

The Pharmaceutical Industry in Figures

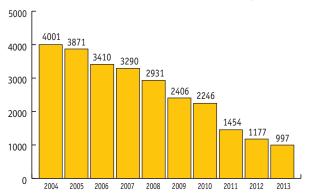


THE PHARMACEUTICAL INDUSTRY: A KEY ASSET TO SCIENTIFIC AND MEDICAL PROGRESS

Thanks to advances in science and technology, the research-based pharmaceutical industry is entering an exciting new era in medicines development. Research methods are evolving and we have many promising prospects on the horizon – from the possibilities offered by personalised medicines, to the potential offered by harnessing the power of big data. The innovative pharmaceutical industry is driven by, and drives, medical progress. It aims to turn fundamental research into innovative treatments that are widely available and accessible to patients.

Already, the industry has contributed to significant improvements in patient well-being. Today's European citizens can expect to live up to 30 years longer than they did a century ago. Some major steps in biopharmaceutical research, complimented by many smaller steps, have allowed for reductions in mortality, for instance from HIV/AIDS-related causes and a number of cancers. High blood pressure and cardiovascular disease can be controlled with antihypertensive and cholesterol-lowering medicines; knee or hip replacements prevent patients from immobility; and some cancers can be controlled – or even cured – with the help of new targeted treatments. European citizens can expect not only to live longer, but to live better quality lives. Yet major hurdles remain, including Alzheimer's, Multiple Sclerosis, many cancers, and orphan diseases.

TOTAL NUMBER OF DEATHS AMONG AIDS CASES IN EUROPE (TOTAL EU/EEA)



Source: HIV/AIDS surveillance in Europe 2013, WHO Regional Office for Europe & European Centre for Disease Prevention and Control (ECDC), November 2014

THE PHARMACEUTICAL INDUSTRY: A KEY ASSET TO THE EUROPEAN ECONOMY

As well as driving medical progress by researching, developing and bringing new medicines that improve health and quality of life for patients around the world, the research-based pharmaceutical industry is a key asset of the European economy. It is one of Europe's top performing high-technology sectors.

INDUSTRY (EFPIA total)	2000	2010	2013	2014
Production	125,301	199,131	216,928	220,000 (e)
Exports (1) (2)	90,935	276,357	305,133	316,500 (e)
Imports	68,841	204,824	230,242	238,500 (e)
Trade balance	22,094	71,533	74,891	78,000 (e)
R&D expenditure	17,849	27,920	30,442	30,500 (e)
Employment (units)	534,882	670,088	706,811	707,000 (e)
R&D employment (units)	88,397	117,035	115,619	116,000 (e)
Total pharmaceutical market value at ex-factory prices	86,704	152,991	176,758	181,000 (e)
Total pharmaceutical market value at retail prices (estimate)	140,345	222,453	261,167	267,400 (e)
Payment for pharmaceuticals by statutory health insurance systems (ambulatory care only)	76,909	129,464	119,385	121,800 (e)

Values in € million unless otherwise stated

Source: EFPIA member associations (official figures) - (e): EFPIA estimate; Eurostat (EU-28 trade data 1995-2014)

⁽¹⁾ Data relate to EU-27, Norway and Switzerland since 2005 (EU-15 before 2005); Croatia and Serbia included since 2010; Turkey included since 2011; Russia included since 2013

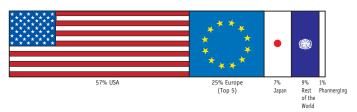
⁽²⁾Data relating to total exports and total imports include EU-28 intra-trade (double counting in some cases)

MAIN TRENDS

The research-based pharmaceutical industry can play a critical role in restoring Europe to growth and ensuring future competitiveness in an advancing global economy. In 2014 it invested an estimated € 30,500 million in R&D in Europe. It directly employs some 707,000 people and generates three to four times more employment indirectly – upstream and downstream – than it does directly. However, the sector faces real challenges. Besides the additional regulatory hurdles and escalating R&D costs, the sector has been severely hit by the impact of fiscal austerity measures introduced by governments across much of Europe since 2010.

- There is rapid growth in the market and research environment in emerging economies such as Brazil, China and India, leading to a gradual migration of economic and research activities from Europe to these fast-growing markets. In 2014 the Brazilian and Chinese markets grew by 12.6% and 11.6% respectively compared to an average market growth of 2.4% for the total European market and 12.5% for the US market (source: IMS Health, April 2015).
- In 2014 North America accounted for 44.5% of world pharmaceutical sales compared with 25.3% for Europe. According to IMS Health data, 57% of sales of new medicines launched during the period 2010-2014 were on the US market, compared with 25% on the European market (top 5 markets).
- The fragmentation of the EU pharmaceutical market has resulted in a lucrative parallel trade. This benefits neither social security nor patients and deprives the industry of additional resources to fund R&D. Parallel trade was estimated to amount to € 5,437 million (value at ex-factory prices) in 2013.

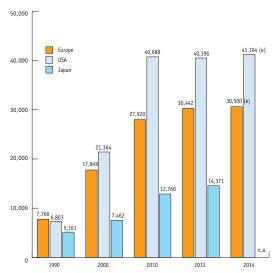
GEOGRAPHICAL BREAKDOWN (BY MAIN MARKETS) OF SALES OF NEW MEDICINES LAUNCHED DURING THE PERIOD 2010-2014



Note: new medicines cover all new active ingredients marketed for the first time on the world market during the period 2010-2014. Europe (Top 5) comprises Germany, France, Italy, Spain and United Kingdom. Pharmerging comprises 21 countries ranked by IMS Health as high-growth pharmaceutical markets (Algeria, Argentina, Brazil, Colombia, China, Egypt, India, Indonesia, Mexico, Nigeria, Pakistan, Poland, Romania, Russia, Saudi Arabia, South Africa, Thailand, Turkey, Venezuela, Vietnam and The Ukraine). Percentages do not add due to rounding.

Source: IMS Health (MIDAS April 2015)

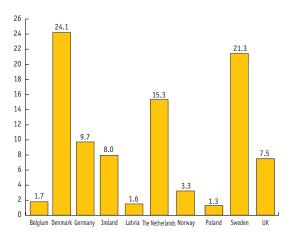
PHARMACEUTICAL R&D EXPENDITURE IN EUROPE, USA AND JAPAN (MILLION OF NATIONAL CURRENCY UNITS*), 1990-2014



* Note: Europe: € million; USA: \$ million; Japan: ¥ million x 100 (e): estimate

Source: EFPIA member associations, PhRMA, JPMA

SHARE OF PARALLEL IMPORTS IN PHARMACY MARKET SALES (%) - 2013



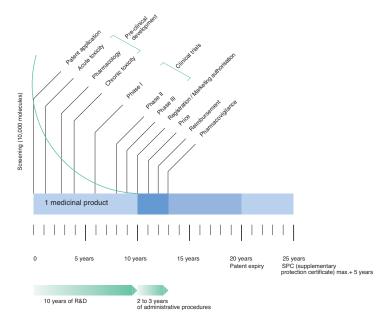
Source: EFPIA member associations (estimate)

PHARMACEUTICAL INDUSTRY RESEARCH AND DEVELOPMENT IN EUROPE

All new medicines introduced into the market are the result of lengthy, costly and risky research and development (R&D) conducted by pharmaceutical companies:

- By the time a medicinal product reaches the market, an average of 12-13 years will have elapsed since the first synthesis of the new active substance;
- The cost of researching and developing a new chemical or biological entity was estimated at € 1,172 million (\$ 1,506 million in year 2011 dollars) in 2012 (Mestre-Ferrandiz et al, Office of Health Economics, December 2012);
- On average, only one to two of every 10,000 substances synthesised in laboratories will successfully pass all stages of development required to become a marketable medicine.

PHASES OF THE RESEARCH AND DEVELOPMENT PROCESS



PHARMACEUTICAL INDUSTRY RESEARCH AND DEVELOPMENT IN EUROPE

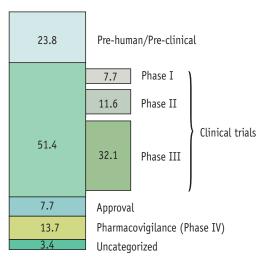
EFPIA 2013	€ million
Austria	453
Belgium	2,493
Bulgaria	n.a.
Croatia	40
Cyprus	85
Czech Republic	77
Denmark	1,411
Estonia	n.a.
Finland	171
France	4,789
Germany	6,063
Greece	80
Hungary	158
Ireland	305
Italy	1,220
Latvia	n.a.
Lithuania	n.a.
Malta	n.a.
Netherlands	642
Norway	124
Poland	203
Portugal	90
Romania	250
Serbia	n.a.
Slovakia	n.a.
Slovenia	165
Spain	885
Sweden	800
Switzerland	5,048
Turkey	83
United Kingdom	4,807
Total	30,442

Note: The figures relate to the R&D carried out in each country.
Czech Republic, Denmark, France, Hungary: 2012 data; Austria, Croatia,
Netherlands: 2011 data
Belgium, Croatia, Denmark, France, Germany, Greece, Ireland, Italy,

Belgium, Croatia, Denmark, France, Germany, Greece, Ireland, Italy, Netherlands, Norway (LMI members), Poland, Romania, Slovenia, Sweden (LIF members), Switzerland (Interpharma members), Turkey: estimate

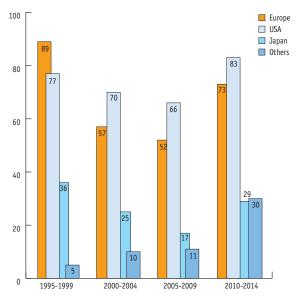
Source: EFPIA member associations (official figures)

ALLOCATION OF R&D INVESTMENTS BY FUNCTION (%)



Source: PhRMA, Annual Membership Survey 2014 (percentages calculated from 2012 data)

NUMBER OF NEW CHEMICAL OR BIOLOGICAL ENTITIES (1995-2014)

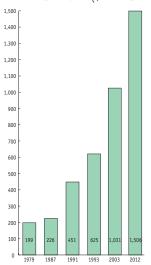


Source: SCRIP - EFPIA calculations (according to nationality of mother company)

IMPORTANCE OF PHARMACEUTICAL R&D

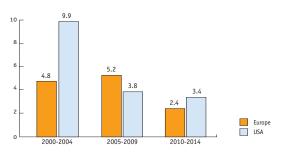
In 2013 the pharmaceutical industry invested more than € 30,400 million in R&D in Europe. A decade of strong US market dominance led to a shift of economic and research activity towards the US from 1995-2005. Additionally, Europe is now facing increasing competition from emerging economies: rapid growth in the market and research environments in countries such as Brazil and China are contributing to the move of economic and research activities to non-European markets. The geographical balance of the pharmaceutical market – and ultimately the R&D base – is likely to shift gradually towards emerging economies.

ESTIMATED FULL COST OF BRINGING A NEW CHEMICAL OR BIOLOGICAL ENTITY TO MARKET (\$ MILLION - YEAR 2011 \$)



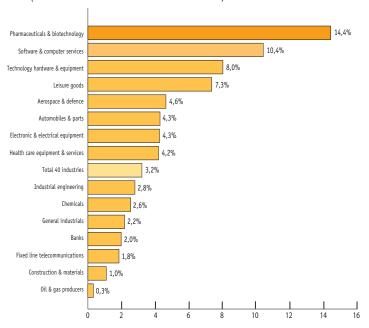
Source: J. Mestre-Ferrandiz, J. Sussex and A. Towse, The R&D cost of a new medicine, Office of Health Economics, December 2012 (Hansen, 1979; Wiggins, 1987; DiMasi et al, 1991; OTA, 1993; DiMasi et al, 2003; Mestre-Ferrandiz et al, 2012)

PHARMACEUTICAL R&D EXPENDITURE - ANNUAL GROWTH RATE (%)



Source: EFPIA, PhRMA

RANKING OF INDUSTRIAL SECTORS BY OVERALL SECTOR R&D INTENSITY (R&D AS PERCENTAGE OF NET SALES – 2013)



Note: Data relate to the top 2,500 companies with registered offices in the EU (633), Japan (387), The USA (804) and the Rest of the World (676), ranked by total worldwide R&D investment (with R&D investment above €15.5 million)

Source: The 2014 EU Industrial R&D Investment Scoreboard, European Commission, JRC/DG RTD

According to EUROSTAT data, the pharmaceutical industry is the high technology sector with the highest added-value per person employed, significantly higher than the average value for high-tech and manufacturing industries. The pharmaceutical industry is also the sector with the highest ratio of R&D investment to net sales. According to the 2014 EU Industrial R&D Investment Scoreboard the pharmaceuticals and biotechnology sector amounts to 18.0% of total business R&D expenditure worldwide.

PHARMACEUTICAL PRODUCTION

Austria Belgium Bulgaria Croatia Cyprus Czech Republic	million 2,692 8,034 117 617 180 n.a. 8,725
Bulgaria Croatia Cyprus	117 617 180 n.a.
Croatia Cyprus	617 180 n.a.
Cyprus	180 n.a.
• 1	n.a.
Czoch Popublic	
czecii kepublic	8,725
Denmark	
Estonia	n.a.
Finland	1,450
France	20,507
Germany	29,010
Greece	938
Hungary	2,629
Ireland	18,896
Italy	27,461
Latvia	120
Lithuania	n.a.
Malta	n.a.
Netherlands	6,180
Norway	745
Poland	2,710
Portugal	1,434
Romania	655
Russia	5,879
Serbia	n.a.
Slovakia	n.a.
Slovenia	1,903
Spain	14,486
Sweden	6,677
Switzerland	33,010
Turkey	3,690
United Kingdom	18,183
Total 2	16,928

Note: All data based on SITC 54

Denmark, Hungary, Norway: 2012 data; Cyprus, Netherlands: 2010 data Croatia, Denmark, France, Ireland, Italy, Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland: estimate

Bulgaria, Croatia, Cyprus, France, Germany, Hungary, Ireland, Latvia, Norway, Poland, Portugal, Romania, Slovenia: veterinary products excluded

Source: EFPIA member associations (official figures)

EMPLOYMENT IN THE PHARMACEUTICAL INDUSTRY

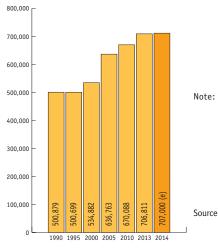
EFPIA 2013	Units
Austria	12,226
Belgium	33,701
Bulgaria	9,900
Croatia	5,800
Cyprus	1,140
Czech Republic	14,800
Denmark	21,150
Estonia	400
Finland	5,465
France	93,209
Germany	110,036
Greece	13,200
Hungary	22,600
Ireland	25,441
Italy	62,300
Latvia	1,971
Lithuania	1,220
Malta	445
Netherlands	13,000
Norway	3,800
Poland	27,570
Portugal	8,000
Romania	23,500
Serbia	n.a.
Slovakia	3,000
Slovenia	8,550
Spain	36,992
Sweden	11,482
Switzerland	40,913
Turkey	22,000
United Kingdom	73,000
Total	706,811

Note: Austria, Hungary, Latvia, Netherlands, Portugal, Slovakia, United Kingdom: 2012 data; Malta: 2004 data

Austria, Belgium, Bulgaria, Croatia, Estonia, France, Greece, Ireland, Italy, Malta, Netherlands, Norway, Poland, Romania, Slovenia, Sweden, Switzerland, Turkey, United Kingdom: estimate

Source: EFPIA member associations (official figures)

EMPLOYMENT IN THE PHARMACEUTICAL INDUSTRY (1990-2014)

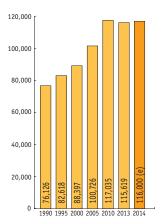


Data includes Turkey (since 2011), Croatia and Lithuania (since 2010), Bulgaria, Estonia and Hungary (since 2009), Czech Republic (since 2008), Cyprus (since 2007), Latvia, Romania & Slovakia (since 2005), Malta, Poland and Slovenia (since 2004)

Source: EFPIA member associations (official figures) - (e): EFPIA

The research-based pharmaceutical industry is one of Europe's major high-technology industrial employers. Recent studies in some countries showed that the research-based pharmaceutical industry generates three to four times more employment indirectly - upstream and downstream - than it does directly. Further, a significant proportion of these are valuable skilled jobs, for instance in the fields of academia or clinical science, which can help maintain a high-level knowledge base and prevent a European "brain drain".

EMPLOYMENT IN PHARMACEUTICAL R&D (1990-2014)



Note: Data includes Greece & Lithuania (since 2013), Bulgaria and Turkey (since 2012), Poland (since 2010), Czech Republic, Estonia and Hungary (since 2009), Romania (since 2005) and

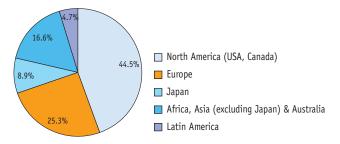
Slovenia (since 2004) Croatia, Cyprus, Latvia, Malta, Serbia, Slovakia: data not available

Source: EFPIA member associations - (e): EFPIA estimate

PHARMACEUTICAL SALES

The world pharmaceutical market was worth an estimated $\in 651,500$ million (\$ 865,518 million) at ex-factory prices in 2014. The North American market (USA & Canada) remained the world's largest market with a 44.5% share, well ahead of Europe and Japan.

BREAKDOWN OF THE WORLD PHARMACEUTICAL MARKET - 2014 SALES



Note: Europe includes Turkey and Russia

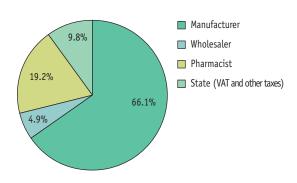
Source: IMS Health (MIDAS), April 2015 (data relate to the 2014 audited global retail

pharmaceutical market at ex-factory prices)

PRICE STRUCTURE

Distribution margins, which are generally fixed by governments, and VAT rates differ significantly from country to country in Europe. On average, approximately one third of the retail price of a medicine reverts to distributors (pharmacists and wholesalers) and the State.

BREAKDOWN OF THE RETAIL PRICE OF A MEDICINE, 2013 (%)



Note: Non-weighted average for Europe (average estimate for 23 countries)

Source: EFPIA member associations

PHARMACEUTICAL MARKET VALUE (AT EX-FACTORY PRICES)

Austria 3,207 Belgium 4,432 Bulgaria 853 Croatia 647 Cyprus 198 Czech Republic 2,125 Denmark 2,095 Estonia 231 Finland 2,114 France 26,744 Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kin	EFPIA 2013	€ million
Bulgaria 853 Croatia 647 Cyprus 198 Czech Republic 2,125 Denmark 2,095 Estonia 231 Finland 2,114 France 26,744 Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom	Austria	
Croatia 647 Cyprus 198 Czech Republic 2,125 Denmark 2,095 Estonia 231 Finland 2,114 France 26,744 Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Belgium	4,432
Cyprus 198 Czech Republic 2,125 Denmark 2,095 Estonia 231 Finland 2,114 France 26,744 Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Bulgaria	853
Czech Republic 2,125 Denmark 2,095 Estonia 231 Finland 2,114 France 26,744 Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Croatia	647
Denmark 2,095 Estonia 231 Finland 2,114 France 26,744 Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Cyprus	198
Estonia 231 Finland 2,114 France 26,744 Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Czech Republic	2,125
Finland 2,114 France 26,744 Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Denmark	2,095
France 26,744 Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Estonia	231
Germany 26,960 Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Finland	2,114
Greece 3,949 Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	France	26,744
Hungary 2,010 Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Germany	26,960
Iceland 108 Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Greece	3,949
Ireland 1,788 Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Hungary	2,010
Italy 20,941 Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Iceland	108
Latvia 310 Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Ireland	1,788
Lithuania 467 Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Italy	20,941
Malta 77 Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Latvia	310
Netherlands 4,471 Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Lithuania	467
Norway 1,652 Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Malta	77
Poland 5,347 Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Netherlands	4,471
Portugal 2,804 Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Norway	1,652
Romania 2,659 Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Poland	5,347
Russia 13,736 Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Portugal	2,804
Serbia 564 Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Romania	2,659
Slovakia 1,166 Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Russia	13,736
Slovenia 507 Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Serbia	564
Spain 13,203 Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Slovakia	1,166
Sweden 3,653 Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Slovenia	507
Switzerland 4,124 Turkey 6,945 United Kingdom 16,671	Spain	13,203
Turkey 6,945 United Kingdom 16,671	Sweden	3,653
United Kingdom 16,671	Switzerland	4,124
	Turkey	6,945
Total 176,758	United Kingdom	16,671
	Total	176,758

Note: Medicinal products as defined by Directive 2001/83/EEC

Cyprus, Denmark, Finland, Iceland, Latvia, Lithuania, Norway, Slovenia, Sweden: pharmaceutical market value at pharmacy purchasing prices

Serbia: 2011 data; Malta: 2007 data

Belgium, France, Germany, Ireland, Italy, Malta, Norway, Spain, United

Kingdom: estimate

Source: EFPIA member associations (official figures) – Hungary, Slovakia: IMS Health The figures above are for pharmaceutical sales, at ex-factory prices, through all distribution channels (pharmacies, hospitals, dispensing doctors, supermarkets, etc.), whether dispensed on prescription or at the patient's request. Sales of veterinary medicines are excluded.

VAT RATES APPLICABLE TO MEDICINES

The table below shows the VAT rates applied to medicines in European countries as of 1 January 2015.

	C.	VAT rates applied to medicines	
Country	Standard VAT rate (%)	Prescription (%)	OTC (%)
Austria	20.0	10.0	10.0
Belgium	21.0	6.0	6.0
Bulgaria	20.0	20.0	20.0
Croatia	25.0	5.0	25.0
Cyprus	19.0	5.0	5.0
Czech Republic	21.0	10.0	10.0
Denmark	25.0	25.0	25.0
Estonia	20.0	9.0	9.0
Finland	24.0	10.0	10.0
France (1)	20.0	2.1	10.0
Germany	19.0	19.0	19.0
Greece	23.0	6.5	6.5
Hungary	27.0	5.0	5.0
Iceland	24.0	24.0	24.0
Ireland (2)	23.0	0.0 - 23.0	0.0 - 23.0
Italy	22.0	10.0	10.0
Latvia	21.0	12.0	12.0
Lithuania (3)	21.0	5.0	21.0
Luxembourg	17.0	3.0	3.0
Malta	18.0	0.0	0.0
Netherlands	21.0	6.0	6.0
Norway	25.0	25.0	25.0
Poland	23.0	8.0	8.0
Portugal	23.0	6.0	6.0
Romania	24.0	9.0	9.0
Russia	10.0	10.0	10.0
Serbia	20.0	10.0	10.0
Slovakia	20.0	10.0	10.0
Slovenia	22.0	9.5	9.5
Spain	21.0	4.0	4.0
Sweden	25.0	0.0	25.0
Switzerland	8.0	2.5	2.5
Turkey	18.0	8.0	8.0
United Kingdom	20.0	0.0	20.0

⁽¹⁾ France: reimbursable medicines 2.1%; non-reimbursable medicines 10.0%

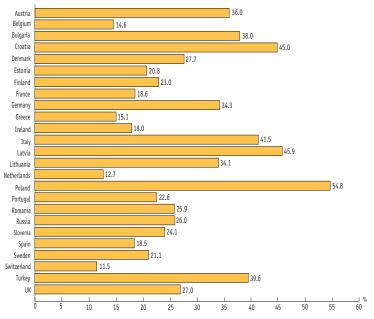
⁽²⁾ Ireland: oral medication 0%; other medication 23%

⁽³⁾ Lithuania: reimbursable medicines 5.0%; non-reimbursable medicines 21.0%

GENERICS

The term 'generic' is widely used but its definition is not always consistent between countries. Generics are usually produced by a manufacturer who is not the inventor of the original product, and are marketed when intellectual property protection rights are exhausted. In general, the market share of generics is significantly higher in newer EU Member States with historically low levels of intellectual property protection.

SHARE (ESTIMATE - IN %) ACCOUNTED FOR BY GENERICS IN PHARMA-CEUTICAL MARKET SALES VALUE (AT EX-FACTORY PRICES), 2013



Note:

Croatia, Denmark, Estonia, Finland, Greece, United Kingdom: share of generics in pharmacy market sales

Austria, Belgium, Bulgaria, France, Germany, Ireland, Italy, Portugal, Slovenia, Spain: share of generics in reimbursable pharmacy market sales

Latvia, Lithuania, Netherlands, Poland, Romania, Russia, Sweden, Switzerland, Turkey: share of generics in total market sales

Cyprus, Czech Republic, Hungary, Iceland, Malta, Norway, Serbia, Slovakia: 2013 data not available

France: data relate only to those active substances listed on the official list of medicines

Definition: 'generic' means a medicine based on an active substance that is out of patent and which is marketed under a different name from that of the original branded medicine

Source: EFPIA member associations

PHARMACEUTICAL EXPORTS

EFPIA 2013	€ million
Austria	7,574
Belgium	36,789
Bulgaria	695
Croatia	410
Cyprus	244
Czech Republic	1,490
Denmark	9,519
Estonia	55
Finland	909
France	28,553
Germany	56,952
Greece	1,051
Hungary	3,654
Ireland	21,239
Italy	18,777
Latvia	297
Lithuania	383
Luxembourg	257
Malta	258
Netherlands	18,935
Norway	585
Poland	2,383
Portugal	732
Romania	930
Russia	284
Slovakia	367
Slovenia	2,317
Spain	10,475
Sweden	6,500
Switzerland	46,934
Turkey	619
United Kingdom	24,966
Total	305,133

All data based on SITC 54

Norway: veterinary products excluded

Source: Eurostat (COMEXT database – December 2014)
Norway: Statistics Norway; Switzerland: Swiss Federal Customs Administration

PHARMACEUTICAL IMPORTS

EFPIA 2013	€ million
Austria	6,787
Belgium	30,918
Bulgaria	919
Croatia	636
Cyprus	223
Czech Republic	2,960
Denmark	3,476
Estonia	306
Finland	1,831
France	22,418
Germany	35,243
Greece	2,752
Hungary	2,696
Ireland	4,506
Italy	18,792
Latvia	456
Lithuania	703
Luxembourg	446
Malta	120
Netherlands	13,123
Norway	1,468
Poland	4,479
Portugal	2,076
Romania	2,650
Russia	9,786
Slovakia	1,520
Slovenia	921
Spain	11,435
Sweden	3,475
Switzerland	18,048
Turkey	3,389
United Kingdom	21,684
Total	230,242

All data based on SITC 54

Norway: veterinary products excluded

Source: Eurostat (COMEXT database – December 2014) Norway: Statistics Norway; Switzerland: Swiss Federal Customs Administration

PHARMACEUTICAL TRADE BALANCE

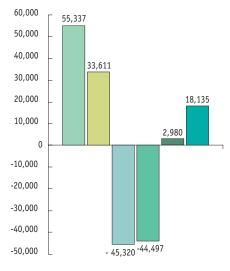
EFPIA 2013	€ million
Austria	787
Belgium	5,871
Bulgaria	- 224
Croatia	- 226
Cyprus	21
Czech Republic	- 1,470
Denmark	6,043
Estonia	- 251
Finland	- 922
France	6,135
Germany	21,709
Greece	- 1,701
Hungary	958
Ireland	16,733
Italy	- 15
Latvia	- 159
Lithuania	- 320
Luxembourg	- 189
Malta	138
Netherlands	5,812
Norway	- 883
Poland	- 2,096
Portugal	- 1,344
Romania	- 1,720
Russia	-9,502
Slovakia	- 1,153
Slovenia	1,396
Spain	- 960
Sweden	3,025
Switzerland	28,886
Turkey	- 2,770
United Kingdom	3,282
Total	74,891

Note: All data based on SITC 54

Norway: veterinary products excluded Source: Eurostat (COMEXT database – December 2014)

Norway: Statistics Norway; Switzerland: Swiss Federal Customs Administration

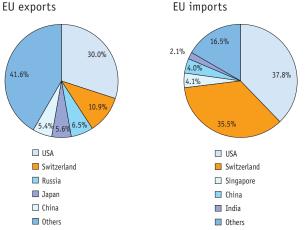
EU-28 TRADE BALANCE - HIGH TECHNOLOGY SECTORS (€ MILLION) - 2014



- SITC 54 Pharmaceutical products
- SITC 71 Power generating machinery and equipment
- SITC 75 Office machines and computers
- SITC 76 Telecommunication, sound, TV, video
- SITC 77 Electrical machinery
- SITC 87 Professional, scientific, controlling material

Source: Eurostat, COMEXT database, April 2015

THE EUROPEAN UNION'S TOP 5 PHARMACEUTICAL TRADING PARTNERS - 2014



Source: Eurostat, COMEXT database, April 2015

TOTAL SPENDING (PUBLIC AND PRIVATE) ON HEALTH-CARE AS A PERCENTAGE OF GDP AT MARKET PRICES

	1970	1980	1990	2000	2010	2012
Austria	5.2	7.5	8.4	10.0	11.1	11.1
Belgium	3.9	6.3	7.2	8.1	10.6	10.9
Czech Republic	-	-	4.4	6.3	7.4	7.5
Denmark	-	8.9	8.3	8.7	11.1	11.0
Estonia	-	-	-	5.3	6.3	5.9
Finland	5.5	6.3	7.7	7.2	9.0	9.1
France	5.4	7.0	8.4	10.1	11.6	11.6
Germany	6.0	8.4	8.3	10.4	11.6	11.3
Greece	5.5	5.9	6.7	8.0	9.5	9.3
Hungary	-	-	-	7.2	8.1	8.0
Iceland	4.7	6.3	7.8	9.5	9.3	9.0
Ireland	5.0	8.1	6.0	6.2	9.2	8.9
Italy	-	-	7.7	7.9	9.4	9.2
Luxembourg	3.1	5.2	5.4	7.5	7.6	7.1
Netherlands	-	7.0	7.5	7.6	11.2	11.8
Norway	4.4	7.0	7.6	8.4	9.4	9.3
Poland	-	-	4.8	5.5	7.0	6.8
Portugal	2.3	4.9	5.6	8.6	10.2	9.5
Slovakia	-	-	-	5.5	8.5	8.1
Slovenia	-	-	-	8.3	9.1	9.4
Spain	3.5	5.3	6.5	7.2	9.6	9.3
Sweden	6.6	8.7	8.1	8.2	9.5	9.6
Switzerland	5.3	7.2	8.0	9.9	10.9	11.4
Turkey	-	2.4	2.7	4.9	5.6	5.4
United Kingdom	4.5	5.6	5.8	6.9	9.4	9.3
Europe	4.7	6.6	6.8	7.7	9.3	9.2
USA	6.8	8.7	11.9	13.1	17.0	16.9
Japan	4.4	6.4	5.8	7.6	9.6	10.3

Note: Europe: non-weighted average (25 countries) - EFPIA calculations

Source: OECD Health Data 2014, November 2014

PAYMENT FOR PHARMACEUTICALS BY COM-PULSORY HEALTH INSURANCE SYSTEMS AND NATIONAL HEALTH SERVICES (ambulatory care only)

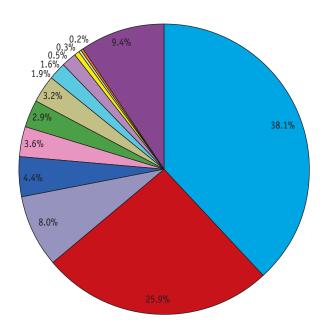
EFPIA 2013	€ million
Austria	2,348
Belgium	3,597
Bulgaria	293
Croatia	462
Cyprus	44
Czech Republic	579
Denmark	734
Estonia	106
Finland	1,273
France	22,585
Germany	30,094
Greece	2,534
Hungary	1,095
Iceland	92
Ireland	1,443
Italy	8,863
Latvia	116
Lithuania	194
Malta	n.a.
Netherlands	4,338
Norway	1,207
Poland	1,711
Portugal	1,160
Romania	1,137
Serbia	263
Slovakia	894
Slovenia	281
Spain	9,183
Sweden	2,030
Switzerland	4,082
Turkey	5,887
United Kingdom	10,760
Total	119,385

Note: Hungary: 2012 data; Slovakia: 2011 data

France, Ireland, Netherlands, Norway, Sweden, United Kingdom: estimate

Source: EFPIA member associations (official figures)

CAUSES OF DEATH BY MAJOR DISEASE AREAS IN EUROPE (EU-28)



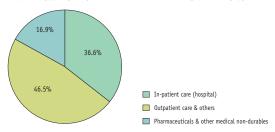
- Diseases of the circulatory system
- Malignant neoplasms
- Diseases of the respiratory system
- Diseases of the digestive system
- Diseases of the nervous system and the sense organs
- Endocrine, nutritional and metabolic diseases
- Mental and behavioural disorders
- Diseases of the genitourinary system
- Certain infectious and parasitic diseases
- Diseases of the musculoskeletal system and connective tissues
- Diseases of the blood(-forming organs) and immune mechanism disorders
- Diseases of the skin and subcutaneous tissue
- Others (non-disease directly related causes of deaths)

Data source: Eurostat, data relate to year 2012 (non-disease directly related causes of deaths: EFPIA calculations), April 2015

THE ADDED VALUE OF MEDICINES IN HEALTHCARE

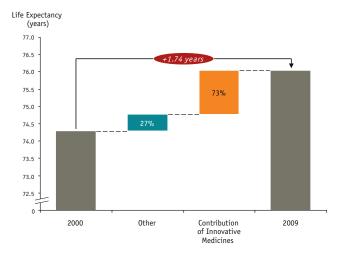
Medicines constitute only a small part of healthcare costs with, on average, 16.9% of total health expenditure in Europe being spent on pharmaceuticals and other medical non-durables. In costly diseases such as cancer and rheumatoid arthritis, medicines account for even less than 10% of the total disease costs. Medicines can also generate additional savings, for example by substantially reducing costs in other areas of healthcare, including hospital stays and long-term care costs.

BREAKDOWN OF TOTAL HEALTH EXPENDITURE IN EUROPE - 2012



Source: OECD Health Data 2014, November 2014 – EFPIA calculations (non-weighted average for 21 EU & EFTA countries)

CONTRIBUTION OF INNOVATIVE MEDICINES TO INCREASE IN LIFE EXPECTANCY (2000-2009)



Source: Lichtenberg, F: Pharmaceutical innovation and longevity growth in 30 developing OECD and high-income countries, 2000-2009 (2012)

EFPIA MEMBER ASSOCIATIONS

Austria

Fachverband der Chemischen Industrie Österreichs (FCIO)

Denmark

Laegemiddelindustriforeningen The Danish Association of the Pharmaceutical Industry (Lif)

France

Les Entreprises du Médicament (LEEM)

Greece

Hellenic Association of Pharmaceutical Companies (SFEE)

Italy

Associazione delle Imprese del Farmaco (Farmindustria)

Norway

Legemiddelindustriforeningen / Norwegian Association of Pharmaceutical Manufacturers (LMI)

Portugal

Associação Portuguesa da Indústria Farmacêutica (Apifarma)

Spain

Asociación Nacional Empresarial de la Industria Farmacéutica (Farmaindustria)

Switzerland

Scienceindustries / Interpharma

Belgium

Association Générale de l'Industrie du Médicament (pharma.be)

Finland

Lääketeollisuus ry

Pharma Industry Finland (PIF)

Germany

Verband Forschender Arzneimittelhersteller (VfA)

Ireland

Irish Pharmaceutical Healthcare Association (IPHA)

Netherlands

Vereniging Innovatieve Geneesmiddelen Nederland (Nefarma)

Poland

Employers Union of Innovative Pharmaceutical Companies (Infarma)

Russia

Association of International Pharmaceutical Manufacturers (AIPM)

Sweden

Läkemedelsindustriföreningen The Swedish Association of the Pharmaceutical Industry (LIF)

Turkey

Arastirmaci Ilac Firmalari Dernegi (AIFD)

United Kingdom

The Association of the British Pharmaceutical Industry (ABPI)

ASSOCIATIONS WITH LIAISON STATUS

Bulgaria: Association of Research-based Pharmaceutical Manufacturers in Bulgaria (ARPharM)

Croatia: Innovative Pharmaceutical Initiative (IF!)

Cyprus: Cyprus Association of Pharmaceutical Companies (KEFEA)

Czech Republic: Association of Innovative Pharmaceutical Industry (AIFP)

Estonia: Association of Pharmaceutical Manufacturers in Estonia (APME)
Hungary: Association of Innovative Pharmaceutical Manufacturers (AIPM)

Latvia: Association of International Research-based Pharmaceutical Manufacturers (AFA)

Lithuania: The Innovative Pharmaceutical Industry Association (IFPA)

Malta: Maltese Pharmaceutical Association (PRIMA)

Romania: Association of International Medicines Manufacturers (ARPIM)

Serbia: Innovative Drug Manufacturers' Association (INOVIA)
Slovakia: Association of Innovative Pharmaceutical Industry (AIFP)

Slovenia: Forum of International Research and Development Pharmaceutical

Industries (EIG)

Ukraine: Association of Pharmaceutical Research and Development (APRaD)

MEMBER COMPANIES

FULL MEMBERS

AbbVie Almirall Amgen

Astellas Pharma EMEA United Kingdom (Japan) AstraZeneca (AZ)

Baxter Bayer HealthCare

Boehringer Ingelheim Bristol-Myers Squibb

Celgene

Biogen

Chiesi Farmaceutici (Chiesi)

Daiichi-Sankyo Europe

Eli Lilly (Lilly) Genzyme

GlaxoSmithKline (GSK)

Grünenthal **Ipsen**

Johnson & Johnson

Lundbeck Menarini Merck

Merck Sharp & Dohme (MSD)

Novartis Novo Nordisk Pfizer Roche Sanofi Servier

Shire Takeda

UCB

USA Spain USA

United Kingdom / Sweden

USA Germany **USA** Germany USA USA Italy

Germany (Japan)

USA USA

United Kingdom

Germany France USA Denmark Italy Germany USA

Switzerland Denmark USA Switzerland

France United Kingdom

Japan Belgium

France

AFFILTATE MEMBERS

Bial Fisai Esteve

Orion Pharma (Orion)

0tsuka Recordati

The Medicines Company

Vifor Pharma

Portugal Japan Spain **Finland** Japan Italv USA Switzerland



EFPIA (The European Federation of Pharmaceutical Industries and Associations) represents the research-based pharmaceutical industry operating in Europe.

Founded in 1978, its members comprise **33** national pharmaceutical industry associations and **40** leading pharmaceutical companies undertaking research, development and manufacturing of medicinal products in Europe for human use.

Its mission is to promote pharmaceutical research and development and the best conditions in Europe for companies to bring to market medicines that improve human health and the quality of life around the world.

Through its membership, EFPIA represents the common views of more than 1,900 large, medium and small companies including the entire European research-based pharmaceutical sector whose interests also include an important part of the generics and biosimilars segments. Two specialised groups have been created within EFPIA to address specific issues relating to vaccines (Vaccines Europe, formerly EVM) and the needs of biopharmaceutical companies (EBE - European Biopharmaceutical Enterprises).

Further details about the Federation and its activities can be obtained from:

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