STATS WINDOW

The Pacific Business Review International has taken an initiative to start a section which will provide a snapshot of major Global & Indian economic indicators and industry review alternatively.

A snapshot of the section in upcoming issues is hereunder:

- Jan. 2016 Economy at a Glance (Global & Indian)
- Feb. 2016 Pharmaceutical industry: Global Scenario
- Mar. 2016 Economy at a Glance (Global & Indian)
- April 2016 Textile Industry: Global Scenario
- May 2016 Economy at a Glance (Global & Indian)

Global Pharmaceutical Industry

This industry comprises companies that manufacture biological, medicinal and pharmaceutical products in various forms including ampoules, tablets, capsules, vials, ointments, powders, solutions and suspensions. The overall pharmaceutical market can be segmented into prescriptionbased (or ethical) products and over-the-counter medications. Industry products are predominantly distributed via wholesalers, and are then sold via pharmacies or distributed in hospitals.

Industry Analysis & Industry Trends

Over the five years to 2015, the Global Pharmaceuticals and Medicine Manufacturing industry experienced moderate growth. Underpinning this growth has been rising demand for healthcare and medications worldwide, especially from emerging economies. Higher healthcare standards and greater emphasis on illness prevention have given pharmaceuticals a higher significance among consumers, driving sales over the period. However, the consequences of the credit crisis and subsequent austerity measures implemented by various governments worldwide translated into cuts in healthcare funding.

Highlights

The global pharmaceutical market is expected to reach sales of nearly \$1.1 trillion by 2015, marked by slowing growth in developed markets and strong sales in emerging markets.

Worldwide prescription drug sales forecast to exceed one trillion dollars in 2020 (CAGR: 5.1% between 2013 and 2020)

In dollar terms, worldwide prescription drugs sales in 2013 relatively flat as the industry's patent cliff tapers off

Bumper year for new drug approvals in US: sales potential of \$24.4bn, 43% higher than the class of 2012

Value of industry's R&D pipeline surges 46% to \$419bn

Bristol-Myers Squibb's anti-PD-1 monoclonal antibody, Nivolumab, becomes the most valuable R&D product at \$23bn

Between 2014 and 2020, \$259bn of sales at risk from patent expiration, but only 46%

expected to materialize due to softer erosions of biological products

Humira projected to be world's largest selling product in 2020 with worldwide sales forecast to be \$12.7bn

Novartis becomes top company by worldwide Rx sales in 2013; Pfizer number two

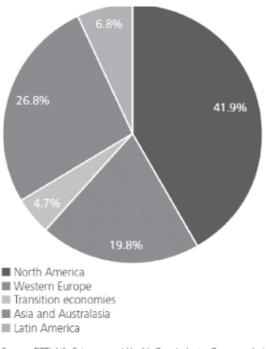
Novartis expected to remain number one, in terms of worldwide Rx sales, in 2020

Worldwide pharmaceutical R&D spend forecast to be \$162bn in 2020 (CAGR: 2.4% between 2013 and 2020)

Oncology set to record highest worldwide sales growth of major therapy categories to 2020 (CAGR: 11.2% between 2013 and 2020)

Within the top 100 prescription products in 2020, biological products expected to account for more than 50% of sales

Pharmaceutical Sales(Region wise)

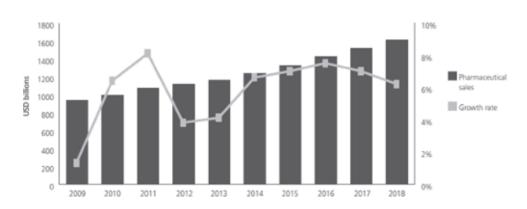


Source: DTTL Life Sciences and Health Care Industry Group analysis of World industry outlook: Healthcare and pharmaceuticals, The Economist Intelligence Unit, May 2014. Also, EIU database

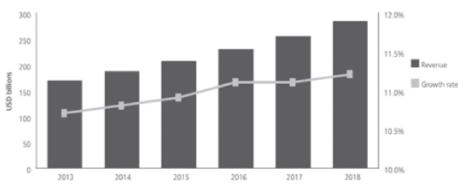
Global Pharmaceutical Segment Revenues

According to the EIU, pharmaceutical sales are projected to increase an average of 6.9 percent annually over 2014-2018, outpacing the estimated global health care spending rate of 5.2 percent during that same period.35 Total pharma revenues are expected to increase from \$1.23 trillion in 2014

to \$1.61 trillion in 2018. In addition to oncology drugs, the cardiovascular therapeutic class will likely prosper, with four of the 10 projected blockbusters drugs belonging to the category. Spending on midmarket prescription drugs used for treating common chronic diseases is likely to stagnate as prices fall. Demand for generic drugs will continue to rise as payors take advantage of patent expiries to reduce costs



Source: DTTL Life Sciences and Health Care Industry Group analysis of World industry outlook: Healthcare and pharmaceuticals, The Economist Intelligence Unit, May 2014



Global Generic Segment Revenues

Source: DTTL Life Sciences and Health Care Industry Group analysis of TechNavio Analysis 2014-2018; Generic Medicines: Essential contributors to the long-term health of society, and IMS data

Worldwide Prescription Drug Sales

More than one trillion dollars of worldwide prescription drug sales expected by 2020

The market for prescription drugs, based on the consensus forecast for the leading 500 pharmaceutical and biotechnology companies, will grow by 5.1% per year (CAGR) to reach \$1,017bn by 2020. Worldwide prescription growth was an uninspiring 0.3% in 2013, close to the 0.4% predicted in the previous edition of the World

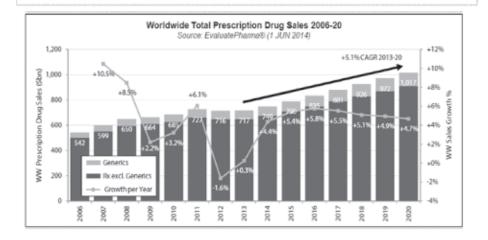
Preview report. This represents a return to modest growth versus the 1.6% contraction in 2012. The depreciation of the yen against the dollar has negatively impacted Japan's contribution to the worldwide market in 2013 by around \$15bn. Sales at risk from patent expiries will average \$3bn per year to 2020; however, as an increasing proportion of sales are from biological products, the predicted erosion post-expiration is expected to be softer, thus protecting industry growth

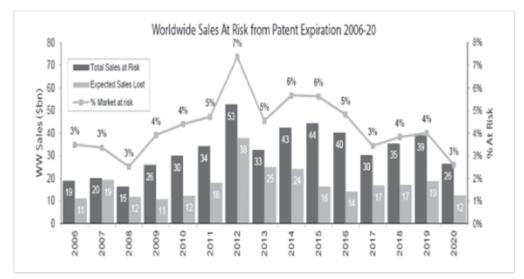
	Pandemio	Flu Co	"noitution	1.1	7.9	5.5	1.7	1.9	2.0	1.9	1.9	1.8	1.9	1.9	2.0	2.1
		WW Pr	escriptic	n Sales	; (\$bn)											
	Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Prescription (Rx)		542	599	650	664	685	727	716	717	749	790	835	881	926	972	1,017
Growth per Year			+10.5%	+8.5%	+2.2%	+3.2%	+6.1%	-1.6%	+0.3%	+4.4%	+5.4%	+5.8%	+5.5%	+5.1%	+4.9%	+4.7%
Generics		40	46	53	52	59	65	66	69	74	79	85	90	96	101	107
Generics as % of Rx		7.4%	7.7%	8.1%	7.8%	8.5%	8.9%	9.2%	9.6%	9.9%	10.0%	10.2%	10.3%	10.4%	10.4%	10.5%
Rx excl. Generics		502	553	597	612	627	662	650	649	675	710	750	791	830	871	911
Growth per Year			+10.1%	+8.0%	+2.5%	+2.4%	+5.7%	-1.9%	-0.2%	+4.0%	+5.3%	+5.6%	+5.4%	+5.0%	+4.9%	+4.6%

Note: Industry sales based on Top 500 pharmaceutical and biotech companies.

Sales to 2013 based on company reported sales data. Sales forecasts to 2020 based on a consensus of leading equity analysts' estimates for company product sales and segmental sales.

*Pandemic Flu products include vaccines and influenza treatments Tamiflu and Relenza

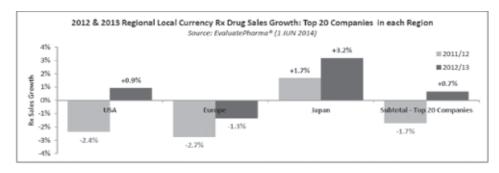




Regional Prescription Drug Sales:USA, Europe & Japan (2011-13)

Key prescription drug sales in 2013 up slightly by 0.7%; Japan up 3.2% in yen, masks 15% slump in dollar terms Europe and Japan increased by a mere 0.7%, based on local currency growth. In terms of local currency, Japan was the strongest performing major market, growing 3.2% in 2013; however, due to depreciation of the yen, the translated US dollar value declined 15%.

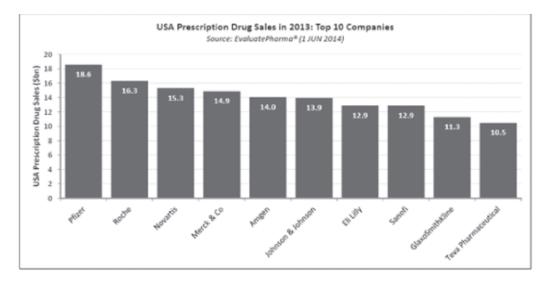
The collective sales from the developed markets of US,



Regional Prescription Drug Sales (2011-13): Observed Top 20 Companies in each Market

		Growth					
		Sales (\$bn)			55)		irrency)
Region	2011	2012	2013	2011/12	2012/13	2011/12	2012/13
USA	211.2	206.2	208.1	-2.4%	+0.9%	-2.4%	+0.9%
Europe	137.9	124.2	126.3	-10.0%	+1.7%	-2.7%	-1.3%
Japan	77.6	76.9	65.4	-0.9%	-15.0%	+1.7%	+3.2%
Subtotal - Top 20 Companies	426.8	407.3	399.8	-4.6%	-1.8%	-1.7%	+0.7%
Unallocated	300.3	308.3	317.6				
Total Worldwide Rx Sales	727.1	715.6	717.5	-1.6%	+0.3%		
Swine Flu Contribution*	1.7	1.9	2.0				
Total Excluding Swine Flu	725.4	713.7	715.5	-1.6%	+0.3%		
2%			,	Based on 6 +1.3%			≡ 20:
1% -							≡ 20: ■ 20:
1% -							
1% -	;)	Europe (Top		+1.3%	Japan	Sub	
1% - 1% - 0%)	Europe (Top		+1.3%	L	Sub	■ 20: Total (USA+EUS+Ja
1% - 1% - 0% - -1% - USA (Private & Public -1% -)	Europe (Top		+1.3%	L	Sub	■ 20: Total (USA+EUS+Ja

Regional Prescription Drug Sales: USA (2011-13)



USA Prescription Drug Sales (2011-13): Top 20 Companies (Pro-forma adjusted for M&A)

	US Rx Sales (\$bn)			Growth (US\$)		
Company	2011	2012	2013	2011/12	2012/13	
1 Pfizer	23.8	19.7	18.6	-17.3%	-5.8%	
2 Roche	13.8	14.8	16.3	+6.9%	+10.2%	
3 Novartis	15.3	15.3	15.3	-0.1%	+0.1%	
4 Merck & Co	17.1	17.0	14.9	-0.4%	-12.8%	
5 Amgen	11.5	12.8	14.0	+11.6%	+9.6%	
6 Johnson & Johnson	12.4	12.4	13.9	+0.3%	+12.3%	
7 Eli Lilly	13.0	12.3	12.9	-5.1%	+4.7%	
8 Sanofi	13.6	12.8	12.9	-5.2%	+0.1%	
9 GlaxoSmithKline	11.4	11.1	11.3	-2.5%	+1.5%	
10 Teva Pharmaceutical	10.5	10.4	10.5	-0.8%	+0.2%	
11 AbbVie	9.7	10.4	10.2	+7.4%	-2.4%	
12 AstraZeneca	13.1	10.6	9.7	-19.2%	-8.6%	
13 Bristol-Myers Squibb	14.7	10.4	8.3	-29.2%	-19.9%	
14 Actavis	5.9	6.9	7.3	+18.3%	+5.3%	
15 Novo Nordisk	5.0	5.9	7.0	+19.0%	+17.6%	
16 Boehringer Ingelheim	6.7	7.1	6.9	+6.4%	-4.0%	
17 Gilead Sciences	4.6	5.6	6.7	+21.3%	+19.7%	
18 Mylan	3.2	3.9	3.9	+20.6%	+0.7%	
19 Celgene	2.9	3.2	3.9	+10.8%	+21.9%	
20 Allergan	3.1	3.4	3.8	+9.5%	+13.6%	
Total	211.2	206.2	208.1	-2.4%	+0.9%	

Worldwide Prescription Drug Sales in 2020: Top 20 Companies

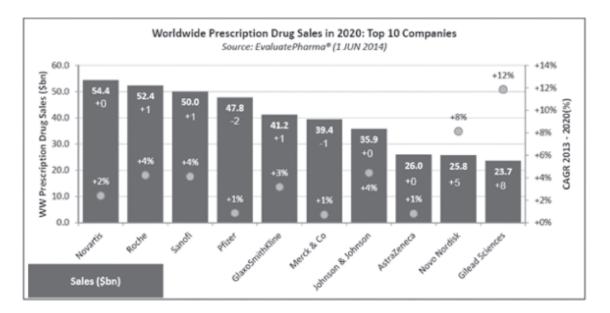
Novartis remains the number one pharmaceutical company through to 2020 with total prescription drug sales of \$54.4bn, representing a 5.3% share of the entire world market. A strong HIV franchise and impressive forecasts for recently approved hepatitis C treatment, Sovaldi, is expected to secure Gilead a place in the top ten by 2020 with total sales of \$23.7bn. In the absence of any future acquisitions, Pfizer is forecast to fall to the number four position by 2020 with total sales of \$47.8bn accounting for 4.7% of the entire prescription drug market. Biogen Idec surges into the top 20, rising eight places, due to the strength of its new oral MS treatment Tecfidera.

(Worldwide Prescription Drug Sales (2013 - 2020): Top 20 Companies & Total Market)

	ww	WW Rx Sales (\$bn)			WW Market Share		
Company	2013	2020	CAGR	2013	2020	Chg. (+/-)	Chg. (+/-
1 Novartis	46.0	54.4	+2%	6.4%	5.3%	-1.1pp	+0
2 Roche	39.1	52.4	+4%	5.5%	5.1%	-0.3pp	+1
3 Sanofi	37.7	50.0	+4%	5.3%	4.9%	-0.3pp	+1
4 Pfizer	45.0	47.8	+1%	6.3%	4.7%	-1.6pp	-2
5 GlaxoSmithKline	33.1	41.2	+3%	4.6%	4.1%	-0.6pp	+1
6 Merck & Co	37.5	39.4	+1%	5.2%	3.9%	-1.4pp	-1
7 Johnson & Johnson	26.5	35.9	+4%	3.7%	3.5%	-0.2pp	+0
8 AstraZeneca	24.5	26.0	+1%	3.4%	2.6%	-0.9pp	+0
9 Novo Nordisk	14.9	25.8	+8%	2.1%	2.5%	+0.5pp	+5
10 Gilead Sciences	10.8	23.7	+12%	1.5%	2.3%	+0.8pp	+8
11 AbbVie	18.8	23.2	+3%	2.6%	2.3%	-0.3pp	-1
12 Bayer	15.6	22.4	+5%	2.2%	2.2%	+0.0pp	+1
13 Bristol-Myers Squibb	12.3	21.6	+8%	1.7%	2.1%	+0.4pp	+4
14 Amgen	18.2	20.9	+2%	2.5%	2.1%	-0.5pp	-3
15 Takeda	13.4	18.4	+5%	1.9%	1.8%	-0.1pp	+1
16 Eli Lilly	20.1	18.1	-2%	2.8%	1.8%	-1.0pp	-7
17 Boehringer Ingelheim	14.5	15.6	+1%	2.0%	1.5%	-0.5pp	-2
18 Teva Pharmaceutical Industries	17.6	15.2	-2%	2.4%	1.5%	-1.0pp	-6
19 Astellas Pharma	10.3	14.5	+5%	1.4%	1.4%	-0.0pp	+0
20 Biogen Idec	5.4	13.0	+13%	0.8%	1.3%	+0.5pp	+8
Total Top 20	461.3	579.5	+3%	64.3%	57.0%	-7.3pp	
Other	256.2	437.9	+8%	35.7%	43.0%		
Total	717.5	1,017.4	+5%	100.0%	100.0%		

Source: EvaluatePharma® (1 JUN 2014)

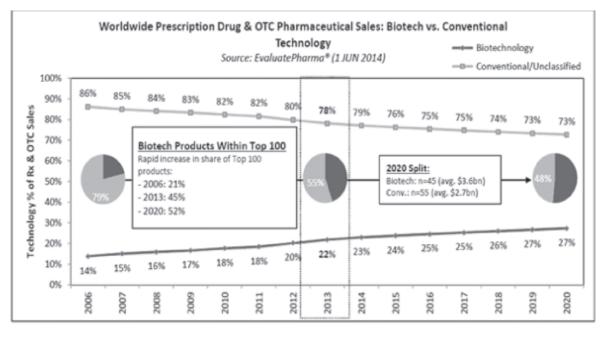
Note: Prescription drug sales include generic drug sales. Excludes alliance revenue and royalties where possible.



Worldwide Prescription Drug & OTC Sales by Technology (2006-20)

The percentage of sales from biotechnology products (bioengineered vaccines & biologics), within the world's top 100, is set to increase from 45% to 52% in 2020. In the broader market, sales from biotechnology products are expected to account for 27% of the world's pharmaceutical sales by 2020, versus the current share of 22% in 2013. Roche is expected to

remain the biggest player in the biotechnology space with sales increasing by \$14.5bn to \$43.5bn in 2020, representing an annual growth of 6% per annum. Bristol-Myers Squibb is forecast to show the strongest growth of 21% per year, largely due to its investigational anti-programmed death-1 (PD-1) monoclonal antibody Nivolumab.



Worldwide Prescription Drug Sales from Biotechnology in 2020: Top 10 Companies

		ww	Sales	(\$bn)	WW Market S	Share	Chg.	Rank
	Company	2013	2020	% CAGR 13-20	2013	2020	(+/-)	Chg.
1	Roche	29.0	43.5	+6%	17.6%	15.0%	-2.6pp	+0
2	Sanofi	14.5	26.1	+9%	8.8%	9.0%	+0.2pp	+1
3	Novo Nordisk	14.0	24.7	+8%	8.5%	8.5%	+0.0pp	+1
4	Amgen	16.8	18.0	+1%	10.2%	6.2%	-4.0pp	-2
5	Pfizer	10.2	17.2	+8%	6.2%	5.9%	-0.3pp	+1
6	Merck & Co	7.9	13.8	+8%	4.8%	4.7%	-0.1pp	+2
7	AbbVie	11.5	13.7	+3%	7.0%	4.7%	-2.3pp	-2
8	Johnson & Johnson	9.5	13.6	+5%	5.7%	4.7%	-1.1pp	-1
9	Bristol-Myers Squibb	3.1	11.9	+21%	1.9%	4.1%	+2.2pp	+6
10	Eli Lilly	5.7	11.5	+11%	3.4%	4.0%	+0.5pp	-1

Note: Company drug sales from undisclosed products are presumed to be from conventional (small molecule) technology.

Top 20 Most Valuable R&D Projects (Ranked by Net Present Value)

NPV Analyzer finds the total value (NPV) of the industry's R&D pipeline has surged 46%, to \$419bn. The main driver of growth is an exciting new class of cancer products targeting the programmed death-1 (PD-1) pathway with a collective value of \$63bn.

Bristol-Myers's potential new anti-PD-1, Nivolumab is the world's most valuable R&D product valued at \$23.2bn, followed by two other potential anti-PD-1 products: Merck's

MK-3475 (pembrolizumab) and Roche's RG7446, valued at \$16.7bn and \$15.6bn, respectively. Eight of last year's top 20 have since been approved and have collectively seen their NPVs increase 57% since June 2013, releasing \$74.8bn of value from the industry's pipeline. Gilead's Sovaldi continues to impress investors, with its value increasing 33% to \$37.9bn over the year.

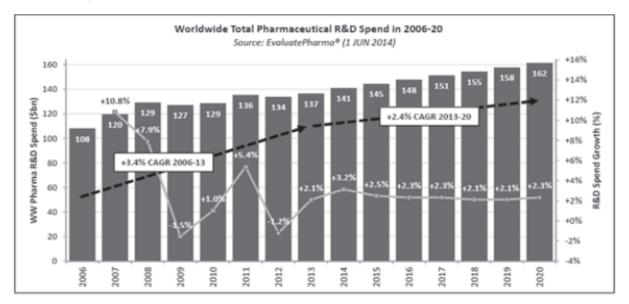
	Product	Company	Phase (Current)	V Pharmacological Class	W Product Sale: 2920	a (\$111)	Today's N (Sm)
	1 Nivolumab	Bristol-Myers Squibb	Phase II	Anti-programmed death-1 (PO-1) MA	b 6,012		23,450
	2 MK-3475	Merck & Co	Flied	Anti-programmed death-1 (PO-1) MA	b 4,063	new entry	16,747
	3 RG7446	Roche	Phese II	Anti-programmed death-1 ligand-1 (PD-L1) MAb	2,937	new entry	15,639
	4 Obeticholic acid	Intercept Pharmaceuticals	Phase II	Famesold X receptor (FXR) agonist	2,992	new entry	11,426
	5 Ledipasvir/Sofosbuvir	Gilead Sciences	Filed	Hepatitis C nucleoside NS5A & NS5B polymerase inhibitor	2,818		9,876
	6 Palbociclib	Pfizer	Phase II	Cyclin-dependent kinase (CDK) 4 & 6 inhibitor	2,950		7,925
	7 DCVax-L	Northwest Biotherapeuties	Phase II	Cancer vaccine	2,046	new entry	6,502
	a VX-809 + ivacaftor	Verlex Pharmaceuticals	Phase II	Cystic fibrosis transmonionane conductance regulator (CFTR) connector	1,900		6,011
	9 MED14736	AstraZeneca	Phase II	Anti-programmed death-1 ligand-1 (PD-L1) MAb	967	new entry	4,711
	10 Lampalizumab	Roche	Phase II	Anti-complement factor D MAb	1,122	new entry	4,520
	11 Revascor	Mesoblast	Phase II	Mesenchymal stem cell	-	new entry	4,332
	12 ideialisib	Gliead Sciences	Filed	Phosphatidylinositol 3-kinase (PI3K) Inhibitor	1,273	new entry	3,615
	13 Evolocumab	Amgen	Pheae II	Anti-proprotein convertase sublitain- like kesin type 8 (PCSK8) MAb	1,093	new entry	3,563
	14 LCZ696	Novartis	Phase II	AT1 receptor-neprilysin (ARNI) Inhibitor	1,329	new entry	3,005
	15 Nivolumab	One Pharmaceutical	Filed	Anti-programmed death-1 (PO-1) MA	b 348		2,996
	18 Alirocumab	Sanofi	Phase II	Anti-proprotein convertase aubilinin- like kesin type 9 (PCSK9) MAb	1,048		2,950
	17 Plegridy	Biogen Idec	Filed	Interferon beta	1,047	new entry	2,934
	18 Abemaciclib	BLUIY	Phase II	Cyclin dependent kinase (CDK) 4 & 6 inhibitor	651	new entry	2,922
	19 Ocretizumab	Roche	Phase II	Anti-CD20 MAb	894	new entry	2,777
	20 Secukinumab	Novartis	Filed	Anti-Interleukin-17 (IL-17) MAb	1,030	new entry	2,735
	Top 20				36,520		136,332
	Other				111,649		282,192
1	Iotal				148,169		418,525

Top 20 Most Valuable R&D Projects (Ranked by Net Present Value)

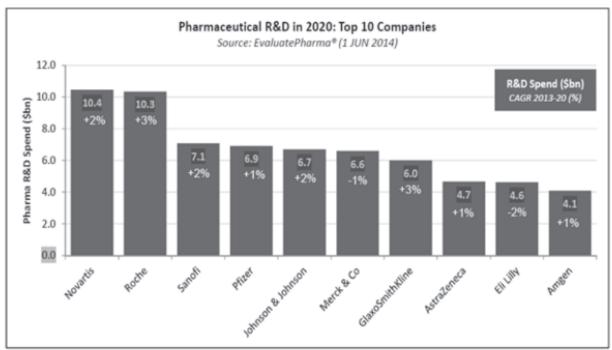
Worldwide R&D Spend by Pharma & Biotech Companies (2006-20)

The worldwide pharmaceutical R&D totalled \$137bn in 2013 representing an increase of 2.1% on the previous year when R&D spend, in dollar terms, actually declined. Looking forward, R&D spend is forecast to grow at a rate of

2.4% per year, which contrasts with the compound annual growth rate of 3.4% between 2006 and 2013. The spend per NME, based on a three-year lag period between R&D expenditure and NME approval*, returned to the level of 2011, or \$3.7bn per NME. Over the past ten years, the pharmaceutical industry invested over \$1.2 trillion in R & D



Pharmaceutical R&D Spend in 2020: Top 20 Companies The forecast finds Novartis will continue to spend the most on research and development in 2020, with a spend of \$10.4bn in 2020. Of the top 20, Biogen Idec is forecast to grow its R&D expense the most rapidly, with R&D forecast to increase 10% per year from \$1.4bn to \$2.8bn in 2020. Overall, total R&D spend is expected to increase by 2.4% each year, reaching \$161.5bn in 2020.



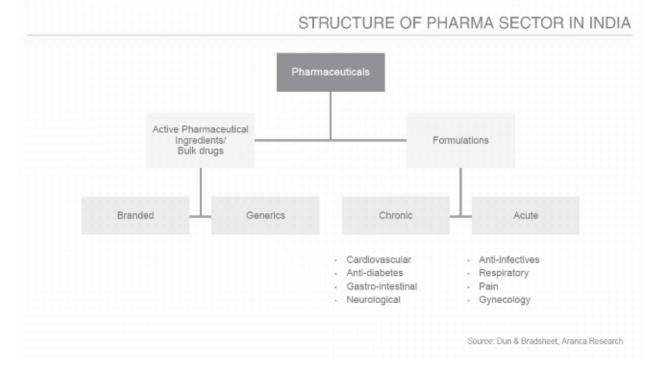
Pharmaceutical R&D Spend (2013 & 2020): Top 20 Companies & Total Market

	Pharma P	R&D (\$bn)		R&D As a % o	R&D As a % of Rx Sales			
Company	2013	2020	CAGR 13-20	2013	2020	Chg. (+/-)		
1 Novartis	9.4	10.4	+2%	20.3%	19.5%	-0.8pp		
2 Roche	8.3	10.3	+3%	21.2%	19.7%	-1.4pp		
3 Sanofi	6.1	7.1	+2%	16.2%	14.1%	-2.1pp		
4 Pfizer	6.6	6.9	+1%	14.6%	14.4%	-0.1pp		
5 Johnson & Johnson	5.8	6.7	*2%	21.9%	18.6%	-3.3pp		
6 Merck & Co	7.1	6.6	-1%	19.0%	16.7%	-2.3pp		
7 GlaxoSmithKline	5.0	6.0	+3%	15.3%	14.6%	-0.7pp		
8 AstraZeneca	4.3	4.7	+1%	17.4%	17.9%	+0.5pp		
9 Eli Lilly	5.3	4.6	-2%	26.4%	25.6%	-0.8pp		
10 Amgen	3.9	4.1	+1%	21.7%	19.6%	-2.1pp		
11 Bristol-Myers Squibb	3.7	4.1	+ 1%	30.2%	18.9%	-11.3pp		
12 Bayer	2.7	3.9	+5%	17.4%	17.4%	-0.0pp		
13 Boehringer Ingelheim	3.2	3.5	+1%	22.4%	22.5%	+0.0pp		
14 AbbVie	2.8	3.5	+3%	15.1%	15.0%	-0.1pp		
15 Takeda	3.4	3.4	-0%	25.5%	18.5%	-7.0pp		
16 Novo Nordisk	2.1	3.3	+7%	14.0%	12.9%	-1.1pp		
17 Gilead Sciences	2.1	3.1	+6%	19.0%	13.0%	-6.1pp		
18 Celgene	1.7	3.1	+9%	26.0%	24.9%	-1.1pp		
19 Biogen Idec	1.4	2.8	+10%	26.6%	21.6%	-5.0pp		
20 Astellas Pharma	1.9	2.7	+5%	18.5%	18.9%	+0.4pp		
Total Top 20	86.9	100.8	+2.1%	19.3%	19.3%	-0.0pp		
Other	49.8	60.7	+2.9%					
Total	136.7	161.5	+2.4%	19.1%	15.9%	-3.2pp		

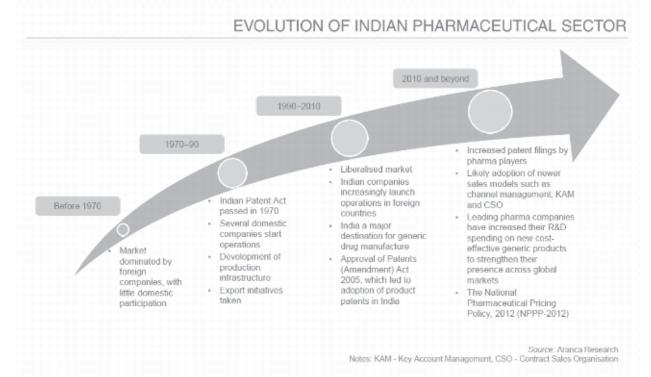
Source: EvaluatePharma® (1 JUN 2014)

Note: Forecast pharmaceutical R&D spend based on a consensus of leading equity analysts' estimates for company-level R&D spend.

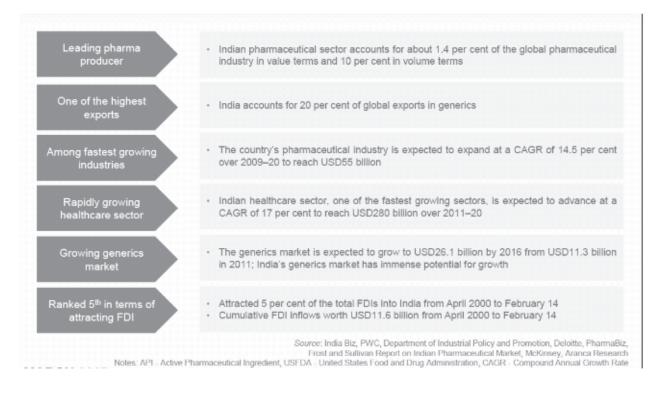
Indian Pharmaceutical Sector



Evolution of Indian Pharmaceutical sector

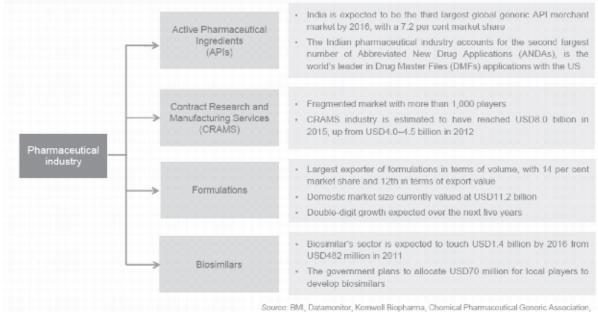


Highlights of Indian Pharmaceutical Sector



Indian Pharmaceutical Industry

API IS THE LARGEST SEGMENT OF THE INDIAN PHARMACEUTICALS SECTOR



wree: BMI, Datamonitor, Kornwell Biopharma, Chemical Pharmaceutical Generic Association, ICRA Report estimates, Aranca Research, pharmanewsprwire.com Note: OTC - Over The Counter

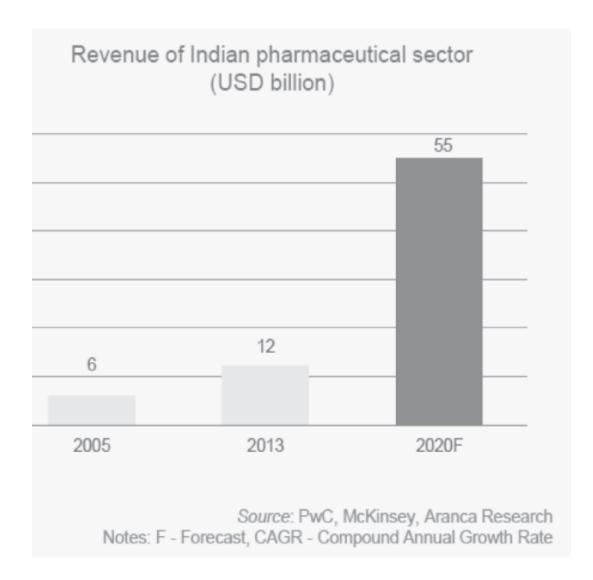
Indian Pharmaceutical industry Revenue Growth

The Indian pharmaceuticals market increased at a CAGR of 9.4 per cent in 2013 from USD6 billion in 2005, and is expected to expand at a CAGR of 23.9 per cent to USD55 billion by 2020.

By 2020, India is likely to be among the top three

pharmaceutical markets by incremental growth and sixth largest market globally in absolute size.

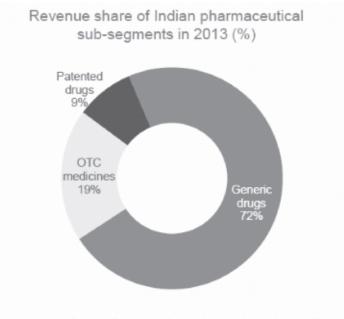
Indias cost of production is significantly lower than that of the US and almost half of that of Europe. It gives a competitive edge to India over others.



Indian Pharmaceutical Market

With 72 per cent of market share (in terms of revenues), generic drugs form the largest segment of the Indian pharmaceutical sector India s generic drugs account for 20 per cent of global exports in terms of volume, making the

country the largest provider of generic medicines globally and expected to expand even further in coming years .Over the Counter (OTC) medicines and patented drugs constitute 19 per cent and 9 per cent, respectively, of total market revenues.

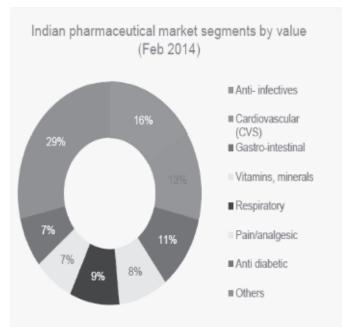


Source: Business Monitor International, Aranca Research

Indian pharmaceutical market segments by value

Anti-infective drugs command the largest share (16 per cent) in the Indian pharma market .The cardiovascular segment represents 13 per cent of the market share; its contribution is likely to rise due to the growing number of

cardiac cases in India .Gastro-intestinal contributes around 11 per cent of the total value of pharma industry in India. With increasing number of research in gastroenterology, segment is going to grow at significant pace in coming years .Top five segments contribute nearly 57 per cent to the total drugs consumption.



Source: All Indian Origin Chemists & Distributors, Department of Pharmaceuticals, Planning Commission Report, Aranca Research

Indian Pharma Exports

Indian pharma companies are capitalising on export opportunities in regulated and semi-regulated markets. The Ministry of Commerce targets to export USD25 billion worth of pharmaceuticals in 2016. Indian drugs are exported to more than 200 countries in the world, with the US as the

key market .India is the world s largest provider of generic

medicines; the country s generic drugs account for 20 per cent of global generic drug exports (in terms of volumes)

In terms of value, exports of pharmaceutical products increased at a CAGR of 26.1** per cent to USD10.1 billion during FY06–13 .The Americas accounted for around 34 per cent of Indian pharma exports in FY13, followed by Europe (26 per cent) and Asia (20 per cent) .Exports to Africa increased at a CAGR of 21 per cent from FY09 to FY13, contributed mainly by export of anti-malarial and anti-retroviral drugs .During the same period, imports of pharmaceutical products rose at a CAGR of 25.4** per cent to USD1.8 billion.



Top Pharma Firms in India

Cipla has the largest share (5.0 per cent) in the Indian pharma market, with MAT sales of USD1675.6 million during March 2014

Sun Pharma posted the highest growth in revenue (20 per cent) among major players during the same period

GlaxoSmithKline, with a revenue base of USD422.4

million for March 2014 MAT sales, ranks third in the market

Ranbaxy ranks fourth in the market, with a revenue base of USD734.1 million for March 2014 MAT sales

While these top four companies garnered 20 per cent market share, top 10 companies comprise nearly 39 percent of the market share

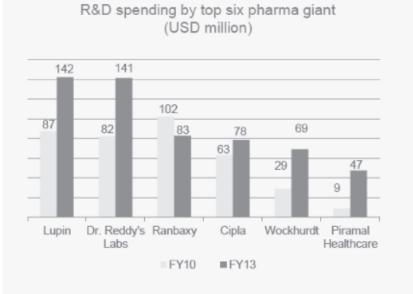


Source: All Indian Origin Chemists & Distributors, Equity Master, BMI, Aranca Research Notes: Market share is in terms of revenue, MAT - Moving Annual Total

Research & Development

In FY14, most of the leading pharma players spent anywhere between USD80-200 billion on R&D, which

represented an increase both in absolute term as well as in proportion to net revenues (8-11 per cent of sales) .By 2020, the Indian healthcare sector is expected to reach USD280 billion from USD70 billion currently.



Source: ICRA, Deloitte, PWC, Aranca Research Note: R&D - Research and Development

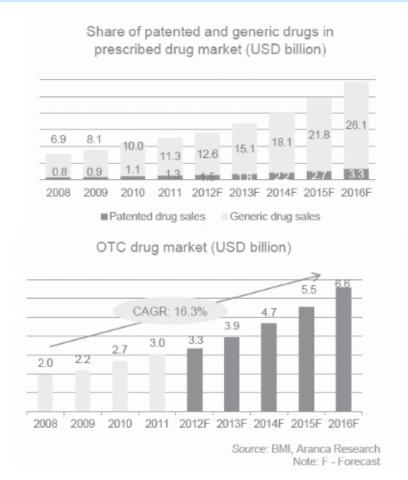
Trends in Indian Pharma Sector

Research and development	 Indian pharma companies spend 8-11 per cent of their total turnover on R&D Expenditure on R&D is likely to increase due to the introduction of product patents; companies need to develop new drugs to boost sales
Export revenue	 India's pharmaceutical export market is thriving due to strong presence in the generics space Pharmaceuticals Exports Promotion Council expects pharma exports to reach USD25 billion in 2016
Joint Ventures	 Multinational companies are collaborating with Indian pharma firms to develop new drugs Pfizer partnered with Aurobindo Pharma to develop generic medicines Six leading pharmaceutical companies have formed an alliance 'LAZOR' to share their best practices, so as to improve efficiency and reduce operating costs
Expansion by Indian players abroad	 Cipla, the largest supplier of anti-malarial drugs to Africa, set up a USD32 billion plant in Africa for the production of anti-retroviral and anti-malarial drugs Ranbaxy, the fifth-largest pharmaceutical company in South Africa, installed a USD30 million manufacturing facility in Johannesburg in 2010
PPP in R&D	 Indian Government plans to involve the private sector in R&D mainly for sectors such as vaccines, drugs and pharmaceuticals, super computing, solar energy and electronic hardware The government has invested USD1.1 billion in the Public-Private Partnership fund to support R&D in India
Patents Act	 Amendments to the Patents Act, 1970, to make it TRIPS compliant Increased incentives to domestic firms to conduct R&D Increased likelihood of technology transfer from developed nations
Product Patents	 The introduction of product patents in India in 2005 gave a boost to the discovery of new drugs India reiterated its commitment to IP protection following the introduction of product patents
Less time for approval	 In order to compete with global player in pharmaceutical industries, approval process of drugs has been simplified by the authorities and approval time for new facilities has been drastically reduced
	Source: Aranca Research Note: R&D - Research and Development

Future Opportunities

The share of generic drugs is expected to continue increasing; it could represent about 90 per cent of the prescription drug market by 2016. Due to their competence in generic drugs, growth in this market offers a great

opportunity for Indian firms.Generic drug market is expected to grow in the next few years, with many drugs going off-patent in the US and other countries.



India s OTC drugs market stood at USD3 billion in 2011 and is expected to expand at a CAGR of 16.3 per cent to USD6.6 billion over 2008–16 .Inclusion of various other drugs and cosmetics under the OTC market may further boost the sector .There is a huge market for OTC drugs as the penetration of chemists in the rural market increases .

Role of Pharmaceutical Industry in India GDP- Some Facts

The Pharmaceutical Industry in India is one of the largest in the world

It ranks 4th in the world, pertaining to the volume of sales

The estimated worth of the Indian Pharmaceutical Industry is US\$6 billion

The growth rate of the industry is 13% per year

Almost most 70% of the domestic demand for bulk drugs is catered by the Indian Pharma Industry

The Pharma Industry in India produces around 20% to 24% of the global generic drugs

The Indian Pharmaceutical Industry is one of the biggest producers of the active pharmaceutical ingredients

(API) in the international arena

Around 40% of the total pharmaceutical produce is exported

55% of the total exports constitute of formulations and the other 45% comprises of bulk drugs

The Indian Pharma Industry includes small scaled, medium scaled, large scaled players, which totals nearly 300 different companies

Pharmaceutical Industry in India-Growth Prospects

As per the present growth rate, the Indian Pharma Industry is expected to be a US\$ 20 billion industry by the year 2015

The Indian Pharmaceutical sector is also expected to be among the top ten Pharma based markets in the world in the next ten years

The sales of the Indian Pharma Industry would worth US\$ 43 billion within the next decade

The Pharma industry in India is one of the major foreign direct investments encouraging sectors