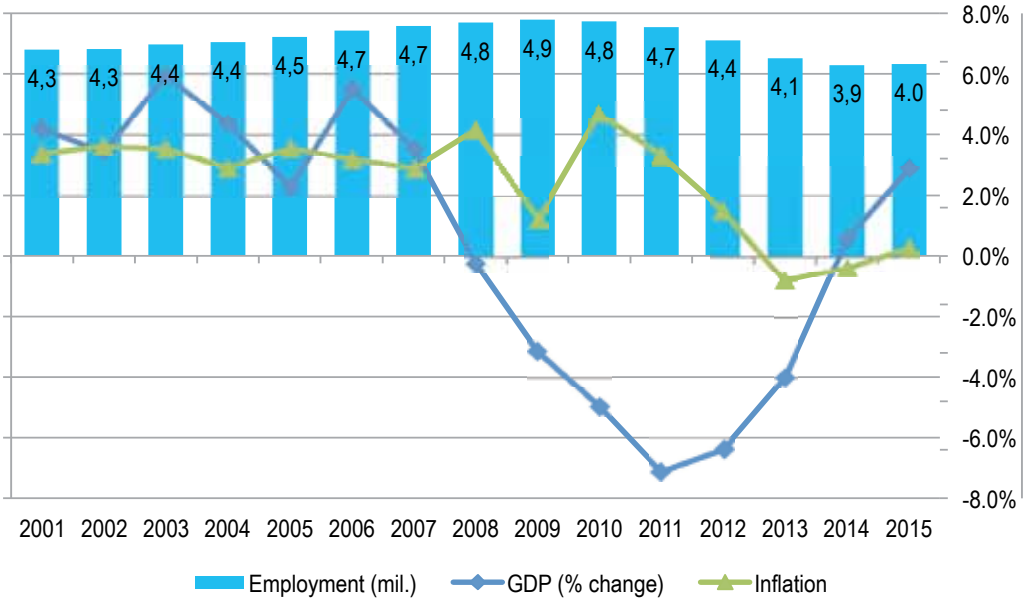


Source: AMECO-European Commission, 2013, data processing IOBE

Fiscal adjustment policies imposed reduction of expenditure and increases in taxation, leading to a significant reduction in both public and private spending, which were the main determinants of the country's GDP. Simultaneously, the high level of uncertainty in both the political and economic environment in combination with the rapid deterioration in demand, discouraged investment and consequently negatively affected GDP. **Net exports** were the only national account component that influenced GDP positively, partially counterbalancing the aforementioned; especially in 2013 were exports have increased.

The prolonged recession has had a significant impact on **employment** in the Greek economy. Namely, the labor force has shrunk to 4.0 million employees compared to 4.9 million in 2009, while **inflation** has turned negative for the first time since records began in 2013, indicating the intensity of the declining economic activity.

Figure 2: Key macroeconomic variables*



Source: AMECO-European Commission 2013

* Figures rounded to one decimal place

4 DEMOGRAPHIC TRENDS AND HEALTH PROFILE OF THE NATIONAL POPULATION

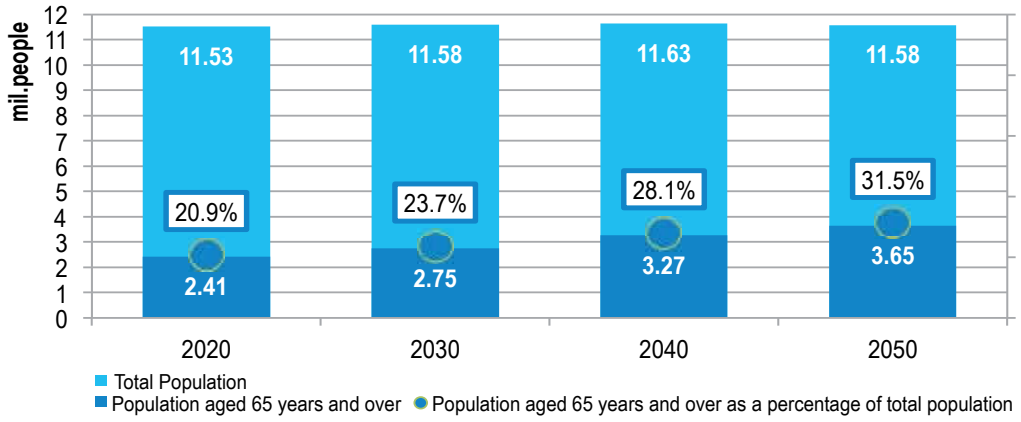
Demographic trends

Low birth rates and continuous improvements in life expectancy have led to increases in the **ageing population** worldwide. Ageing places a significant additional demand on a country's aged care system and the associated financing and delivery of its services. Additionally, increased life expectancy, due to medical advances and the development of innovative therapies, is related to the upward trend of the pharmaceutical expenditure. However, according to professor's Lichtenberg[1] study, **pharmaceutical innovation** has increased life expectancy by 0.87 years through the period 1995-2010, whilst helped to decrease mean length of stay in inpatient care, with an annual reduction rate of 2.2% through the period 2000-2008. As such, any **demographic changes** have implications for society, for the economy and for the ability of governments to meet the expectations of the community.

The Greek population is not expected to change significantly until 2050 (Figure 3), but the increase in life expectancy in combination with the expected increase in the number of people aged over 65 years old as well as those over 80 years old (Figure 4), who use more health services, will have significant impact on the forthcoming expenditures in the health sector, putting social security systems under pressure. According to OECD estimates, and based on the current dynamics of population change, the percentage of the population aged over 65 years in Greece will increase from 19.1% in 2010 to 32.5% in 2050. Similarly, the percentage of population aged over 80 is expected to reach 10.5% in 2050 from 4.8% in 2010 (1 in 10). Rates for the category over 80 are close to the average of EU-27, however for the category over 65 years the percentage for the EU-27 is lower (17% 2010; 28% 2050).

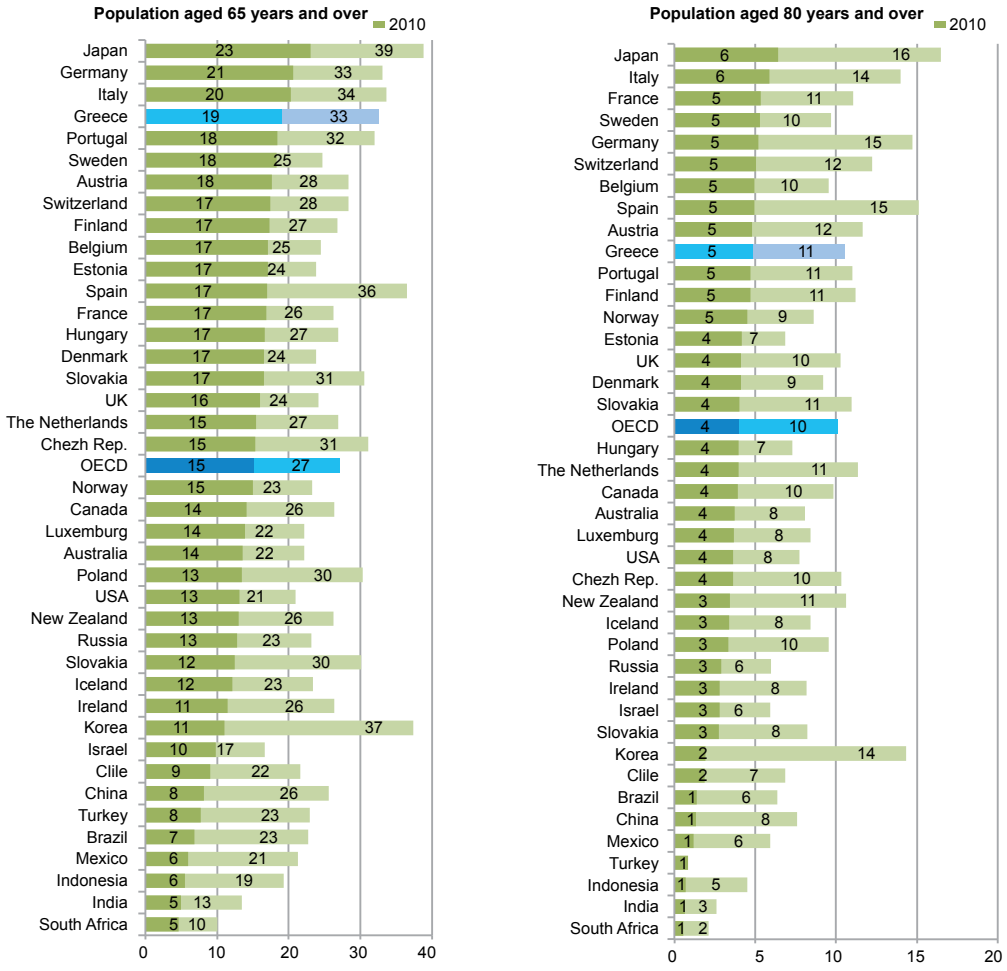
[1] The study was held by Mr. Frank Lichtenberg, professor of Economics in the university of Columbia, in the fields of independent research program that was financed by MSD Greece, and it was presented in the 9th National Conference on Management, Economics and Politics of Health which is organized by the National School of Public Health.

Figure 3: Projected shares of the population aged 65+ and 80+ in Greece, 2010-2050



Source: Eurostat, Population Projections, 2014, data processing IOBE

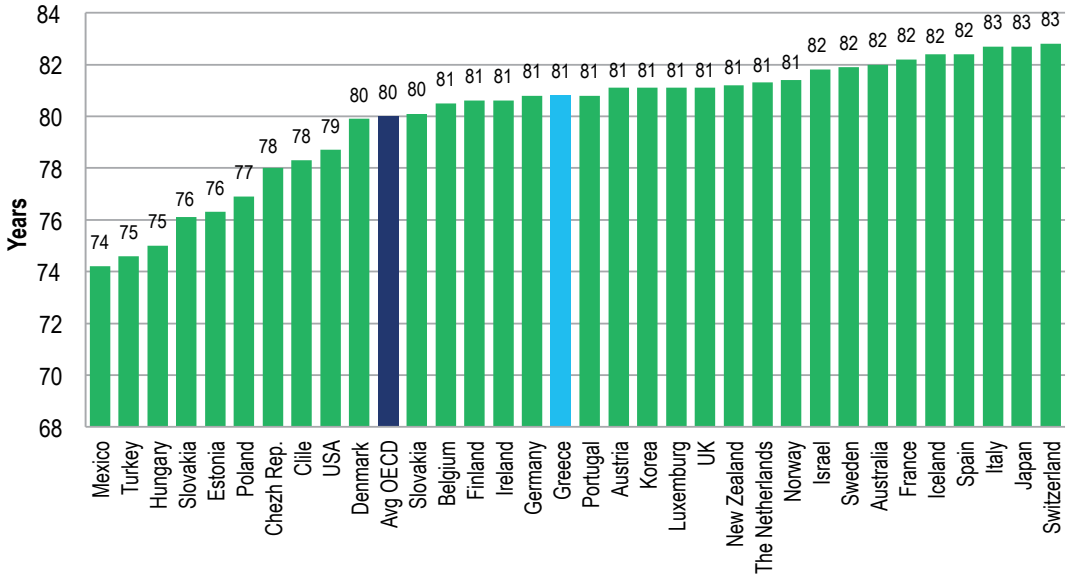
Figure 4: Projected shares of the population aged 65+ and 80+ in the OECD and other selected countries, 2010-2050



Source: OECD, Historical Population Data Projections Database, 2013

For 2011, according to OECD data, **life expectancy** in Greece was at 80.8 years, along with Germany and Portugal and slightly higher than the average life expectancy of OECD countries (80 years). The highest life expectancy was recorded in Switzerland and Japan, close to 83 years (Figure *5*).

Figure 5: Evolution of life expectancy at birth in Greece and in the OECD countries, 2011

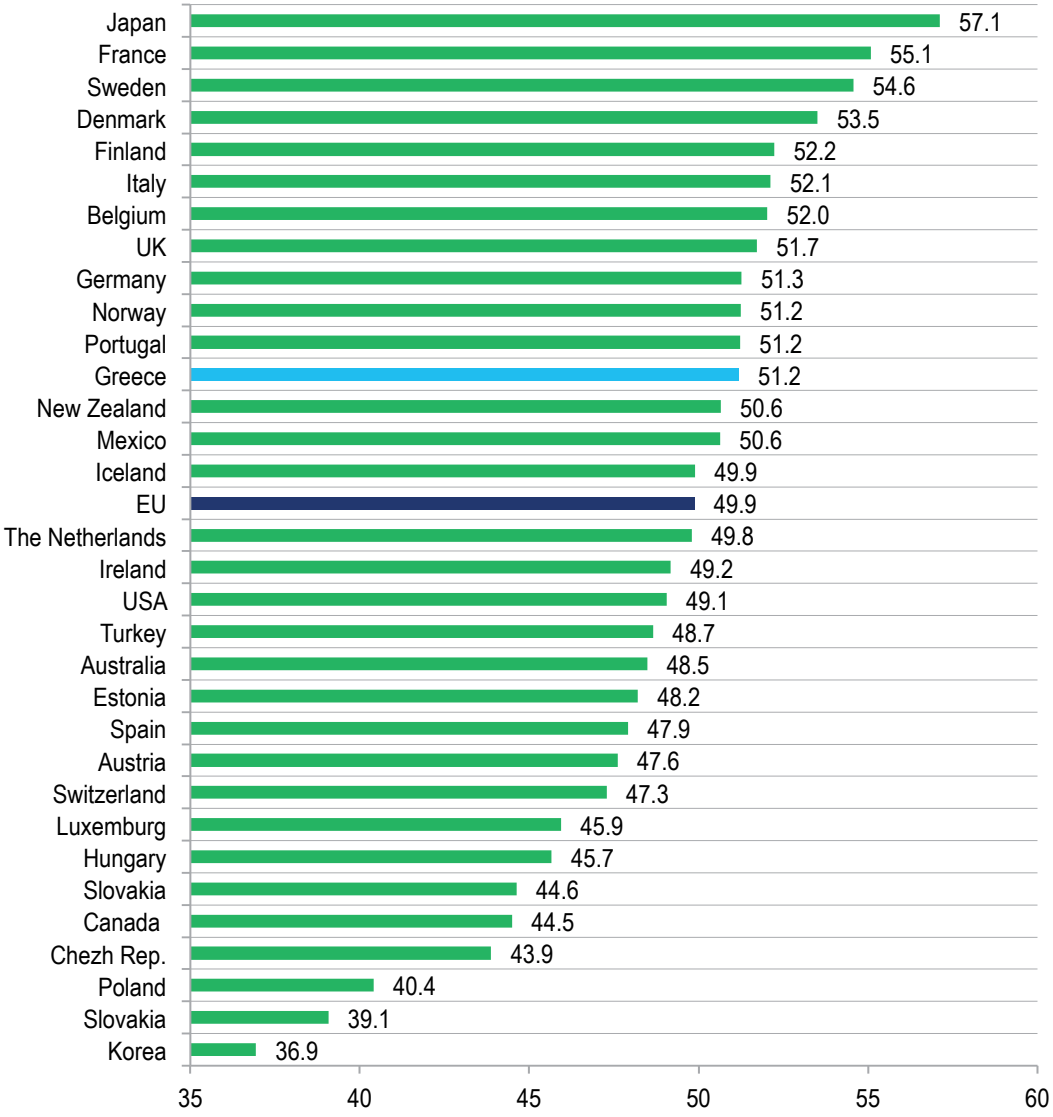


Source: OECD, Health Data 2013

Dependency population ratio shows the number of dependents (aged 0-14 and over the age of 65) to the total active population (aged 15-64). A high ratio means that the overall economy faces a greater burden in supporting the ageing population. This indicator is on an upward trend in advanced economies, reflecting rising life expectancy and declining birth rates.[2]

[2] Based on ELSTAT data, live births in Greece in 2012 accounted for 100.371 thousand, a reduction of 5.69% compared to 2011.

Figure 6: Dependency population ratio, 2011

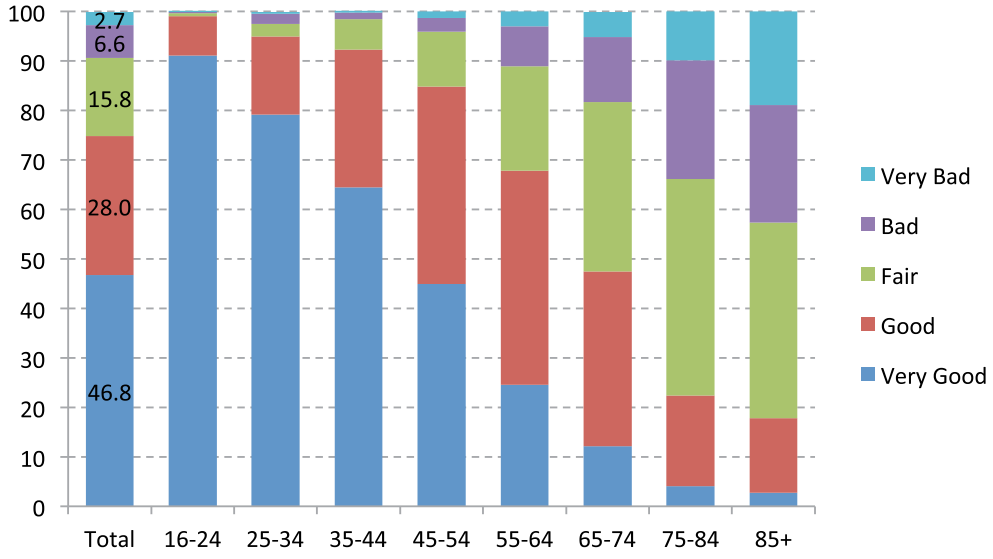


Source: OECD, Health Data 2013.

Greece's dependency ratio (51.2) is higher than the EU average (49.9) or the US (49.1). In comparison with the larger EU countries (France, Germany, UK), Greece has a lower dependency population ratio, while compared with other Mediterranean countries its higher (Spain-Turkey). **What should be stressed here is that nearly half of the population is dependent on the other half, and this proportion tends to deteriorate, signaling growing pressures on social security systems.**

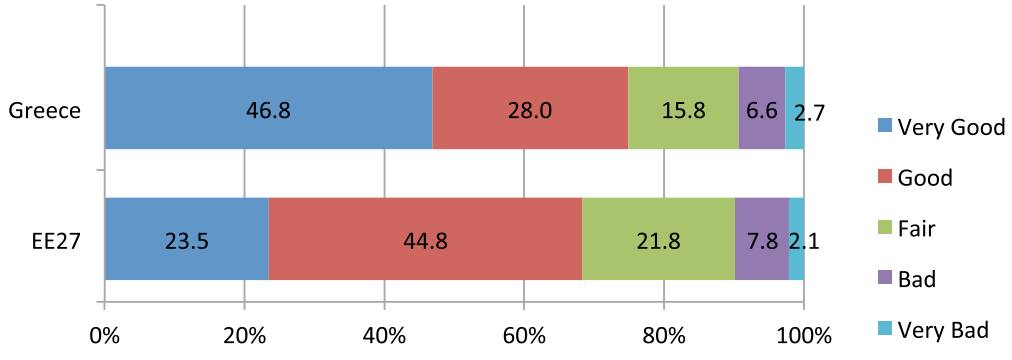
Greek citizens are overall satisfied with their health status, with 74,8% of the population reporting that their state is about good or very good health which is above the EU-27 average (68,3). Only 6,6% of the population has reported that their state is of bad health and 2,7% of very bad. It should be noted that an individual's health depends on specific parameters such as age, physical mobility, emotional state, lifestyle and more, but also relies significantly on the medical care and health services received.

Figure 7: Self-reported health status by age group in Greece, 2012 (%)



Source: Eurostat, Statistics on Income and Living Condition 2013.

Figure 8: Self-reported health status in Greece compared to EU-27, 2012 (%)

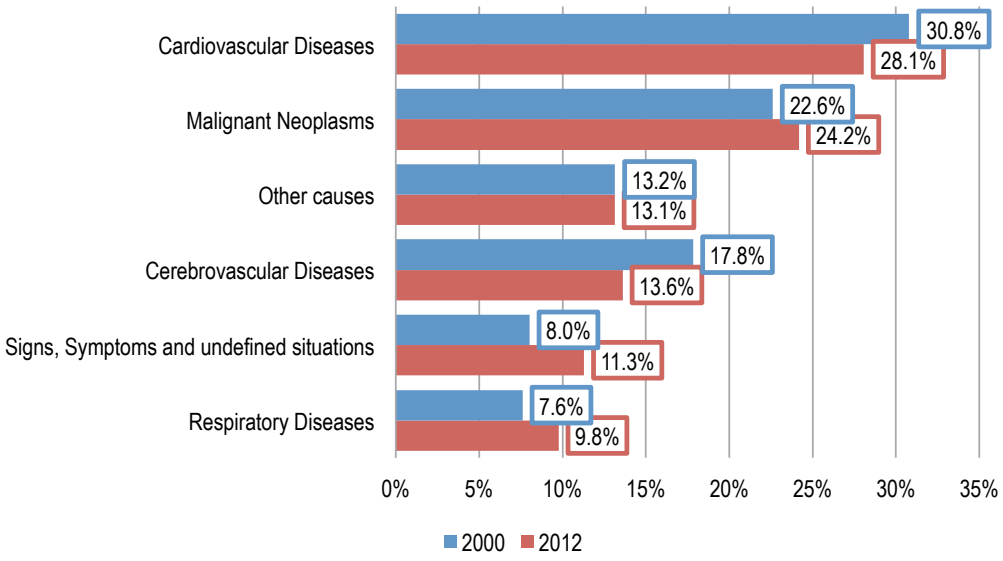


Source: Eurostat, Statistics on Income and Living Condition 2013.

Apart from the biological parameters, an individual's health status is also largely dependent on the prevalent economic or social factors. According to a study[3] published by the Lancet, economic crisis has affected the health status of the Greek population both directly and indirectly, as health expenditure for health services and social protection has decreased due to the fiscal adjustment program. In particular, health status has been affected directly due to constraints in welfare activities such as prevention and treatment programs (e.g. mosquito-spraying programs) or provision of medical supplies to vulnerable social groups (distribution of syringes and condoms), that have resulted in an increase in health effects such as new HIV infections, incidence of tuberculosis or re-emergence of malaria. At the same time, due to the significant increases in out-of-pocket payments required by patients while disposable income has been decreasing, health status has worsened because of inadequate nutrition, fewer visits to physicians and overall, lesser use of health care services.

Based on 2012 data, the major causes of death in Greece were cardiovascular diseases (28.1%) followed by malignant neoplasms (24, 2%), cerebrovascular diseases (13, 6%), signs, symptoms and undefined situations (11, 3%) and respiratory diseases by 9.8%. In comparison to 2000, there was an increase in malignant neoplasms and respiratory diseases and a decrease in the percentage of cardiovascular diseases (Figure 9).

Figure 9: Causes of deaths in Greece, 2012



Source: ELSTAT, data processing IOBE, 2014

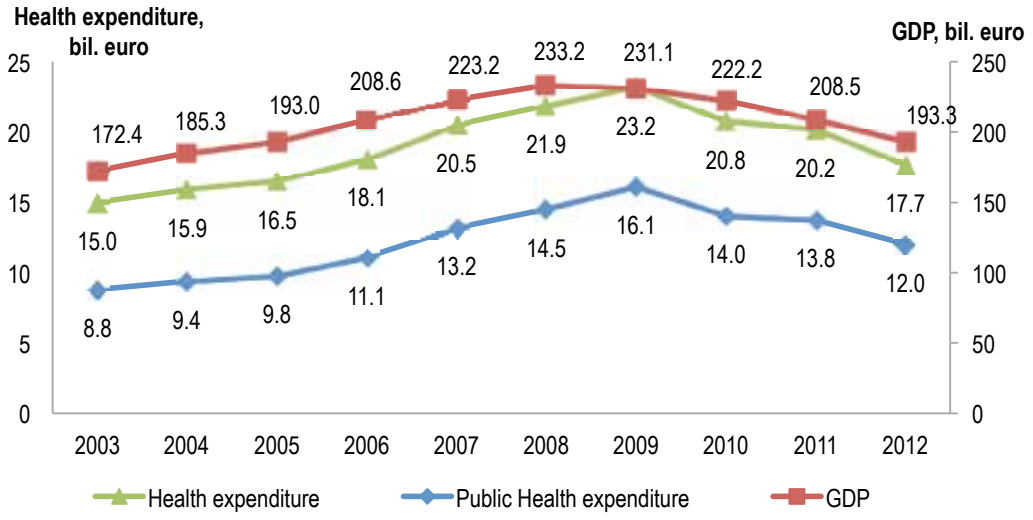
[3] Alexander Kentikelenis, Marina Karanikolos, Aaron Reeves, Martin McKee, David Stuckler. Greece's health crisis: from austerity to denialism. The Lancet, 2014; 383 (9918): 748

5 DEMAND SIDE: HEALTH AND PHARMACEUTICAL EXPENDITURE IN GREECE

In 2012, the Hellenic Statistical Authority (EL.STAT) in collaboration with the Center for Health Services Management and Evaluation (C.HE.S.M.E) of the Nursing Department of the University of Athens and Dr. Markus Schneider (BASYS, Germany) published for the first time statistics on National Health Expenditures (both public and private) based on the System of Health Accounts (SHA) of the Organization for Economic Cooperation and Development (OECD). The released data are preliminary estimates.

Health expenditure in Greece declined in accordance to the GDP contraction after 2009. In the period 2005-2009, GDP grew by 20% (+€38.1 billion), while total health expenditure increased by 41% (+€6.8 billion). During the initial years of the crisis, 2009-2012, GDP declined by 16.3%, current total health expenditure by 23.6% and the current public health expenditure by 25.3%.

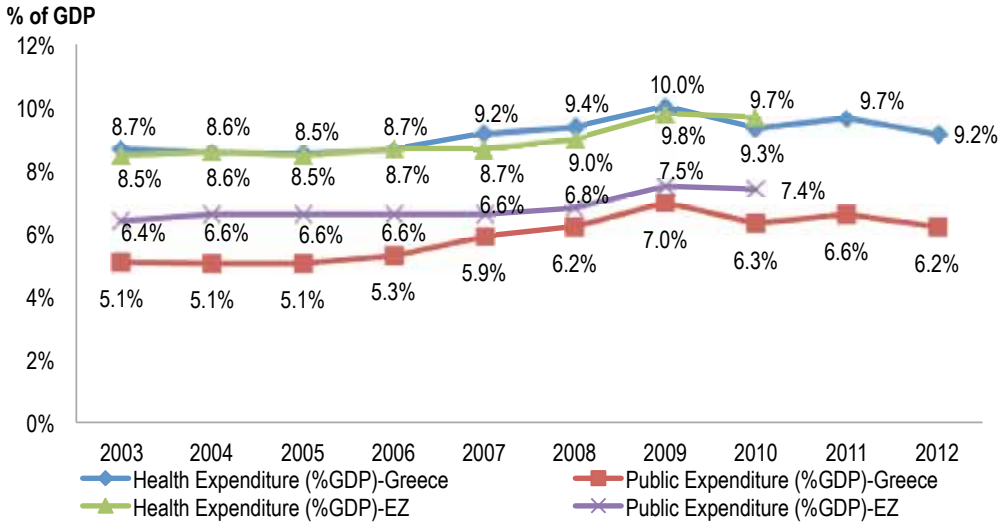
Figure 10: GDP, Health Expenditure, Public Health Expenditure (bil. euro)



Source: System of Health Accounts (SHA) 2014, EL.STAT. 2014

Similarly, total health expenditure and public health expenditure in Greece, as a percentage of GDP, showed an upward trend until 2009, reaching 10% and 7% of GDP respectively, while in 2012 both were reduced to 9.2% and 6.2% respectively. It should be noted here that during 2009-2012, GDP has been reduced by almost 16%. In comparison, with Eurozone, total health expenditure as % of GDP showed a similar trend to Greece, in contrast with public expenditure where higher rates were observed in Europe.

Figure 11: Health Expenditure & Public Health Expenditure as a% of GDP, Greece, Eurozone



Source: System of Health Accounts (SHA) 2014, EL.STAT. 2014

The pharmaceutical market is only a subset of the total health expenditure. However, the fiscal adjustment program has focused on the contraction of the pharmaceutical expenditure and as such its analysis is of significance. For a more complete understanding of the individual costs of pharmaceutical spending, it is necessary to clarify certain components, as presented below.

Data on "pharmaceutical expenditure" are often confused with data on "total pharmaceutical sales" released by the National Organization for Medicines (EOF).

EOF records sales of medicinal products from pharmaceutical companies to hospitals, wholesalers and pharmacies, on a monthly basis. On the other hand, according to the OECD's International Classification of Health Accounts, with which Greek statistics have been harmonized, pharmaceutical spending is the total expenditure for medicinal products prescribed for outpatient care (non-hospital treatment). Therefore, **pharmaceutical expenditure is only a fraction of total pharmaceutical sales.**

More precisely, **pharmaceutical sales** are composed of:

(a) Public pharmaceutical expenditure which is incurred by social insurance funds (part of this expenditure is reimbursed to public funds, as it is inclusive of VAT 6.5% and of rebates/clawbacks from pharmacists and pharmaceutical companies);

(b) Hospital sales from pharmaceutical products (invoiced at hospital price = wholesaler price minus 13% - rebates);

(c) Sales of pharmaceutical products that are re-exported (parallel exports);

(d) Sales of pharmaceutical products to Greek citizens or tourists at their own cost;

(e) Sales of pharmaceutical products to Greek citizens or foreigners which are reimbursed by private insurance companies;

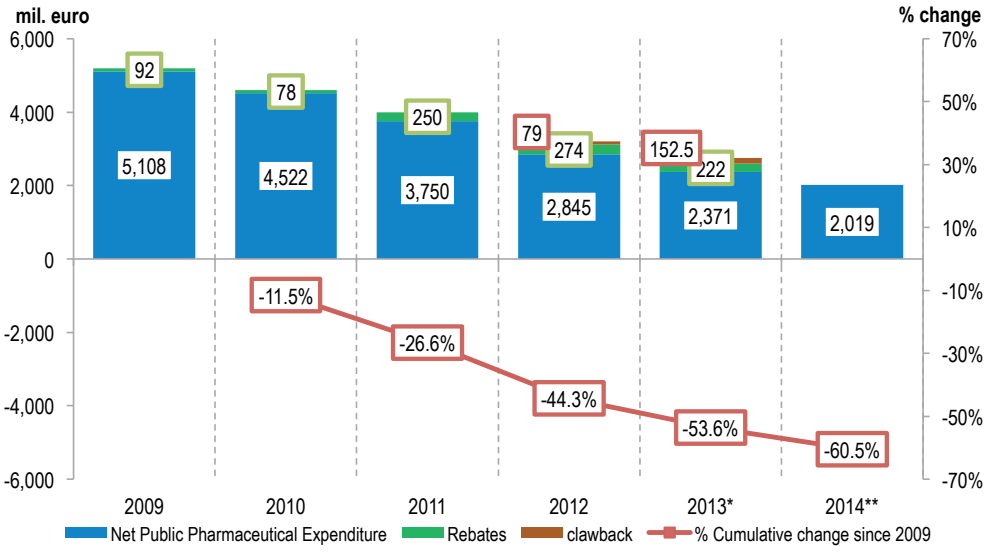
(f) Patient's copayment, which does not put burden on social security funds.

Regarding point (b), it should be noted that pharmaceutical sales to hospitals are included in hospital expenditure, so they should be excluded from the analysis to avoid double-counting.

Regarding points **(c), (d) and (e),** it should be noted that these sales are not part of public pharmaceutical expenditure; on the contrary, they generate revenue to the government, in the form of VAT, income tax, payroll tax, social security contributions, etc.

Net public pharmaceutical expenditure is the final amount Social Security Funds have to spend to cover population needs, after deduction of discounts, rebates and clawback. From 2009 and onwards, pharmaceutical expenditure followed a downward trend, resulting in an overall decrease of 53.6% until 2013, reaching the target of €2.37 billion. This decline was the result of the fiscal adjustment program which included changes in the pricing system, increases in returns - rebates - to social security funds, reduction of regulated margins in the wholesale and retail distribution of drugs, reduction in VAT on medicines and more.

Figure 12: Public Pharmaceutical Expenditure 2009-2014 (mil. euro)



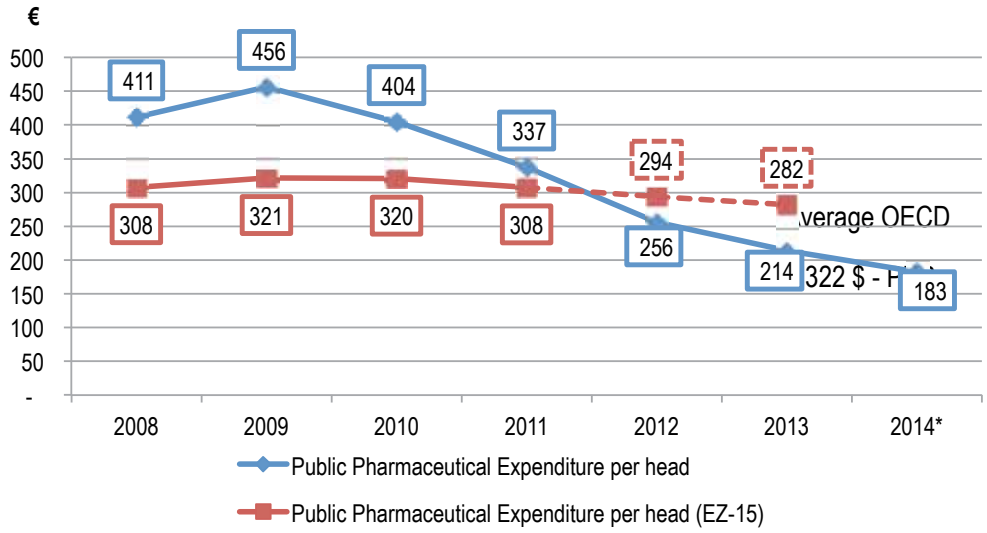
Source: System of Health Accounts (SHA) 2014, EOPYY 2012, State Budget 2014: Executive Summary, data processing IOBE
*Midterm Fiscal Strategy forecasts, ** forecasts
Note: Data for refunds / rebates (rebates) from pharmaceutical companies are only available for the years 2009-2013

The budget for net pharmaceutical expenditure for 2014 was estimated at about € 2,019 billion, while the estimated cumulative reduction from 2009 will reach -60.5%. **Net pharmaceutical expenditure in 2014 would represent 1.1% of the –already reduced-GDP, compared with 2.2% in 2009.**

It should be noted, however, that in accordance with the new Midterm Fiscal Strategy Framework 2015-2018, the roof of pharmaceutical expenditure in 2014 is €1,944 billion, while for 2015 the amount remaining at the same level (€1,945 billion).

Similar downward trend was observed for **net public pharmaceutical expenditure per capita,** namely from €456 per capita in 2009, to €214 per capita in 2013, whilst it is expected to reach €183 per capita in 2014. In Euro zone countries (15), for which data were available up to 2011, the average per capita net public pharmaceutical expenditure was €320 in 2009-2010 facing a small reduction to €308 in 2011. With the assumption that the pharmaceutical expenditure in these countries will decline at the same rate as in 2011 (-3.8%)[4] for the period 2012-2013, the per capita pharmaceutical expenditure is expected to be at €294 and €282 respectively in 2012 and in 2013.

Figure 13: Per capita Net Public Pharmaceutical expenditure in Greece and EZ-15



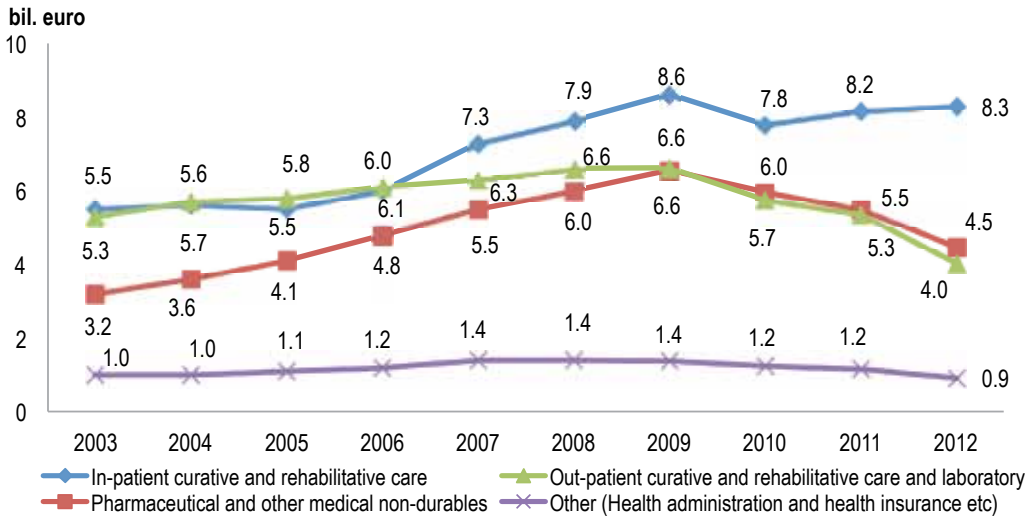
Source: System of Health Accounts (SHA) 2014, EOPYY 2012, State Budget 2014: Executive Summary, OECD Health Data 2013, Eurostat, data processing IOBE

[4] With the estimate for the total cost of the 15-nation eurozone has appreciated the real loss for the Greek pharmaceutical expenditure.

Health Expenditure & Pharmaceutical Expenditure

In this section health expenditure are decomposed to pharmaceutical expenditure, inpatient, outpatient and research expenditures and other costs (management, prevention, etc.). Inpatient expenditure amounted to €8.6 billion in 2009, the highest among the different components of health expenditure, showing a reduction of €334 million by 2012, while outpatient costs and laboratory expenses decreased by €2.6 billion amounting to a total of €4 billion in 2012. At the same time, pharmaceutical expenditure and spending on medical supplies fell by €2.1 billion and amounted to €4.5 billion in 2012. Between 2005 and 2009, the difference between inpatient and pharmaceutical expenditure increased from €1.4 to €2 billion, partly due to the increasing number of medical salaries and due to increasing operating costs in public hospitals.

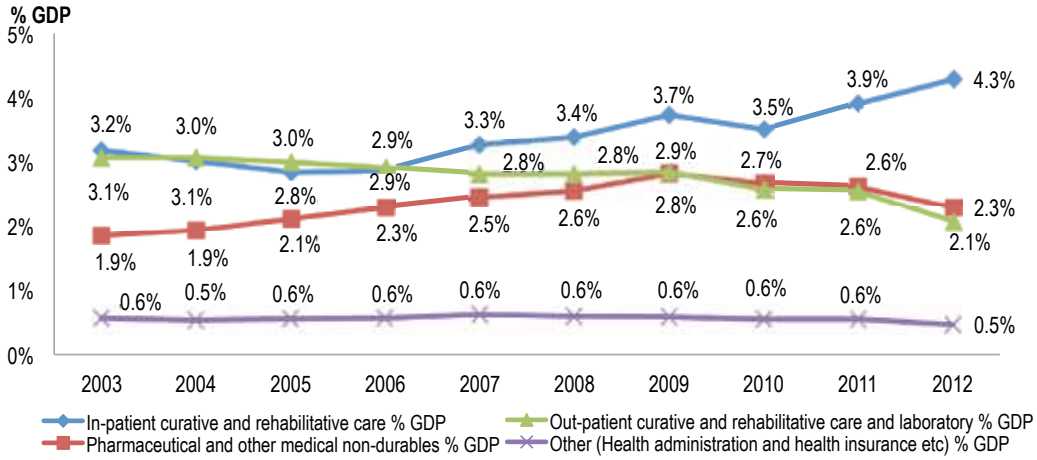
Figure 14: Total Health Expenditure by Financing Agency (bil. euro)



Source: System of Health Accounts (SHA) 2014, EL.STAT. 2014

The figure below depicts total health expenditure per category expressed as a percentage of GDP. However, it should be handled with care since changes in GDP during the period in question 2008-2012 should be taken into account. Inpatient expenditure amounted to 4.3% of GDP in 2012, clearly higher than in the previous years, while pharmaceutical expenditure was reduced to 2.3% in 2012. Similar trend was observed for outpatient expenditure, where the declining rate reached 2.1% of GDP in 2012. Finally, for other services expenditure, the proportion of GDP was kept relatively stable at 0.5% -0.6%.

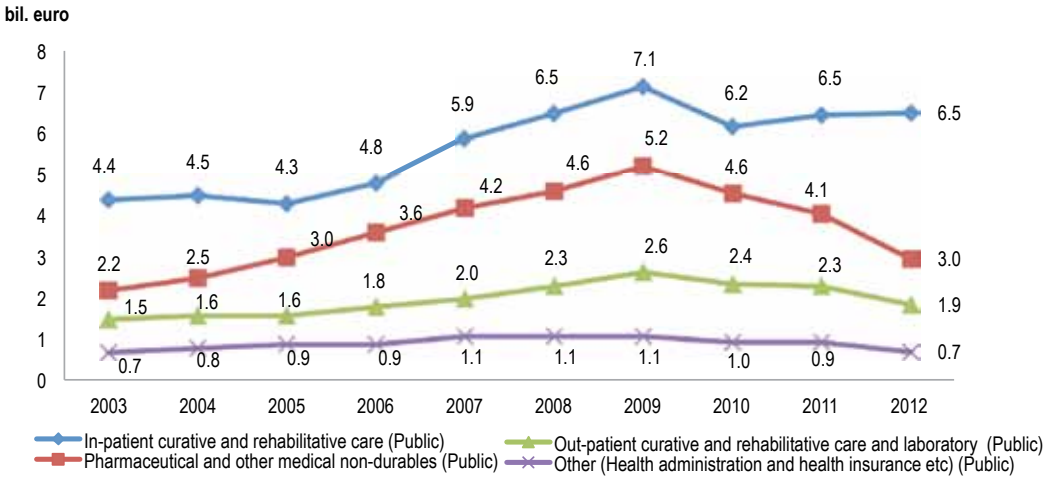
Figure 15: Total Health Expenditure by Financing Agency (% GDP)



Source: System of Health Accounts (SHA) 2014, EL.STAT. 2014

In Figure 16, the rapid growth in inpatient curative and rehabilitative care expenditure is reflected, that is, from €4.3 to €7.1 billion in just four years 2005-2009, with the highest increase been reported between 2008-2009, where public hospital expenditure increased by more than €500 million. In 2010, a sharp decline was observed from €7.1 billion to €6.2 billion, before stabilizing at €6.5 billion until 2012. Furthermore, during the period 2009-2012, public pharmaceutical expenditure decreased by €2.2 billion, while outpatient expenditure was reduced by €700 million. Other expenditure such as administration costs showed a relatively small decline.

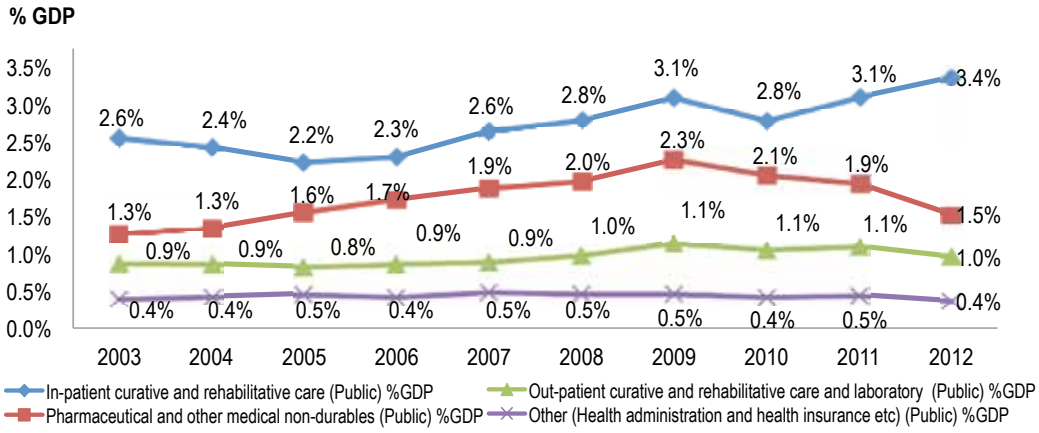
Figure 16: Public Health Expenditure by Financing Agency (bil. euro)



Source: System of Health Accounts (SHA) 2014, EL.STAT. 2014

In the figure below, expenditure is presented as a percentage of GDP. A steady growth of public pharmaceutical expenditure by 0.2% of GDP per year during the period 2005-2009 was observed, followed by a decrease to 1.5% of GDP in 2012, compared to 2.3% in 2009. Public hospital expenditure increased its share to 3.4% of GDP in 2012, compared to 3.1% in 2009, the period 2011-2012 was stable but GDP drop significantly.

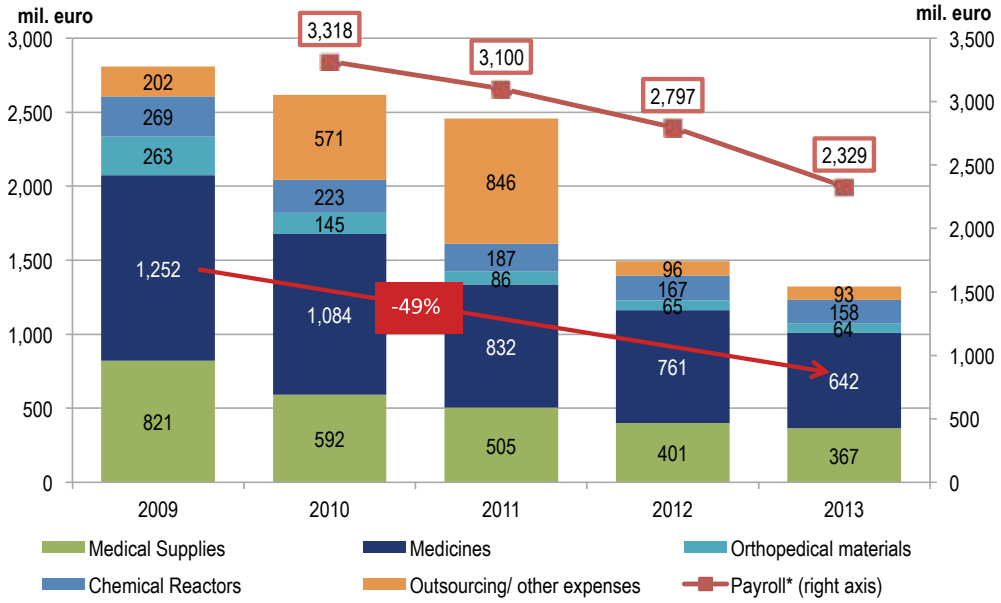
Figure 17: Public Health Expenditure by Financing Agency (% GDP)



Source: System of Health Accounts (SHA) 2014, EL.STAT. 2014

The drop in public health expenditure can also be reflected in the fluctuation of hospital expenditure. All cost centers have reported a significant decline during the period 2009-2013. However, it is noteworthy to mention that hospital pharmaceutical expenditure was reduced by 49%, while the drop in medical supplies expenses was even higher reaching 55.3%. Additionally, at the same period, based on available data, payroll in hospitals was contracted by 29.8%.

Figure 18: Breakdown of NHS hospitals' expenditures, 2010-2013 (mil. euro)



* Payroll includes all categories of labor earnings in Hospitals, Welfare institutions and Government bodies

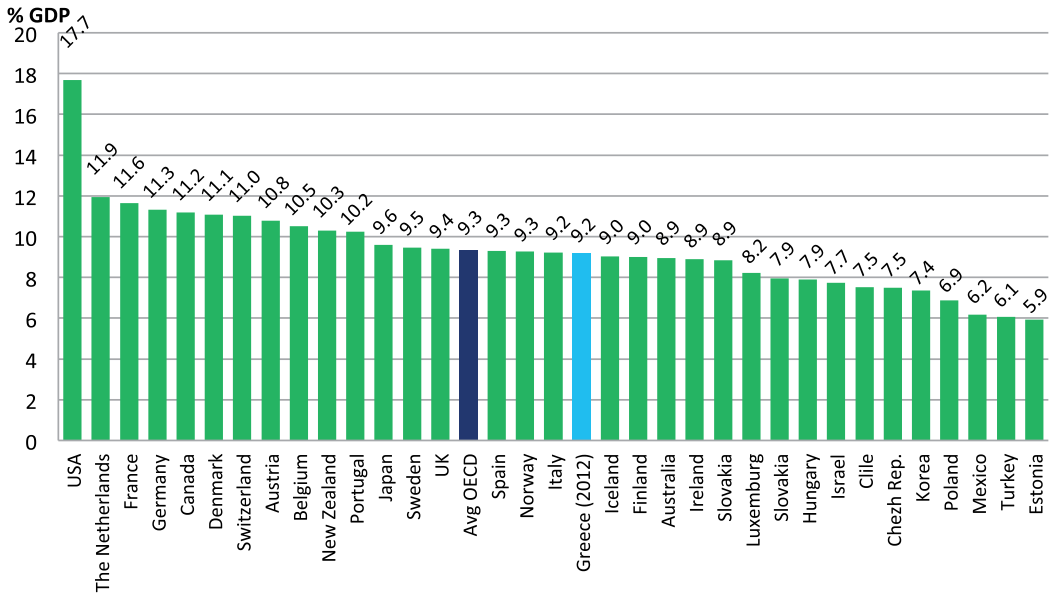
Source: ESYNET, 2013, Budget Execution Bulletins - Ministry of Finance, Mid-term Fiscal Strategy Framework 2015-2018, data processing IOBE

Comparison With Other Countries

An assessment between Greece and other European countries can allow a more objective account of the impact of the tight fiscal policy followed.

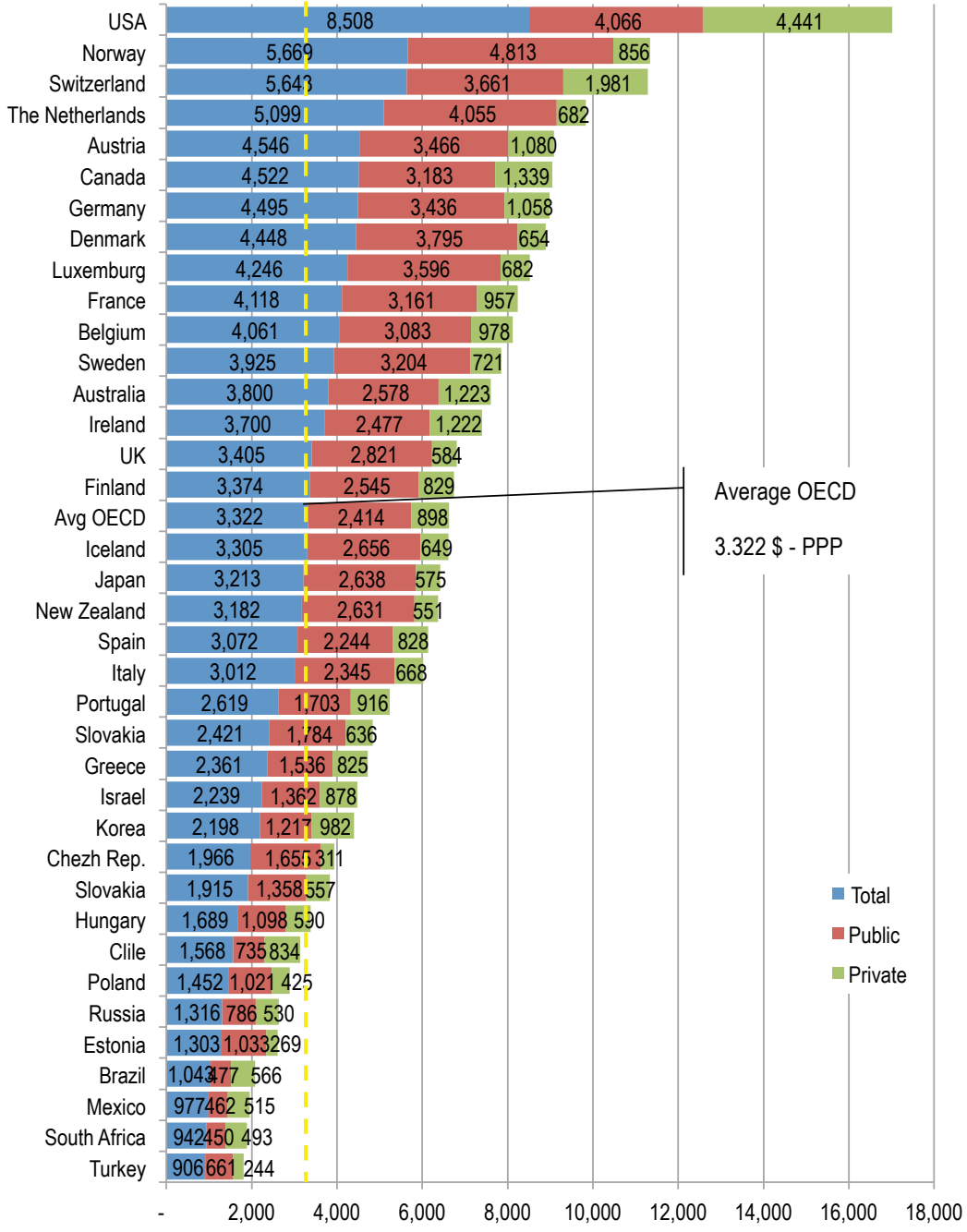
Health expenditure as a percentage of GDP in Greece in 2012 accounted for 9.2%, with the average in OECD countries at 9.3% in 2011, close to the European average (Figure 19). At the same time, however, the per capita total health expenditure (Figure *20*), as expressed in $ PPP, in Greece was 29% lower than the average of OECD countries, while per capita public health expenditure was 36% lower respectively. **In Greece, public health expenditure corresponds to two thirds of total health expenditure**. Additionally, based on the per capita health expenditure, Greece is ranked 17th in total 40 countries.

Figure 19: Health Expenditure as a percentage of GDP (OECD countries), 2011



Source: OECD Health Data 2013, SHA, 2012

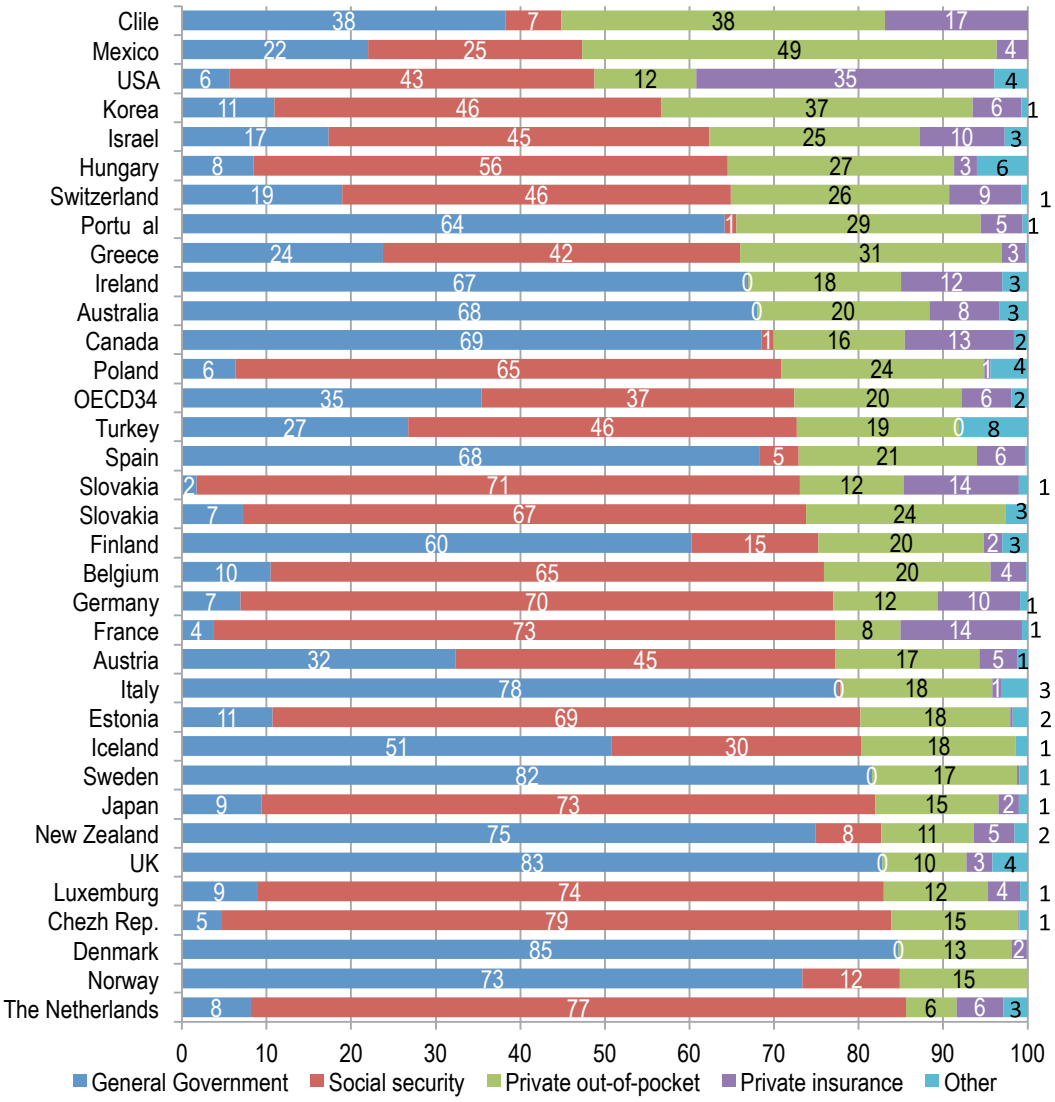
Figure 20: Health Expenditure per capita, (OECD countries) $ PPP (Purchasing Power Parity) 2011



Source: OECD, Health at a Glance 2013

The following figure reports on the breakdown of health expenditure by type of financing in each country. In Greece, 24% of expenditure is financed by the government, while adding social security funds, increases the proportion of state financing to approximately 66%, while the OECD average, approaches 72%. Private funding accounts for 31%, i.e. approximately 1/3, proportion much higher than the OECD average (20%).

Figure 21: Health Expenditure by type of financing (2011)



Source: OECD, Health at a Glance 2013

According to the classification system ESSPROS developed by Eurostat, expenditure, which is mainly incurred by social security funds, is broken down into the following categories: Sickness, Disability, Old age, Survivors, Family/Children, Unemployment, Housing and Social exclusion. Public pharmaceutical expenditure is accounted for on sickness expenditure. In Greece, the recording of public spending in these categories is kept by EL.STAT.

Payments on **pensions** absorb the majority of funds on social protection. In specific, between 2005 and 2011, spending on pension benefits increased in current prices by €4.2 billion and amounted to €26.5 billion, representing an annual growth rate of 2.9%. In 2011, however, a slowdown in the growth of pension expenditure was recorded, as a result of cuts made this year, which were offset by the large number of new pensioners. The faster growth of total expenditure on social protection compared to pension costs led to the lower participation of the latter from 47.8% in 2005 to 44% in 2011.

The second largest category of welfare expenditure refers to **sickness benefits**, which increased by €2.6 billion between 2005 and 2011 and amounted to €15.5 billion in 2011, a change representing an average annual growth rate of 3.1%. However, it must be noted that during 2010-2011 a reduction of 14.9% was recorded. Overall, expenditure on pensions and sickness cover 69.9% of spending on social protection, compared to 75.6% in 2005. With respect to the other spending categories, a relatively stable share of the overall costs was sustained throughout the same period, with the exception of the costs of **widowhood** which more than doubled their participation and **unemployment benefits**.

Table 3 below shows the respective breakdown of welfare expenditure in EU27 for the period 2005-2011. Similarly with Greece, pensions and sickness benefits cumulatively occupy 70% of total expenditure in Europe. However, when taken into account individually it can be observed that pension expenditure in the EU27 accounted for 40% of total costs, slightly lower than in Greece (44%), while sickness benefits occupied 29.4% compared to 25.9%. Differences are also noted in the remaining categories, with spending on disability and family allowances respectively holding a higher share Europe (7.6% vs. to 4.9 and 8% vs. 6.2% respectively). In Greece, almost all expenditure fell in 2011, except from unemployment benefits. In contrast, in Europe all categories recorded growth during the same year, but housing benefits.

Table 2: Welfare Expenditure based on ESSPROS system - Greece (mil. euro)

Categories	2005	2006	2007	2008	2009	2010	2011	CAGR* 05/11	%10/11
Sickness/ Health care	12,971	14,408	15,150	17,190	18,426	18,271	15,557	3.1%	-14.9%
%	***27.8%***	***28.7%***	***28.1%***	***29.0%***	***29.1%***	***29.2%***	***25.9%***		
Disability	2,291	2,379	2,645	2,774	2,998	2,932	2,928	4.2%	-0.1%
%	***4.9%***	***4.7%***	***4.9%***	***4.7%***	***4.7%***	***4.7%***	***4.9%***		
Old age	22,291	21,741	23,474	25,121	26,156	26,473	26,474	2.9%	0.0%
%	***47.8%***	***43.2%***	***43.6%***	***42.4%***	***41.4%***	***42.3%***	***44.0%***		
Widowhood	1,604	4,075	4,513	4,932	5,199	4,848	4,892	20.4%	0.9%
%	***3.4%***	***8.1%***	***8.4%***	***8.3%***	***8.2%***	***7.8%***	***8.1%***		
Family/Children	2,997	3,095	3,324	3,710	4,240	3,990	3,726	3.7%	-6.6%
%	***6.4%***	***6.2%***	***6.2%***	***6.3%***	***6.7%***	***6.4%***	***6.2%***		
Unemployment	2,399	2,315	2,423	2,992	3,725	3,806	4,472	10.9%	17.5%
%	***5.1%***	***4.6%***	***4.5%***	***5.1%***	***5.9%***	***6.1%***	***7.4%***		
Housing	1,035	1,098	1,088	1,202	1,155	854	752	-5.2%	-11.9%
%	***2.2%***	***2.2%***	***2.0%***	***2.0%***	***1.8%***	***1.4%***	***1.2%***		
Social exclusion	1,083	1,174	1,255	1,283	1,351	1,376	1,363	3.9%	-0.9%
%	***2.3%***	***2.3%***	***2.3%***	***2.2%***	***2.1%***	***2.2%***	***2.3%***		
Total expenditure	46,671	50,285	53,872	59,204	63,250	62,550	60,164	4.3%	-3.8%

Source: EL.STAT. 2012, *CAGR: Compound Average Growth Rate, data processing IOBE

Table 3: Welfare Expenditure based on ESSPROS system - EU27 (mil. euro)

Categories	2005	2006	2007	2008	2009	2010	2011	CAGR 05/11	%10/11
Sickness/ Health care	833,149	877,106	909,577	945,438	987,226	1,017,441	1,036,160	3.7%	1.8%
%	***28.9%***	***29.2%***	***29.3%***	***29.5%***	***29.5%***	***29.4%***	***29.4%***		***0.0***
Disability	230,601	243,772	254,591	261,136	261,643	264,681	269,487	2.6%	1.8%
%	***8.0%***	***8.1%***	***8.2%***	***8.1%***	***7.8%***	***7.6%***	***7.6%***		***0.0***
Old age	1,122,981	1,169,891	1,233,318	1,276,905	1,306,227	1,364,276	1,406,385	3.8%	3.1%
%	***39.0%***	***38.9%***	***39.7%***	***39.8%***	***39.0%***	***39.4%***	***39.9%***		***0.5***
Widowhood	192,118	199,634	192,104	195,548	199,027	203,217	206,184	1.2%	1.5%
%	***6.7%***	***6.6%***	***6.2%***	***6.1%***	***5.9%***	***5.9%***	***5.8%***		***0.0***
Family/Children	229,543	238,424	252,722	258,921	270,621	278,277	280,959	3.4%	1.0%
%	***8.0%***	***7.9%***	***8.1%***	***8.1%***	***8.1%***	***8.0%***	***8.0%***		***-0.1***
Unemployment	172,215	166,976	155,528	160,250	204,462	207,525	197,645	2.3%	-4.8%
%	***6.0%***	***5.6%***	***5.0%***	***5.0%***	***6.1%***	***6.0%***	***5.6%***		***-0.4***
Housing	65,033	69,231	65,789	65,770	68,134	71,635	73,359	2.0%	2.4%
%	***2.3%***	***2.3%***	***2.1%***	***2.0%***	***2.0%***	***2.1%***	***2.1%***		***0.0***
Social exclusion	35,008	41,164	45,197	45,145	50,401	53,265	55,406	8.0%	4.0%
%	***1.2%***	***1.4%***	***1.5%***	***1.4%***	***1.5%***	***1.5%***	***1.6%***		***0.03***
Total expenditure	2,880,647	3,006,198	3,108,828	3,209,113	3,347,740	3,460,316	3,525,585	3.4%	1.9%

Source: Eurostat 2012, data processing IOBE

Health Expenditure And Drug Expenditure of Households

Household Budget Survey, which is conducted annually by ELSTAT, provides information for the composition of total household spending, according to various socioeconomic characteristics. Based on the respective data, health expenditure accounted for 6.4% of total household expenditure as estimated through market transactions in 2012. Out of this 6.4% for health expenditure, pharmaceutical expenditure accounted for 27.4% compared to 19.3% in 2008.

Figure 22: Breakdown of Household Spending for 2012 (%)

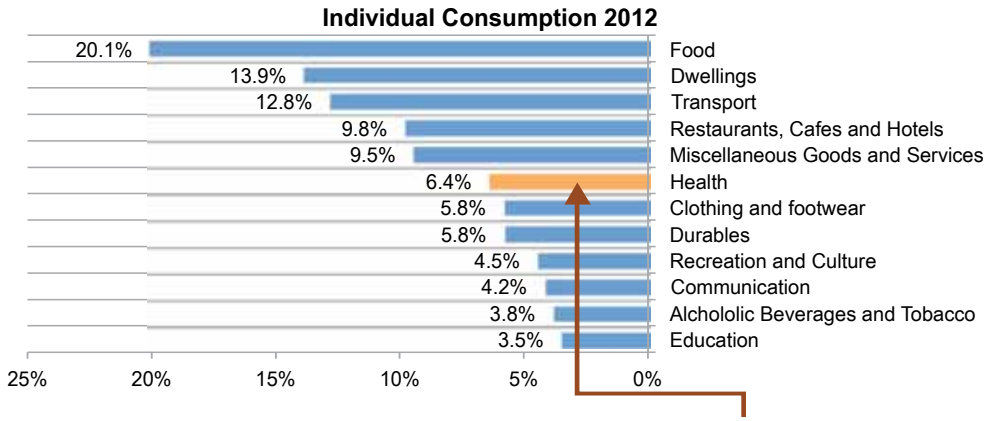
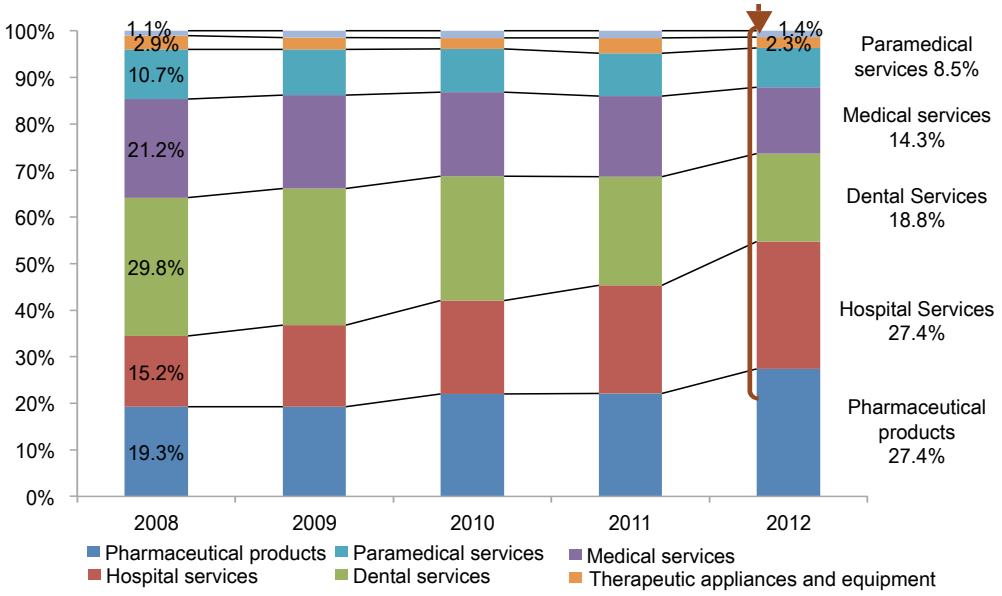


Figure 23: Breakdown of Household Expenditure on Health for 2008- 2012 (%)



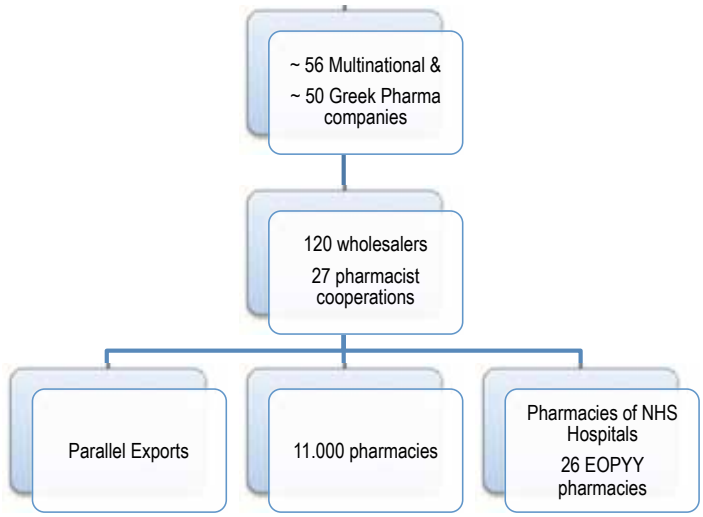
Source: (Figure 22/23), EL.STAT. Data processing IOBE

Expenditure for hospital services was estimated at 27.4% for 2012 compared to 15.2% in 2008, while the share of dental services was decreased to 18.8% from 29.8% in 2008. **Finally, medical services accounted for 14.3% of total health expenditure of households, compared to 21.2% five years ago.**

6 THE SUPPLY SIDE: PHARMACEUTICAL INDUSTRY AND ECONOMY

Production and distribution of pharmaceuticals is one of the most dynamic sectors of the Greek economy. In 2013, according to the Labor Force Survey conducted by ELSTAT, approximately 13.6 thousands workers were employed in the manufacturing of medicinal products, making the pharmaceutical industry a vital factor of growth in Greece.

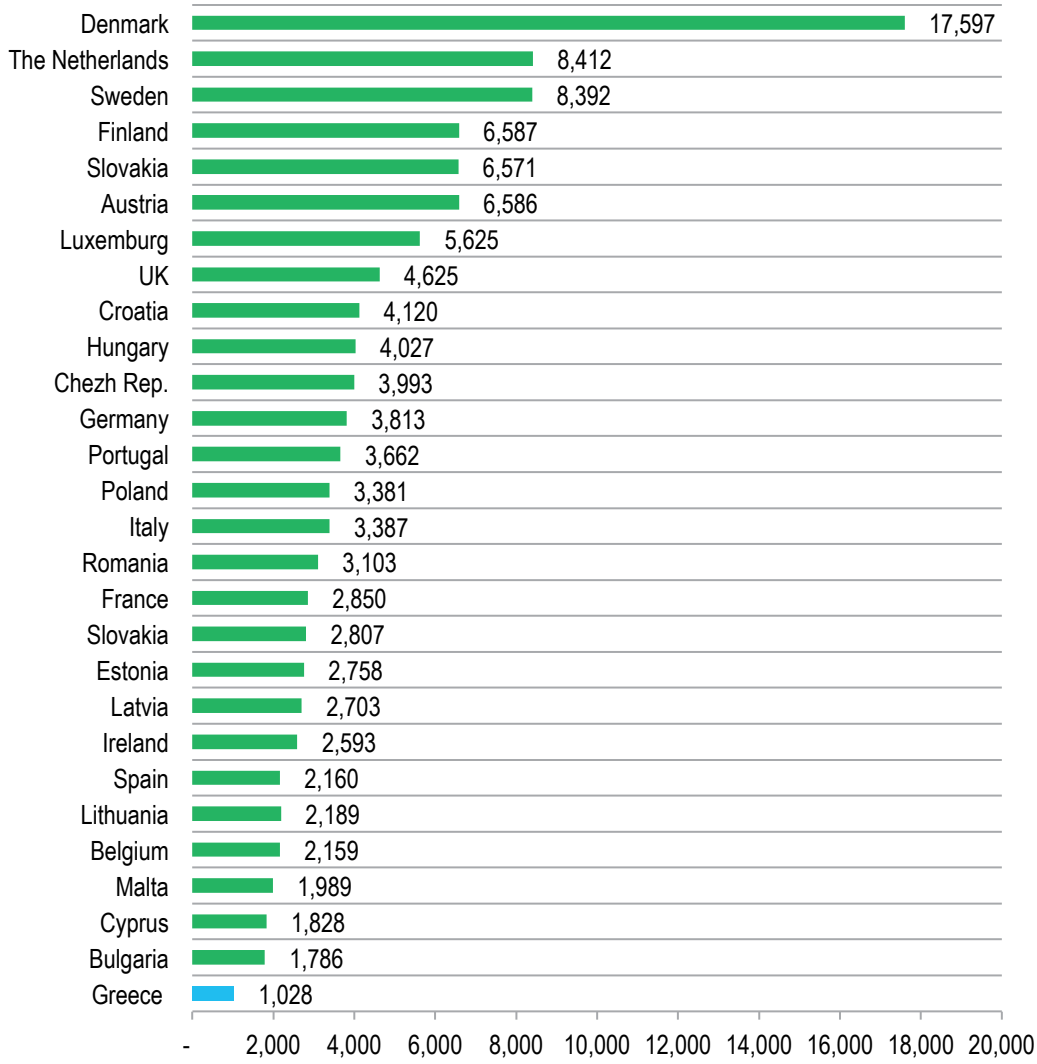
The supply of pharmaceutical products in Greece is comprised of pharmaceutical companies (both manufacturers and importers) and supply chain companies (both storage and distribution). In particular, all pharmaceuticals are distributed through wholesalers to pharmacies, with the exception of those products which are directly sold to hospitals. However, direct sales to pharmacies are permitted, as long as pharmacies accept the respective payment policies of the companies. In some occasions, doctors or pharmaceutical companies are allowed to supply patients directly upon approval by the Social Insurance Fund.



Source: ELSTAT, MOH, GCP.

The wholesale segment of the market is featured by private wholesalers and pharmacist cooperatives. Based on data from the PanHellenic Association of Pharmaceutical Wholesalers, 120 wholesalers and 27 pharmacist cooperatives operated in the domestic market in 2012. The population density of pharmacies in Greece is the highest among EU Member States, with a ratio of **one (1) pharmacy per 1,000 inhabitants,** compared to the EU-27 average of one (1) pharmacy per 3,200 inhabitants.

Figure 24: Pharmacy density in EU27 (population per pharmacy), 2012



Source: German Pharmacies, Figures Data Facts 2012.

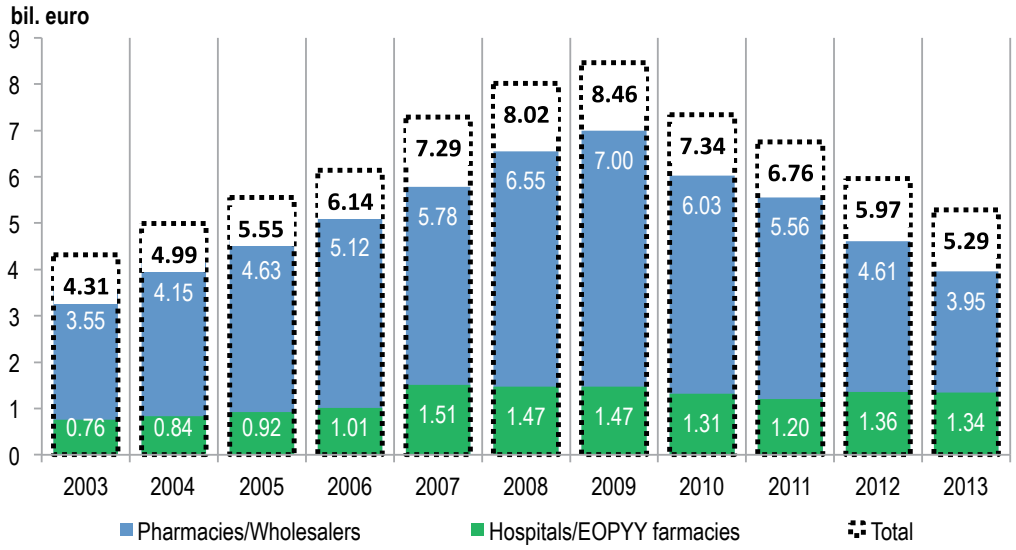
EOPYY Pharmacies

Based on the ministerial decree published in Government Gazette 64/B΄/16-01-2014, the list of high-cost, serious diseases pharmaceutical products that fall under the provisions of L.3816/2010 was split into two distinct lists. The first list relates to pharmaceutical products that are only available for hospital use (1A), while the second list includes those pharmaceutical products, which their use begins in the hospital and can be continued externally (1B). These products are currently provided exclusively by EOPYY pharmacies or public hospital pharmacies. EOPYY initially operated five pharmacies in Attica and one in Thessaloniki. Currently, 26 EOPYY pharmacies are in operation. In areas where EOPYY pharmacies do not exist, the insured can obtain the respective medicines from EOPYY's local health units, after placing an order. Products that are exclusively available for hospital use are sold from EOPYY at hospital price, reduced by 6.5%, while those in the second list are subject to the prices as regulated by the Ministry of Health.

Sales[5]

Total pharmaceutical sales amounted to €5.29 billion in 2013, showing an overall contraction of 11.3% compared to 2012. Approximately, 75% of total sales were supplied to wholesalers and private pharmacies compared to 82% on average during the period 2003-2012[6]. On the contrary, sales to EOPYY pharmacies and hospitals have shown an upward trend during the last year, reaching approximately 25% of sales compared to an average of 18% during the previous years. It should be noted here that during the period 2009-2013, in the context of fiscal consolidation, continuous price reductions and measures aimed at controlling public pharmaceutical expenditure have led to a sharp decline of approximately 37.5% in pharmaceutical sales.

Figure 25: Pharmaceutical Sales in Greece, 2003-2012 (bil. euro)



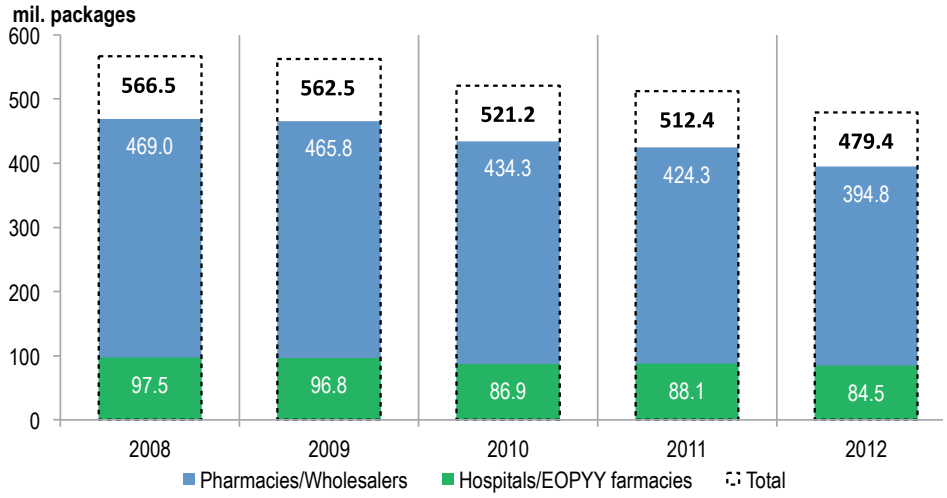
Source: EOF, 2012; EOF's announcement 2014.

Isolating the pricing effect over sales, a similar downward trend is shown when analyzing the number of packages sold. In particular, there is an overall decline in the number of packages sold of 6.5% in 2012, as shown in the figure below.

[5] Total pharmaceutical sales recorded monthly by the National Organization of Medicines (EOF) and include pharmaceutical sales by pharmaceutical companies to both hospitals (in hospital prices) and Wholesalers / Pharmacies (at retail prices). Sales also recorded in terms of number of packages.

[6] Parallel exports in 2012 comprised 9% of the value of non-hospital sales and are included here.

Figure 26: Pharmaceutical Sales in Greece, 2008-2012, number of packages

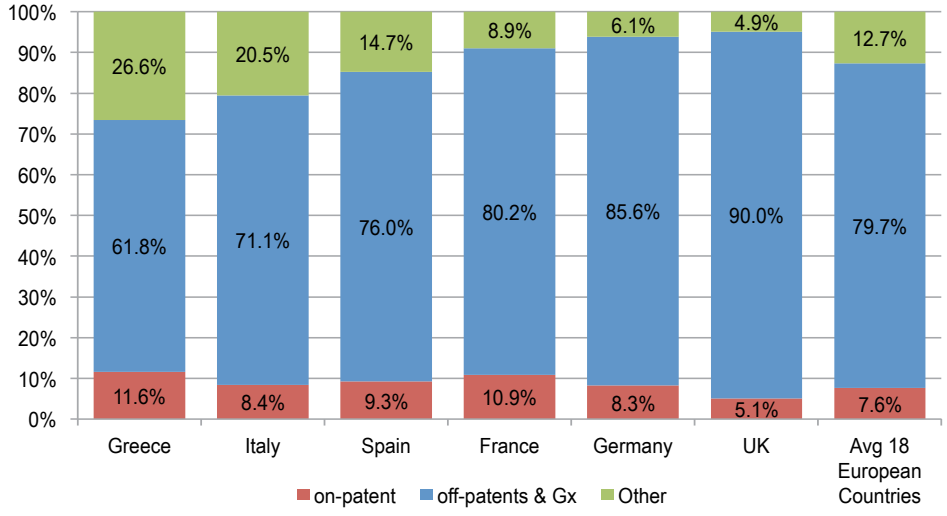


Source: EOF 2012

Pharmaceutical products can be classified according to their patent protection status. Off-patent products and generics (Gx) belong to the non-patent protected group.

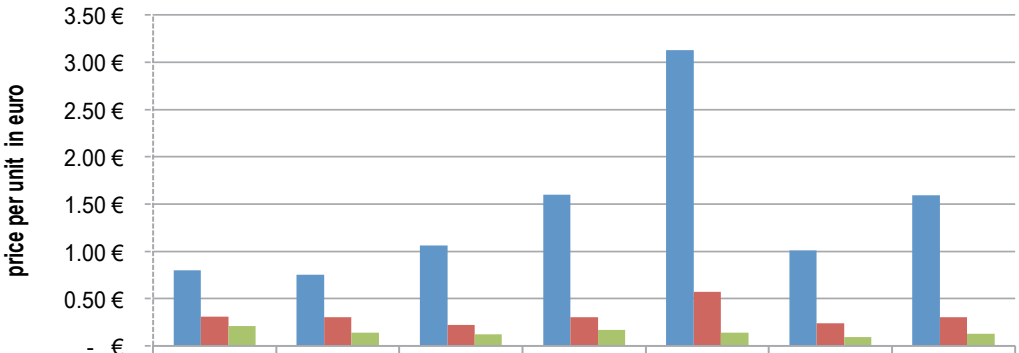
In Greece, the penetration rate of patent protected medicinal products reaches 11.6%, which is higher than in other European markets. However, this can be explained by the **pricing status** of these products, as they are **almost 50% lower than the European average** (Figure 27). In contrast, **prices of generics are among the highest in Europe**, since they do not differ significantly from the prices of off-patent products (Figure 28).

Figure 27: Penetration of patent protected & non-protected pharmaceuticals in selected countries (in volume), 2013



Source: IMS, 12/2013

Figure 28: Pricing in European Countries, 2013 (price per unit, €)

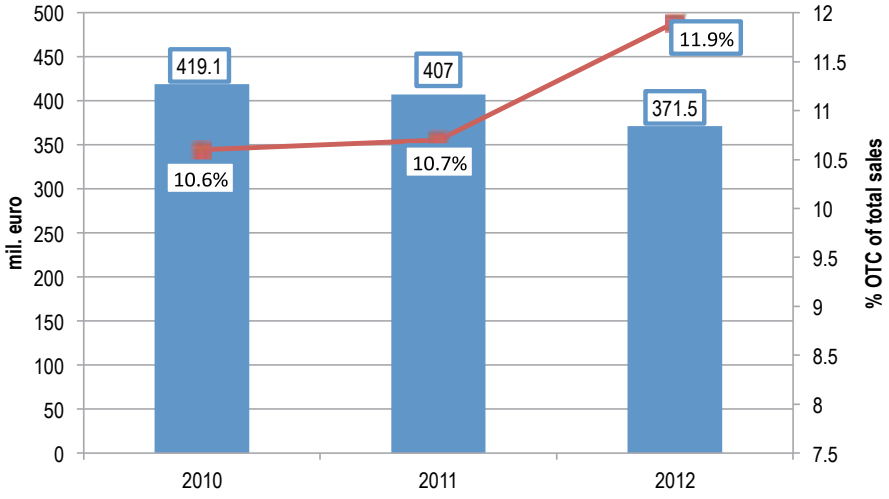


	Greece	Italy	Spain	France	Germany	UK	Avg 18 Eurpean Countries
on-patent	0.80 €	0.75 €	1.06 €	1.60 €	3.13 €	1.01 €	1.59 €
off-patents	0.31 €	0.30 €	0.22 €	0.30 €	0.57 €	0.24 €	0.30 €
Generics	0.21 €	0.14 €	0.12 €	0.17 €	0.14 €	0.09 €	0.13 €

Source: IMS, 12/2013
Note: only retail sales are included

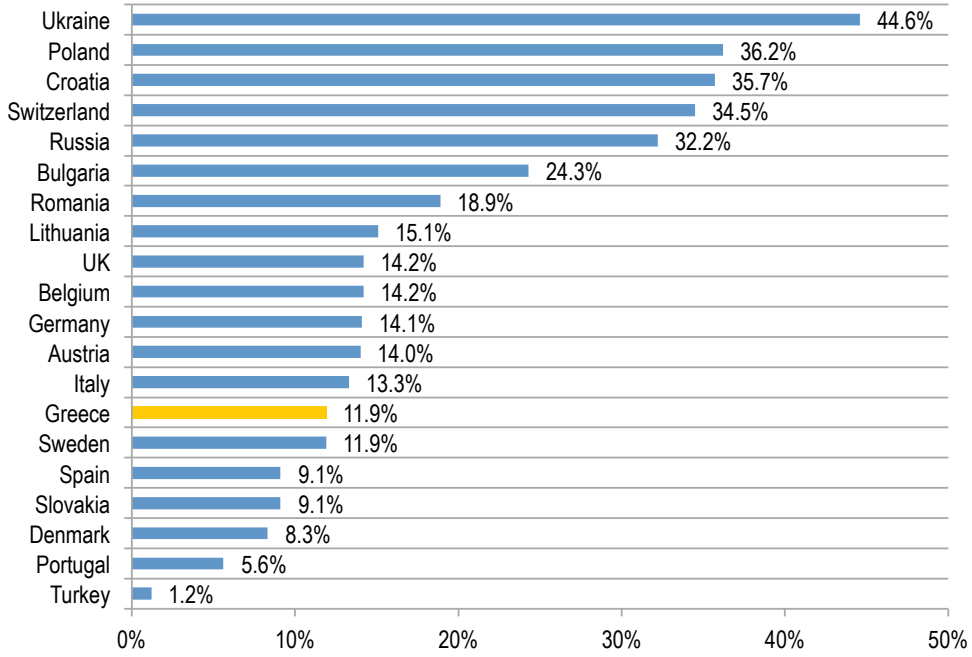
Over-the-Counter (OTC) medicinal products hold a substantial market share over total sales to pharmacies, as they currently represent 11.9% of the market. It should be noted here, that although, in 2012 the OTC market size amounted to €371.5 million, signifying a reduction from previous years, this was experienced at a lower rate than total pharmaceutical sales.

Figure 29: OTC sales, 2010-2012 (mil. euro)



Source: AESGP (www.aesgp.eu), 2013
Note: Depending on the source of information used, there may be deviations over EOFs' sales data.

Figure 30: OTC share on total Sales (inside hospitals) in various countries, 2012



Source: AESGP (www.aesgp.eu), 2013

Overall, OTC market share depends largely on the range of non-prescription medicines included in each country. The respective share in Greece is among the lowest compared with the other European countries. In 2012, the most important OTC category in Greece was the analgesics, followed by cold remedies and vitamins representing approximately ¾ of the market.

Table 4: OTC sales by group in Greece (mil. euro)*

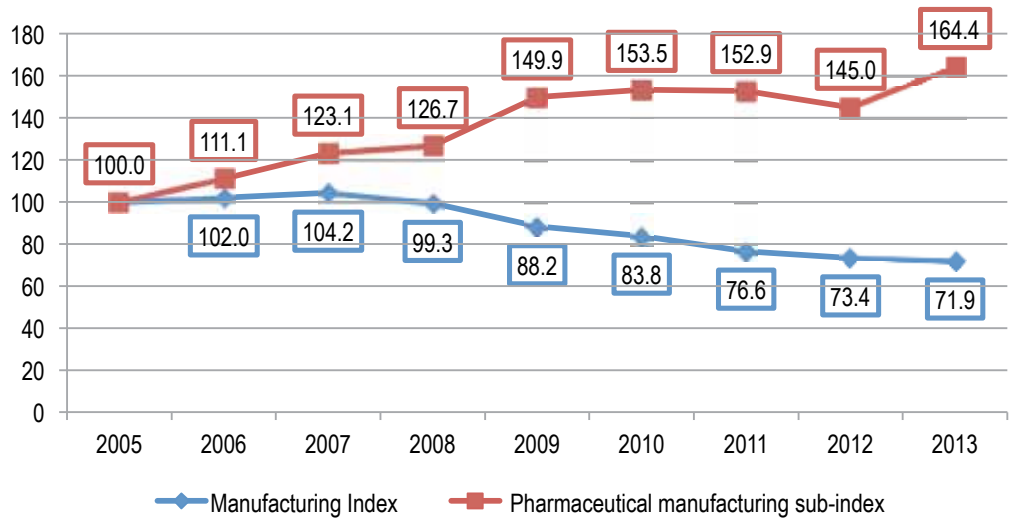
OTC groups	2010	2011	2012	%11/12	% of total, 2012
Cough and cold	74.3	83.7	78.4	-6.3%	27%
Analgesics	109.0	94.0	80.9	-13.9%	28%
Digestives	22.7	25.2	24.9	-1.2%	9%
Skin treatment	35.4	36.1	34.5	-4.4%	12%
Vitamins and minerals	96.6	83.5	71.6	-14.3%	25%
Total	338.0	322.5	290.3	-10.0%	100%

Source: AESGP (www.aesgp.eu), 2013, data processing IOBE
*Rounding to one decimal place

Production

In the past few years, the Greek industry overall has experienced declining rates of growth due to the economic crisis. However, production of pharmaceuticals remains one of the fastest growing sectors in the manufacturing area. This is mainly due to increased investment through the set-up of both production and manufacturing units. Analyzing the industrial production index, it can become obvious that the recession of the Greek economy has affected the manufacturing sector overall, resulting in a 30% decline during the period 2005-2013 (~18% reduction since 2009). However, the sub-sector of pharmaceutical production has recorded significant growth, despite the cost-containment measures enforced and the reduction in the pharmaceutical expenditure. In particular, until 2010, pharmaceutical industrial production was experiencing an upward trend, unlike many other industries that were shrinking. The relatively small decay in the period 2011-2012 was offset in 2013 with the index facing its peak at 164.4 units.

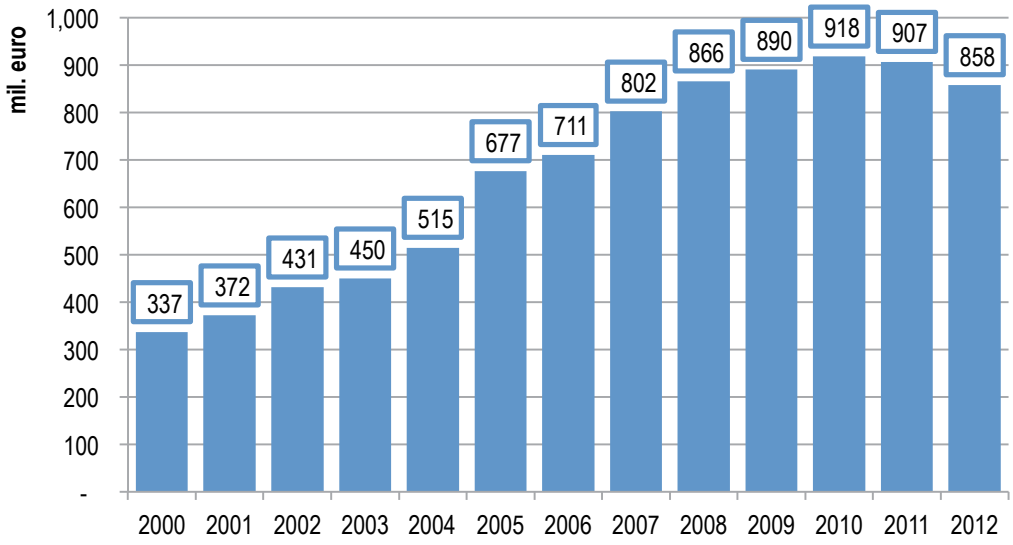
Figure 31: Manufacturing Production Index (2005=100)



Source: EL.STAT. 2014.

According to Prodcom (Eurostat) in terms of value **(ex-factory prices)**, pharmaceutical production in Greece was estimated at €858 million in 2012, approximately 5.4% lower than in 2011. Nevertheless, domestic **pharmaceutical industry has a growing share in overall domestic industrial production,** ranking Greece high among OECD countries respectively.

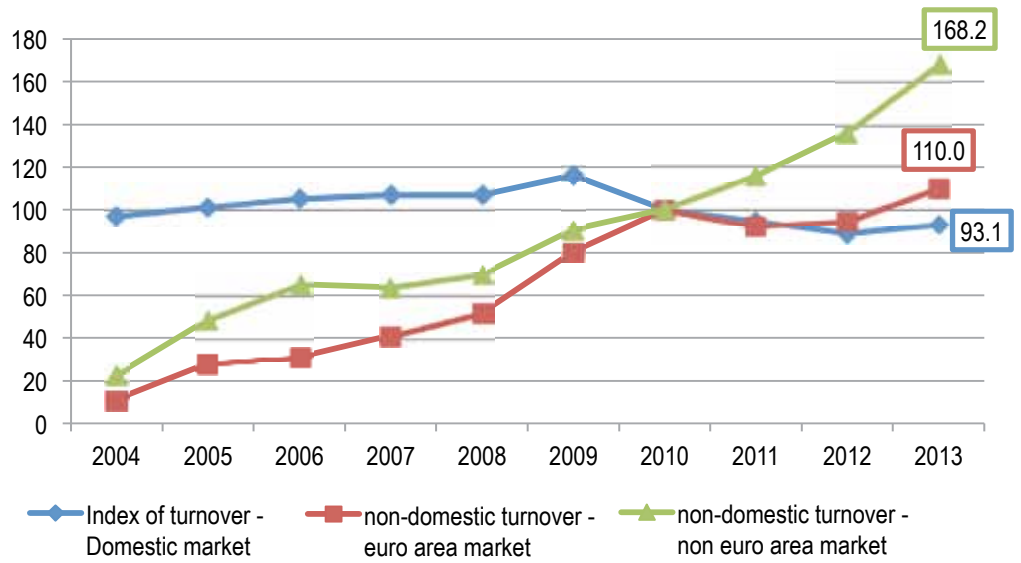
Figure 32: Domestic Production of pharmaceutical products, 2000-2012 (mil. euro)



Source: Eurostat 2014, PRODCOM Database.

The importance of pharmaceutical production can also be represented in the figure below, which shows the evolution of turnover index in the pharmaceutical industry as a proportion of the turnover of the domestic market but also to exports to Eurozone and non-Eurozone countries.

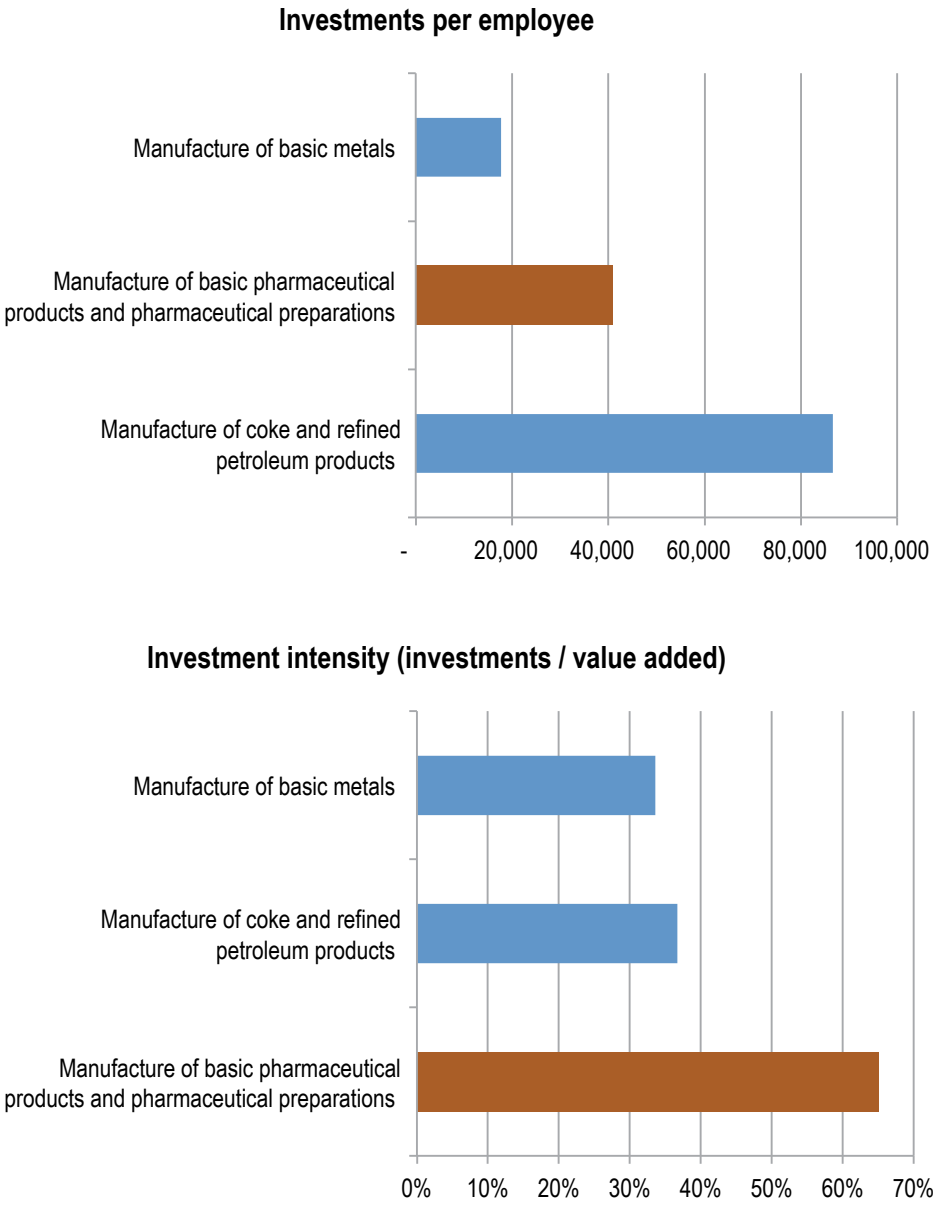
Figure 33: Turnover Index in Pharmaceutical Industry (2010=100,0)



Source: Eurostat, 2014

Pharmaceutical industry is characterized by high labor productivity and given its size, exhibits the highest performance among the different branches of domestic manufacturing in terms of intensity of investment activity. Namely, investment per employee is estimated approximately at €40,000, while investment in value added reaches 65%, representing the greater amount spent in the manufacturing industry.

Figure 34: Structural and Sectorial Indices of Manufacturing, 2010 (in €)

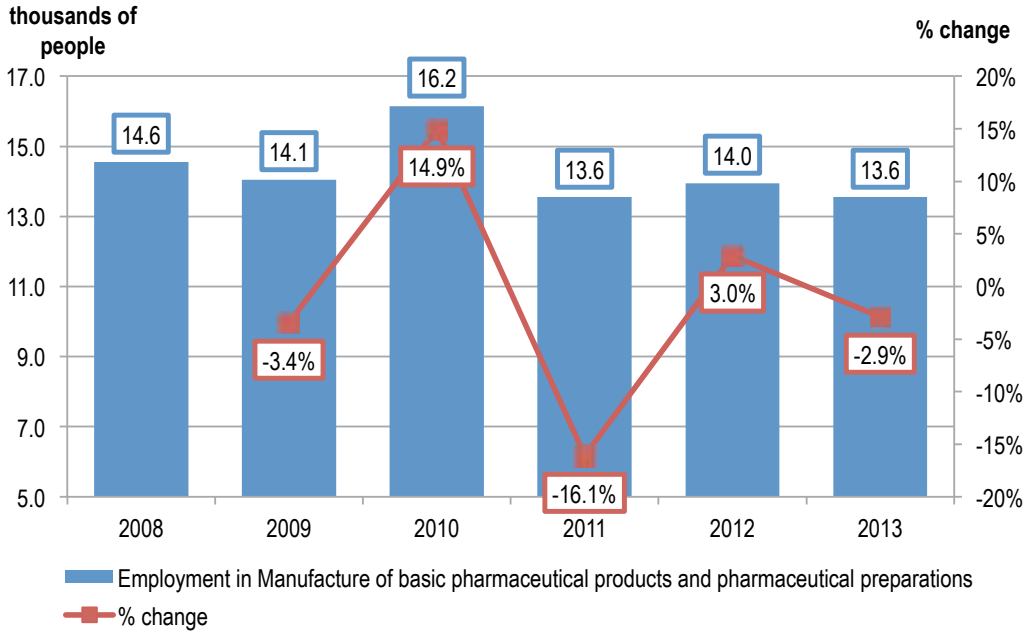


Source: Eurostat, Structural Business Statistics

Employment

The European pharmaceutical industry is a high-tech sector, offering employment to 700,000 people. According to Eurostat, in 2013, in Greece 13,600 people were employed in the manufacturing of pharmaceutical products, covering 31 different specialties/classifications showing the dynamic of the sector.

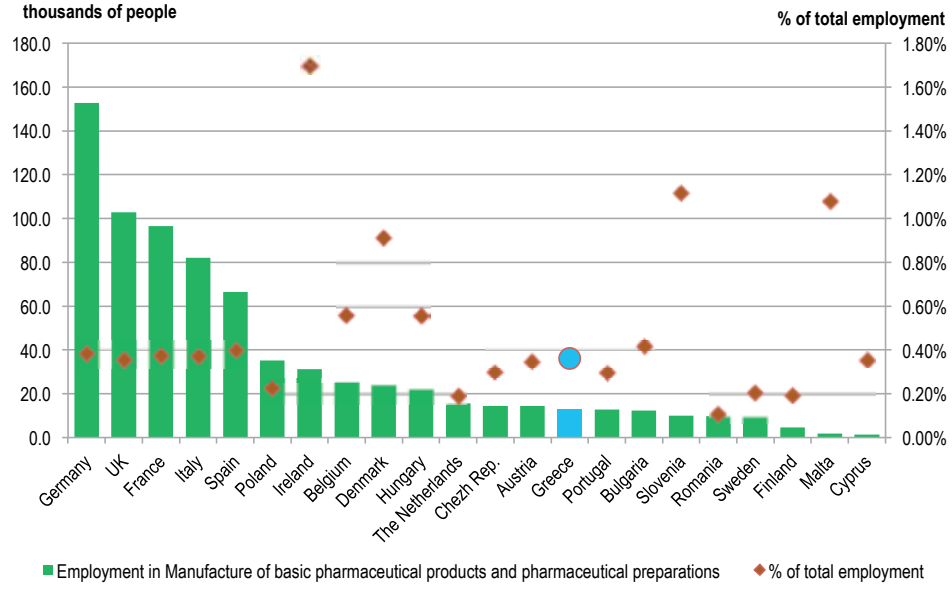
Figure 35: Employment in the pharmaceutical production sector *



Source: Eurostat, 2014
* Annual employment data is based on the average of the quarterly data

Figure below shows the number of employees in the production of medicines in EU countries, and their share in total employment of each country. Employment in absolute terms is higher in Germany and UK; however, when taking into account population size, Ireland, Slovenia and Malta have the highest rates. In Greece the share is 0.36%, close to EU average and to developed countries.

Figure 36: Employment in the pharmaceutical production sector in the EU countries (Q3-2013)



Source: Eurostat 2014, Data available for all countries until Q3 2013, data processing IOBE

The following table shows the total workforce in the wider healthcare sector, which amounts to almost 140,000 employees.

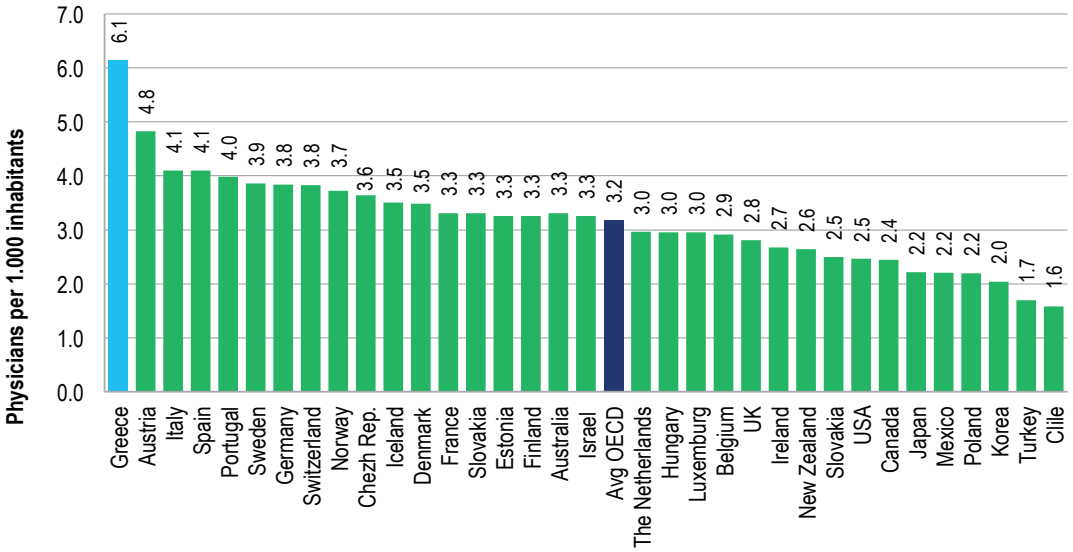
Table 5: Employment in Health Sector

	2007	2008	2009	2010	2011	2012
Physicians	62,207	67,540	69,030	69,265	69,435	69,215
Specialized Physicians	*38,463**	*39,189**	*41,239*	*41,628*	*42,622*	*43,499*
Dentists	14,429	14,689	14,774	14,661	14,518	14,208
Pharmacists	9,802	10,595	10,788	11,160	11,987	
Nurses	37,718	38,291	37,306			
Physiotherapists		3,881	4,521	5,118	5,582	6,096

Source: OECD, Health Data, 2013, EL.STAT. 2012.
* IOBE estimations; ** including assisting and recorded staff

Based on OECD data, in 2011, Greece had the highest number of physicians per capita (6.1 per 1,000 inhabitants), compared with the average of OECD countries (3.2). In Greece, the number of physicians per capita increased significantly between 2000 and 2008, but since then it is stable.

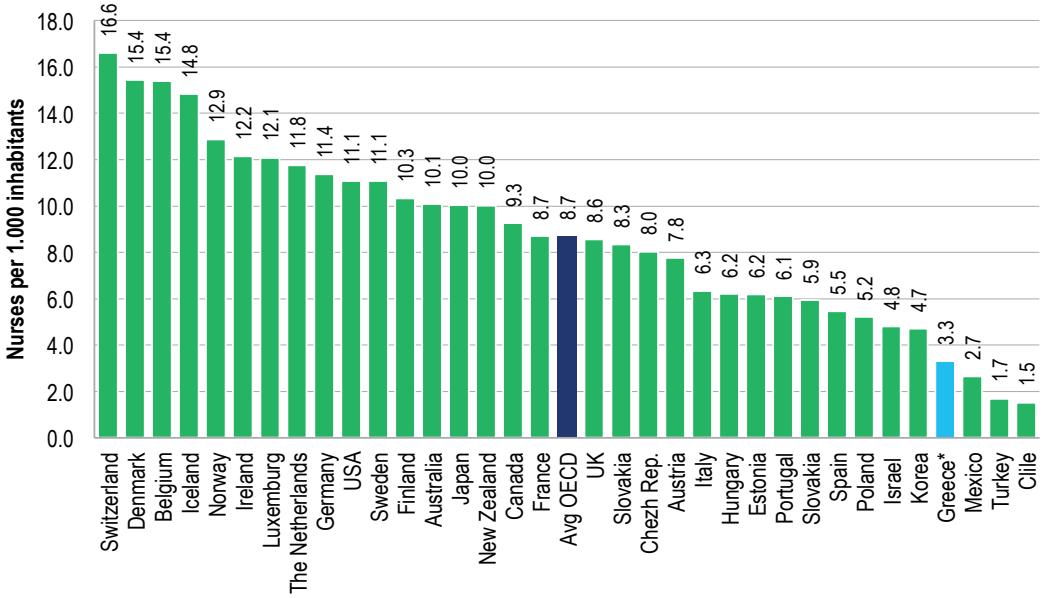
Figure 37: Physicians per 1,000 inhabitants in OECD countries, 2011



Source: OECD, Health Data 2013.

However, what should be noted, is the low ratio of nurses per capita (3.3 per 1,000 inhabitants), when the average for OECD countries is 8.7 nurses per 1,000 inhabitants.

Figure 38: Nurses per 1,000 population in OECD countries, 2011

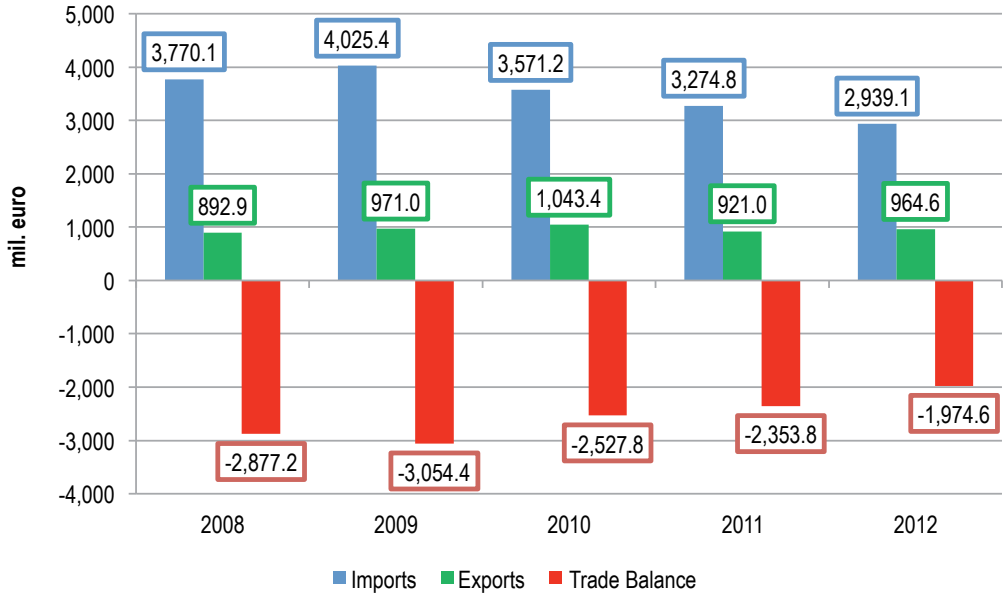


Source: OECD, Health Data 2013.

External trade

The pharmaceutical industry is also an important driver for the country's external trade. Imports and exports of medicinal products amounted to €2.9 billion and €964 million respectively in 2012. Compared to 2011, imports of pharmaceutical products fell by 10%, while exports increased by 5%, lowering the pharmaceutical trade deficit at -€1.9 billion in 2012 compared to -€3.1 billion in 2009.

Figure 39: Pharmaceutical Trade Balance (mil. euro)

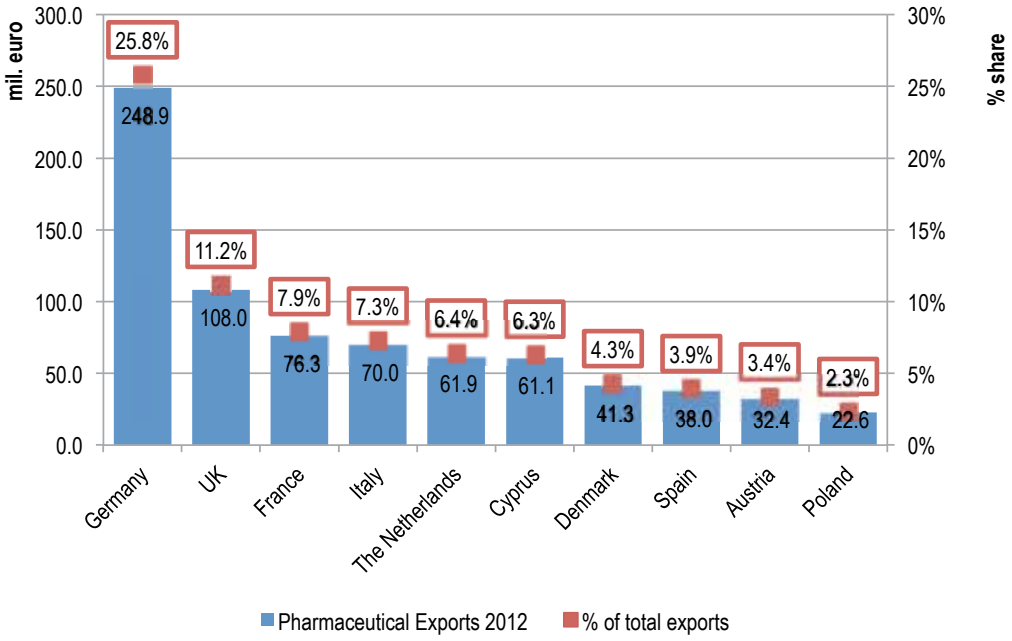


Source: Eurostat, 2014

It is interesting to see how trading activity is shaped with respect to other countries. In 2012 Greece exported pharmaceutical products in 117 countries, while imported from 62 countries. The main export destination was again Germany, with €249 million, accounting for one quarter of total Greek exports, followed by the UK with €108 million, more than 1/10 exports.

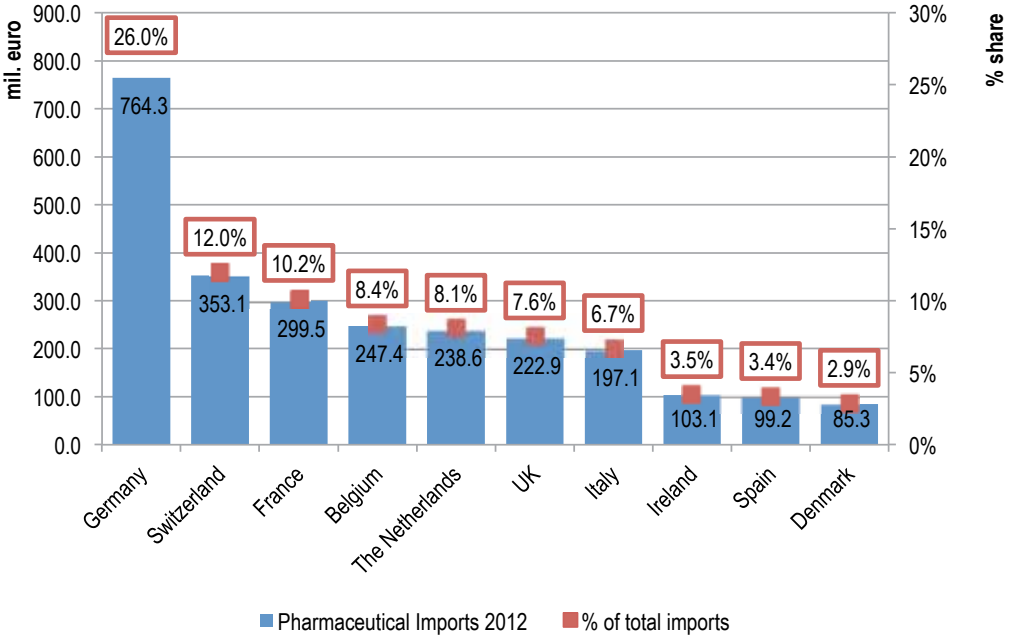
With respect to imports, Germany is again the main trading partner, as pharmaceutical products imported from this country amounted to €764 million, corresponding to 1/4 of total imports. The second most important import country is Switzerland with €353 million.

Figure 40: Main export partner countries of pharmaceutical products, 2012



Source: Eurostat, 2014, data processing IOBE

Figure 41: Main import partner countries of pharmaceutical products, 2012

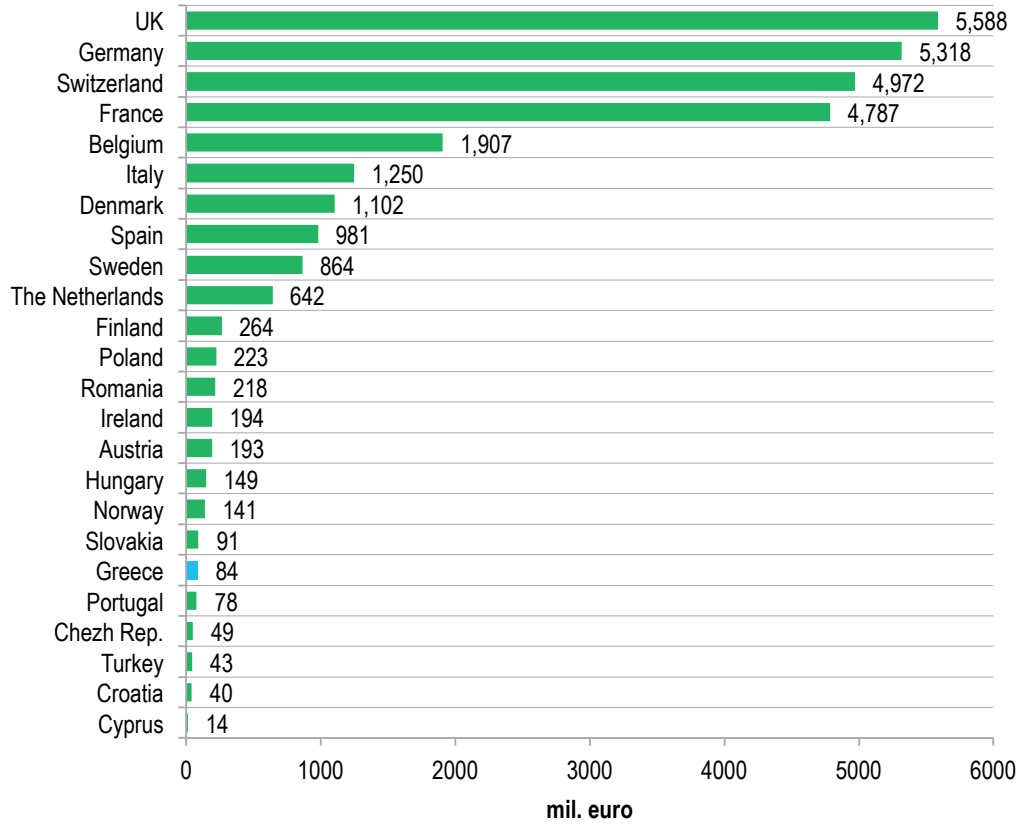


Source: Eurostat, 2014, data processing IOBE

Research and development (R&D)

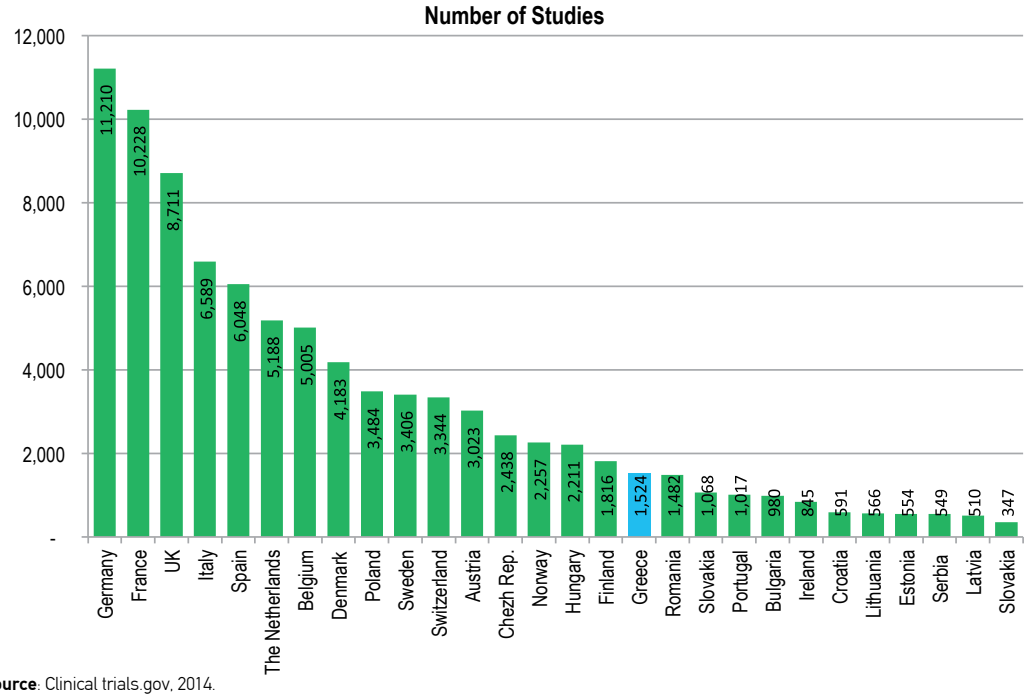
Investment in R&D is an area with great strategic growth potential that can have a multiplying effect on the national economy by contributing to the employment of high-skilled staff and creating such conditions that will increase the domestic added value in the future. Although R&D of innovative medicines plays a key factor for the growth of the pharmaceutical market, **Greece is one of the countries with the lowest ranking among EU countries in this area,** as it has not established an appropriate environment for developing and attracting clinical trials yet. Namely, in 2011, Greece was ranked 19th among EU countries in the R&D list spending €84 million, while Netherlands and Belgium spent €642 million and €1.9 billion respectively.

Figure 42: R&D Expenditure in Europe, 2011



Source: EFPIA, The Pharmaceutical Industry in Figures, 2013.

Figure 43: Number of Clinical Trials (all phases) (2013)



Source: Clinical trials.gov, 2014.

7 FINANCIAL ANALYSIS

This chapter presents the financial situation of three key stakeholders of the domestic pharmaceutical market, namely pharmaceutical companies, wholesalers and pharmaceutical supplier cooperatives for 2010-2012. Data is from published financial statements so only companies with legal form SA and LTD are included in the analysis. Additionally, in this chapter there is an evaluation of financial ratios of profitability, liquidity, activity and capital structure for each group of companies. The indexes have been calculated as a weighted average of the consolidated financial statements in order to provide a representative picture of the overall financial performance of each business group.

Pharmaceutical Companies

This stakeholder group includes pharmaceutical companies that are involved in the production, packaging and distribution of pharmaceutical products. The sample used in the analysis included 121 companies for 2010, 123 for 2011 and 105 for 2012[7], both Greek and subsidiaries of multinational companies. These companies cover the greatest part of the domestic pharmaceutical market in terms of sales value of pharmaceutical products (in producer prices).

Basic Financial Accounting Statements of Pharmaceutical Companies

In Table 6 below, the consolidated balance sheet data of pharmaceutical companies for the period 2010-2012 is presented, as well as the annual percentage changes of the total economic sizes of the companies. The next table presents the consolidated statement of pharmaceutical companies, in which the basic sizes are expressed as a percentage of the class size in which they integrate (assets, liabilities and / or turnover).

[7] The variation in the number of companies exists because of non-disclosure of accounting statements.

Table 6: Consolidated Balance Sheet data of Pharmaceutical companies (mil. euro)

Financial elements	2010	2011	2012	2010/2011	2010/2011
Number of firms	121	123	105	%	%
Fixed Assets	**1,179.2**	**1,332.6**	**1,398.4**	**13.0%**	**13.0%**
Net fixed Assets	1,087.2	1,077.9	1,019.3	-0.9%	-0.9%
Depreciation	556.5	672.6	698.2	20.9%	20.9%
Current Assets	6,048.8	4,436.2	4,460.2	-26.7%	-26.7%
Inventories	1,020.1	975.4	919.7	-4.4%	-4.4%
Accounts Receivable	4,084.1	2,820.6	3,172.4	-30.9%	-30.9%
Cash & equivalents	944.6	640.1	368.2	-32.2%	-32.2%
Total Assets	**7,219.0**	**5,671.1**	**5,527.5**	**-21.4%**	**-21.4%**
Equity	1,082.3	955.6	1,685.9	-11.7%	-11.7%
Capital Stock	1,018.0	1,047.9	1,182.1	2.9%	2.9%
Total obligations	6,136.7	4,715.5	3,841.6	-23.2%	-23.2%
Long-term obligations	847.3	919.0	810.1	8.5%	8.5%
Short-term obligations	5,289.4	3,796.6	3,031.5	-28.2%	-28.2%
Total Liabilities	**7,219.0**	**5,671.1**	**5,527.5**	**-21.4%**	**-21.4%**
Turnover	**5,834.9**	**5,750.9**	**5,161.0**	**-1.4%**	**-1.4%**
Selling cost	**3,935.7**	**3,628.4**	**3,201.5**	**-7.8%**	**-7.8%**
Gross Profits	**1,899.2**	**2,122.5**	**1,959.5**	**11.8%**	**11.8%**
Net Profits (before taxes)	**- 201.3**	**- 153.7**	**221.9**	**23.6%**	**23.6%**

Source: Hellastat (balance sheets), data processing IOBE

Table 7: Consolidated Financial Statement of Pharmaceutical companies

	2010	2011	2012
Fixed Assets	16%	23%	25%
Net fixed Assets	15%	19%	18%
Depreciation	8%	12%	13%
Current Assets	84%	78%	81%
Inventories	14%	17%	17%
Accounts Receivable	57%	50%	57%
Cash & equivalents	13%	11%	7%
Total Assets	100%	100%	100%
Equity	15%	17%	31%
Capital Stock	14%	18%	21%
Total obligations	85%	83%	69%
Long-term obligations	12%	16%	15%
Short-term obligations	73%	67%	55%
Total Liabilities	100%	100%	100%
Turnover	100%	100%	100%
Selling cost	67%	63%	62%
Gross Profits	33%	37%	38%
Net Profits (before taxes)	3%	3%	4%

Source: Hellastat - data processing IOBE

Based on the data shown in the tables above, **a significant reduction in total assets** was marked during the period 2010-2012, mainly due to the sharp decline in current assets, despite the escalation of depreciation the same period. More than 81% of resources are current assets, of which 57% falls under accounts receivable by customers of pharmaceutical companies.

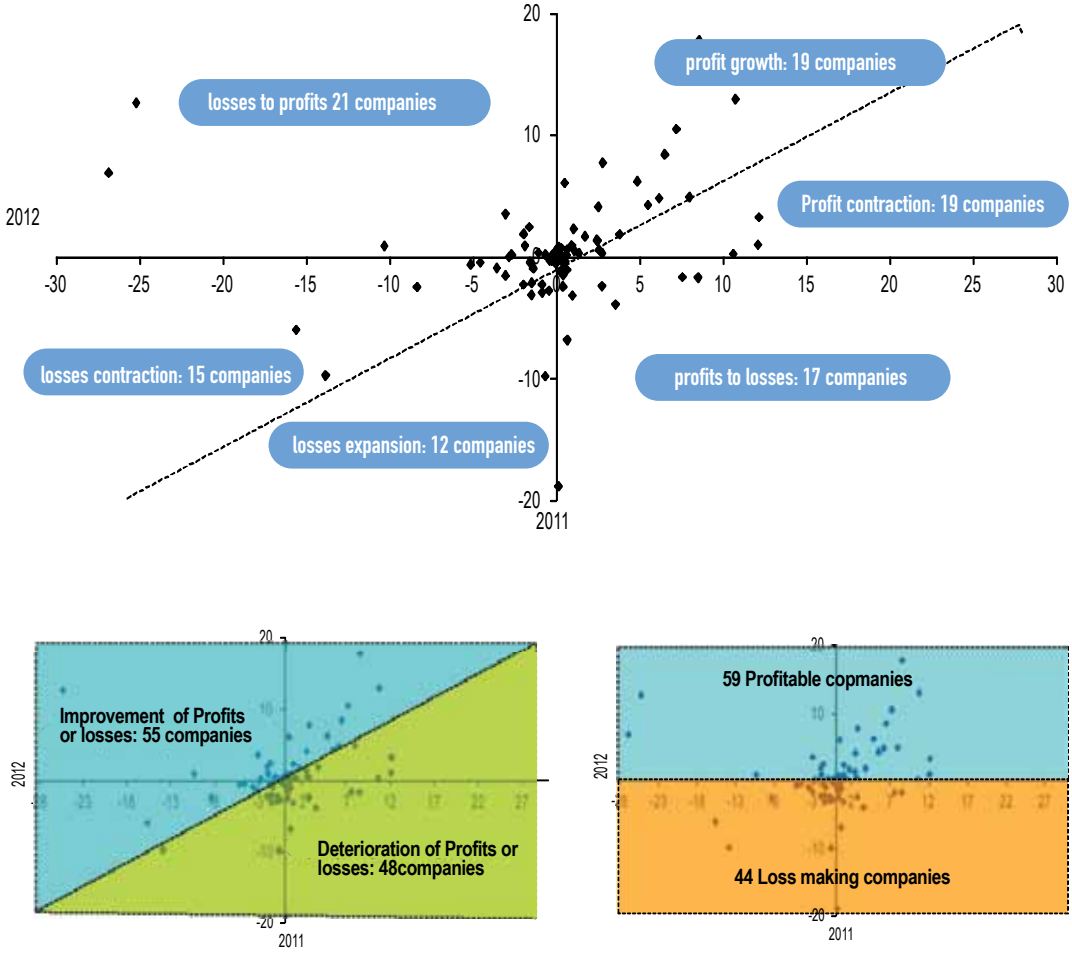
As far as **liabilities** are concerned, a decline of 2.5% has been observed mainly due to the fall of short-term duties to suppliers and lenders of pharmaceutical companies, which is however, mitigated by the rise of equity (76.4%). Partial repayment of public debt eased the market, allowing pharmaceutical companies to cover part of their obligations, despite the reduction in cash flow. Overall, the last two years had a negative impact on the pharmaceutical sector, as in most business sectors of the Greek economy.

In 2012, turnover of pharmaceutical companies accounted for €5.16 billion experiencing a sharp decline of 10.3% from the previous year. Both sales and cost of sales have recorded a continuous downward trend since 2010 of 11.7% and almost 20% respectively. The faster decline in cost of sales, have allowed gross income to increase slightly, but did not prevent the presence of net losses for the industry overall.

In 2012 from a total of 105 pharmaceutical companies (Figure 44):

- ✓ 55 improved their financial results, while in 48 companies financial results worsened compared to 2011.
- ✓ **59 profitable companies**
- ✓ 19 increased their profits and 19 lowered their profits
- ✓ 21 companies became profitable from loss making in 2011
- ✓ **44 loss making companies**
- ✓ 12 expand their losses and 15 limited their losses
- ✓ 17 companies became loss making from profitable

Figure 44: Pharmaceutical companies' distribution based on change in net profit (or loss) before tax (in mil. euro)



Source: Hellastat (balance sheets), data processing IOBE

Financial Ratios of Pharmaceutical Companies

Based on findings from Table 8, an improvement compared with the indices of 2011 can be observed. Specifically, indicators of return on equity and assets, as well as indicators of gross and net profit are all positive. Finally, current ratio improved in 2012.

Table 8: Financial ratios of pharmaceutical companies

	2010	2011	2012
	Efficiency Ratios		
Return on Equity	-18.6%	-16.1%	13.2%
Return on Assets	-2.8%	-2.7%	4.0%
Gross Profit Margin	32.5%	36.9%	38.0%
Net Profit Margin	-3.4%	-2.7%	4.3%
	Liquidity Ratios		
Current Ratio	1.1	1.2	1.5
Quick Ratio	0.9	0.9	1.1
Cash Ratio	0.2	0.2	0.1
	Activity Ratios		
Days to Sell Inventory	95	98	105
Days Sales in Receivables	255	179	224
Days in Accounts Payable	491	382	346
Asset turnover	0.8	1.0	0.9
Equity turnover	5.4	6.0	3.1
	Leveraging ratios		
Fixed to Total Assets	15.1%	19.0%	18.4%
Debt Burden	5.67	4.93	2.28
Total Debt Ratio	85.0%	83.2%	69.5%
Inventories / Current Assets	16.9%	22.0%	20.6%

Source: Hellastat - data processing IOBE

Activity indicators have shown slight improvement in terms of days to sell inventory and days in accounts payable, given the settlement of a significant part on receivables. Assets and equity transaction rate was reduced, showing lack of exploitation of funds and company resources. Debt pressure and indebtedness have shown a downward trend, however, increases in current assets have led to lower levels of the asset consolidation index and the inventories / current assets ratio.

Wholesalers

This group includes companies whose main activity is the wholesale of pharmaceutical products. The sample analyzed included 71 companies operating in the Greek market in 2010 and 2011 respectively and 55 companies in 2012.

Basic Financial Accounting Statements of Wholesalers

The following tables show the corresponding consolidated balance sheet and financial statements of wholesalers.

Table 9: Consolidated Balance Sheet data of Wholesalers (mil. euro)

Financial Elements	2010	2011	2012	2010/2011	2011/2012
Number of firms	71	71	55	%	%
Fixed Assets	286.9	285.2	232.3	-0.6%	-18.5%
Net fixed Assets	249.1	241.2	187.3	-3.2%	-22.3%
Depreciation	37.9	44.0	45.0	16.2%	2.2%
Current Assets	1,003.1	938.1	624.8	-6.5%	-33.4%
Inventories	188.1	158.5	97.5	-15.7%	-38.5%
Accounts Receivable	741.9	708.9	477.1	-4.4%	-32.7%
Cash & equivalents	64.5	45.3	50.0	-29.7%	10.3%
Total Assets	1,256.9	1,183.3	811.9	**-5.9%**	**-31.4%**
Equity	322.8	272.6	255.8	-15.6%	-6.2%
Capital Stock	298.1	263.3	234.9	-11.7%	-10.8%
Total obligations	934.2	910.7	556.1	-2.5%	-38.9%
Long-term obligations	160.8	137.9	91.0	-14.2%	-34.0%
Short-term obligations	773.4	772.8	465.1	-0.1%	-39.8%
Total Liabilities	1,256.9	1,183.3	811.9	**-5.9%**	**-31.4%**
Turnover	2,646.2	2,445.2	1,838.0	-7.6%	-24.8%
Selling cost	2,450.4	2,269.5	1,706.8	-7.4%	-24.8%
Gross Profits	195.8	175.7	131.2	-10.2%	-25.4%
Net Profits (before taxes)	37.5	- 49.8	12.4	-232.6%	125.0%

Source: Hellastat - data processing IOBE

Table 10: Consolidated Financial Statement of Wholesalers

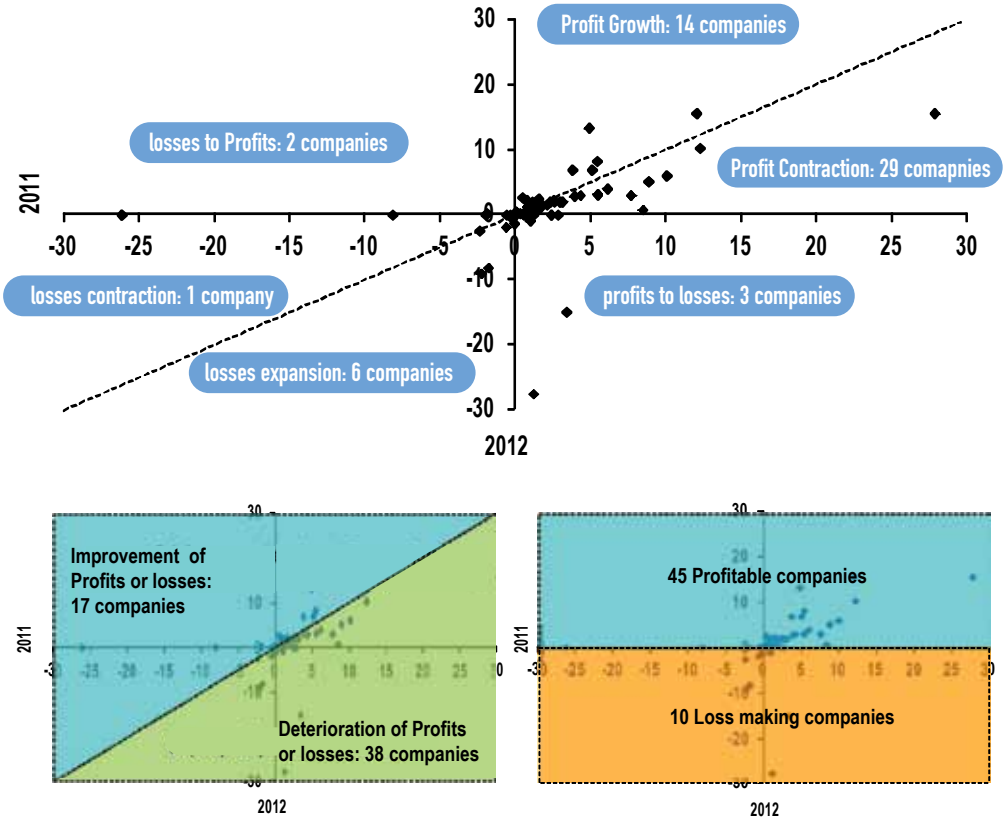
	2010	2011	2012
Fixed Assets	23%	24%	29%
Net fixed Assets	20%	20%	23%
Depreciation	3%	4%	6%
Current Assets	80%	79%	77%
Inventories	15%	13%	12%
Accounts Receivable	59%	60%	59%
Cash & equivalents	5%	4%	6%
Total Assets	100%	100%	100%
Equity	26%	23%	32%
Capital Stock	24%	22%	29%
Total obligations	74%	77%	68%
Long-term obligations	13%	12%	11%
Short-term obligations	62%	65%	57%
Total Liabilities	100%	100%	100%
Turnover	100%	100%	100%
Selling cost	93%	93%	93%
Gross Profits	7%	7%	7%
Net Profits (before taxes)	1%	2%	1%

Source: Hellastat - data processing IOBE

The data of the balance sheet shows a reduction in total assets of wholesalers, mainly due to stock reduction and secondarily due to the adjustment in net fixed assets. Receivables hold the largest share of the current assets with no significant deviations during the period 2010-2012, accounting for approximately 60%. On the liabilities side, equity of wholesalers decreased both in 2011 and 2012, while total liabilities decreased significantly, which may reflect the adjustment of credit policy of pharmaceutical companies and the banking system towards wholesalers.

Turnover of wholesalers for the year 2012 reached €1.8 billion, representing a 24.8% decline compared to 2011. Gross profits have been continuously contracted during the years 2010-2012, while net profits were positive in 2012, in contrast to 2011 results.

Figure 45: Wholesalers companies' distribution based on change in net profit (or loss) before tax (mil. euro)



Source: Hellastat (balance sheets), data processing IOBE.

In 2012, out of a total of 55 wholesalers companies (Figure *45*):

- ✓ 17 improved their financial results, while 38 worsened compared to 2011.
- ✓ **45 profitable companies**
- ✓ 14 increased their profits and 29 lowered their profits
- ✓ 3 companies became profitable from loss making in 2011
- ✓ **10 loss making companies**
- ✓ 6 expand their losses and 1 limited its losses
- ✓ 3 companies became loss making from profitable

Financial Ratios of Wholesalers

The positive picture of the overall profitability of wholesalers is reflected in the ratios of the return on equity and assets. Liquidity ratios improved in 2012 compared to previous year, while wholesalers reduced their inventories duration. Additionally, stocks continue to follow a downward trend and hold an even smaller portion of current assets. Overall, contribution of fixed assets to total assets has improved steadily in the past years. At the same time, both days sales in receivables and accounts payable decreased significantly.

Table 11: Financial Ratios of Wholesalers

	2010	2011	2012
	Efficiency Ratios		
Return on Equity	11.6%	-18.3%	4.9%
Return on Assets	3.0%	-4.2%	1.5%
Gross Profit Margin	7.4%	7.2%	7.1%
Net Profit Margin	1.4%	-2.0%	0.7%
	Liquidity Ratios		
Current Ratio	1.30	1.21	1.34
Quick Ratio	0.97	0.90	0.94
Cash Ratio	0.08	0.06	0.11
	Activity Ratios		
Days to Sell Inventory	28	25	21
Days Sales in Receivables	102	106	95
Days in Accounts Payable	115	124	99
Asset turnover	2	2	2
Equity turnover	8	9	7
	Leveraging ratios		
Fixed to Total Assets	19.8%	20.4%	23.1%
Debt Burden	2.89	3.34	2.17
Total Debt Ratio	74.3%	77.0%	68.5%
Inventories / Current Assets	18.7%	16.9%	15.6%

Source: Hellastat (balance sheets), data processing IOBE

Pharmaceutical Co-Operations

Pharmaceutical co-operations also engage in the wholesale of pharmaceutical products. The analyzed sample included 28 companies in 2010 and 2011 respectively and 21 companies in 2012.

Basic Financial Accounting Statements of Pharmaceutical Co-Operations

The following table (Table 12) shows the consolidated balance sheet of co-operations for 2010-2012, as well as the annual percentage changes in overall economic size of the respective companies Table 13 shows the corresponding consolidated balance sheet.

Data from balance sheet shows a significant reduction of total assets of pharmaceutical co-operations amounting to 52.7% during the last year. It is noteworthy to see that in the previous year (2010-2011) the % change was positive (+13.3%). This is mainly attributable to changes in current assets and in particular to reduction in inventories and accounts receivables.

Table 12: Consolidated Balance Sheet data of Pharmaceutical co-operations (mil. euro)

Financial Elements	2010	2011	2012	2010/2011	2011/2012
Number of firms	28	28	21	%	
Fixed Assets	61.9	69.7	35.6	12.6%	-48.9%
Net fixed Assets	33.7	38.3	17.5	13.5%	-54.1%
Depreciation	28.2	31.5	18.1	11.5%	-42.5%
Current Assets	503.6	570.6	270.4	13.3%	-52.6%
Inventories	87.4	87.1	40.3	-0.3%	-53.8%
Accounts Receivable	398.1	459.7	184.7	15.5%	-59.8%
Cash & equivalents	18.1	23.7	45.4	30.9%	91.4%
Total Assets	537.3	608.8	287.9	13.3%	-52.7%
Equity	127.7	147.5	93.4	15.5%	-36.7%
Capital Stock	43.9	46.1	33.8	5.0%	-26.8%
Total obligations	409.6	461.4	194.5	12.6%	-57.8%
Long-term obligations	12.5	12.5	5.7	0.0%	-54.1%
Short-term obligations	397.2	448.9	188.8	13.0%	-57.9%
Total Liabilities	537.3	608.8	287.9	13.3%	-52.7%
Turnover	**1,717.2**	**1,731.6**	**940.9**	**0.8%**	**-45.7%**
Selling cost	**1,641.4**	**1,644.8**	**893.7**	**0.2%**	**-45.7%**
Gross Profits	**75.8**	**86.8**	**47.1**	**14.5%**	**-45.7%**
Net Profits (before taxes)	**22.4**	**22.8**	**8.3**	**1.7%**	**-63.5%**

Source: Hellastat (balance sheets), data processing IOBE

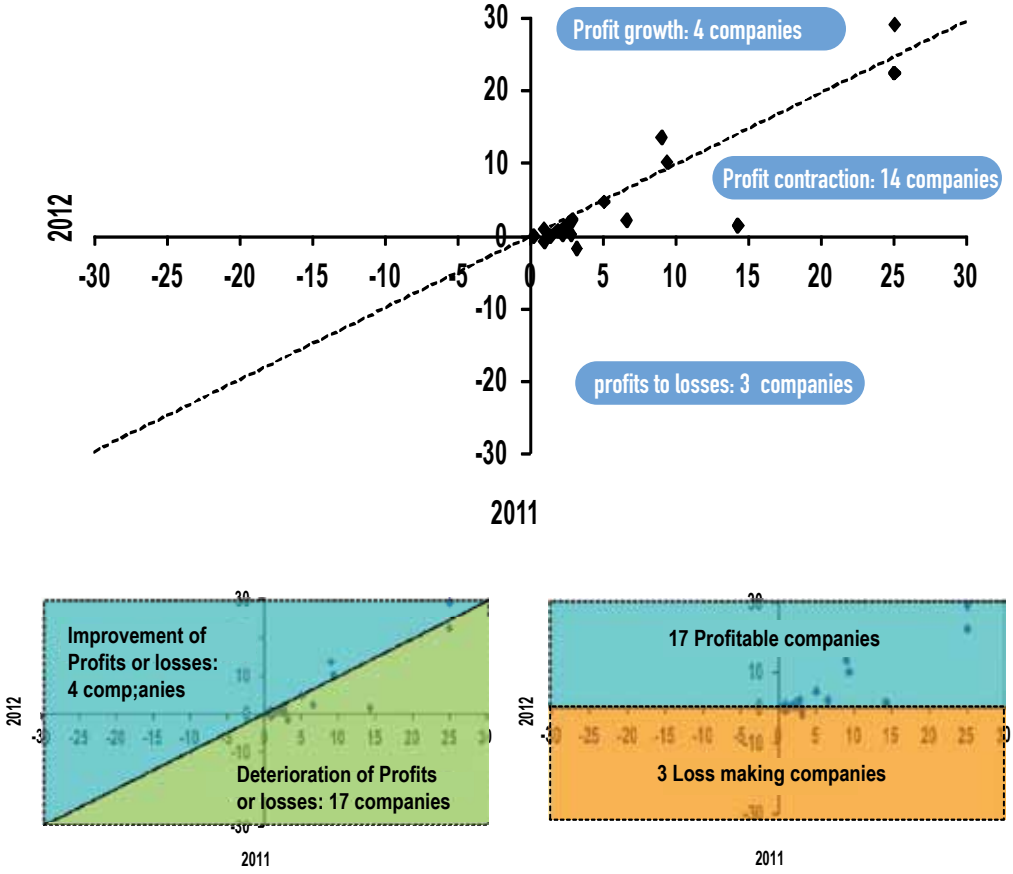
Table 13: Consolidated Financial Statement of Pharmaceutical co-operations

	2010	2011	2012
Fixed Assets	12%	11%	12%
Net fixed Assets	6%	6%	6%
Depreciation	5%	5%	6%
Current Assets	94%	94%	94%
Inventories	16%	14%	14%
Accounts Receivable	74%	76%	64%
Cash & equivalents	3%	4%	16%
Total Assets	100%	100%	100%
Equity	24%	24%	32%
Capital Stock	8%	8%	12%
Total obligations	76%	76%	68%
Long-term obligations	2%	2%	2%
Short-term obligations	74%	74%	66%
Total Liabilities	100%	100%	100%
Turnover	100%	100%	100%
Selling cost	96%	95%	95%
Gross Profits	4%	5%	5%
Net Profits (before taxes)	1%	1%	1%

Source: Hellastat, data processing IOBE

Similar trend was shown in terms of liabilities, overall reduction in 2012 of 52.7%, since all individual elements have experienced a sharp decline. Turnover for 2012 amounted to €940.9 million, significantly smaller than in the previous years, leading also to lower gross and net profits.

Figure 46: Pharmaceutical cooperatives' distribution based on change in net profit (or loss) before tax (mil. euro)



Source: Hellastat (balance sheets), data processing IOBE

In 2012, from a total of 21 pharmaceutical co-operations (Figure 45):

- ✓ 4 improved their financial results, while in 17 financial results worsened compared to 2011.
- ✓ **18 profitable**
- ✓ 4 increased their profits and 14 lowered their profits
- ✓ **3 loss making**
- ✓ 3 companies became loss making from profitable

Financial Ratios Of Pharmaceutical Co-Operations

The significant strengthening of equity of pharmaceutical cooperatives in combination with the stability of net profit, led to a decline of the index on return on equity. Gross profit margin remained unchanged, but is kept at a lower level than that of wholesalers. Liquidity ratios were slightly improved, allowing them to settle more efficiently any short-term obligations. Days to sell stock, for receivables and accounts payable overall were improved, showing a more favorable climate in terms of activity and thus, and helping to reduce total debt ratio.

Table 14: Financial Ratios of Pharmaceutical co-operations

	2010	2011	2012
	Efficiency Ratios		
Return on Equity	17.6%	15.5%	8.9%
Return on Assets	4.2%	3.7%	2.9%
Gross Profit Margin	4.4%	5.0%	5.0%
Net Profit Margin	1.3%	1.3%	0.9%
	Liquidity Ratios		
Current Ratio	1.3	1.3	1.4
Quick Ratio	1.2	1.2	1.3
Cash Ratio	0.0	0.1	0.2
	Activity Ratios		
Days to Sell Inventory	19.4	19.3	16.4
Days Sales in Receivables	84.6	96.9	71.7
Days in Accounts Payable	88.3	99.6	77.1
Asset turnover	3.2	2.8	3.3
Equity turnover	13.5	11.7	10.1
	Leveraging ratios		
Fixed to Total Assets	6.3%	6.3%	6.1%
Debt Burden	3.2	3.1	2.1
Total Debt Ratio	76.2%	75.8%	67.6%
Inventories / Current Assets	17.4%	15.3%	14.9%

Source: Hellastat, data processing IOBE

8 PRICING OF PHARMACEUTICAL PRODUCTS

In terms of price setting of pharmaceutical products, Greece uses an international price referencing (IPR) system based on the prices of the EU member countries.

In particular, based on the ministerial decision published in GG 64/16.01.2014, prices for **on-patent products** is set based on the average of the 3 lower prices of the EU member-states which publish reliable data. In general, in order for a medicinal product to be priced for the first time, it must have been priced in at least three EU member-countries. Prices are re-visited twice per year and the price bulletins are issued, in January and July respectively, of each year.

Regarding medicinal products **after the expiration of the patent protection of the active substance** (after 01.01.2012), prices are automatically reduced either to 50% of the last under protection price or to the average of the three lower prices of the EU member-states, respecting the lowest between the two. More specifically, for products with no generics the average of the three lower prices in EU countries exclusively applies. Once a generic is sold in the market and sales are thereof realized, the 50% reduction applies even if it is lower than the average of the 3 lower prices. For all the aforementioned, the existing prices will be reduced when the average of the 3 lower prices in EU member-states is lower than their existing price. For products for which the patent protection of active substance expired before 01.01.2012, flat reduction of prices apply, as defined in the respective ministerial decree, each time a price bulletin is published.

Price of **generics** is set to 65% of the price of the respective reference medicinal product. In cases where the reference medicinal product has a different package, then deductions are applied based on the respective provisions of the MD. Moreover, if no reference product exists in the Greek market, the price of the generic is set to 65% of the average of the three lower prices in the EU countries of the reference products. These provisions apply in the cases of pricing of new generics, of generics with MA after 01.01.2012 and of generics that correspond to active substances that have lost their patent after 01.01.2012. For all other generics, flat price reductions apply, as specified by the respective MD, each time a price bulletin is published.

The maximum producer's (ex-factory) price of all **biological and bio-similar products** (blood products, biotechnological products, vaccines, bio-similar products and other biological products) is set as the average of the three lower prices in the EU countries. The resulting prices may be equal or less than the applicable ones.

Bio-similar medicinal products are not generics and the automatic substitution of original medicinal products from bio-similar products or from bio-similar medicinal products by other bio-similars are not recommended. Interchangeability of biological products is not recommended, either in the case of originals, or in the case of bio-similar products. Pre-

scribing of biological products should be strictly in accordance with the provisions of their respective marketing authorizations', i.e. the approved indications and the approved dosage scheme, while taking into account both relative effectiveness and treatment costs. EOPYY is allowed to set criteria and prescription conditions of biologics based on the respective committees' decisions. Off-label use is allowed in exceptional cases based on the provisions of the ministerial decree published in GG 545b/01.03.2012.

Orphan medicinal products may be priced even if prices are available in only two other EU countries. After price approval, orphan drugs must be included in the positive list within 30 days. EOF must be linked with EMA in order to make visible the official European list of orphan drugs. EOF should appoint a committee to propose actions for adopting incentives in order to promote the availability of orphan medicinal products in the European standards.

Price definitions

Maximum Wholesale Price: Maximum Wholesale Price of Medicinal Products is the price at which medicinal products are sold to pharmacies. This price includes the gross profit margin of the wholesaler, which is calculated as a percentage on the maximum price of the ex-factory. Gross profit margin (mark up) a) for all medicinal products reimbursed by social security funds is set as a percentage of 4.9% on the maximum net ex-factory price, as of March 2012; b) for non-prescription medicinal products (OTC) as a percentage of 7.8% on the maximum net ex-factory price and c) for medicinal products that belong to par.2, art.2, L3816/2010 as a percentage of 2% on hospital price. The latter is called as Special Wholesaler Price.

Maximum Retail Price: Maximum Retail Price of Medicinal Products is the price at which medicinal products are sold by pharmacies to consumers, and it is defined by the wholesale price, adding the lawful profit margin of the pharmacy as set out in the respective ministerial decree and the applicable Value Added Tax (VAT 6.5%). In particular, for pharmacies the mark up is determined as follows: a) for non-prescription medicinal products (OTC) and non-reimbursed prescription products, as a percentage of up to 35% on the wholesale price; b) for reimbursed products with a wholesale price up to 200€ as a percentage of 32.4%; c) for medicinal products that belong to L.3816 and have a special wholesale price up to 200€ as a percentage of 16% and d) a fixed amount of 30€ for all reimbursed products with wholesale price or special wholesale price over 200€. The maximum retail prices are uniform throughout the country, except in areas where a reduced VAT is applied.

Ex-factory price: The maximum producer's price (ex-factory) is the sale price by the marketing authorization holders (MAHs) to wholesalers and is calculated based on the wholesale price **reduced** a) for prescription medicinal products which are not reimbursed by the Social Insurance Funds by 4.67%, b) for prescription non-reimbursed medicinal products by 5.12% and c) for non-prescription (OTC) medicinal products by 7.24%.

Maximum Hospital Price: Maximum Hospital Price of Medicinal Products is the price at which medicinal products are sold by the Marketing Authorization Holders to the State, State hospitals, Social Care Units, public law legal entities referred to in par. 1 of Article 37 of Law 3918/2011, pharmacies of private clinics with over 60 beds and EOPYY pharmacies. The maximum hospital price shall be determined on the basis of the ex-factory price reduced by 13%..

Pharmaceutical products price structure

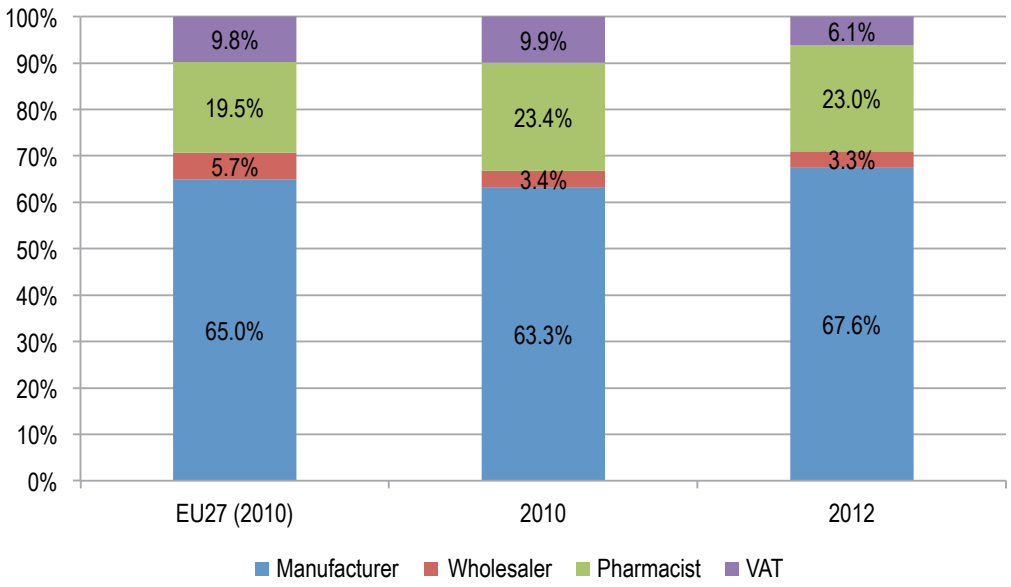
Profit margins of wholesalers vary depending on the reimbursement status of each product and its relative price. That is, they depend on whether the product belongs in the positive, negative, OTC list or if they fall under L.3816/2011 provisions and on whether its price is higher than 200€. Mark-ups and pricing structure of medicinal products, including applicable VAT 6.5%, is summarized below. Figure-47 shows the respective price structure for 2010 in Greece and the EU-27 average. The main difference with EU average is attributable to both wholesaler and pharmacist margins, when the share of producers is at comparable levels.

Table 15: Mark-ups in the pharmaceutical supply chain, 2013

	Reimbursed Products	High Cost products	OTC	Negative list products
Wholesalers (to the net ex-factory)	4.9%	2.0*%	7.8%	5.4%
Pharmacies (to the wholesale price)	32.4%	16.0**%	35.0%	35%
Pharmacies (wholesale / Special wholesale price > €200)	€30	€30	35.0%	35%

*to the hospital price **to the Special wholesale price
Source: Ministerial Decision No. 3457,2014 (Gazette of Government B 64)

Figure 47: Price structure of reimbursed drugs with wholesaler prices < €200 (Retail Price-100)

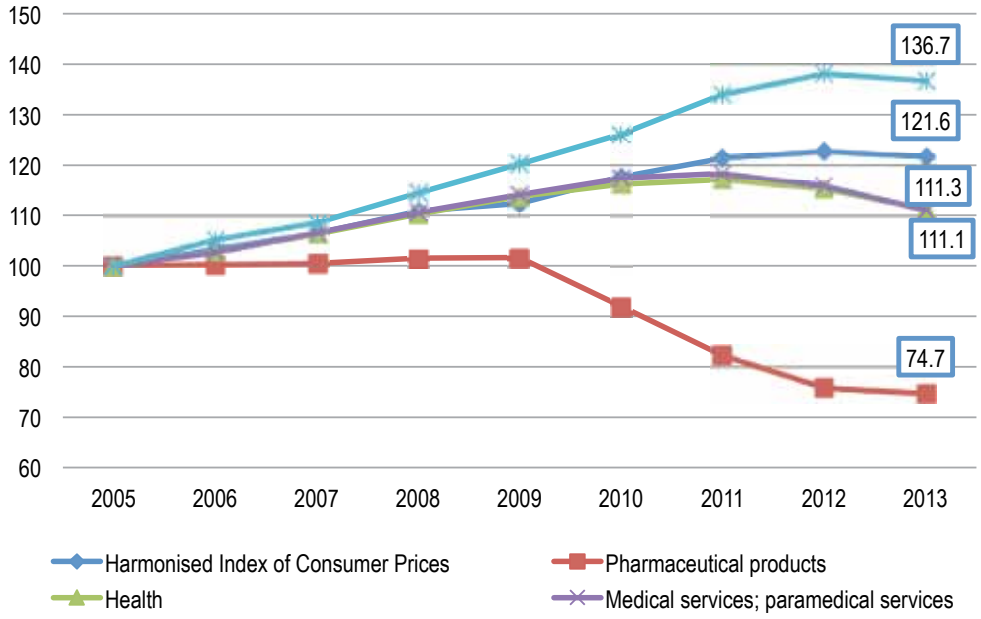


Source: IOBE estimations and EFPIA 2012.

Pharmaceutical Price Index

The prices of medicinal products in Greece followed a slightly upward trend until 2009, significantly lower than inflation. **The pricing reforms introduced from 2009 onwards led to an overall decline of 26,5% in the pharmaceutical price index.**

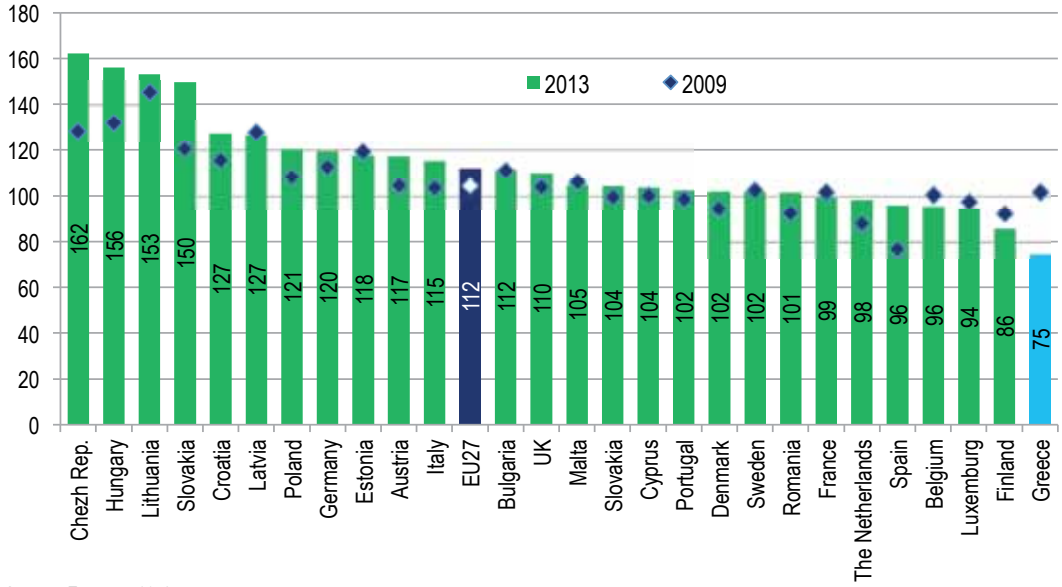
Figure 48: Pharmaceutical Price Index vs CPI and Health Price Indices (2005=100)



Source: Eurostat, 2013

Price index of pharmaceutical products for Greece was higher in 2009 than the EU average. After the respective cost-containment measures implementation, price index dropped significantly, reaching its lowest levels. As a result, pharmaceuticals price index is currently well below the EU-27 average, ranking Greece in the last place of the respective list. Highest levels of the index were recorded in the Czech Republic and Hungary. It is important to note here that other countries under fiscal adjustment programs such as Spain or Portugal have actually increased the respective index since 2009.

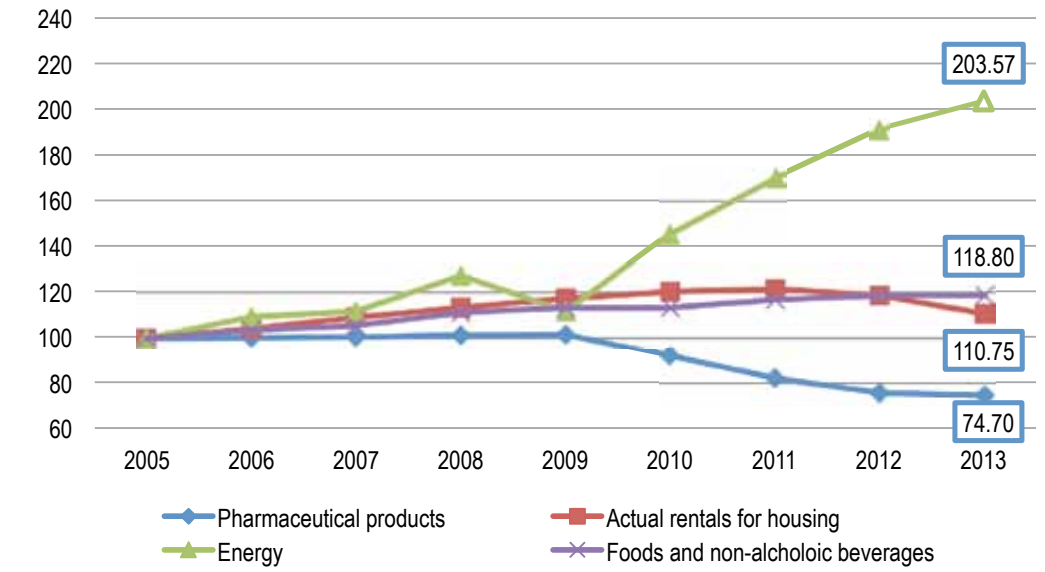
Figure 49: Pharmaceutical Price Index in EU countries (2005=100)



Source: Eurostat, 2013.

Finally, compared to other categories of goods incorporated into the relative basket, drug price index showed the biggest drop in Greece. Properties leasing also experienced a decline in contrast to energy and food & non-alcoholic drinks which recorded increases by 103.5% and 11.8% respectively since 2005.

Figure 50: Pharmaceutical Price Index vs Price Index of other Basic Goods (2005=100)



Source: Eurostat, 2013.

Reimbursement of pharmaceuticals

As far as reimbursement of medicinal products is concerned, the most important legislative changes during 2013 are summarized below.

Ministerial Decision 82961 published in the Government Gazette 2219/9-9-2013, states that in cases where the retail price of a product with generic presence is higher than the reimbursement price, the patient must cover the statutory co-pay (0%, 10%, 25%) plus the full difference in prices. In cases where the retail price is higher than reimbursement price and generics of the chosen product do not exist, then patients must cover the statutory co-pay plus 50% of the difference in prices. The remaining 50% is compensated by the Social Security Funds. Where the retail price of the chosen drug is lower than the reimbursement price, the difference between them is deducted from the statutory co-pay. Amount deducted cannot exceed 50% of the co-pay.

Ministerial Decision 113429 published in Government Gazette 3117/B/9.12.2013 stated that after each price revision or after approval of new drug prices, the positive list and the corresponding reference prices must be reviewed within 30 days. Original medicinal products are included in the reimbursement list of Social Security Funds, if they satisfy one of the following conditions: either they are marketed in at least 2/3 of the EU member-states or they are marketed in at least 12 EU member-states, after they have been evaluated by the respective Health Technology Assessment bodies. New generics are automatically included in the list if their reference product (off-patent) is also included. Based on this MD, it has been stated that in the next revision of the reimbursement list, the reference price of each cluster should be based on the average of the three cheapest generics in each group with a market share greater than 4% in this group (cluster), as long as the resulting reference price is lower than the current one.

Based on the aforementioned, according to data from EOPYY, patients' co-payment in 2013 accounted for 17.2% on average of the total expenditure for medicines and at 21% of drug costs at retail.

Table 16: Patient's co-payment - 2013

	Co-payment
Total Pharmaceutical expenditure (including VAT and co-payment)	17.2%
Pharmaceutical retail market (except EOPYY pharmacies and high cost drugs Law No. 3816)	21,0%

Source: EOPYY, IOBE estimations.

Table 17: Interventions and policy measures in the health and pharmaceutical sector in 2013

Date	Gazette / Ministerial Decision	Law
15/1/2013	MD 4146 GG 43	Amendment of the Joint Ministerial Decision No.2555 GG353/B/2012) "List of diseases, whose medicines are administered with reduced or zero participation of the insured person" as amended by the Joint Ministerial Decision Φ.42000/οικ.12485/ 1481/6.6.2012 (Gov. Gazette 1814/B/2012)"
23/1/2013	MD 7789, GG 94A'	Provisions on the pricing of medicinal products
4/2/2013	MD 9425, GG188B'	Amendment of Joint Ministerial Decision 9425/2013 (GG188 B' 04/02/2013) "Determination of discount percentages for the debts of EOPYY to contracted private health services provider"
7/2/2013	MD 13833, GG 235 B	Update on the list of medicinal products for the treatment of serious diseases included in §2, art. 12 of L.3816/2010 (A' 6)
21/2/2013	MD15659, GG 69	Amendment of Joint Ministerial Decree 60242 (GG212 / 15 6 2010) re the establishment of a Special Committee for establishing the reimbursement list and rationalizing the framework of administering serious diseases medicinal products.
25/2/2013	MD 18579, GG 427 B	Amendment of the Joint Ministerial Decision 9425/2013 (GG 188B' 04/02/2013) "Determination of discount rate on unsettled payments of EOPYY to contracted private healthcare providers".
7/3/2013	Law 4132, GG 59 A	Urgent regulations of the MoH and other provisions
26/3/2013	MD 23926, GG 103	Re the establishment of a Special Committee for establishing the reimbursement list and rationalizing the framework of administering serious diseases medicinal products.
26/3/2013	MD 29311, GG 692 B	Approval of reimbursement list of art.12 §1 subparagraph α' L.3816/2010, as amended and applied
15/5/2013	MD 42927, GG 1184 B	Amendment of MD29311 (GG692B/26.03.2013) "Approval of reimbursement list of art.12 §1 subparagraph α' L.3816/2010"
22/5/2013	MD 47048, GG 1240 B	Amendment of MD 29311(GGB΄ 692/26.03.2013), as it has been amended by MD42927 (GGB' 1184/15.05.2013)
14/6/2013	MD 57408, GG 1446 B	Provisions on the pricing of medicinal products
21/6/2013	MD 52095, GG 1561 B	Amendment of Joint Ministerial Decree 104747/2012 (GG 2883B΄/ 2012) "List of diseases, whose medicines are administered with reduced or zero participation of the insured person"
2/7/2013	MD 61605, GG 212	Amendment of Joint Ministerial 60242 (GG 212/15 6 2010) as amended subsequently re the establishment of a Special Committee for establishing the reimbursement list and rationalizing the framework of administering serious diseases medicinal products.
17/7/2013	MD 68458, GG 344	Appointment of Chairman of EOPYY & Establishment of 9 members Committee on Health Supplies
25/7/2013	MD 69010, GG 1814 B	Provisions on the pricing of medicinal products
22/8/2013	MD 76818, GG 2045 B	Amendment of MD 110034 (GG 3035B /15-11-2012) "Clawback mechanism for 2013"
22/8/2013	MD 76625	Establishment of 9 members Committee on Health Supplies
9/9/2013	MD 82961, GG 2219 B	Amendment of the Ministerial Decisions 104744/2012 as amended with the Ministerial Decision 19389, Gov. Gazette 17.12.2012 "Procedure of application of the Reference Prices System for the preparation, revision and supplementation of the list of prescribed medicines"

26/9/2013	MD 88814, GG 463	Establishment of a Special Committee for establishing the reimbursement list and rationalizing the framework of administering serious diseases medicinal products
2/10/2013	MD 90281, GG 2467	Approval of reimbursement list of art.12 §1 subparagraph α' L.3816/2010, as amended and applied
10/10/2013	MD 90168, GG 2543	Composition and establishment of Negotiation Committee within EOPYY
7/11/2013	MD 101754, GG 2840B	Updated OTC list
18/11/2013	Law 4208, GG 252A	Regulations of the MoH and other provisions – EOPYY's Negotiation Committee
29/11/2013	MD 108616, GG 588	Amendment of Joint Ministerial Decision 126447/17-11-2011 (GG 428/8-12-2011) re the establishment of Secondary Special Objections Committee, EOF, as subsequnelty amended and applied
9/12/2013	MD 113429, GG 3117 B	Provisions on the pricing of medicinal products

9 STATE'S DEBT TOWARDS PHARMACEUTICAL FIRMS

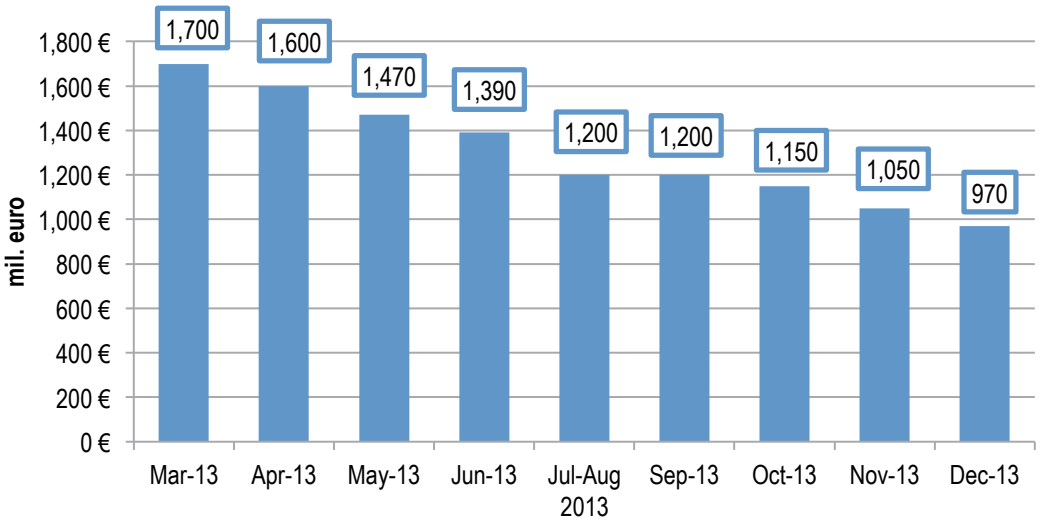
From the analysis of data on total receipts, sales invoices and debts issued from 01.01.2012 to 31.12.2013 from the member companies of SFEE that:

• The total amount of sales of pharmaceutical companies which are members of SFEE to the State during the period from 01.01.2012 to 31.12.2013 amounted to €1.833,1 million

• On 31.12.2013, the total receipts of the pharmaceutical companies which are members of SFEE from the State for invoices issued from 01.01.2012 to 31.12.2013 amounted to €1,031,9 million, in other words, on 31.12.2013 the 56.3% of total debt of the public to pharmaceutical companies, members of the SFEE has been repaid.

• On 31.12.2013, the total amount of debts to pharmaceutical companies belonging to SFEE for invoices amounted to € 970 million. It is noted that total debts include debts before 2012, which amount to €12,6 million for ESY Hospitals, €12.6 million for EOPYY (IKA), and €7,3 million for Military Hospitals.

Figure 51: State's Debt towards Pharmaceutical companies



Source: SFEE, Debt

* Debts for invoices issued from 01.01.2012 to 12.31.2013 as well as total debts before 2012.
** Data are not available for January, February and July.

NOTES

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