

USS

A Helicopter View of the Pharmaceutical Industry

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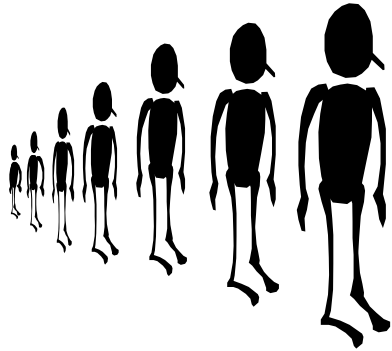
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Discussion Topics Today

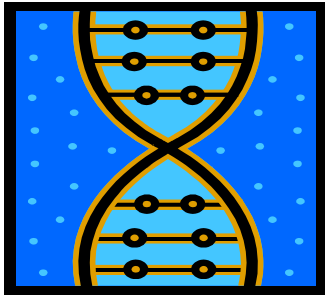
- Seismic Shifts in the Market
- The Environment
 - Market slowdown
 - Patent expiries
 - R&D productivity
 - Stock market performance
- Sales drivers in more detail
 - Geographic shifts
 - Therapeutic categories and portfolio mix shifts
 - Regulatory pressures, value for money and health technology assessments
- Cost drivers
 - Offshoring/outsourcing
 - Managing sales and marketing expenses
- Corporate social responsibility/reputation and sustainability



Four seismic shifts in the global pharmaceutical market



Demographic



Technological



Geographic

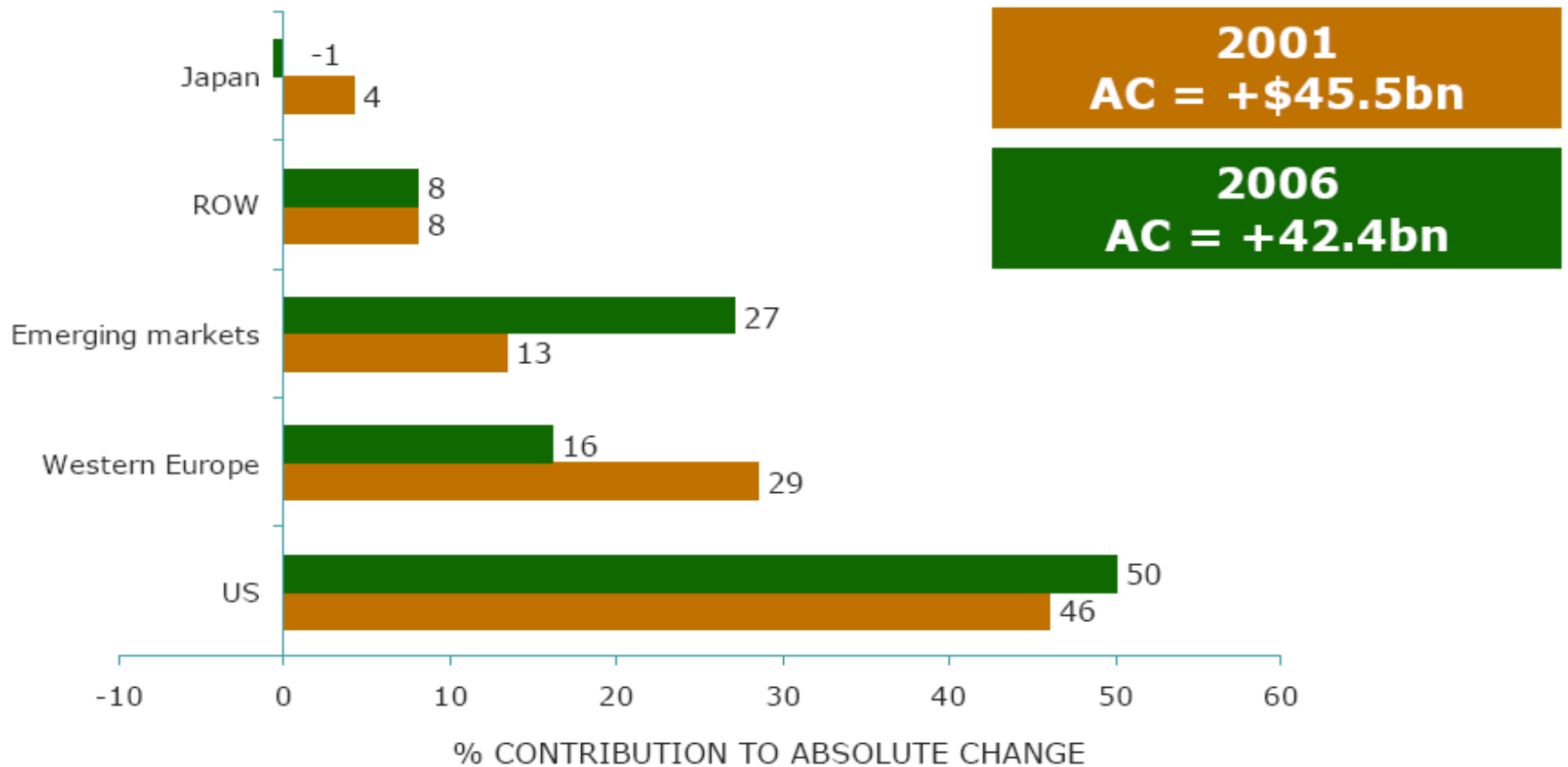


Expectational

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US the Key Driver but Emerging Markets Looking Strong

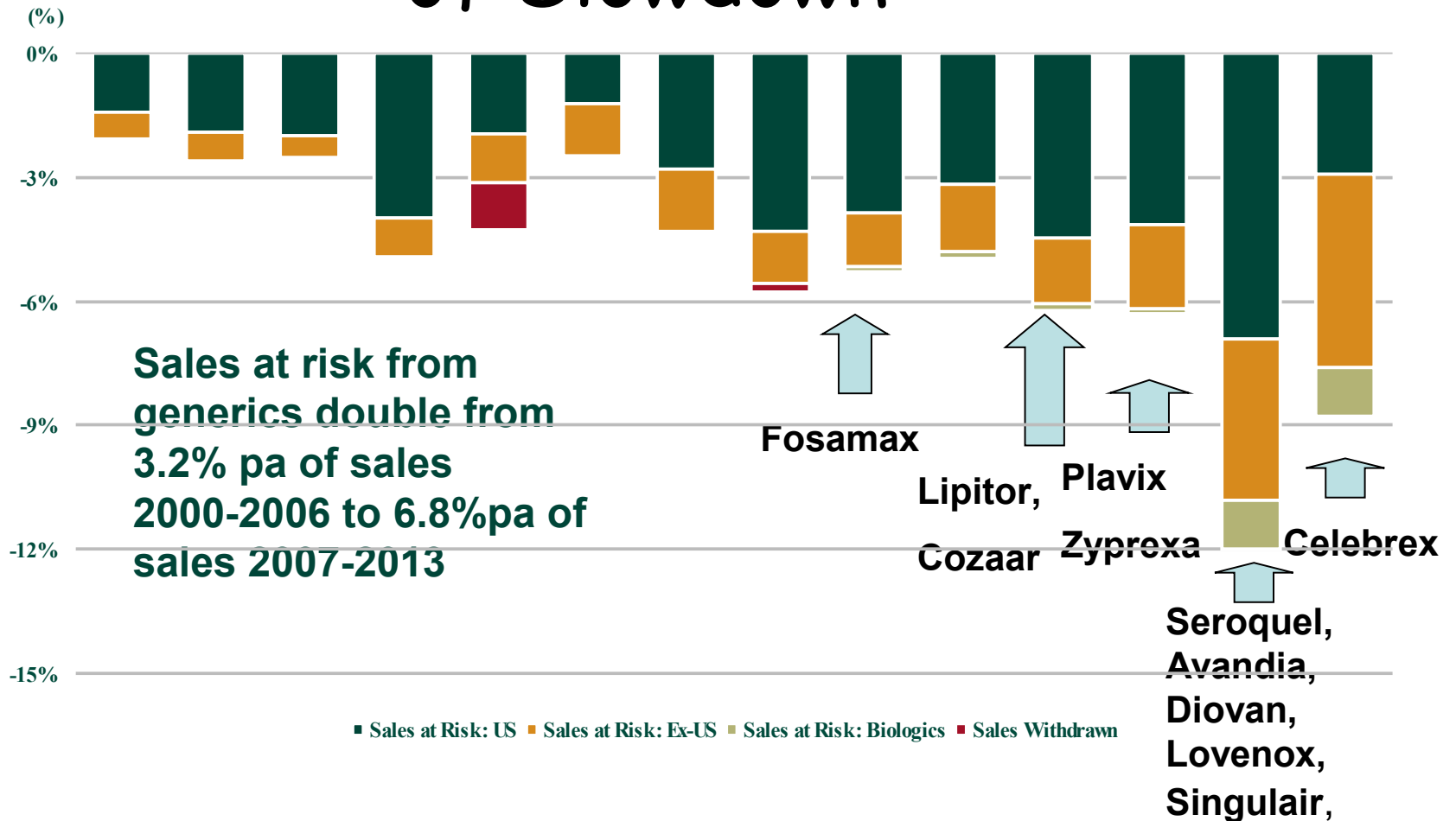


Source: IMS Health, IMS Market
prognosis International, Feb 2007



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Patent Expiries are the Key Drivers of Slowdown

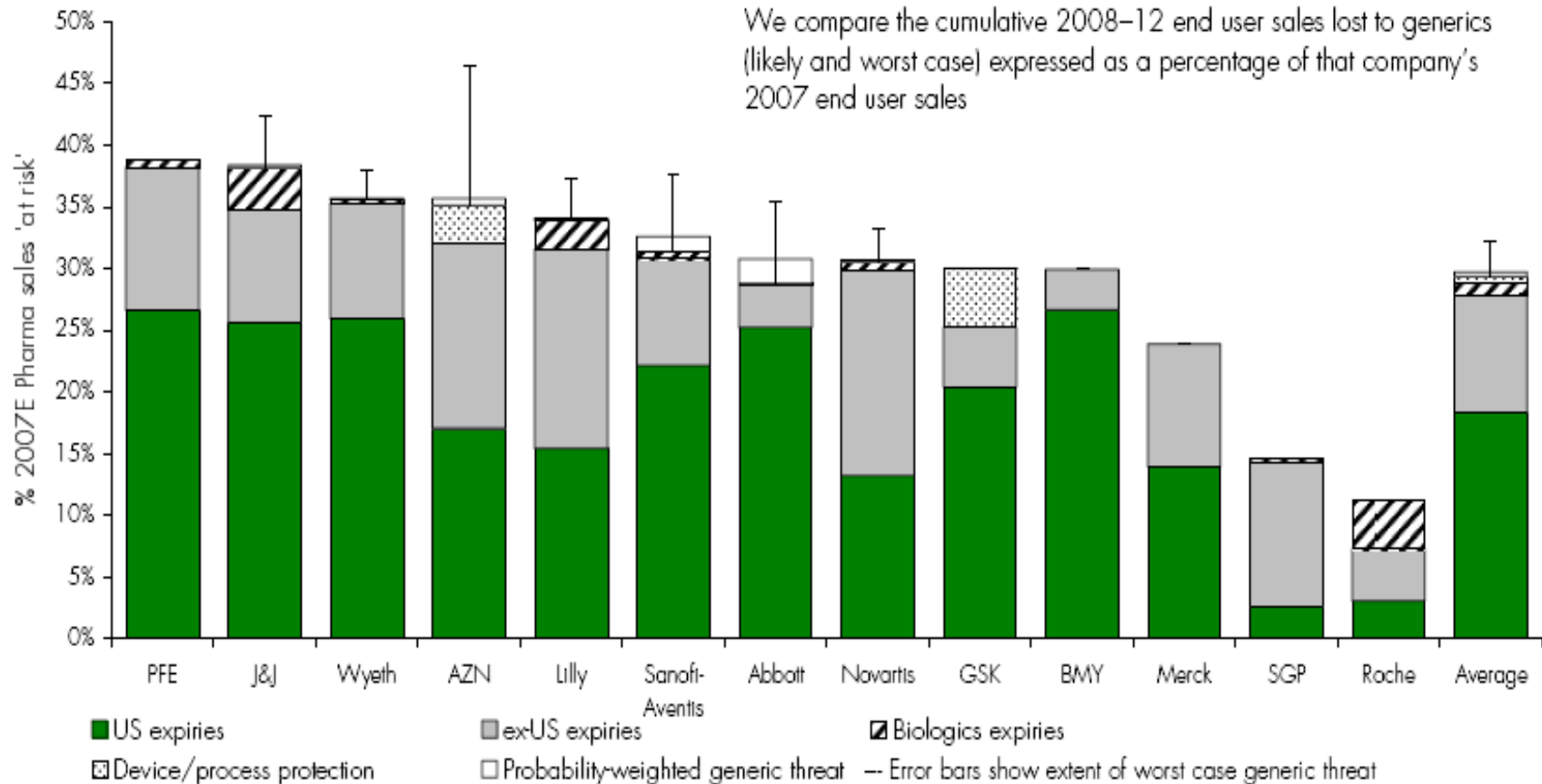


Source: Lehman Brothers Pharmaceutical Research



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Sales at Risk from Generics 2008-12E as % of 2007E Sales



Source: Lehman Brothers Pharmaceutical Research



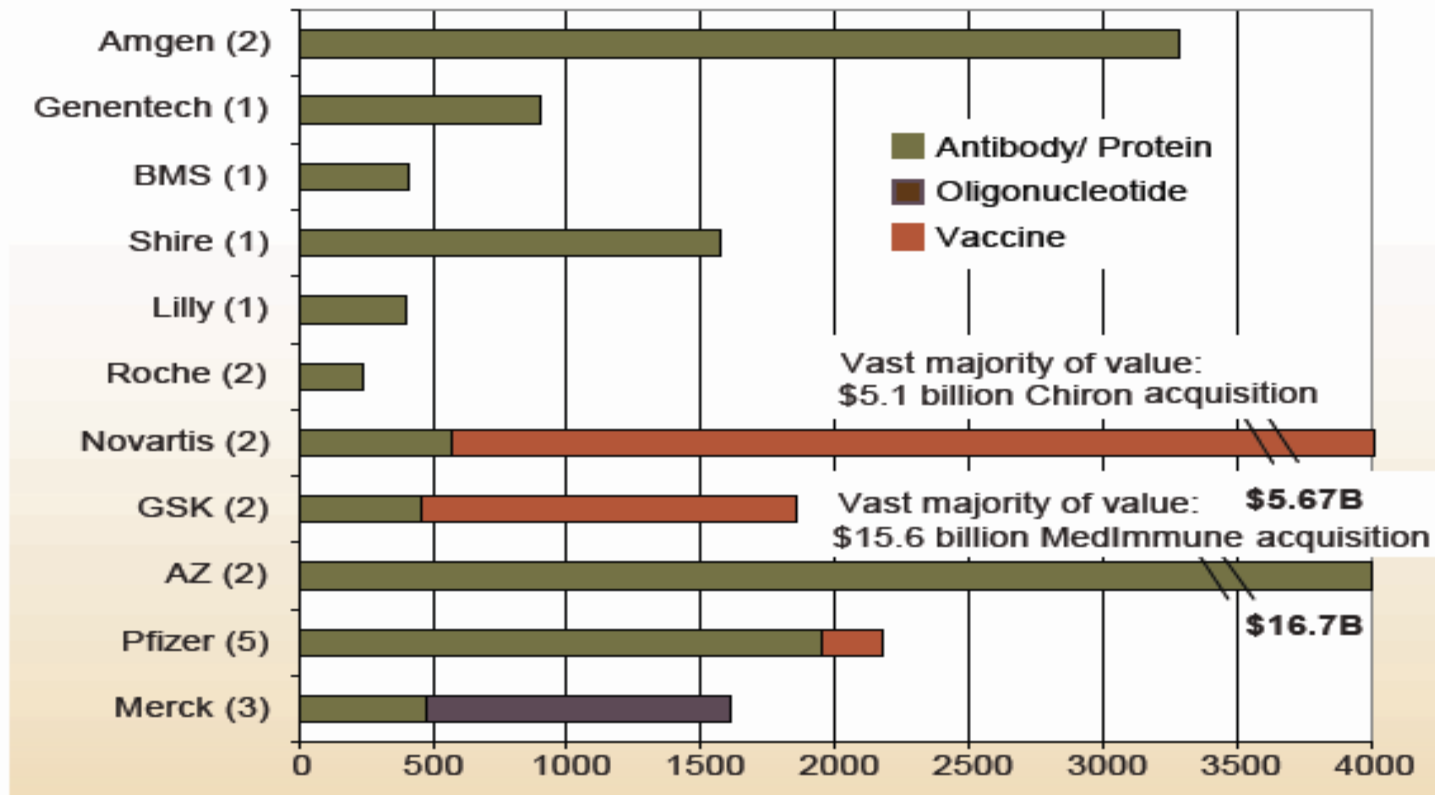
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Pharma Has Spent \$80bn on Biotech

Exhibit 3

Biologics Acquisitions of Selected Pharmas and Biotechs

(2003 – 2007)

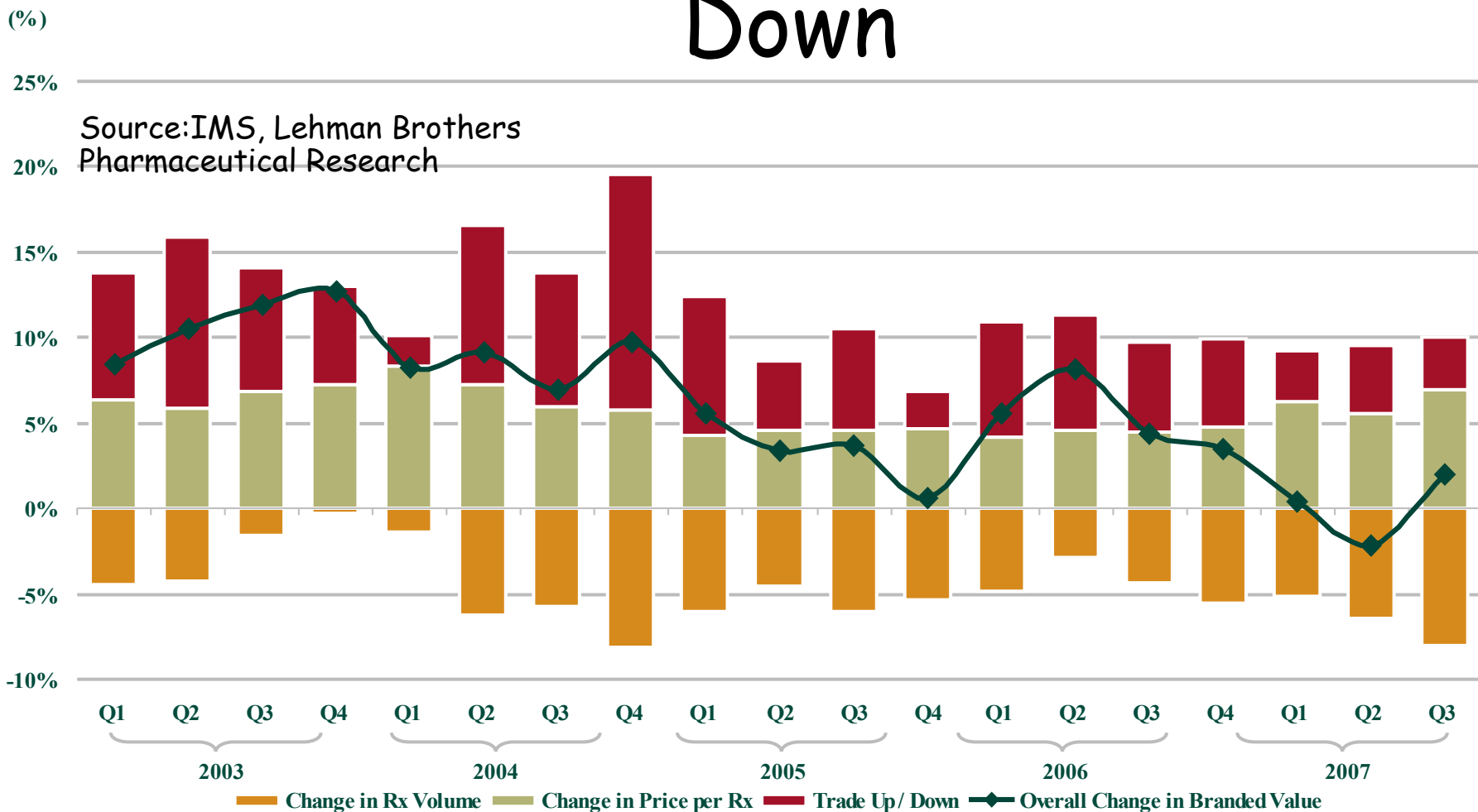


SOURCE: Company websites and Windhover's Strategic Transactions Database

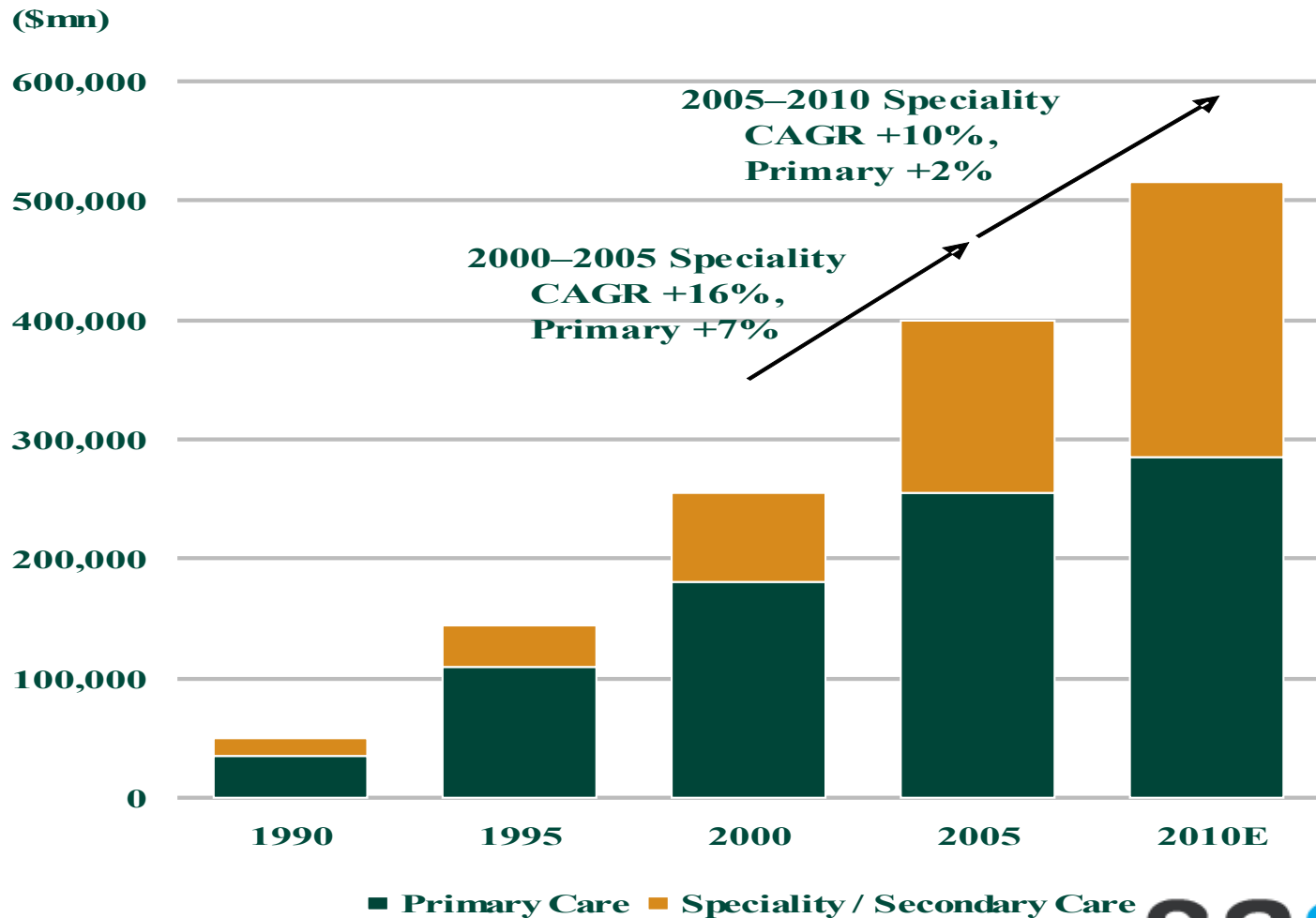


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US Branded Rx Volumes Still Down



Specialty/Secondary Care is Key Driver of Growth



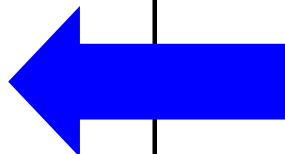
Source: Lehman Brothers
Pharmaceuticals Research



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Shift in Mix Will Drive Margins

Sales	2007	2011	CAGR
Primary care	250	275	2%
Secondary/speciality care	150	220	10%
	400	495	5%
M&S spend as % of sales			
Primary Care	40%	40%	
Secondary/specialty care	22%	22%	
Blended rate	33.3%	32.0%	
Absolute \$ spent			
Primary care	100	110	2%
Secondary/specialty care	33	48.4	10%
Total	133	158.4	4%



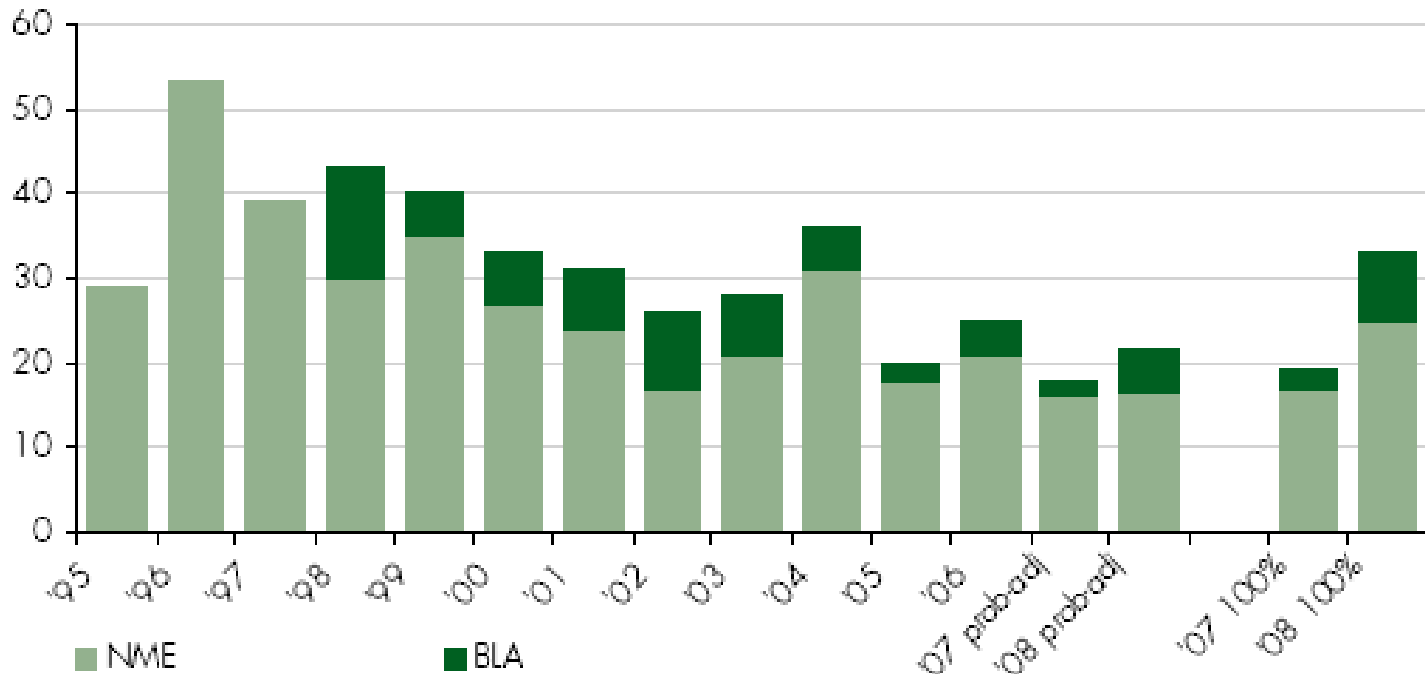
**1.3%
margin gain
just
through mix
shift**

Source: Lehman Brothers and
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estimates



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Number of NME/BLA Approvals at All Time Low



NME: new molecular entity, BLA: biologic licence application

2007/08e data are shown on a probability adjusted basis and at 100% probability

Source: FDA, Lehman Brothers research



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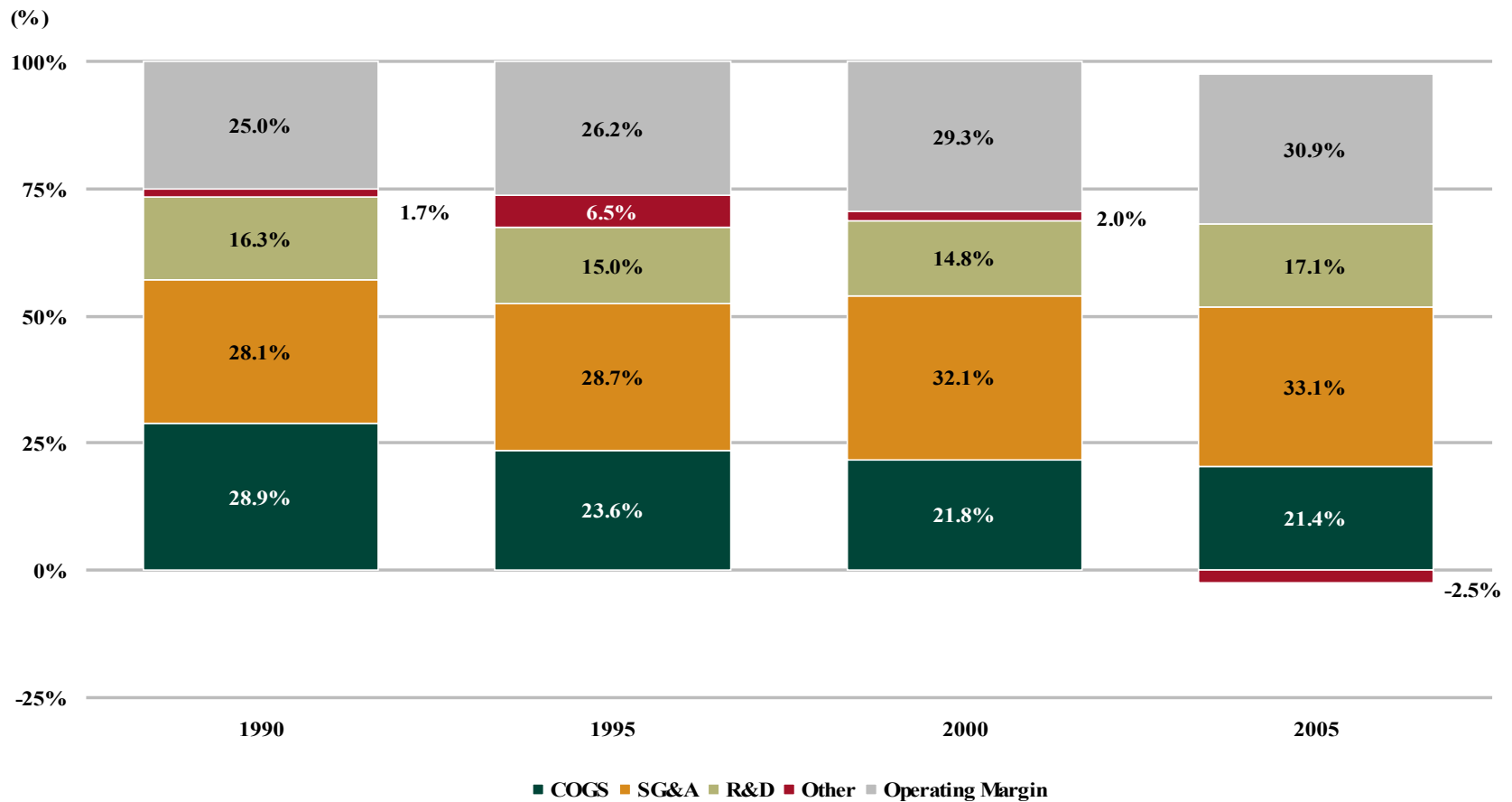
The P&R Environment is getting tougher

	US			EU			ROW		
	2000	2005	2010	2000	2005	2010	2000	2005	2010
Use of value to drive P&R decisions	Low	Medium	High	Medium	High	High	Medium	High	High
Pricing	Low	Low	High	Medium	High	High	Medium	High	High
Comparative effectiveness	Low	Medium	High	Medium	High	High	Medium	Medium	High
Lifecycle data requirements	Low	Medium	High	Low	High	High	Low	High	High

Requirements:  Low  Medium  High



COGS as % of Sales Could Be Improved



Offshoring / Outsourcing

The Changing Role of Sales and Marketing

Split of Employee Numbers by Function for Weighted Average European Pharma Company (using Big 5 companies)

		% of employees	Estimated % of costs	Costs split \$mn	% of employee functions that could move offshore	Estimated saving per employee	Savings \$mn	New costs \$m
Total - est	84145.6	100%	100%	7782			1144	6638
Production - est	26085.1	31%	15%	1167	70%	70%	572	595
R&D - est	14304.7	17%	25%	1946	30%	70%	409	1537
Admin - est	10097.4	12%	15%	1167	20%	70%	163	1004
Marketing - est	33658.2	40%	45%	3502	0%	0%	0%	3502

There Is Still Real Potential To Save Money Through Offshoring

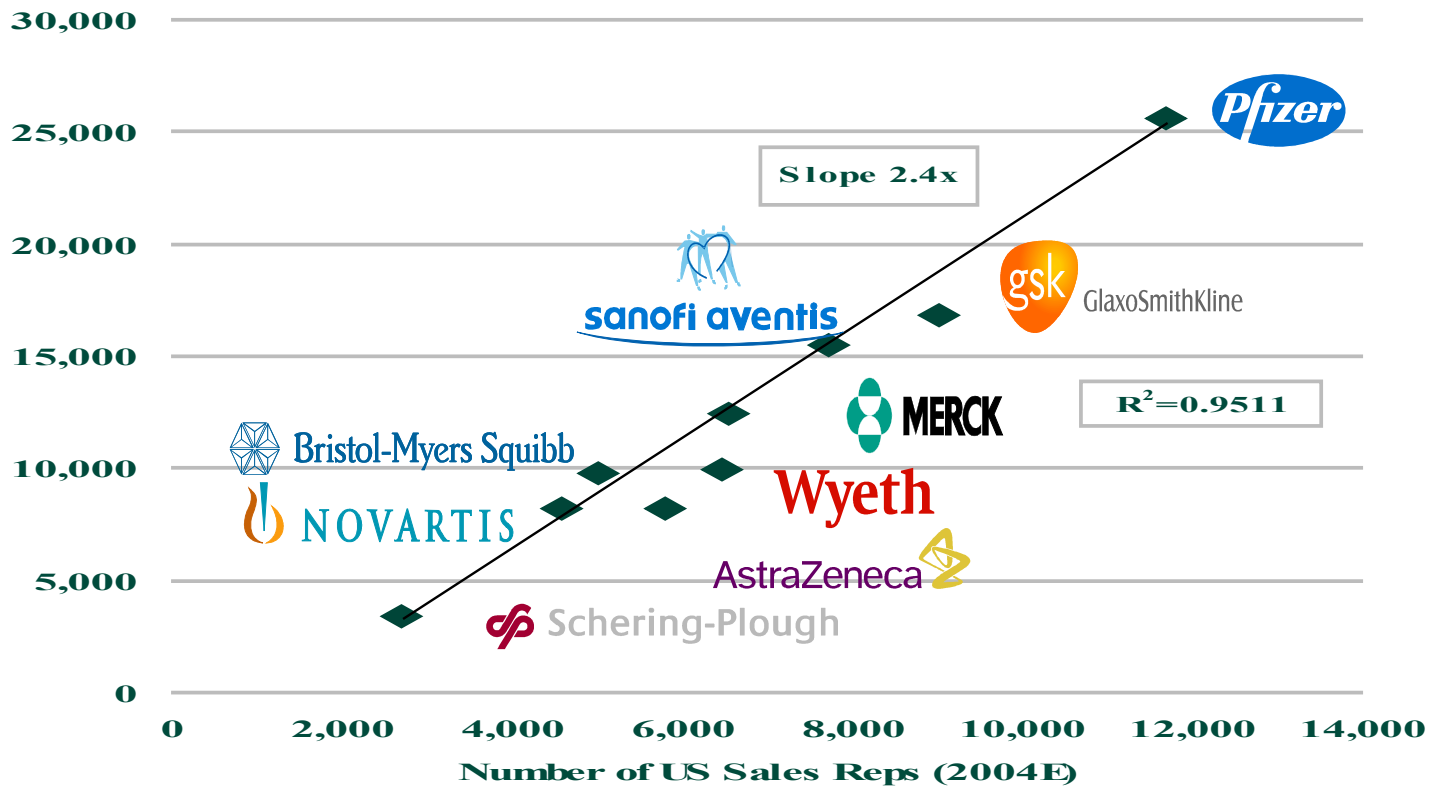


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Does the Share of Voice Model Still Apply?

The Changing Role of Sales and Marketing

Total US Pharma Sales 2005E



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However Industry Cannot Pursue Traditional Business Model Without Risk

Drug Safety	Understating the adverse reactions associated with a drug	Exaggerating the dangers involved in importing drugs	Failing to monitor the safety of marketed drugs adequately
Clinical Trials	Failing to disclose the full results of clinical trials	Making improper financial arrangements with trial sites	Manipulating trial data to maximise sales
Drug Prices	Charging prices that are perceived as too high	Ignoring social responsibilities in pricing for the developing world	Spending excessively to protect patents
Sales Practices	Promoting products for off-label indications	Providing physicians with financial incentives to prescribe products or write favourable articles about them	Inventing new lifestyle diseases
Investor Relations	Over-managing price/earnings and earnings per share ratios	Remunerating senior management exorbitantly	Ignoring negative publicity
Innovation	Spending R&D funds to develop "me-too" drugs	Spending too much on sales & marketing, and diverting funds from R&D	Developing drugs on the basis of sales potential rather than medical need

Source: PricewaterhouseCoopers



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Did Novartis Pick the Right Issue to Fight about in India?

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More than 200 000 people ask Novartis to drop its challenge on drug patent

British Medical Journal. By Sally Hargreaves

3 February, 2007



Pharma Must Not Take its Licence to Operate for Granted

