3. Competitive Dynamics in Europe's Pharmaceutical Market

After having analyzed policy and competition law approaches to Europe's pharmaceutical industry, this chapter now turns towards the subject matter itself: Market structure, business models and dimensions of competition in Europe's pharmaceutical sector are discussed to provide the economic and business reality under which generic defense strategies are developed and executed today.

3.1. Market Structure and Business Models

3.1.1. Market Relevance

Europe's market for human pharmaceutical products has developed into one of the most attractive sectors in the world: With almost 215 billion € worth of human pharmaceutical products in 2007, Europe spent on average 2% of its Gross Domestic Product (GDP) or approximately 430 € per citizen on pharmaceuticals.[89] By that, the EU represents approximately 30% all pharmaceuticals sold globally being the second largest geographic market (after North America) worth approximately 730 billion € in 2007. Although emerging regions as Asia or Latin America have sustainably outperformed Europe's growth rates of less than 6% from 2007 to 2008, the EU will remain a key priority for global pharmaceutical companies. This is mainly due to its mere size as well as its demand structure for expensive drugs with high therapeutic value represented by high drug expenditure per capita.[90]

Europe contributes 14 firms to the world's 50 largest pharma companies measured by sales in 2008. Headquartered in EU member states, they all run global business operations beyond the European market, which have generated over 180 billion US$ in global sales in 2008. Thereby, a relatively high market concentration can be observed: The three largest companies,

89 See supra note 10 at p.10 and p. 20; Figures include prescription as well as non-prescription drugs in retail prices.

90 See Anthony Raeside et al., World Preview 2016, EvaluatePharma Report 3 (May 2010).

i.e. *GlaxoSmithKline*, *Sanofi-Aventis* and *AstraZeneca*, already contributed 110 billion US$ of sales in 2008 (see figure 2) despite the fact that none of them had participated in the latest wave of mega mergers and acquisitions.[91]

Top-50 Ranking	Group Name	Global Pharma Sales 2008 (US$ bn)	Global R&D Spend 2008 (US$ bn / % of sales)		Tier
2	GlaxoSmithKline	43,0	5,2	12,1%	
3	Sanofi-Aventis	38,7	6,5	16,8%	1
5	AstraZeneca	31,6	5,1	16,1%	
13	Bayer	15,1	2,5	16,6%	2
16	Boehringer Ingelheim	13,6	2,9	21,3%	
22	Novo Nordisk	8,6	1,5	17,4%	3
23	Merck KGaA	7,6	1,5	19,7%	
27	Servier	5,2	n/a	n/a	
30	UCB	4,3	1,1	25,6%	
32	Solvay	3,8	0,6	15,8%	
33	Ratiopharm	3,7	n/a	n/a	4
41	Menarini	3,1	0,3	9,7%	
43	Shire	2,8	0,5	17,9%	
45	Lundbeck	2,1	0,6	28,6%	
TOTAL		**183,2**	**28,3**	15,4%	

Figure 2:
European Pharmaceutical Companies amongst the Global Top-50 Ranking 2008[92]

3.1.2. Originator Pharmaceutical Companies

Except for Germany's *Ratiopharm*, which was acquired by *Teva Pharmaceuticals* in 2010, all European pharmaceutical companies amongst the largest global 50 can be considered 'originators': They invest a substantial part of their revenues, on average over 15% (see figure 2), into R&D with the objective to discover, develop and commercialize innovative pharmaceutical products. In this effort, originators historically have focused on 'blockbuster' products in high prevalence disease areas with potential annual sales beyond 1 billion € in order to recoup their high investments and generate the expected profit level.[93]

For originators, profitability needs to be sufficiently high to fund R&D investments for both, drug candidates reaching the market as well as the much

91 In this recent wave, Pfizer acquired Wyeth, Novartis acquired Alcon, Merck & Co. acquired Schering-Plough and Roche gained majority control over Genentech. See PharmExec Staff, The PharmExec 50, 5 Pharmaceutical Executive 68, 70-78 (2009).
92 Own illustration; data sourced from Id. at pp. 70-78.
93 See supra note 10 at pp. 27-28.