



CFA Institute

CFA Institute Research Challenge

hosted by
CFA Society Italy
Prometheus Capital

INVESTMENT SUMMARY

Recordati (REC:IM)

Wind of change

- **2016** has been a positive year for the company that showed a 10% growth in sales compared to the previous year and even better results for what concerns the EBIT (+17.6%) and the Net Income (+19%)
- **2017** is expected to be a relevant year as numerous meaningful events are expected to have an impact on the company valuation: Zanipress license will expire in several countries, the 2017-2019 business plan will set a new tone to the company strategy and different products in pipeline are expected to get into the market this year (i.e. Cystadrops and Cariprazine in EU, Carbaglu in US)

Moreover, recent trends captured during the last year might persist in the future designing new possible horizons for the company.

- **International presence:** the recent expansion in Russia and Turkey could represent an opportunity for a future geographic expansion. The same could be said following the admission of Carbaglu in the US market which might also represent an open door to the expansion in this geographic area
- **Product portfolio:** the Cariprazine (Schizophrenia treatment) moves away from the three medical areas in which Recordati has focused its activity (Urology, Cardiovascular and Rare Diseases) and may launch the company into new product lines
- **Business Plan (2017-2019):** seems to contain the Rare Disease business growth (that has been a real catalyst during the past years) and the margin expansions giving more weight to the Research and Development starting investing in the early stages of the projects
- **Acquisitions:** Italcimici (2016) and ProFarma (2016) still have to show that they are valuable in terms of product developments or market potential

A snapshot

We forecast a price of €29.76 per share based on a **sum of the parts analysis** hinging on what we consider being the three main pillars of the future company value.

- **Existing product portfolio** (€22.14)
- **Pipeline** (€2.51)
- **M&A** (€5.11)

This result is confirmed by the peer analysis based on the EV/EBIT multiple that provides a valuation of €29.23 per share

Methodology

Our valuation reflects the popular idiom “*understanding the past to predict the future*”. It is focused on the understanding of the past years’ company’s value creation: the increase in sales and margins that brought Recordati to its current strong market position.

We think that this, first and, undeniable relation will persist designing the future company strategy that, thus, will be based on the expansion of sales and margins.

A second and deeper analysis of the past brings to a more valuable understanding of what have been the key value drivers of the company’s sales and margins growth throughout the last decade and therefore its value creation.

The first significant catalyst has been the M&A activity that drove the company’s expansion throughout the entire period. The second key driver in terms of sales and especially in terms of margins was the Rare Disease area that provided solid margins (over 40% vs. 20%ca. for the other businesses).

The understanding of this path laid the ground to the definition of the pillars that, we think, need to be analyzed deeply and separately and that will be the core part of the company’s value creation in the future: the analysis of the **existing product portfolio** allows to distinguish the organic growth and the future effects of the current geographical and product situation. Whereas the analysis of the **pipeline** aims at better understand the products under developments in order to make better forecasts on some potential future growth drivers and on the Rare Disease product line extension. Eventually, a specific analysis on a potential **M&A activity** forecast will catch what we think has been and will be the heart of the Recordati value creation during the years.



HOLD

Target Price: € 29.76

Target Price %: - 0.701%

Current Price as of
28.02.2017: € 29.97

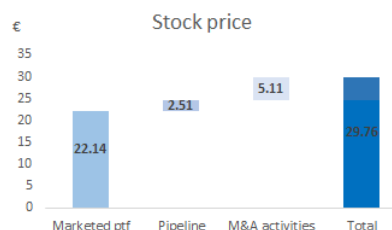
Milan Stock Exchange

Healthcare
Pharmaceuticals/Specialty

Valuation by:
Prometheus Capital

Key Statistics

Closing Price	
52-Week Range	€20.66 - 29.79
Avg Daily Vol (3M)	446.169
Shares Out (mm)	209,1
Market Value (mm)	€ 6.229,8
Dividend Yield	2,2%
P/E	16,78
P/B	3,90
EV/EBITDA	3,95
Institutional Holdings	20,77%
Insider Holdings	53,95%



mm	2015A	2016E	2017E	2018
Revenues	€ 1,048	€ 1,143	€ 1,194	€ 1,2
EBITDA	€ 317	€ 370	€ 352	€ 3
EBIT	€ 279	€ 330	€ 310	€ 3
Net Income	€ 199	€ 236	€ 221	€ 2

INDUSTRY OVERVIEW AND COMPETITIVE POSITIONING

- The pharmaceutical sector is one of the top performing high-technology sectors in Europe
- In 2014 it had the highest ratio of R&D costs on Net Sales
- This sector has produced modest growth during last years and is expected to remain equally steady until 2020, mostly because of market saturation. The market itself grew by 4.6% in 2015 reaching €205.2bn and is expected to grow until €252.4bn by 2020 (CAGR 4.2%)
- The problem with the European Pharmaceutical market is its high regulation and subjection to possible governments' policies of reducing healthcare expenditures. In many countries prescription drugs are provided by public spending and it's the government that decides also how much to spend on medicines, both purchasing them directly or reimbursing the end-users' initial purchase
- The strong regulation and legal framework characterizing this market affects the ease of market entry and the presence of new competitors: demonstrating to have safe products can require until 15 years and lots of investments in advance, without knowing if it will eventually be allowed to be sold in the market. A statistic from PhRMA states that just one out of 10000 drugs will be approved after the 3 phases of the pipeline
- In a sector where innovation and R&D are such important value drivers, some big players established their leadership over the years with diversified portfolios in both terms of products and geographic presence. Their R&D expenses are usually high with an average ratio R&D/sales of more than 18% (companies' data)
- Other pharma companies are bit smaller, focusing on a selected product line and/or on a specific geographic presence. Although the size of these companies is usually small, their brands can be renowned across specific medical areas or geographic regions
- Others are more consumer oriented. These companies usually produce OTC products (that do not require prescriptions) and somehow stand on another line compared to traditional pharma companies
- Recordati is not actually part of any of these groups. Indeed, the company R&D expenses are low compared to the market (R&D/sales: 7% vs. 18%) and this is mainly due to the fact that the company invests in licenses and in late-stage projects (phase II/III)
- Also, the size of the company is incredibly small if compared to some of the biggest players as Novartis, Bayer or Johnson and Johnson (over €45bn sales vs. €1bn for Recordati)
- Still, the company wide presence worldwide and its more and more diversified portfolio of products are making Recordati for some aspects similar to the industry giants
- For company size and flexibility, competitors as Almirall, Ipsen and Lundbeck seem more similar to Recordati and are possibly representing a valuable benchmark
- Similarities could be found between consumers' oriented pharma companies and Recordati for what concerns the OTC line of products
- Recordati position straddles all these different subcategories sharing part of their key characteristics but never overlapping all of them. The distinctive positioning of the company is strengthened by the fact that Recordati represents a singular model for the Italian market as its size and structure balances between a listed company with fragmented shareholders and a private/family company
- A good way to catch the market like/dislike for the company competitive positioning is to look at its EV/sales multiple. This indicator seems to appreciate big pharma groups able to leverage on their size in order to create big margins (Roche, J&J etc.). Now, even if Recordati seems just halfway between the smaller peers and the biggest ones, the market still seems to appreciate the company positioning rewarding it with high multiples deriving from high expectations (Exhibit 10: Porter's Five Forces)

Figure 1: R&D expenses (% of Net Sales) - 2014

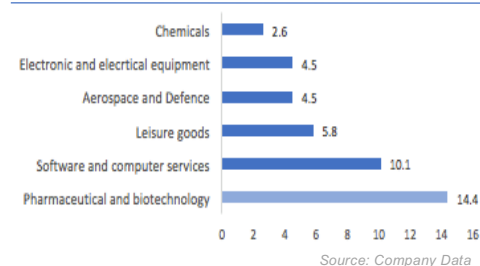


Figure 2: Euro Pharma market geographical segmentation (% of value)

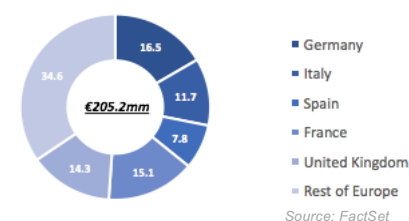


Figure 3: Euro Pharma Market Share (% of value)

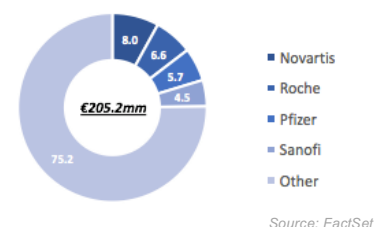
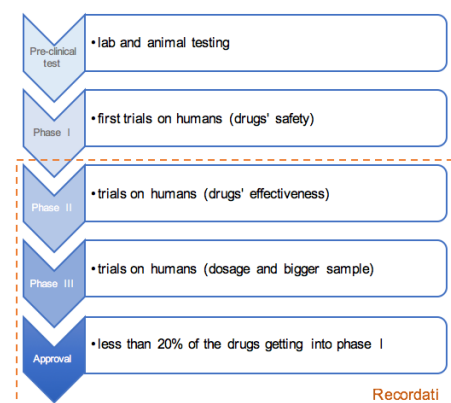


Figure 4: Phases of Clinical Trial



Source: Cancer Research U

Figure 5: EBIT margin as driver of EV/sales in the Pharma industry

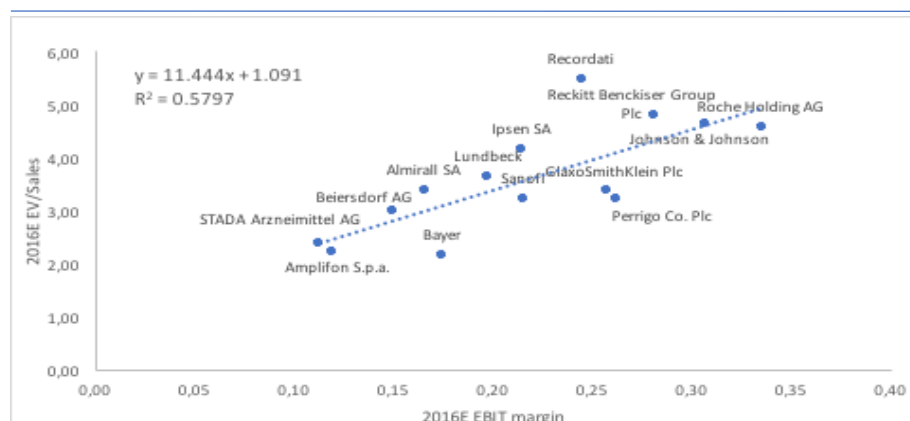
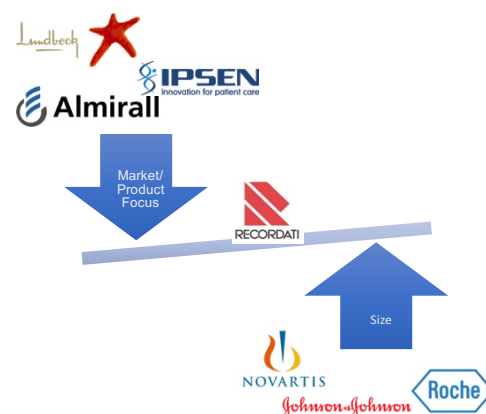


Figure 6: Recordati positioning



BUSINESS DESCRIPTION

Generic description

The pharmaceutical industry has its own structure of revenues and costs different in sources and timing

- **Revenues** come from the **selling of drugs**, most of which, in Italy, are reimbursed to the patients by the Country, or from the **royalties** that companies pay in order to produce specific components invented by others
- **Costs** connected to the development of new drugs or chemicals (mostly **R&D**) have to be supported in advance, with the real risk that the new product won't pass the tests required for being introduced in the market and will never be sold

The *iter* that the drugs need to pass through is called *pipeline*: 3 phases in which the components are tested on patients to see whether they could have side effects.

When a new drug is introduced, after having passed the whole pipeline, the developer protects its use and replication through a *patent*. After the expiration, generics and biosimilars become the main substitutes, pushing the branded drugs under price pressure: these "replicating" companies don't need to face the huge costs of testing, and can sell the same active ingredients at a much lower cost.

A focus on Recordati

- Recordati is a pharmaceutical company founded in 1926 by Giovanni Recordati in Correggio (RE), still owned by Recordati family at 51%. The company initially started as a pharmacy and turned to be a leading internationally-known company specialized in **Orphan Diseases**, **Cardiovascular**, **Genito-Urinary diseases** and **Dermatology**. In 1984 got listed on the Italian Stock Exchange. During the following years the company expansion kept going on in both directions: searching for new products and new markets in different countries
- The **business strategy** is particularly focused on expansion mostly by acquisitions: since 2000, almost every year, it acquired companies, either in order to expand its supply of products or its influence in different countries. The company used its own cash flows to finance the deals, keeping a low net financial position
- The **M&A** effect brings higher revenues, EBIT and EBIT margins. In the last 4 years the R&D expenses were steady at an average of 7.5% of the revenues but in the future we assumed them to be higher (reaching 8%) according to the company disclosure on the future strategy and its plan to start investing from the early phases of the pipeline, especially for the orphan drugs segment

(Exhibit 9: SWOT Analysis)

Figure 7: Euro Pharma Market Value Forecast



Figure 8: Revenues by product

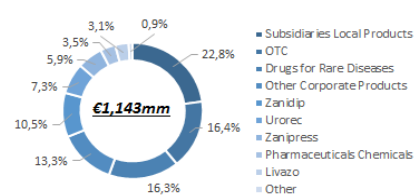


Figure 9: Revenues by market

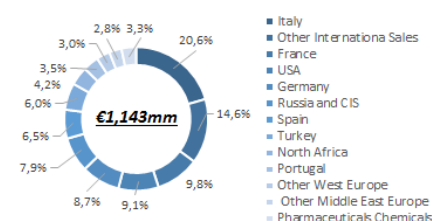
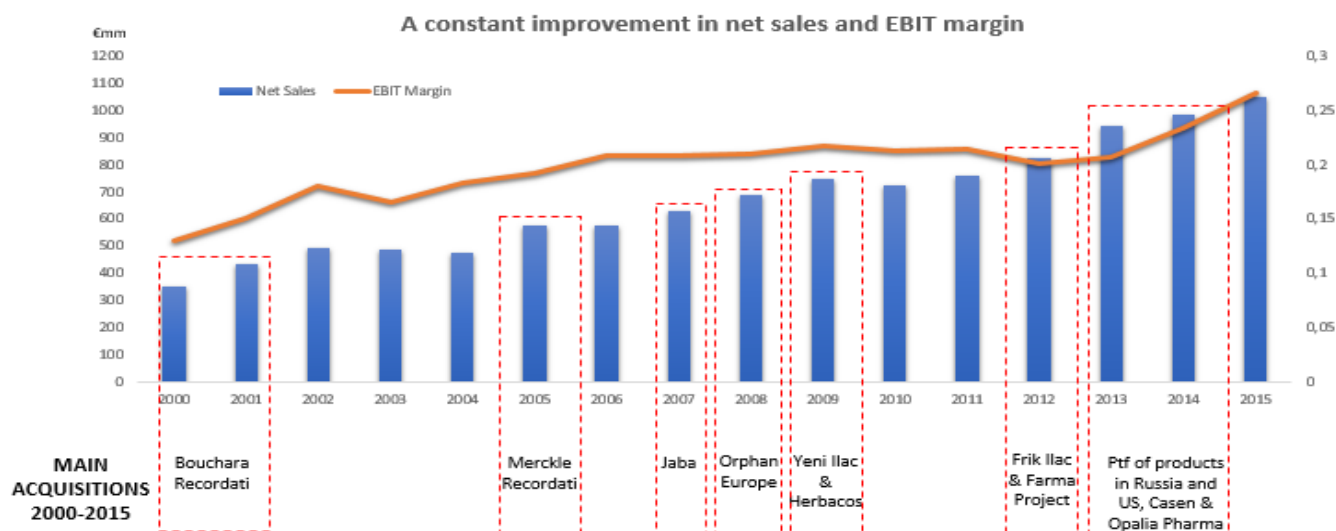


Figure 10: "The M&A effect brings higher revenues, EBIT and EBIT margins": Acquisitions as the key driver for the company's value



VALUATION

Existing product portfolio analysis

- For our analysis we use a **DCF model** in order to catch the complex structure of the company and to define specific assumptions concerning the future trends of key variables
- The complexity of Recordati belongs to both a structured and diversified portfolio of products and a strong international presence network. The portfolio of products is built around several business areas: the **RX products**, **Orphan Drugs**, **OTC products** and **Pharma-Chemicals**
- Indeed, not all products are marketed in every country and each region provides different products with different growth rates. Therefore, our model is based on a **hierarchical structure** with a first level division by geographic area and the consequent more specific split of revenues by product for every region. (Exhibit 2 for the core assumptions of the model)

We think that the main focus of this approach should be on revenues as they are main drivers of the model. Thus, every region comes up with estimated sales for our forecast period (2016-2021).

- The **costs' structure** follows the trend set by revenues, as the company has shown in the past the ability to anchor those items to the size of its sales. However, as showed above, this main trend is counterbalanced by the growth in margins as the size of the sales increases

The only exception is the **R&D costs** that are expected to stabilize around 8% of sales given the information provided by the company on the future strategy of investing in the early stages of the project.

- The **Net Working Capital** is computed considering all those assets and liabilities involved in the core business. This includes trade payables, account receivables, inventory but also tax liabilities, provisions (pension plans) and derivatives instruments that are used to run the everyday activity. The value of NWC is anchored to sales (12.46%) given the reliability of this indicator in the past years
- Capex** can be split in Tangibles and Intangibles: the first ones are driven by the need to renovate buildings and other properties and to expand and ameliorate the machineries and other equipment, whereas the Intangibles are the results of acquisitions and other main intangible assets (licenses and rights)
- Depreciation & Amortization** are computed following the analysis of the useful life of different assets

Figure 11: Costs' structure over the forecasting period



Figure 12: Estimating the free cash flows

Cash Flow Model												
in € '000	2016E	yoy%	2017E	yoy%	2018E	yoy%	2019E	yoy%	2020E	yoy%	2021E	CAGR 16-21
Revenues	1,142,948	4.47%	1,194,051	5.76%	1,262,826	4.86%	1,324,233	4.02%	1,377,488	2.46%	1,411,433	4.31%
Italy	234,906	9.51%	257,242	1.45%	260,967	1.36%	264,514	1.47%	268,410	-0.75%	266,409	2.55%
France	112,574	1.67%	114,459	1.92%	116,652	2.06%	119,055	2.06%	121,508	-0.77%	120,574	1.38%
Germany	99,445	4.51%	103,930	3.82%	107,898	2.92%	111,054	1.92%	113,187	2.01%	115,464	3.03%
USA	103,446	18.00%	122,066	14.00%	139,156	12.00%	155,854	10.00%	171,440	9.00%	186,869	12.56%
Turkey	68,785	2.68%	70,630	26.02%	89,005	7.68%	95,844	6.08%	101,673	6.02%	107,790	9.40%
Russia and CIS	89,983	-14.36%	77,058	9.31%	84,230	15.25%	97,072	7.45%	104,300	5.86%	110,415	4.18%
Spain	74,473	3.36%	76,975	3.45%	79,627	3.54%	82,446	3.61%	85,423	-3.32%	82,583	2.09%
North Africa	48,088	7.73%	51,806	6.88%	55,368	4.91%	58,088	3.98%	60,398	3.00%	62,209	5.28%
Portugal	40,549	3.44%	41,944	3.90%	43,582	4.06%	45,353	4.18%	47,247	-2.79%	45,928	2.52%
Other Middle East Europe	31,792	2.84%	32,695	2.95%	33,659	3.12%	34,709	3.06%	35,772	3.12%	36,888	3.02%
Other West Europe	34,584	12.86%	39,031	1.59%	39,651	1.28%	40,159	1.46%	40,743	1.51%	41,357	3.64%
Other International Sales	166,464	0.00%	166,464	2.90%	171,291	2.90%	176,258	2.90%	181,370	2.90%	186,630	2.31%
Pharmaceuticals Chemicals	37,859	5.00%	39,752	5.00%	41,739	5.00%	43,826	5.00%	46,018	5.00%	48,318	5.00%
Cost of sales	356,401	7.21%	382,096	5.76%	404,104	4.86%	423,755	4.02%	440,796	2.46%	451,659	4.85%
% of sales	31.18%		32.00%		32.00%		32.00%		32.00%		32.00%	
Gross profit	786,546	3.23%	811,955	5.76%	858,722	4.86%	900,478	4.02%	936,692	2.46%	959,775	4.06%
gross margin%	68.82%		68.00%		68.00%		68.00%		68.00%		68.00%	
Selling expenses	301,871	10.75%	334,334	5.76%	353,591	4.86%	370,785	4.02%	385,697	2.46%	395,201	5.54%
% of sales	26.41%		28.00%		28.00%		28.00%		28.00%		28.00%	
G&A expenses	62,796	4.58%	65,673	5.76%	69,455	4.86%	72,833	4.02%	75,762	2.46%	77,629	4.33%
% of sales	5.49%		5.50%		5.50%		5.50%		5.50%		5.50%	
R&D expenses	80,264	11.57%	89,554	12.81%	101,026	4.86%	105,939	4.02%	110,199	2.46%	112,915	7.06%
% of sales	7.02%		7.50%		8.00%		8.00%		8.00%		8.00%	
others	-11,953	-0.11%	-11,941	5.76%	-12,628	4.86%	-13,242	4.02%	-13,775	2.46%	-14,114	3.38%
% of sales	-1.05%		-1.00%		-1.00%		-1.00%		-1.00%		-1.00%	
EBIT	329,662	-5.83%	310,453	3.73%	322,021	4.86%	337,679	4.02%	351,259	2.46%	359,916	1.77%
EBIT margin%	28.84%		26.00%		25.50%		25.50%		25.50%		25.50%	
financial income (expenses)	-11,501	3.82%	-11,941	5.76%	-12,628	4.86%	-13,242	4.02%	-13,775	2.46%	-14,114	4.18%
% of sales	-1.01%		-1.00%		-1.00%		-1.00%		-1.00%		-1.00%	
Pre tax profit	318,161	-6.18%	298,513	3.64%	309,392	4.86%	324,437	4.02%	337,485	2.46%	345,801	1.68%
Taxes	-81,951	-5.29%	-77,613	3.64%	-80,442	4.86%	-84,354	4.02%	-87,746	2.46%	-89,908	1.87%
	-25.76%		-26.00%		-26.00%		-26.00%		-26.00%		-26.00%	
Minorities	2,362	-6.48%	2,209	3.64%	2,290	4.86%	2,401	4.02%	2,497	2.46%	2,559	1.61%
Net profit	233,848	-6.48%	218,690	3.64%	226,661	4.86%	237,683	4.02%	247,241	2.46%	253,334	1.61%
NWC	142,468	4.47%	148,838	5.76%	157,411	4.86%	165,066	4.02%	171,704	2.46%	175,935	4.31%

In order to derive the present value of future cash flows we evaluate the **Weighted Average Cost of Capital** (6.93%) considering the target capital structure of the company:

- **Cost of Debt** set to 3.00% (company's data)
- **Tax Rate** 26% (company's data)
- **Net Financial Position** €100mm (target value)
- **Equity Value** is the market cap of the company
- **Cost of Equity**: risk free of 2.23% (10 years' Italian treasury bond), risk premium of 6.5% (Bloomberg's estimate on the Italian equity market) and the beta of the company equal to 0.74 resulting from a regression of the daily Recordati returns on the FTSEMIB (market index) returns over 10 years. (Exhibit 3 for regression results)

Nevertheless, most of the company value derives from **Terminal Value** that requires specific assumptions: we estimate a 2.00% steady growth after the forecast period reflecting a conservative view on the uncertain future.

Figure 13: From Free Cash Flows to Equity Value

in € '000	2016E	2017E	2018E	2019E	2020E	2021E
EBIT*(1-tax rate)	244,749	229,735	238,295	249,883	259,932	266,337
NET CAPEX	-49,800	-49,800	-49,800	-49,800	-49,800	-49,800
PP&E CAPEX	-20,000	-20,000	-20,000	-20,000	-20,000	-20,000
Intangible CAPEX	-30,000	-30,000	-30,000	-30,000	-30,000	-30,000
PP&E Disinvestment	100	100	100	100	100	100
Intangible Disinvestment	100	100	100	100	100	100
D&A	39,929	41,941	44,128	46,242	48,275	50,114
PP&E Ammortization	11,429	11,941	12,628	13,242	13,775	14,114
Intangible Ammortization	28,500	30,000	31,500	33,000	34,500	36,000
Depreciation						
Appreciation						
Delta NWC	11,892	6,370	8,573	7,654	6,638	4,231
FCF	222,986	215,506	224,051	238,671	251,769	262,421
WACC	6.95%					
(1+WACC)^t	1.07	1.14	1.22	1.31	1.40	1.50

TERMINAL VALUE (€)	3,613,333
WACC	6.95%
g (growth rate)	2.00%
FCF t6 (€ '000)	262,421
FCF t6*(1+g) (€ '000)	267,669
WACC - g	4.95%
(1+WACC)^6	1.4965

EV (€)	4,731,087
---------------	------------------

EQUITY VALUE (€)	4,630,903
EV (€)	4,731,087
Net Debt (+) / Cash (-) (€ m)	100,184
Minorities (€)	0
Associates (€)	0
NOSH ('000)	209,125
EV/NOSH (€)	22.14

Using the number of outstanding shares of 209.13mm we forecast a **price for the existing product portfolio of €22.14**.

Figure 14: Sensitivity analysis on the target price achieved through the DCF model for the existing portfolio of products

SENSITIVITY on TV		WACC								
TV	3,613,333	5.50%	6.00%	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	
g (growth rate)	0.00%	3,460,352	3,083,268	2,766,857	2,498,027	2,267,179	2,067,118	1,892,345	1,738,586	
	0.50%	3,825,420	3,380,383	3,012,416	2,703,634	2,441,266	2,215,950	2,020,670	1,850,061	
	1.00%	4,271,613	3,736,921	3,302,622	2,943,508	2,642,135	2,386,045	2,166,105	1,975,469	
	1.50%	4,829,354	4,172,690	3,650,868	3,226,996	2,876,483	2,582,307	2,332,316	2,117,598	
	2.00%	5,546,451	4,717,401	4,076,503	3,567,182	3,153,439	2,811,280	2,524,098	2,280,033	
	2.50%	6,502,579	5,417,743	4,608,547	3,982,965	3,485,787	3,081,885	2,747,843	2,467,455	
	3.00%	7,841,159	6,351,533	5,292,603	4,502,693	3,891,990	3,406,610	3,012,270	2,686,116	
	3.50%	9,849,028	7,658,839	6,204,678	5,170,915	4,399,744	3,803,497	3,329,582	2,944,533	
SENSITIVITY on EV		WACC								
EV	4,731,087	5.50%	6.00%	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	
g (growth rate)	0.00%	4,631,755	4,235,731	3,900,848	3,613,998	3,365,571	3,148,356	2,956,842	2,786,742	
	0.50%	4,996,822	4,532,846	4,146,407	3,819,605	3,539,657	3,297,188	3,085,167	2,898,216	
	1.00%	5,443,016	4,889,384	4,436,612	4,059,480	3,740,527	3,467,283	3,230,601	3,023,624	
	1.50%	6,000,757	5,325,153	4,784,859	4,342,968	3,974,875	3,663,545	3,396,812	3,165,753	
	2.00%	6,717,854	5,869,864	5,210,494	4,683,154	4,251,831	3,892,518	3,588,594	3,328,187	
	2.50%	7,673,982	6,570,206	5,742,538	5,098,936	4,584,179	4,163,123	3,812,340	3,515,610	
	3.00%	9,012,562	7,503,996	6,426,594	5,618,665	4,990,382	4,487,848	4,076,766	3,734,271	
	3.50%	11,020,431	8,811,302	7,338,668	6,286,887	5,498,135	4,884,735	4,394,078	3,992,688	
SENSITIVITY on EQUITY VALUE		WACC								
EQUITY VALUE	4,630,903	5.50%	6.00%	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	
g (growth rate)	0.00%	4,531,571	4,135,547	3,800,664	3,513,814	3,265,387	3,048,172	2,856,658	2,686,558	
	0.50%	4,896,638	4,432,662	4,046,223	3,719,421	3,439,473	3,197,004	2,984,983	2,798,032	
	1.00%	5,342,832	4,789,200	4,336,428	3,959,296	3,640,343	3,367,099	3,130,417	2,923,440	
	1.50%	5,900,573	5,224,969	4,684,675	4,242,784	3,874,691	3,563,361	3,296,628	3,065,569	
	2.00%	6,617,670	5,769,680	5,110,310	4,582,970	4,151,647	3,792,334	3,488,410	3,228,003	
	2.50%	7,573,798	6,470,022	5,642,354	4,998,752	4,483,995	4,062,939	3,712,156	3,415,426	
	3.00%	8,912,378	7,403,812	6,326,410	5,518,481	4,890,198	4,387,664	3,976,582	3,634,087	
	3.50%	10,920,247	8,711,118	7,238,484	6,186,703	5,397,951	4,784,551	4,293,894	3,892,504	
SENSITIVITY on PRICE		WACC								
TARGET PRICE	22.14	5.50%	6.00%	6.50%	7.00%	7.50%	8.00%	8.50%	9.00%	
g (growth rate)	0.00%	21.67	19.78	18.17	16.80	15.61	14.58	13.66	12.85	
	0.50%	23.41	21.20	19.35	17.79	16.45	15.29	14.27	13.38	
	1.00%	25.55	22.90	20.74	18.93	17.41	16.10	14.97	13.98	
	1.50%	28.22	24.98	22.40	20.29	18.53	17.04	15.76	14.66	
	2.00%	31.64	27.59	24.44	21.91	19.85	18.13	16.68	15.44	
	2.50%	36.22	30.94	26.98	23.90	21.44	19.43	17.75	16.33	
	3.00%	42.62	35.40	30.25	26.39	23.38	20.98	19.02	17.38	
	3.50%	52.22	41.66	34.61	29.58	25.81	22.88	20.53	18.61	

(For Terminal Value, Enterprise Value and Equity Value values are in € '000; for Price values are in € per share)

Pipeline analysis

We perform an independent analysis on Recordati's pipeline.

The pipeline is evolving and we think that in few years the group will benefit from future launches of new products, specially the incoming drugs for Rare Diseases.

Figure 15: The Pipeline

NAME	ORIGINATOR	INDICATION	STATUS
Urology			
Vitaros	Apricus	Erectile dysfunction	Approved by a number of health authorities in EU
Fortacin	Plethora Solution	Premature ejaculation	Variation of EU approval
REC 0438	Recordati / UFPeptides	OAB in patients with spinal lesions	Phase I/II in EU
Rare Diseases			
Carbaglu	Recordati	Organic acidemias	Approved in EU / Phase III in US
Carbaglu	Recordati	Hyperammonaemia	New formulations
Cystadrops	Recordati	Ocular cystinosis	Approved in EU in January
Graspa	Erytech	Acute lymphoblastic leukemia	Filed in EU; CHMP positive opinion
Graspa	Erytech	Acute myeloid leukemia	Phase II b
Others			
Methadone	Recordati	Treatment of cancer-related pain in cases of resistance/intolerance to opioids	Filed in France
Reagila	Gedeon Richter	Schizophrenia	Filed in EU
Un-named	AP-HP/Recordati	Acute decompensation episodes in MSUD	Phase II in EU

We evaluate the main product in pipeline such as: Vitaros, Fortacin, Carbaglu, Graspa and Reagila and as for Carbaglu and Methadone we have already included our forecast assumptions in our DCF Model since they are marketed in USA and France respectively. We outline the pipeline's main products in detail on the following pages.

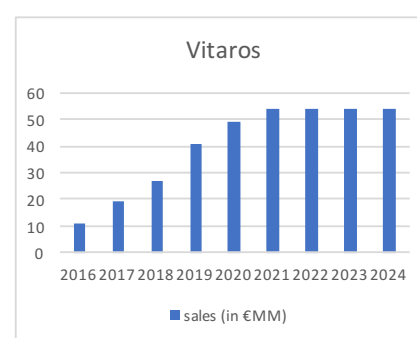
Urology Pipeline

- Vitaros (probability 100%)

It is used in the treatment of *erectile dysfunction* and is the first topical cream formulation of Alprostadil.

It is expected to be used in patients who fail PDE5 inhibitor treatment (around 30%-35% of the patient population). As for our analysis we estimate a market penetration of Vitaros in Europe of 22.23% (derived by the main assumption that European male population suffering *erectile dysfunction* is about 6% of the total male population between 20-60 years old) and a market value per patient of €21.33 (in line with *Medtech Insight* estimation). We split the total market value for each European country based on the potential number of Vitaros's patients and predict 7 years of full market potential (reaching the peak sale of 100% in 2021). Our computations for the product NPV include an upfront payment of €2.4mm (2014), annual fixed royalties equal to €4mm and variable royalties equal to 10% of the product sales each year in line with the industry standards. The estimated costs were in line with the ones used for the DCF model as well as the weighted average cost of capital.

Figure 16: Vitaros expected sales



- Fortacin (probability 100%)

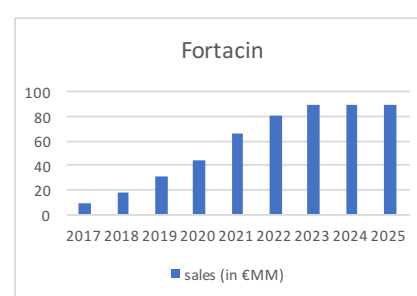
It is an easy to use topical cream for the treatment of *premature ejaculation (PE)*. The product was initially developed by Plethora Solutions (UK) which signed an agreement with Recordati for the production and distribution of this drug in the European countries, Russia and CIS, Turkey and several North African countries.

Our estimates for the product NPV include an upfront payment of €5mm (2014) and annual royalties equal to 20% of the product sales in line with the industry standards. For what concerns the estimates on the future sales, these are particularly hard to predict due to the variable definition of *PE* that might include different degrees of severity and thus a variable number of potential patients. To overcome this issue, we stuck to a conservative estimate of 20% of men population affected by *PE*.

Further assumptions on Fortacin consumers include a 5% market share (in line with Plethora Solutions estimate) and a (conservative) estimate of 2 units' sales per patient per annum based on a joint hypothesis of a 12 doses package and a hypothetical intercourse of once every two weeks. This brought to estimated peak sales of €88.6mm that we assume the company could reach in seven years.

The estimated costs were in line with the ones used for the DCF model as well as the weighted average cost of capital. The drug is expected to produce an increasing number of sales until its peak that will persist until the end of the license. Then, the generic effect is reflected in a -10% annual growth rate in sales.

Figure 17: Fortacin expected sales



Rare Diseases Pipeline

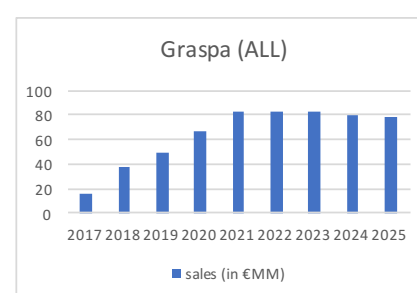
- Graspa (probability ALL:90%; ALM:30%)

It is a product for the treatment of two out of four kinds of *Lukemia*: *ALL (Acute Lymphoblastic Leukemia)* and *AML (Acute Myeloid Leukemia)*. This drug is L-asparaginase which is an enzyme that proved to have an antitumor activity that could help the cure for *Leukemia* when associated with Chemotherapy. The radical innovation of Graspa is that it avoids toxicity and allergy which are very diffused for the other L-asparaginase treatments.

Recordati signed an agreement with Erytech (France) in 2012 for the commercialization of Graspa in Europe.

According to the company, Graspa *ALL* is filed in EU and sales should begin during 2017FY whereas Graspa *AML* is still in phase II b and we estimate that the launch will occur in 2022.

Figure 18: Graspa (ALL) expected sales



To estimate the future sales of both indications we follow an approach based on the incidence of ALL and ALM on the population as a function of the age. In fact, studies show that ALL is more frequent in kids with less than 5 years whereas AML is more frequent in the elders (over 60 years). The incidence of Graspera was then computed assuming a conservative 30% market share which, in our opinion, could be higher given the better properties of the treatment compared to other L-asparaginases. We also assume yearly sales equal to €36,000 per patient, given the information disclosed by Erytech in the past. This result comes from the hypothesis of 3 doses per patient with a unit price of €12,000 that could even reach €15,000 according to some unofficial rumors. We also estimate that the treatment could reach its full market potential in 5 years (due to the strong presence of Recordati in the region and the severity of the disease). Also, we estimate the costs and the wacc following the assumption of around 40% EBIT margin for the Rare Disease products adjusted by variable royalties accounting 15% of the product sales.

- Cystadrops (probability: 100%)

It is a product that Recordati developed in-house for the treatment of corneal cysteine crystal deposits in patients with *cystinosis*. Cystadrops is the first product approved by the EMA for this indication. However, the product is not expected to enter the US market where Cystaran is the most diffused cure to treat this disease.

There are three main forms of *cystinosis* which are described as infantile, juvenile, and adult. The most commonly diagnosed form of *cystinosis* is the infantile, or *nephropathic* form, which has been shown to have an incidence of 1 in every 100,000 to 200,000 children. Thus, our estimated sales are based on the assumptions following these incidence ratios. The market share of Cystadrops is expected to be around 80% pushed up by the lack of other drugs for this indication in Europe and pulled down by the difficulty of diagnosis of this Rare Disease and the high costs for its treatment. The annual cost per capita is expected to reach €1500 given the price of a similar treatment in the US.

These estimates bring to peak sales expected to reach over €11mm per year. We estimate the costs to be in line with the other Rare Disease drugs bringing to EBIT margins around 40% and using the company wacc to discount our estimated future cash flows.

Other Pipeline

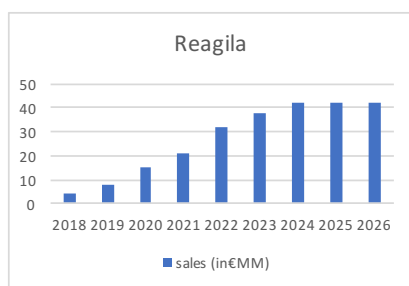
- Reagila (Cariprazine) (probability: 100%)

It is a drug intended for the treatment of *schizophrenia* and mania associated with *bipolar I* disorder. The drug has been in-licensed by Recordati from Gedeon Richter and they are both marketing partner in Western Europe, Algeria, Tunisia and Turkey.

We forecast 7 years of market potential, starting from 2018 and reaching 100% in 2024. Annual sales are computed considering 1% of population, of each country in which Reagila will be marketed, suffering of *schizophrenia*; market share of Cariprazine is assumed of 5% and the price is computed assuming a 10% premium on Risperidone price (€28 per month) which is €360 annum. Risperidone is another drug prescribed for *schizophrenia* and bipolar. For its NPV computation variable royalties are 20% of the annual sales, in line with the industry standards. Estimated costs in line with the ones used for the DCF model as well as the wacc.

With this separate analysis of the main pipeline's product we obtain a **total value per share of €2.51** that should be added to the total value per share computed by the valuation of the marketed products and the also to the total value per share derived from the possible future M&A strategies.

Figure 21: Cariprazine expected sales



(Exhibit 4 for Pipeline main assumptions and Exhibit 5 for Pipeline NPV Model in detail)

M&A analysis

- Acquisitions have played a major role in transforming Recordati, from an Italy-focused primary care pharma company, to a globally diversified player
- As per our analysis, through 2007-2016 acquisitions have contributed 63% of the company's primary sales growth (Exhibit 6 for further details). In addition, Orphan Drug acquisitions have taken Recordati's margin profile to a higher level, with a current EBIT margin of over 27% from a value of c.21% in 2012-13, and have provided access to the US market

Figure 19: Graspera (AML) expected sales

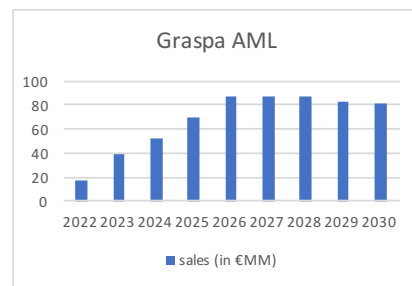


Figure 20: Cystadrops expected sales

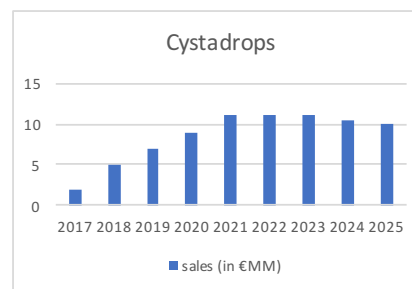
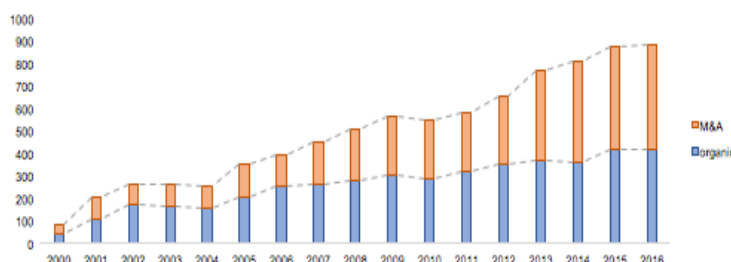


Figure 22: Pipeline NPV

Product	NPV	# of Shares (in mm)	Value per Share (in €)
Vitaros	57	209.125	0.272
Fortacin	169	209.125	0.807
Graspera (ALL)	111	209.125	0.530
Graspera (AML)	70	209.125	0.336
Cystadrops	32	209.125	0.155
Reagila	87	209.125	0.414
TOTAL	526	209.125	2.514

Figure 23: A key value driver: The external growth.



Going forward, we believe that acquisitions will remain a [key element of the company's strategy](#), focused on targets under €150mm and historical EV/sales target of 2.0x (in line with historical deals, Exhibit 7), with leverage expected to be held broadly constant at current levels (0.4x net debt/EBITDA in 2016E).

As we see future acquisitions as an integral part of the company's strategy and as one of the main drivers of its value creation, we include an average of the future M&A operations that will contribute to the overall group's sales by 5.63% of total sales (in line with the average contribution of new acquired companies to the total sales from the period 2007-2016E).

We estimate a constant growth rate, 3.6% per year, of the acquired sales through the 5 years estimated period 2016-2021 (which is coherent with the stable organic growth rate that the company is able to maintain over the years). In addition, the expected EBIT margin, Capex and D&A are in line with our DCF forecast. Furthermore, in order to obtain our NPV of the future M&A operations we compute the present value of the annual estimated price paid for the acquisitions (keeping the historical EV/sales multiple at 2.0x).

Our last consideration regards the [possibility of taking advantage of the substantial amount of leverage](#) still available for the company. Indeed, instead of financing the M&A activity through cash and targeting a maximum amount price of €150mm, Recordati could leverage on debt. Since the maximum Net debt/EBITDA ratio could be around 2.3x, with an average EBITDA of €350mm, the company would be able to use c.€800mm of net debt to achieve acquisitions of bigger companies with an extraordinary value creation, and this would translate into a higher stock price: €33.46 (Exhibit 8: M&A Best Scenario)

Figure 24: M&A NPV

EUR mm	2016E	2017E	2018E	2019E	2020E	2021E
Total Sales	1,142.95	1,194.05	1,262.83	1,324.23	1,377.49	1,411.43
Acquired Sales through M&A	64.36	67.24	71.11	74.57	77.57	79.48
% of total sales	5.63%	5.63%	5.63%	5.63%	5.63%	5.63%
<i>Acquired Sales growth post M&A 2016</i>		66.64	69.01	71.46	74.00	76.62
<i>growth rate</i>		3.6%	3.6%	3.6%	3.6%	3.6%
<i>Acquired Sales growth post M&A 2017</i>			69.62	72.10	74.66	77.31
<i>growth rate</i>			3.6%	3.6%	3.6%	3.6%
<i>Acquired Sales growth post M&A 2018</i>				73.63	76.25	78.99
<i>growth rate</i>				3.6%	3.6%	3.6%
<i>Acquired Sales growth post M&A 2019</i>					77.25	80.03
<i>growth rate</i>					3.6%	3.6%
<i>Acquired Sales growth post M&A 2020</i>						80.36
<i>growth rate</i>						3.6%
Total future sales from M&A	64.36	133.88	209.74	291.76	379.72	472.79
Synergies from M&A	0.92	1.98	3.13	4.35	5.66	7.04
% of costs	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
EBIT	18.83	35.32	54.28	75.51	98.27	122.36
EBIT margin %	28.8%	26.0%	25.5%	25.5%	25.5%	25.5%
Taxes	(4.89)	(9.18)	(14.11)	(19.63)	(25.55)	(31.81)
tax rate	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%
Capex	(2.57)	(5.36)	(8.39)	(11.67)	(15.19)	(18.91)
% of sales	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
D&A	2.25	4.69	7.34	10.21	13.29	16.55
% of sales	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
FCF	13.61	25.47	39.12	54.42	70.82	88.18
WACC	6.95%					
(1+WACC) ^t	1.0695	1.1438	1.2233	1.3083	1.3993	1.4965
PV FCF	12.72	22.27	31.98	41.59	50.61	58.92
TV	2,299.41					
growth rate	3.0%					
PV TV	1,536.50					
PV TOT	1,754.59					
Price paid for each transaction	(128.72)	(134.47)	(142.22)	(149.14)	(155.13)	(158.96)
Average EV/Sales multiple in M&A for REC	2.0x	2.0x	2.0x	2.0x	2.0x	2.0x
(1+WACC) ^t	1.0695	1.1438	1.2233	1.3083	1.3993	1.4965
PV Price paid for each transaction	(120.35)	(117.56)	(116.26)	(113.99)	(110.87)	(106.22)
TOT PV price paid	(685.25)					
POTENTIAL VALUE OF M&A	1,069.35					
NOSH	209.13					
Potential value / Nosh	5.11					

Total [value per share derived from the possible future M&A strategies](#) is **€5.11** that added to the value per share of the marketed portfolio of €22.14 and the value per share of the pipeline of €2.51 results in a **total price per share of €29.76**.

[Peers analysis and multiple valuation](#)

- We want to include a peers' multiple analysis in our report. We believe that it is very useful for a better understanding of the market in which Recordati is operating and for [double-checking our DCF valuation](#)
- Since the global pharmaceutical industry is very spread and competitive, it is quite difficult to find perfectly comparable companies: for this reason, we considered [different pharmaceutical companies](#) in terms of [size](#), [business model](#) and [geographical presence](#), dividing them in four main categories
- [Big global pharmaceutical companies](#), such as Bayer, Roche, Johnson & Johnson, GSK and Sanofi, whose comparability is limited by different business models, sizes and products segment focus, but we see them as real drivers of the sector

- **Smaller pharmaceutical companies** that are more comparable in terms of both product categories and size, such as Almirall, Ipsen, Lundbeck and STADA Arzneimittel AG
- **Consumer-oriented companies** which are more focused on the OTC market, like Beiersdorf AG, Perrigo and Reckitt Benckiser
- **Amplifon**, that is comparable in terms of size, international presence, cash flow generation, solid profitability and Italian listing

Looking at the peers' multiples, at the current price, the stock trades at a premium in comparison to the sample median in terms of 2016E-2017E EV/EBIT and P/E.

Figure 25: Pharma industry multiples

	EV/EBIT		P/E	
	2016E	2017E	2016E	2017E
Amplifon S.p.a.	18.46	15.97	31.34	26.38
Almirall SA	20.26	15.99	28.23	22.6
Lundbeck	24.61	15.52	46.79	21.36
STADA Arzneimittel AG	20.81	17.32	19.63	17.72
Ipsen SA	18.62	15.64	25.07	22.68
Beiersdorf AG	19.86	18.37	28.23	26.18
Reckitt Benckiser Group plc	20.61	16.87	26.46	21.83
Perrigo Co. Plc	12.2	12.08	11.98	11.74
Johnson and Johnson	16.71	13.42	18.06	17.33
Sanofi	16.5	11.62	22.51	14.27
Bayer	13.49	11.88	19.36	13.21
GlaxoSmithKlein plc	12.1	11.39	15.4	14.63
Roche Holding AG	15.2	11.77	20.69	15.68
Recordati	19.28	17.15	23.71	23.43
Median ex-Recordati	18.46	15.54	22.51	17.72
Average ex-Recordati	17.65	14.45	24.13	18.89

Figure 26: From multiples to price per share

Recordati - multiple valuation	2016E
Median EV/EBIT multiple	18.46
EBIT - Recordati	336.54
EV - Recordati	6,213.55
Net Debt (+) / Cash (-)	100.18
Minorities	0
Associates	0
Equity Value	6,112.37
NOSH	209.13
Fair Value (EUR)	29.23

We use the median EV/EBIT 2016E multiple among the peers to complete our multiple valuation and comparing it with our DCF outcome: the latter results with a price of €29.76 and it is confirmed by the similar value that we reach through multiple valuation of €29.23 per share.

FINANCIAL ANALYSIS

As far as the liquidity is concerned, from 2012 to 2015, the Current Ratio had improved: the current assets increased their proportion on the current liabilities from 1.33 to 2.17, showing a high ability to pay liabilities in the short term. The same trend has been observed for the Quick Ratio with a decreasing weight of the inventory over time.

As far as the solvency is concerned, we decided to focus on the Leverage of the company: as already stated, Recordati decided to finance their acquisitions with the cash produced from operations, without using debt. The Leverage has always been low, even decreasing from 0.23 to 0.18.

Talking about proficiency, the return for Shareholders and for Stakeholders followed almost the same trend: increasing from 2012 to 2015; ROE increased from 18% to 23%, while ROA from 15% to 19%. However, asset turnover has been decreasing from 0.76 to 0.71. As ROA has improved, Recordati became more cost-efficient. Furthermore, the dividend payout ratio has been increasing from 49.25% to 66.65%, while the industry average has been increasing from 49.6% to 63.2%.

INVESTMENT RISKS

Strategic Risk [SR1] – Failure to Sustain the Rare Diseases Strategy

The category Rare Diseases covers a substantial share of the total sales. If Recordati would be unable to launch new products in the Rare Diseases category, the company will lose its key competitive advantage and will see its growth rate stagnate or decline. Furthermore, the demand could be too low to be profitable due to mispricing. To mitigate this factor, the company could diversify through mergers and acquisitions of companies focusing on rare diseases.

Strategic Risk [SR2] – Unable to Gain New Licensing Agreements

Certain products are licensed-in by Recordati, such as Urorec. The drug is originated by Kissei Pharmaceutical Co., but Recordati acquired the license for the development and marketing within Europe. If the company would be unable to gain new licensing agreements for future products, the development of those products will be costlier. This factor could be mitigated by focusing on future agreements on multiple products, even those in the pipeline.

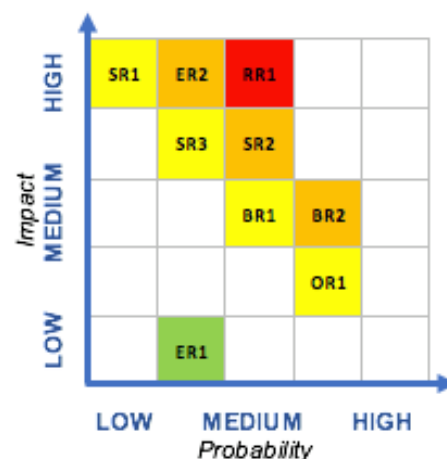
Strategic Risk [SR3] – Failure of Acquisition Strategy

Recordati focuses on growth through mergers and acquisitions. In the unlikely scenario that there are no attractive companies to acquire, Recordati stagnates in terms of growth.

Figure 27: Key ratios

	2012	2013	2014	2015
Liquidity Analysis				
Current Ratio	1.34	1.17	1.93	2.17
Quick Ratio	0.85	0.76	1.38	1.65
Solvency Ratio				
Leverage (Debt / Assets)	24.00%	26.75%	18.80%	18.55%
LEVERAGE INDUSTRY	24.63%	22.38%	22.45%	22.73%
Profitability Analysis				
Net Profit Margin	14.3%	14.2%	16.3%	19.0%
ROE	17.9%	19.0%	20.5%	22.9%
ROE INDUSTRY	25.69%	22.10%	22.13%	21.54%
ROA	10.9%	10.4%	11.7%	13.5%
ROA INDUSTRY	10.95%	9.99%	9.73%	8.88%
ROS	20.16%	20.75%	23.40%	26.58%
Asset Turnover	0.76	0.73	0.72	0.71
Credit Analysis				
LT Debt / Equity	19.52%	28.04%	36.35%	32.48%
Interest Coverage	25.20	13.36	14.21	21.29
Other Analysis				
Dividend Payout Ratio	50.83%	66.65%	49.25%	56.31%
Payout Ratio (%)	49.6%	55.7%	58.2%	63.2%

Figure 28: Investment risk map



Recordati can mitigate this factor by spending more on internal R&D activities and focus more on organic growth.

Business Risk [BR1] – Competitor Introduces More Cost-Effective Treatment

While a competitor cannot introduce a product similar to Recordati's licensed products due to patent rights, the competition could introduce an alternative treatment. For example, when surgery is considered to be a safer and more cost-effective alternative treatment, the demand for the drug would be lower. As Recordati has a flexible structure, the company could rely on this and adjust prices accordingly.

Business Risk [BR2] – Inability to Gain Approval for Pipeline

In the case that Recordati fails the clinical trials, new products will not be launched into the market. Thus, the price erosion of products with expired patents cannot be offset. The loss of sales would impact the growth negatively. The rejection rates are lower for drugs in further phases of the trials. Recordati is already mitigating this factor by focusing on investments in phase II and III drugs. Another possibility is to diversify the product portfolio of the pipeline.

Regulatory Risk [RR1] – Changes in Government Reimbursement Plans

As the pricing of the drugs is a result of government policy, a governmental decision to alter the reimbursement for drugs could potentially impact the sales turnover dramatically. If a government decides to lower or even abolish the reimbursement on Recordati's drugs, the demand from the consumers would be lower, as drugs become less affordable. Recordati could mitigate this risk through diversifying to other countries and focus on the countries with the most lenient reimbursement policies.

Economic Risk [ER1] – Sudden Increase of Interest Rates

While the amount of debt in the company is low, a substantial amount of Recordati's outstanding debt is based on a floating rate. Rising interest rates would lead to an increase in the cost of debt. The impact of this risk could be mitigated through interest rate swaps from floating to fixed rates.

Economic Risk [ER2] – Unstable European Union

As Recordati has market share outside the Eurozone, the current unstable European Union results in more volatility in the foreign exchange rates, which would increase the exchange rate risk. In the scenario that the European Union falls apart, Recordati will be exposed to more exchange rate risk due to an increase in the amount of currencies within the company's income. The company could focus on growth outside of Europe and moving part of their costs outside of Europe, which would reduce its exposure to foreign exchange rate risk in this scenario.

Other Risk [OR1] – Lack Independence of Directors

As seen in Exhibit 12, Recordati has five non-executive directors, who are independent. However, Mario Garaffo and Marco Vitale have been non-executive directors for more than nine years over the past twelve years. Furthermore, the main shareholders is the Recordati family and two of the three executive directors are family members. Therefore, there could potentially be a conflict of interest between management and the shareholders. The factor could be mitigated by changing the non-executive directors more often in order to remain more independent.

CORPORATE GOVERNANCE

Recordati S.p.A. applies the "2015 Italian Corporate Governance Code" to its corporate governance structure. The strength of Recordati's corporate governance structure is evaluated by its compliance to the Code. Recordati scores a total of 4.3 out of 5.0 on compliance (details can be found in Exhibit 14). In order to understand the deviations from the Code, it is important to note that the Recordati family is the majority shareholder of the company at 53.95% ownership and, therefore, has legal control over it. The minimum score of 1 on Article 5 'Appointment of Directors' is a direct consequence of this. Recordati S.p.A. has decided that forming a Nomination committee is deemed unnecessary, as the Recordati family has legal control. Again, this is reflected in the Executive Board of the company, as two out of three Directors are members of the family. While the corporate governance structure is in the favour of the shareholders of Recordati, it could be argued that it is mainly in favour of the sole majority shareholder the Recordati family. Therefore, the protection of minority shareholders is deemed rather weak.

The Board of Directors

Recordati is led by three executive and five non-executive directors. The Chairman, Alberto Recordati, and the Vice-Chairman and Chief Executive Officer, Andrea Recordati, are members of the Recordati family. Fritz Squindo is the Chief Financial Officer and Managing Director. Therefore, it should be noted that the Recordati family has not only legal control over the company in terms of majority shares, but also direct control in terms of executive directors. The non-executive directors are somewhat independent. As seen in Exhibit 12, the directors have extensive expertise with regards to their positions.

Internal Control and Risk Management System

The Risk and Audit Committee has drawn up an extensive "Catalogue of Risks", which is re-assessed annually. The 2015 edition has been updated with outsider insights from the consulting company Deloitte S.p.A. and encompasses the main internal and external risks to the company. The Board of Directors has analysed the compatibility of this report with the 2015 – 2017 Three-Year Business Plan. The aim of this system is to have a set of procedures ready to prevent or limit unexpected results. The control mechanisms are designed by the heads of each department. The structural components of the system consist of: the Code of Ethics, the system of powers and delegations, corporate operating procedures and supportive IT systems. We believe that the Internal Control and Risk Management System protects the shareholders from the risks towards the value of the company.

Figure 29: Investment risk mitigations factor

Risks	Mitigating Factor
Strategic Risk	
Failure to Sustain the Rare Diseases Strategy	Mergers & Acquisitions
Unable to Gain New Licensing Agreements	Future Agreements
Failure of Acquisition Strategy	Spend more on R&D
Business Risk	
Competitor Introduces More Cost-Effective Treatment	Price Reduction
Inability to Gain Approval for Pipeline	Focus on Late Stage Products Product Portfolio Diversification
Regulatory Risk	
Changes in Government Reimbursement Plans	Country Diversification
Economic Risk	
Sudden Increase of Interest Rates	Interest Rate Swap
Unstable European Union	Focus on Growth Outside of Europe
Other Risk	
Lack Independence of Directors	Change Non-Executive Directors More Often

Exhibit 1: Financial Statements (Forecasts)

Balance Sheet Model

in € '000	2015		2016E		2017E		2018E		2019E		2020E		2021E	
	values	% of tot assets	values	% of tot assets	values	% of tot assets	values	% of tot assets	values	% of tot assets	values	% of tot assets	values	% of tot assets
Current Assets														
Inventories	143,093	9.74%	156,105	9.71%	163,085	9.42%	172,478	9.27%	180,866	9.07%	188,139	8.82%	192,775	8.59%
Trade Receivables	177,219	12.06%	193,335	12.02%	201,979	11.67%	213,613	11.48%	224,000	11.23%	233,008	10.93%	238,750	10.53%
Other Receivables	28,883	1.97%	31,510	1.96%	32,918	1.90%	34,814	1.87%	36,507	1.83%	37,975	1.78%	38,911	1.72%
Other Current Assets	5,280	0.36%	5,760	0.36%	6,018	0.35%	6,364	0.34%	6,674	0.33%	6,942	0.33%	7,113	0.31%
Derivatives Instruments at Fair Value	12,671	0.86%	13,823	0.86%	14,441	0.83%	15,273	0.82%	16,016	0.80%	16,660	0.78%	17,070	0.75%
Cash & Securities	225,525	15.35%	320,739	19.94%	416,127	24.05%	516,034	27.33%	624,996	31.33%	742,229	34.82%	867,036	38.23%
Total Current Assets	592,671	40.35%	721,271	44.84%	834,568	48.22%	958,577	51.52%	1,089,058	54.60%	1,224,954	57.46%	1,361,657	60.04%
Non-Current Assets														
Property, Plant & Equipment	108,987	7.42%	117,458	7.39%	125,417	7.25%	132,689	7.13%	139,348	6.99%	145,472	6.82%	151,257	6.67%
Intangible Assets	246,450	16.78%	247,850	15.41%	247,750	14.32%	246,150	13.23%	243,050	12.18%	238,450	11.18%	232,350	10.25%
Goodwill	453,285	30.86%	453,285	28.18%	453,285	26.19%	453,285	24.36%	453,285	22.72%	453,285	21.26%	453,285	19.99%
Other Participations and Securities	32,444	2.21%	32,444	2.02%	32,490	1.88%	32,512	1.75%	32,537	1.63%	32,562	1.53%	32,587	1.44%
Other Credits	4,549	0.31%	4,731	0.29%	4,897	0.28%	5,080	0.27%	5,233	0.26%	5,390	0.25%	5,551	0.24%
Other Deferred Tax Assets	30,500	2.08%	31,333	1.95%	32,185	1.86%	32,402	1.74%	32,262	1.62%	31,797	1.49%	31,240	1.35%
Total Non-Current Assets	876,215	59.65%	887,100	55.16%	896,024	51.78%	902,118	48.48%	905,713	45.40%	906,955	42.54%	906,271	39.96%
Total Assets	1,468,886	100.00%	1,608,372	100.00%	1,730,592	100.00%	1,860,695	100.00%	1,994,771	100.00%	2,131,909	100.00%	2,267,929	100.00%

Current Liabilities														
Trade Payables	106,597	7.26%	116,291	7.23%	121,490	7.02%	128,488	6.91%	134,736	6.75%	140,154	6.57%	143,808	6.74%
Other Payables	72,351	4.93%	78,930	4.91%	82,459	4.76%	87,209	4.69%	91,450	4.58%	95,127	4.46%	97,472	4.37%
Tax Liabilities	14,592	0.99%	15,919	0.99%	16,631	0.96%	17,589	0.93%	18,444	0.92%	19,186	0.90%	19,658	0.89%
Other Current Liabilities	959	0.07%	1,048	0.07%	1,093	0.06%	1,156	0.06%	1,212	0.06%	1,261	0.06%	1,292	0.06%
Provisions	29,400	2.00%	32,074	1.99%	33,508	1.94%	35,438	1.90%	37,161	1.86%	38,655	1.81%	39,608	1.85%
Derivatives Instruments at Fair Value	4,290	0.29%	4,680	0.29%	4,889	0.28%	5,171	0.28%	5,422	0.27%	5,641	0.26%	5,780	0.27%
Current Financial Liabilities	34,469	2.35%	34,469	2.14%	34,469	1.99%	34,469	1.83%	34,469	1.73%	34,469	1.62%	34,469	1.62%
Other Short-Term Debt	9,849	0.67%	9,849	0.61%	9,849	0.57%	9,849	0.53%	9,849	0.49%	9,849	0.46%	9,849	0.46%
Total Current Liabilities	272,507	18.55%	293,258	18.23%	304,388	17.59%	319,368	17.16%	332,742	16.68%	344,342	16.15%	351,735	16.58%
Non-Current Liabilities														
Long-Term Debt	282,615	19.24%	282,615	17.57%	282,615	16.33%	282,615	15.19%	282,615	14.17%	282,615	13.26%	282,615	12.26%
Pensions	18,895	1.29%	19,178	1.19%	19,466	1.12%	19,758	1.06%	20,054	1.01%	20,355	0.95%	20,661	0.97%
Other Deferred Tax Liabilities	22,360	1.52%	22,695	1.41%	23,036	1.33%	23,381	1.26%	23,732	1.19%	24,088	1.13%	24,449	1.12%
Other Non-Current Liabilities	2,517	0.17%	2,517	0.16%	2,517	0.15%	2,517	0.14%	2,517	0.13%	2,517	0.12%	2,517	0.12%
Total Non-Current Liabilities	326,387	22.22%	327,006	20.33%	327,634	18.93%	328,217	17.64%	328,919	16.49%	329,575	15.46%	330,242	15.49%
Equity														
Common Equity	26,141	1.78%	26,141	1.63%	26,141	1.51%	26,141	1.40%	26,141	1.31%	26,141	1.23%	26,141	1.20%
Share Premium Account	83,719	5.70%	83,719	5.21%	83,719	4.84%	83,719	4.50%	83,719	4.20%	83,719	3.93%	83,719	3.93%
Treasury Shares	-35,061	-2.39%	-35,061	-2.18%	-35,061	-2.03%	-35,061	-1.88%	-35,061	-1.76%	-35,061	-1.64%	-35,061	-1.64%
Reserve for Derivatives Instruments at Fair Value	-3,290	-0.22%	-3,290	-0.20%	-3,290	-0.19%	-3,290	-0.18%	-3,290	-0.16%	-3,290	-0.15%	-3,290	-0.15%
Reserve for Currency Exchange	-66,918	-4.56%	-66,918	-4.16%	-66,918	-3.87%	-66,918	-3.60%	-66,918	-3.35%	-66,918	-3.14%	-66,918	-3.14%
Other Undistributable Reserves	42,543	2.90%	42,543	2.65%	42,543	2.46%	42,543	2.29%	42,543	2.13%	42,543	2.00%	42,543	2.00%
Retained Earnings	685,587	46.67%	884,379	54.99%	1,002,472	57.93%	1,112,911	59.81%	1,227,375	61.53%	1,347,404	63.20%	1,472,261	69.06%
Net Income	198,792	13.53%	118,093	7.34%	110,439	6.38%	114,464	6.15%	120,030	6.02%	124,857	5.86%	127,934	6.00%
Dividend Account	-61,606	-4.19%	-61,606	-3.83%	-61,606	-3.56%	-61,606	-3.31%	-61,606	-3.09%	-61,606	-2.89%	-61,606	-2.89%
Group's Equity	869,907	59.22%	988,000	61.43%	1,098,439	63.47%	1,212,903	65.19%	1,332,932	66.82%	1,457,789	68.88%	1,585,723	74.38%
Minorities' Equity	85	0.01%	109	0.01%	131	0.01%	154	0.01%	178	0.01%	203	0.01%	228	0.01%
Total Equity	869,992	59.23%	988,109	61.44%	1,098,570	63.48%	1,213,056	65.19%	1,333,110	66.83%	1,457,992	68.79%	1,585,951	74.39%
Total Liabilities	1,468,886	100.00%	1,608,372	100.00%	1,730,592	100.00%	1,860,695	100.00%	1,994,771	100.00%	2,131,909	100.00%	2,267,929	100.00%

Profit & Loss Model

in € '000	2015		2016E		2017E		2018E		2019E		2020E		2021E	
	values	% of sales	values	% of sales	values	% of sales	values	% of sales	values	% of sales	values	% of sales	values	% of sales
Group Sales	1,047,676	100.00%	1,142,948	100.00%	1,194,051	100.00%	1,262,826	100.00%	1,324,233	100.00%	1,377,488	100.00%	1,411,433	100.00%
Cost of Goods	-335,210	-32.00%	-356,401	-31.18%	-382,096	-32.00%	-404,104	-32.00%	-423,755	-32.00%	-440,796	-32.00%	-451,659	-32.00%
Gross Profit	712,466	68.00%	786,546	68.82%	811,955	68.00%	858,722	68.00%	900,478	68.00%	936,692	68.00%	959,775	68.00%
Selling Expenses	-293,204	-27.99%	-301,871	-26.41%	-334,334	-28.00%	-353,591	-28.00%	-370,785	-28.00%	-385,697	-28.00%	-395,201	-28.00%
R&D Expenses	-76,736	-7.32%	-80,264	-7.02%	-95,524	-8.00%	-101,026	-8.00%	-105,939	-8.00%	-110,199	-8.00%	-112,915	-8.00%
G&A Expenses	-58,980	-5.63%	-62,796	-5.49%	-65,673	-5.50%	-69,455	-5.50%	-72,833	-5.50%	-75,762	-5.50%	-77,629	-5.50%
Other Net Income and Expenses	-5,029	-0.48%	-11,953	-1.05%	-11,941	-1.00%	-12,628	-1.00%	-13,242	-1.00%	-13,775	-1.00%	-14,114	-1.00%
Operating Profit	278,517	26.58%	329,662	28.84%	310,453	26.00%	322,021	25.50%	337,679	25.50%	351,259	25.50%	359,916	25.50%
Other Financial Income and Expenses	-13,080	-1.25%	-13,080	1.14%	-13,080	1.10%	-13,080	1.04%	-13,080	0.99%	-13,080	0.95%	-13,080	0.93%
Pre-tax Profit	265,437	25.34%	316,582	27.84%	297,373	25.00%	308,941	24.50%	324,599	24.50%	338,179	24.50%	346,836	24.50%
Taxes	-66,634	-6.36%	-81,951	-7.17%	-77,613	-6.50%	-80,442	-6.37%	-84,354	-6.37%	-87,746	-6.37%	-89,908	-6.37%
	25%		26%		26%		26%		26%		26%		26%	
Net Income	198,783	18.97%	234,631	20.66%	220,760	18.50%	228,499	18.13%	240,245	18.13%	249,714	18.13%	255,867	18.13%
Minorities	20	0.002%	24	0.002%	22	0.002%	23	0.002%	24	0.002%	25	0.002%	26	0.002%

Exhibit 2: DCF Assumptions

Main Corporate Products

- **Zanipress:** developed by Recordati and indicated for the treatment of *hypertension*. Distributed both directly and through licenses in 25 countries with leadership position in some European countries (Italy 37.5%, France 27.4%, Germany 52.9% market share). In the last 6 years the sales of Zanipress tripled from €20mm in 2009 to €65mm in 2015 driven both by drug commercial success and the progressive rollout in new markets. Zanipress was protected by an exclusivity commercial right which is expired in December 2016 worldwide with the exception of Spain and Portugal where generic version launched in 2014 negatively impacted sales. The CAGR (-12.94%) is compounded assuming that sales for 2019 will be 50% of 2016 sales. This is coherent with the "generics effect" happened for Zanidip between 2009 and 2014. At that time the sales went down from €214mm to €110mm over 5 years. This corresponds to a $CAGR = (110/214)^{(1/5)} - 1 = -12.46\%$. Expect full impact of generic competition in 2019 to be around 30% of Zanipress.
- **Zanidip:** is an antihypertensive discovered and developed in its research laboratories based on *lercanidipine* (calcium channel blocker). The drug is sold in 98 countries through commercial organizations, licenses and co marketing agreement. The patent expired in 2010 and new generic version entered in the market: for these reasons sales since 2010 have almost halved in past years. Recordati's assumptions of stable sales for Zanidip. Zanidip is now stabilizing due to EM growth offsetting EU erosion and more generics have left the market.
- **Urorec:** indicated for the treatment of *symptomatic benign prostatic hyperplasia (BPH)*. Is based on silosodin an active principle which Recordati obtained under license from the Japanese company Kissei Pharmaceutical for the whole Europe (45 countries) and further 18 countries in the Middle East and Africa. The product is covered by an exclusivity commercial right for 10 years from launch in each country (started in 2010 launch in Germany). Since its launch in 2010 sales steadily increased from €2mm in 2010 to €68mm in 2015 thanks to both growing sales volumes and gradual rollout in new markets. The global therapeutic market for *benign prostatic hyperplasia* is expected to grow with a CAGR of 8.23% from 2014 to 2024: from a \$2bn to a \$4.9bn market. (source: Global Data). For Urorec we can expect a similar growth rate for the period 2017-2020. However, due to the patent expiration at the end of 2020, we expect a drop in the sales from 2021 onward.
- **Livazo:** is a statin indicated for the reduction of total cholesterol (TC) and LDL cholesterol in adult patients with primary hypercholesterolemia. The drug was in license from the Japanese company Kowa for many European countries. Recordati decided to not yet commercialize the product in Italy and France as the reimbursement from the respective national health system is unsatisfying. Livazo was instead directly marketed in Spain Portugal Ukraine since 2014 in Greece and since 2012 in Switzerland through a license. The commercial agreement with Kowa concerns 11 key countries for a total statins market that according to the company amounts to €2.1bn therefore management aims at further launches to take place in coming years. The company aims at Livazo sales to exceed €50mm by 2019. We are expecting the introduction of Livazo in new countries. Today Livazo is launched in 6 markets and has a 7.5% market share in those countries. Livazo was recently introduced in Russia and will be introduced in Turkey during 2017. Recordati expects a double digit growth until 2019. Patent expiration in 2020.
- **Drugs for Rare Diseases:** The Rare Disease franchise grew at 22% in 2016 supported by strong new patient adds but is expected a slower growth going forward due to a slow down in new patients' recruitment. The company's Rare Diseases portfolio has been the major driver of its operating margin expansion, from 21.7% 2009 to 26.6% 2015 (double digit sales' increase in the US thanks to drugs for Rare Diseases). While the company's orphan drug portfolio is dominated by older drugs with almost no market exclusivity, we see an opportunity for modest price increases due to the lack of competition, as the patient population is small and and as there is a high difficulty in discovering these patients, especially for new entrants. We forecast a CAGR 10% through 2016-2020 for this segment. The acquisition of Orphan Europe in 2007 gave Recordati key assets such as Carbaglu while 2012 acquisition of a portfolio of assets from Lundbeck in the US (Panhematin, Cosmegen) further strengthened the company's position in the Rare Diseases market. Recordati markets its orphan drugs across several countries globally with the company's US operations solely focused on Rare Diseases.
- **Pharma-Chemicals:** We are expecting a 5% growth for this field. This growth is mainly driven by the fact that Recordati can increase its R&D activity using the fine chemicals developed by this part of the company. We are also expecting an increase in the Pharma-Chemicals activity in those countries where the presence of Recordati could easily grow thanks to the more flexible regulation and the greater possibility to co-operate with other payers compared to the Pharma-Industry. However, we did not assume any further investments in this field.

Main Countries

Italy: In 2014 sales decreased by 4.7% yoy mainly due to the expiration of the licensing agreement for the commercialization of the Adagen (Rare Diseases). This negative effect was partially offset by the growth in the OTC segment and some of the more important corporate products (Peptazol, Urorec, Cardicor and Zanipril). We forecast a growth in these corporate products mainly driven by the commercial power of Recordati in Italy. For the OTC products we estimate a growth around 2%-3% based on the studies of Lorenzo Positano (BCG Pharma Industry Italia). For main corporate products we (Zanidip, Zanipress, Urorec) we link our estimates to the specific diseases market forecasts and to the expiring licenses. Eventually, during 2016 sales in the Italian market also benefitted from the acquisition of Itlachimici (sales = €46mm). In our model we integrated this acquisition in the OTC item that grew by 4% in 2015 + €46mm new sales (*7/12). We consider a full impact of Itlachimici acquisition in 2017 with an increase in sales by the remaining €46mm *5/12. For what concerns Tora-dol, Cardicor and Peptazol licenses already expired so generics versions are in the markets: forecasts are in line with the Lorenzo Positano ones that generic pharma in Italy will grow by 1% per year. For Cardicor we forecast a higher growth rate table at 5% p.a. justified by Recordati's stronger commitment to improve sales of this drug which had a double digit growth during last 5 years. For Rextat/Lovanicor (lovastatin), we expect sales to decrease over the next 5 years due to the fact that the statins market is facing a downward pressure by generics and among the different statins, lovastatin is one of the most expensive ones (in Italy the daily cost of lovastatin therapy is €0.51 vs €0.33 for simvastatin).

Italy sales		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Peptazol	anti-ulcer	25,374	23,651	23,769	23,888	24,008	24,008	24,008	24,008
Cardicor	heart failure	18,205	20,250	21,263	22,326	23,442	24,145	24,870	25,367
Urorec	BPH (Benign prostatic hyperplasia)	16,208	19,308	20,897	22,617	24,478	26,493	28,673	24,963
Zaneditp/ Lercanidipine	antihypertensive	18,876	18,407	18,131	17,859	17,591	17,327	17,067	16,811
Zanipril/Lercaprel (Zanipress)	antihypertensive	12,205	14,554	12,671	11,031	9,604	8,361	7,279	6,337
Tora-Dol	analgesic	13,310	12,202	12,324	12,447	12,572	12,697	12,824	12,953
Rextat/Lovinasor	anti-cholesterol	10,726	11,953	12,551	12,551	12,300	12,054	11,813	11,576
Entact	antidepressant	16,660	-	0	0	0	0	0	0
Orphan Drugs		8,191	6,042	6,646	7,244	7,823	8,371	8,873	9,406
other RX		28,558	33,764	33,764	33,764	33,764	33,764	33,764	33,764
TOTAL RX		168,313	160,131	162,015	163,727	165,582	167,220	169,171	165,185
Aloves	canker sores	-	7,500	7,725	7,880	8,037	8,198	8,362	8,529
Transact LAT	flurbiprofen	-	6,500	6,695	6,829	6,965	7,105	7,247	7,392
Proctolyn	anti-hemorrhoids	6,208	6,500	6,695	6,829	6,965	7,105	7,247	7,392
Dentosan	teeth	-	5,300	5,459	5,568	5,680	5,793	5,909	6,027
Imidazyl	eye drops	4,637	4,800	4,944	5,043	5,144	5,247	5,352	5,459
Eumill	eye drops	-	-	0	0	0	0	0	0
other OTC		33,118	14,116	41,373	61,367	62,594	63,846	65,123	66,426
TOTAL OTC		43,962	44,716	72,891	93,515	95,386	97,293	99,239	101,224
TOTAL ITALY		212,275	204,847	234,906	257,242	260,967	264,514	268,410	266,409

Italy growth rates		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Peptazol	anti-ulcer		-6.79%	0.50%	0.50%	0.50%	0.00%	0.00%	0.00%
Cardicor	heart failure		11.23%	5.00%	5.00%	5.00%	3.00%	3.00%	2.00%
Urorec	BPH (Benign prostatic hyperplasia)		19.13%	8.23%	8.23%	8.23%	8.23%	8.23%	-12.94%
Zaneditp/ Lercanidipine	antihypertensive		-2.48%	-1.50%	-1.50%	-1.50%	-1.50%	-1.50%	-1.50%
Zanipril/Lercaprel	antihypertensive		19.25%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%
Tora-Dol	analgesic		-8.32%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Rextat/Lovinasor	anti-cholesterol		11.44%	5.00%	0.00%	-2.00%	-2.00%	-2.00%	-2.00%
Entact	antidepressant		-100.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Orphan Drugs			-26.24%	10.00%	9.00%	8.00%	7.00%	6.00%	6.00%
other RX			18.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
TOTAL RX			-4.86%	1.18%	1.06%	1.13%	0.99%	1.17%	-2.36%
Aloves	canker sores		-	3.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Transact LAT	flurbiprofen		-	3.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Proctolyn	anti-hemorrhoids		4.71%	3.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Dentosan	teeth		-	3.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Imidazyl	eye drops		3.52%	3.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Eumill	eye drops		-	3.00%	2.00%	2.00%	2.00%	2.00%	2.00%
other OTC			-57.38%	3.00%	2.00%	2.00%	2.00%	2.00%	2.00%
TOTAL OTC			1.72%	3.00%	2.00%	2.00%	2.00%	2.00%	2.00%
TOTAL ITALY			-3.50%	14.67%	9.51%	1.45%	1.36%	1.47%	-0.75%

France: last year revenues were negatively impacted by Adagen. Methadone is one of the most important drug for this market and is expected to grow in the future (on a global level) due to market researches on opioids. However, we think that the sales could increase even more if Recordati obtains the approval to use Methadone as a treatment of cancer-related pain in cases of resistance or intolerance to opioids (filed in France) other than the current usage as treatment of the dependence to heroine and other opioids.

For Urorec Zanidip Zanipress we used the same approach as above. For the others RX drugs, we used Global Data Estimates on 0.7% CAGR 2014-2020 for the French Market primarily due to the increasing focus on generic drugs. OTC in line with French GDP growth.

France sales		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Methadone	drug addiction	26,266	28,139	29,546	30,580	31,650	32,758	33,741	34,753
Urorec	BPH (Benign prostatic hyperplasia)	10,049	11,560	12,511	13,541	14,656	15,862	17,167	14,946
Zanextra	antihypertensive	10,088	10,300	8,967	7,807	6,797	5,917	5,151	4,485
Zanidip/lercanidipina	antihypertensive	7,419	5,623	5,539	5,456	5,374	5,293	5,214	5,136
Orphan Drugs		8,191	6,042	6,646	7,244	7,823	8,371	8,873	9,406
other RX		26,903	24,926	25,101	25,277	25,454	25,632	25,811	25,992
TOTAL RX		88,916	86,590	88,310	89,904	91,753	93,833	95,958	94,717
Hexa line	antibacterial	6,958	8,231	8,322	8,421	8,539	8,650	8,763	8,868
Neocodion	cough	6,478	6,620	6,693	6,773	6,868	6,957	7,048	7,132
other OTC		6,684	9,149	9,250	9,361	9,492	9,615	9,740	9,857
TOTAL OTC		22,120	24,000	24,264	24,555	24,899	25,223	25,551	25,857
TOTAL FRANCE		111,036	110,590	112,574	114,459	116,652	119,055	121,508	120,574

France growth rates		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Methadone	drug addiction		7.13%	5.00%	3.50%	3.50%	3.50%	3.00%	3.00%
Urorec	BPH (Benign prostatic hyperplasia)		15.04%	8.23%	8.23%	8.23%	8.23%	8.23%	-12.94%
Zanextra	antihypertensive		2.10%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%
Zanidip/lercanidipina	antihypertensive		-24.21%	-1.50%	-1.50%	-1.50%	-1.50%	-1.50%	-1.50%
Orphan Drugs			-26.24%	10.00%	9.00%	8.00%	7.00%	6.00%	6.00%
other RX			-7.35%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
TOTAL RX			-2.62%	1.99%	1.81%	2.06%	2.27%	2.26%	-1.29%
Hexa line	antibacterial		18.30%	1.10%	1.20%	1.40%	1.30%	1.30%	1.20%
Neocodion	cough		2.19%	1.10%	1.20%	1.40%	1.30%	1.30%	1.20%
other OTC			5.36%	1.10%	1.20%	1.40%	1.30%	1.30%	1.20%
TOTAL OTC			8.50%	1.10%	1.20%	1.40%	1.30%	1.30%	1.20%
TOTAL FRANCE			-0.40%	1.79%	1.67%	1.92%	2.06%	2.06%	-0.77%

Germany: German pharma market is expected to edge up to \$65bn by 2020. While Germany is the leading pharma market in Europe, valued at \$58.6bn last year, the sector will expand at a modest CAGR of 1.7% to reach an estimated \$65bn by 2020: Germany is a mature market with high healthcare expenditure and pharmaceutical production - but it is the cost-saving government policies the largest

barrier to future growth. According to Federal Health Reporting, the German generic market is the largest in the EU, accounting for approximately 73.5% by volume and 33.1% by value of Germany's total pharmaceutical sales in 2013. This tendency to favor generics may restrict future sales of patented drugs. The market of Ortoton is expected to improve due to the global trend for the muscle relaxant drugs. For next years we have been more conservative aligning our global expectations with the local German pharmaceutical market that is expected to expand at a modest Compound Annual Growth Rate (CAGR). (Studies: GlobalData for pharma marker in Germany; Future Market Insights fro Muscle Relaxant Drugs)

Claversal: in 2012 GlobalData estimated that the US Ulcerative Colitis market reached \$2.25bn. By the end of the forecast period, in 2022, sales across the US will grow steadily to reach \$3.4 9bn, representing a Compound Annual Growth Rate (CAGR) of 4.5 % over the 10-year timeframe, which includes four new market entrants and the launch of biosimilars.

Corifeo (lecarnidipine): during last years' sales increased more than 15% mainly due to the price competitiveness of Recordati's Lecarnidipina compared to other generics and therefore the company awarded the contract.

Recosyn and Lipotalon: for these two drugs we expect a growth rate aligned to the musculo-skeletal global growth rate disorders; Global musculoskeletal disorders therapeutics market to grow at a CAGR of approximately 4% during 2016-2020 (source: BusinessWire).

OTC sales' in line with German GDP (source: EU).

Germany sales		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Ortoton	muscle relaxing	19,207	27,776	31,942	35,775	38,995	41,335	42,575	43,852
Claversal	ulcerative colitis	12,848	12,558	12,684	12,810	12,939	13,068	13,199	13,331
Zanipress	antihypertensive	8,735	7,777	6,771	5,895	5,132	4,468	3,890	3,386
Corifeo/lecarnidipina	antihypertensive	4,648	7,138	7,209	7,281	7,354	7,428	7,502	7,577
Recosyn	ortopedic	6,005	6,271	6,459	6,653	6,852	7,058	7,270	7,488
Lipotalon	anti-inflammatory	5,437	4,968	5,117	5,271	5,429	5,592	5,759	5,932
Orphan Drugs		8,191	6,042	6,646	7,244	7,823	8,371	8,873	9,406
other RX		2,668	5,323	5,430	5,538	5,649	5,762	5,877	5,985
TOTAL RX		67,739	77,853	82,258	86,468	90,174	93,081	94,945	96,967
Mirfulan	healing	6,061	5,992	6,094	6,191	6,284	6,372	6,468	6,558
other OTC		10,839	10,908	11,093	11,271	11,440	11,600	11,774	11,939
TOTAL OTC		16,900	16,900	17,187	17,462	17,724	17,972	18,242	18,497
TOTAL GERMANY		84,639	94,753	99,445	103,930	107,898	111,054	113,187	115,464

Germany growth rates		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Ortoton	muscle relaxing		44.6%	15.00%	12.00%	9.00%	6.00%	3.00%	3.00%
Claversal	ulcerative colitis		-2.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Zanipress	antihypertensive		-11.00%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%
Corifeo/lecarnidipina	antihypertensive		53.50%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Recosyn	ortopedic		4.40%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Lipotalon	anti-inflammatory		-8.63%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Orphan Drugs			-26.24%	10.00%	9.00%	8.00%	7.00%	6.00%	6.00%
other RX			99.55%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
TOTAL RX			14.93%	5.66%	5.12%	4.29%	3.22%	2.00%	2.13%
Mirfulan	healing		-1.14%	1.70%	1.60%	1.50%	1.40%	1.50%	1.40%
other OTC			0.64%	1.70%	1.60%	1.50%	1.40%	1.50%	1.40%
TOTAL OTC			11.95%	1.70%	1.60%	1.50%	1.40%	1.50%	1.40%
TOTAL GERMANY			11.95%	4.95%	4.51%	3.82%	2.92%	1.92%	2.01%

USA sales in €	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Rare Diseases	56,777	82,100	103,446	122,066	139,156	155,854	171,440	186,869

USA growth rates	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Rare Diseases		44.60%	26.00%	18.00%	14.00%	12.00%	10.00%	9.00%

Turkey: we expect high sales growth due to the new plant in Turkey that should reach its full potential. We also expect further increase in the pharma market in line with the double digit growth of last years. However, we made some more conservative assumptions for the future in line with global data forecast CAGR of 2% p.a. mainly due to a lack of transparency in regulatory environment that could deter clinical investment in the industry and to high private healthcare expenditure and low coverage of services. For Iecarnidipine Urorec and Zaniress we expect high growth rate especially in 2016-2017 mainly driven by increase in volumes. The commitment of the company to expand the sales of these drugs in Turkey during last years showed a very positive impact (46% growth rate Urorec, 49.7% growth rate Zaniress).

Turkey sales in local currency									
Cabral	muscle relaxing	34,797	38,122	44,984	51,732	57,422	62,590	66,971	71,659
Lercadip	antihypertensive	35,419	37,824	40,283	42,700	45,048	47,300	48,719	49,694
Mictonorm	urinary incontinence	28,191	35,057	41,367	47,572	52,805	57,558	61,587	65,898
Kreval	cough	17,922	20,819	24,566	28,251	31,359	34,181	36,574	39,134
Urorec	BPH (Benign prostatic hyperplasia)	14,149	20,698	28,977	36,222	40,749	44,417	47,526	50,853
Zaniress	antihypertensive	11,747	17,586	24,620	30,776	34,622	37,738	40,380	43,207
Procto-Glyvenol	anti-hemorrhoids	11,857	12,962	15,295	17,589	19,524	21,281	22,771	24,365
Other									
Currency Exchange Effect		-2,800	-4,776	-3,543	7,823	8,371	8,873	9,406	
TOTAL TURKEY		68,003	74,073	68,785	70,630	89,005	95,844	101,673	107,790

Turkey sales in €									
Cabral	muscle relaxing	12,320	12,030	12,126	12,009	13,330	14,530	15,547	16,636
Lercadip	antihypertensive	12,540	11,936	10,859	9,913	10,458	10,981	11,310	11,536
Mictonorm	urinary incontinence	9,981	11,063	11,151	11,044	12,259	13,362	14,297	15,298
Kreval	cough	6,345	6,570	6,622	6,558	7,280	7,935	8,491	9,085
Urorec	BPH (Benign prostatic hyperplasia)	5,010	6,532	7,811	8,409	9,460	10,311	11,033	11,805
Zaniress	antihypertensive	4,159	5,550	6,637	7,144	8,038	8,761	9,374	10,030
Procto-Glyvenol	anti-hemorrhoids	4,198	4,091	4,123	4,083	4,533	4,940	5,286	5,656
Orphan Drugs		8,191	6,042	6,646	7,244	7,823	8,371	8,873	9,406
Other		5,258	7,459	7,586	7,768	8,001	8,281	8,588	8,931
Currency Exchange Effect		-2,800	-4,776	-3,543	7,823	8,371	8,873	9,406	
TOTAL TURKEY		68,003	74,073	68,785	70,630	89,005	95,844	101,673	107,790

Turkey growth rates									
Cabral	muscle relaxing		9.56%	18.00%	15.00%	11.00%	9.00%	7.00%	7.00%
Lercadip	antihypertensive		7.00%	6.50%	6.00%	5.50%	5.00%	3.00%	2.00%
Mictonorm	urinary incontinence		24.36%	18.00%	15.00%	11.00%	9.00%	7.00%	7.00%
Kreval	cough		16.16%	18.00%	15.00%	11.00%	9.00%	7.00%	7.00%
Urorec	BPH (Benign prostatic hyperplasia)		46.29%	40.00%	25.00%	12.50%	9.00%	7.00%	7.00%
Zaniress	antihypertensive		49.71%	40.00%	25.00%	12.50%	9.00%	7.00%	7.00%
Procto-Glyvenol	anti-hemorrhoids		9.32%	18.00%	15.00%	11.00%	9.00%	7.00%	7.00%
Orphan Drugs			-26.24%	10.00%	9.00%	8.00%	7.00%	6.00%	6.00%
Other				1.70%	2.40%	3.00%	3.50%	3.70%	4.00%
TOTAL TURKEY			8.93%	-7.14%	2.68%	26.02%	7.68%	6.08%	6.02%

Russia: growth in line with company expectation of double digit growth.

Russia + CIS in local currency									
		0.01262							
Tergynan	gynecological anti-infective	937,259	992,558	1,171,218	1,335,189	1,468,708	1,586,205	1,713,101	1,815,887
Polydexa	auricular anti-infective	782,060	850,968	1,004,142	1,144,722	1,259,194	1,359,930	1,468,724	1,556,848
Isofra	rhinal anti-infective	465,700	640,558	755,858	861,679	947,846	1,023,674	1,105,568	1,171,902
Alfavit	nutritional supplement	452,031	560,664	661,584	754,205	829,626	895,996	967,675	1,025,736
Qudesan	nutritional supplement	314,475	317,488	374,636	427,085	469,793	507,377	547,967	580,845
Other									
Currency Exchange Effect		-20,900	18,746	1,784	1,839	8,371	8,873	9,406	
TOTAL RUSSIA + CIS		81,339	72,382	89,983	77,058	84,230	97,072	104,300	110,415

Russia (CIS) in €									
Tergynan	gynecological anti-infective	13,346	12,519	18,178	19,184	21,102	22,790	24,614	26,090
Polydexa	auricular anti-infective	11,136	10,734	15,585	16,447	18,092	19,539	21,102	22,369
Isofra	rhinal anti-infective	6,631	8,080	11,732	12,380	13,618	14,708	15,885	16,838
Alfavit	nutritional supplement	6,437	7,072	10,268	10,836	11,920	12,874	13,903	14,738
Qudesan	nutritional supplement	4,478	4,005	5,815	6,136	6,750	7,290	7,873	8,345
Orphan Drugs		8,191	6,042	6,646	7,244	7,823	8,371	8,873	9,406
Other		31,120	3,031	3,013	3,046	3,086	3,129	3,176	3,224
Currency Exchange Effect		-20,900	18,746	1,784	1,839	8,371	8,873	9,406	
TOTAL RUSSIA + CIS		81,339	72,382	89,983	77,058	84,230	97,072	104,300	110,415

Russia (CIS) growth rates									
Tergynan	gynecological anti-infective		5.90%	18.00%	14.00%	10.00%	8.00%	8.00%	6.00%
Polydexa	auricular anti-infective		8.81%	18.00%	14.00%	10.00%	8.00%	8.00%	6.00%
Isofra	rhinal anti-infective		37.55%	18.00%	14.00%	10.00%	8.00%	8.00%	6.00%
Alfavit	nutritional supplement		24.03%	18.00%	14.00%	10.00%	8.00%	8.00%	6.00%
Qudesan	nutritional supplement		0.96%	18.00%	14.00%	10.00%	8.00%	8.00%	6.00%
Orphan Drugs				10.00%	9.00%	8.00%	7.00%	6.00%	6.00%
Other			-0.60%	1.10%	1.30%	1.40%	1.50%	1.50%	
TOTAL RUSSIA + CIS			-11.01%	24.32%	-14.36%	9.31%	15.25%	7.45%	5.86%

Spain: Citrafleet, Enema Casen and Cidine are gastro-intestinal products that come from Casen Fleet (Spanish Pharma company acquired by Recordati in 2013). These products have registered a negative trend in the recent past years so we forecast a conservative scenario of a 0% growth rate. In fact, Casen used to have a 60% market share in Spain (for Citrafleet) that was eroded during 2015 (from €14mm in 2014 to €12mm in 2015). Making forecasts on the future growth of these products is very difficult as for the volatility of the past years' sales: from 2013 to 2014 we can see an improvement on sales whilst in 2015 the trend in reversed.

Spain sales		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Citrafleeet	preparation for colonoscopy	12,177	12,292	12,292	12,292	12,292	12,292	12,292	12,292
Livazo	anti-cholesterol	9,263	10,168	11,185	12,303	13,534	14,887	16,376	14,247
Enema Casen	gastric emptying	8,055	7,881	7,881	7,881	7,881	7,881	7,881	7,881
Urorec	BPH (Benign prostatic hyperplasia)	6,471	7,233	7,828	8,473	9,170	9,925	10,741	9,351
Cidine	gastro-prokinetic	5,750	5,077	5,077	5,077	5,077	5,077	5,077	5,077
Bi-oral-suero	rehydrating solution	4,478	4,798	4,952	5,065	5,167	5,260	5,354	5,445
Zanipress	antihypertensive	2,775	2,906	2,530	2,203	1,918	1,669	1,453	1,265
Orphan Drugs		8,191	6,042	6,646	7,244	7,823	8,371	8,873	9,406
Other		10,993	15,584	16,083	16,437	16,766	17,084	17,375	17,618
TOTAL SPAIN		68,153	71,981	74,473	76,975	79,627	82,446	85,423	82,583

Spain growth rates		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Citrafleeet	preparation for colonoscopy	0.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Livazo	anti-cholesterol	9.77%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	-13.00%
Enema Casen	gastric emptying	-2.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Urorec	BPH (Benign prostatic hyperplasia)	11.78%	8.23%	8.23%	8.23%	8.23%	8.23%	8.23%	-12.94%
Cidine	gastro-prokinetic	-11.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Bi-oral-suero	rehydrating solution	7.15%	3.20%	2.30%	2.00%	1.80%	1.80%	1.80%	1.70%
Zanipress	antihypertensive	4.72%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%
Orphan Drugs		-26.24%	10.00%	9.00%	8.00%	7.00%	6.00%	6.00%	6.00%
Other			3.20%	2.20%	2.00%	1.90%	1.70%	1.70%	1.40%
TOTAL SPAIN			5.62%	3.46%	3.36%	3.45%	3.54%	3.61%	-3.32%

North Africa: Recordati acquired in 2013 Opalia Pharma which is one of the main player in the Nord Africa industry especially in Tunisia. During last years the company has been able to leverage both on increasing volumes and larger product portfolio that drove a double digit growth. The value of Africa's pharmaceutical industry jumped to \$20.8bn in 2013 from just \$4.7bn a decade earlier. That growth is continuing at a rapid pace: we predict the market will be worth \$40bn to \$65bn by 2020. (Source: McKinsey)
Estimated CAGR 2020 c.10%.

North Africa sales		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Opalia pharma		15,855	19,200	21,888	24,296	26,482	28,336	29,753	30,645
Other		22,425	24,486	26,200	27,510	28,886	29,752	30,645	31,564
TOTAL NORTH AFRICA		38,280	43,686	48,088	51,806	55,368	58,088	60,398	62,209

North Africa growth rates		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Opalia pharma			21.10%	14.00%	11.00%	9.00%	7.00%	5.00%	3.00%
Other			9.19%	7.00%	5.00%	5.00%	3.00%	3.00%	3.00%
TOTAL NORTH AFRICA			14.12%	10.08%	7.73%	6.88%	4.91%	3.98%	3.00%

Portugal: For Livazo, Urorec and Zanipress we used the same approach as above. For the other products we linked the growth to the GDP. In fact, even if some OTC products had a double digit growth in 2015, some other important ones (as Transact LAT and Microlax) faced a decrease in the sales. There are no particular expectations for the Portuguese pharma market.

Portugal sales		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Livazo	anti-cholesterol	6,331	7,227	7,950	8,745	9,619	10,581	11,639	10,126
Zanipress	antihypertensive	4,161	4,124	3,590	3,126	2,721	2,369	2,063	1,796
Transact LAT	BPH (Benign prostatic hyperplasia)	4,029	3,924	3,967	4,019	4,061	4,165	4,240	4,316
Microlax	laxative	2,943	2,839	2,870	2,908	2,960	3,013	3,067	3,123
Urorec	BPH (Benign prostatic hyperplasia)	2,065	2,355	2,549	2,759	2,986	3,231	3,497	3,045
Orphan Drugs		8,191	6,042	6,646	7,244	7,823	8,371	8,873	9,406
Other		8,521	12,835	12,977	13,145	13,382	13,623	13,868	14,118
TOTAL PORTUGAL		36,241	39,346	40,549	41,944	43,582	45,353	47,247	45,928

Portugal growth rates		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Livazo	anti-cholesterol		14.15%	10.00%	10.00%	10.00%	10.00%	10.00%	-13.00%
Zanipress	antihypertensive		-0.89%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%	-12.94%
Transact LAT	BPH (Benign prostatic hyperplasia)		-2.61%	1.10%	1.30%	1.80%	1.80%	1.80%	1.80%
Microlax	laxative		-3.53%	1.10%	1.30%	1.80%	1.80%	1.80%	1.80%
Urorec	BPH (Benign prostatic hyperplasia)		14.04%	8.23%	8.23%	8.23%	8.23%	8.23%	-12.94%
Orphan Drugs			-26.24%	10.00%	9.00%	8.00%	7.00%	6.00%	6.00%
Other				1.10%	1.30%	1.80%	1.80%	1.80%	1.80%
TOTAL PORTUGAL			8.57%	3.06%	3.44%	3.90%	4.06%	4.18%	-2.79%

Other Middle East Europe: given the limited presence of Recordati in Romania, Czech Republic, Poland and Slovakia with less than €20mm sales in those countries, we assumed a growth mainly driven by the GDP. No assumptions were made on potential new investments in those countries.

Other West Europe: for these countries we had a positive impact in 2016 mainly due to the acquisition of the Swiss company ProFarma during 2016. The annual sales of ProFarma have been €10mm. We aligned our expectations with the GDP ones. No assumptions were made on potential new investments in those countries.

Other International countries: for the sales to licenses, sales from Bouchara Recordati and from Casen Recordati we decided to align the growth rate to the global GDP. We used the data from the World Bank Report- January 2017. We think that these sales will be mainly driven by the ability to increase the sales to licenses from the new products in pipeline. For this reason, we think that it would be more adequate to analyze the effects deriving from the pipeline in a separate part of the work.

Other Middle East Europe sales		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Procto-Glyvenol (Poland)	anti-hemorrhoids	2,125	3,500	3,588	3,700	3,809	3,928	4,048	4,175
Poland		6,726	9,100	9,355	9,620	9,904	10,213	10,526	10,854
Czech Republic and Slovakia		12,705	12,400	12,747	13,109	13,496	13,917	14,343	14,790
Romania		3,627	3,500	3,588	3,700	3,809	3,928	4,048	4,175
Orphan Drugs		1,850	2,400	2,467	2,537	2,612	2,694	2,776	2,863
Other		488	26	27	27	28	29	30	31
TOTAL MIDDLE EAST EUROPE		27,521	30,926	31,792	32,695	33,659	34,709	35,772	36,888

Other Middle East Europe growth rates		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Procto-Glyvenol (Poland)	anti-hemorrhoids		64.70%	2.80%	2.84%	2.95%	3.12%	3.06%	3.12%
Poland			35.30%	2.80%	2.84%	2.95%	3.12%	3.06%	3.12%
Czech Republic and Slovakia			-2.40%	2.80%	2.84%	2.95%	3.12%	3.06%	3.12%
Romania			-3.50%	2.80%	2.84%	2.95%	3.12%	3.06%	3.12%
Orphan Drugs			29.70%	2.80%	2.84%	2.95%	3.12%	3.06%	3.12%
Other			-94.67%	2.80%	2.84%	2.95%	3.12%	3.06%	3.12%
TOTAL MIDDLE EAST EUROPE			12.37%	2.80%	2.84%	2.95%	3.12%	3.06%	3.12%

Other West Europe sales		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Orphan Drugs (UK)			5,796	5,912	5,971	6,049	6,139	6,244	6,350
other			3,204	3,268	3,325	3,382	3,422	3,470	3,522
Ireland, Greece and Switzerland			11,800	17,516	21,736	22,105	22,371	22,684	23,021
Orphan Drugs		8,191	6,042	6,194	6,276	6,363	6,453	6,547	6,640
Other		16,417	1,660	1,694	1,723	1,752	1,773	1,798	1,825
TOTAL WEST EUROPE		24,608	28,502	34,584	39,031	39,651	40,159	40,743	41,357

Other West Europe growth rates		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Orphan Drugs (UK)				2.00%	1.00%	1.30%	1.50%	1.70%	1.70%
other				2.00%	1.74%	1.70%	1.20%	1.40%	1.49%
Ireland, Greece and Switzerland				2.00%	1.74%	1.70%	1.20%	1.40%	1.49%
Orphan Drugs				2.53%	1.31%	1.40%	1.41%	1.46%	1.41%
Other				2.00%	1.74%	1.70%	1.20%	1.40%	1.49%
TOTAL WEST EUROPE				21.34%	12.86%	1.59%	1.28%	1.46%	1.51%

Other international sales		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Foreign licenses and sales		99,622	109,484	112,002	115,026	118,362	121,794	125,326	128,961
Bouchara Recordati		14,699	14,908	15,251	15,663	16,117	16,584	17,065	17,560
Casen Recordati		7,571	6,558	6,709	6,890	7,090	7,295	7,507	7,725
Orphan Drugs		16,408	20,297	20,764	21,324	21,943	22,579	23,234	23,908
Other		6,542	7,196	7,362	7,560	7,780	8,005	8,237	8,476
TOTAL OTHER INTERNATIONAL SALES		144,842	158,443	162,087	166,464	171,291	176,258	181,370	186,630

Other international sales growth rates		2014	2015	2016E	2017E	2018E	2019E	2020E	2021E
Foreign licenses and sales			9.90%	2.30%	2.70%	2.90%	2.90%	2.90%	2.90%
Bouchara Recordati			1.42%	2.30%	2.70%	2.90%	2.90%	2.90%	2.90%
Casen Recordati			-13.38%	2.30%	2.70%	2.90%	2.90%	2.90%	2.90%
Orphan Drugs			23.70%	2.30%	2.70%	2.90%	2.90%	2.90%	2.90%
Other			10.00%	2.30%	2.70%	2.90%	2.90%	2.90%	2.90%
TOTAL OTHER INTERNATIONAL SALES			9.39%	2.30%	2.70%	2.90%	2.90%	2.90%	2.90%

Exhibit 3: Regression Output for Beta computation

SUMMARY OUTPUT

Regression Statistics								
Multiple R	0,763587926							
R Square	0,583066521							
Adjusted R Square	0,58290205							
Standard Error	0,016582644							
Observations	2537							

ANOVA		df	SS	MS	F	Significance F		
Regression		1	0,974847849	0,974847849	3545,106601	0		
Residual		2535	0,697084623	0,000274984				
Total		2536	1,671932471					

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0,00075169	0,000329296	2,282714653	0,022529639	0,000105972	0,001397407	0,000105972	0,001397407
0,001070995	0,740645234	0,01243929	59,54079779	0	0,716253028	0,76503744	0,716253028	0,76503744

Exhibit 4: Pipeline Assumptions

VITAROS

Erectile Dysfunction

Data	value	source
EU population (in mln)	743,100	World Bank
Man population (in mln)	371,550	assumption: 50% man population
ED population (in mln)	22,293	6% of man pop. (https://www.sharecare.com/health/erectile-dysfunction/percent-male-population-affected-ed)
VITAROS patients EU (in mln)	5,000	http://www.taglichbrothers.com/companyreports/apricusbio/apricusbio-05232016.pdf
market penetration	22,43%	
market value (€ per patient)	21,33	http://lsintel.com/market-reports-page.php?id=A452

Recordati markets

Country	total pop (in mln, source World bank 2013)	male pop 20-60 (in mln): UN 2015	ED pop (in mln)	potential Vitaros patients (in mln)	market value (in mln)
Portugal	10,460	2,676	0,161	0,036	0,768
Spain	46,770	13,050	0,783	0,176	3,746
Ireland	4,595	1,269	0,076	0,017	0,364
Poland	38,530	11,089	0,665	0,149	3,183
Russia + CIS	276,917	81,776	4,907	1,100	23,477
Turkey	74,930	21,142	1,269	0,285	6,070
North. african co	112,402	57,136	3,428	0,769	16,403
total	564,604	188,138	11,288	2,532	54,012

years to full market potential	7
--------------------------------	---

	2015	2016	2017	2018	2019	2020	2021
market potential	10%	20%	35%	50%	75%	90%	100%
sales (in € mln)	5,401	10,802	18,904	27,006	40,509	48,611	54,012

FORTACIN

Premature ejaculation

Country	male pop. 20-60 (in mln): UN 2015	PE pop. (20%)	5% market share	unit sales annum (intercourse once every two weeks + 12 doses package)	unit price	total sales (in €mm)
EU	135,176	27,035	1,352	2,704	15	40,553
Russia+CIS	81,776	16,355	0,818	1,636	15	24,533
Turkey	21,142	4,228	0,211	0,423	15	6,343
North Africa	57,136	11,427	0,571	1,143	15	17,141
total	295,230	59,046	2,952	5,905	15	88,569
source	UN-2015	http://www.plethorasolutions.co.uk/licensing.php	http://www.plethorasolutions.co.uk/licensing.php	http://www.ejaculationspray.com/buy.htm ; http://www.pleth	our assumption	

years to full market potential	7
--------------------------------	---

	2017	2018	2019	2020	2021	2022	2023
market potential	10%	20%	35%	50%	75%	90%	100%
sales (in € mln)	8,857	17,714	30,999	44,285	66,427	79,712	88,569

GRASPA

treatment for ALL (phase 3) and AML (phase 2b)

ALL

	0-5	05 -> 20	20 -> 40	40 -> 60	over 60
Total population europe (source UN: 2015) in mln	39,951	113,784	198,321	209,873	176,513
Incidence ratio (%)	0,0050%	0,0020%	0,0007%	0,0005%	0,0010%
Number of ALL Patient in Europe per Age	0,0020	0,0023	0,0014	0,0010	0,0018

AML

	0-5	05 -> 20	20 -> 40	40 -> 60	over 60
Total population europe (source UN: 2015) in mln	39,951	113,784	198,321	209,873	176,513
Incidence ratio (%)	0,0007%	0,0005%	0,0010%	0,0030%	0,0100%
Number of AML Patient in Europe per Age	0,0003	0,0006	0,0020	0,0063	0,0177

Total ALL patients	8.476
Total AML patients	26.779

	Tot. patients	Incidence GRASPA	Unit cost GRASPA treatment	probability	peak sales (in € mln)
ALL	8.476	30%	36000	90%	82
AML	26.779	30%	36000	30%	87

years to full market potential	5
--------------------------------	---

	2017	2018	2019	2020	2021
market potential (ALL)	20%	45%	60%	80%	100%
sales (in € mln)	16,477	37,074	49,432	65,909	82,386
	2022	2023	2024	2025	2026
market potential (AML)	20%	45%	60%	80%	100%
sales (in € mln)	17,353	39,044	52,059	69,412	86,765

CYSTADROPS

Total population (source UN: 2015)	742
Incidence ratio (%)	0,00001
Total cystinosis patients in Europe	0
Average cost of Cystaran (the only FDA approved for treatment of cystinosis) USD per unit	1600
Average price in Europe	1500
Probability	100%
Incidence of CYSTADROPS in Europe (first pharmaceutical product to be approved in the	80%
Peak Sales	11,132

years to full market potential	5
--------------------------------	---

CYSTADROPS	2017	2018	2019	2020	2021
market potential	20%	45%	60%	80%	100%
sales (in € mln)	2,226	5,009	6,679	8,905	11,132

REAGILA

Cariprazine for the treatment of Schizophrenia and Bipolar disorders

	population >18: UN 2015	schizophrenia	market share cariprazine	annual sales
Western Europe	150,865	1,50865	0,0754325	27,1557
Algeria	25,336	0,25336	0,012668	4,56048
Tunisia	7,798	0,07798	0,003899	1,40364
Turkey	51,778	0,51778	0,025889	9,32004
Total sales	235,777	2,35777	0,1178885	42,43986

years to full market potential	7
--------------------------------	---

	2018	2019	2020	2021	2022	2023	2024
market potential	10%	20%	35%	50%	75%	90%	100%
sales (in € mln)	4,244	8,488	14,854	21,220	31,830	38,196	42,440

Exhibit 5: Pipeline NPV Model

VITAROS	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TV
Sales			11	19	27	41	49	54	54	54	54	54	54	54
Fixed Royalties	-2.4		-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	
Variable Royalties			-1.08	-1.89	-2.70	-4.05	-4.86	-5.40	-5.40	-5.40	-5.40	-5.40	-5.40	
Other Expenses			-5.67	-9.92	-14.18	-21.27	-25.52	-28.36	-28.36	-28.36	-28.36	-28.36	-28.36	
EBIT	-2.4	0	0.19	3.23	6.27	11.33	14.37	16.39	16.39	16.39	16.39	16.39	16.39	16.39
EBIT margin			1.77%	17.08%	23.21%	27.97%	29.56%	30.35%	30.35%	30.35%	30.35%	30.35%	30.35%	
Taxes			-0.05	-0.84	-1.63	-2.95	-3.74	-4.26	-4.26	-4.26	-4.26	-4.26	-4.26	-4.26
Net Capex			-0.43	-0.76	-1.08	-1.62	-1.94	-2.16	-2.16	-2.16	-2.16	-2.16	-2.16	-2.16
D&A			0.38	0.66	0.95	1.42	1.70	1.89	1.89	1.89	1.89	1.89	1.89	1.89
delta NWC			1.51	1.13	2.65	3.02	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78
FCF			-1.43	1.16	1.86	5.16	6.61	8.08	8.08	8.08	8.08	8.08	8.08	8.08
discount factor @6.95%			1.00	0.94	0.87	0.82	0.76	0.71	0.67	0.62	0.58	0.55	0.51	0.51
NPV (2016)			56.899											

FORTACIN	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TV
Sales				9	18	31	44	66	80	89	89	89	89	89
Fixed Royalties	-5													
Variable Royalties				-1.77	-3.54	-6.20	-8.86	-13.29	-15.94	-17.71	-17.71	-17.71	-17.71	
Other Expenses				-4.61	-9.21	-16.12	-23.03	-34.54	-41.45	-46.06	-46.06	-46.06	-46.06	
EBIT				2.48	4.96	8.68	12.40	18.60	22.32	24.80	24.80	24.80	24.80	24.80
EBIT margin				28.00%	28.00%	28.00%	28.00%	28.00%	28.00%	28.00%	28.00%	28.00%	28.00%	
Taxes				-0.64	-1.29	-2.26	-3.22	-4.84	-5.80	-6.45	-6.45	-6.45	-6.45	-6.45
Capex				-0.35	-0.71	-1.24	-1.77	-2.66	-3.19	-3.54	-3.54	-3.54	-3.54	-3.54
D&A				0.31	0.62	1.08	1.55	2.32	2.79	3.10	3.10	3.10	3.10	3.10
Delta NWC				1.24	1.24	3.10	3.10	6.20	4.96	7.44	4.96	7.44	4.96	4.96
FCF				3.03	4.82	9.37	12.05	19.63	21.08	25.35	22.87	25.35	22.87	22.87
discount factor @6.95%			1.00	0.94	0.87	0.82	0.76	0.71	0.67	0.62	0.58	0.55	0.51	0.51
NPV (2016)			168.773											

GRASPA (AML)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TV
Sales									17	39	52	69	87	87
Fixed Royalties														
Variable Royalties									-2.60	-5.86	-7.81	-10.41	-8.68	
Other Expenses									-9.11	-20.50	-27.33	-36.44	-45.55	
EBIT									5.64	12.69	16.92	22.56	32.54	32.54
EBIT margin									32.50%	32.50%	32.50%	32.50%	37.50%	
Taxes									-1.47	-3.30	-4.40	-5.87	-8.46	-8.46
Net Capex									-0.69	-1.56	-2.08	-2.78	-3.47	-3.47
D&A									0.61	1.37	1.82	2.43	3.04	3.04
delta NWC									2.43	3.04	4.25	5.47	6.68	6.68
FCF									1.66	6.16	8.01	10.88	16.96	16.96
discount factor @6.95%			1.00	0.94	0.87	0.82	0.76	0.71	0.67	0.62	0.58	0.55	0.51	0.51
NPV (2016)														70.239

GRASPA (ALL)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TV
Sales				16	37	49	66	82	82	82	82	82	82	82
Fixed Royalties														
Variable Royalties				-2.47	-5.56	-7.41	-9.89	-12.36	-12.36	-12.36	-12.36	-12.36	-8.24	
Other Expenses				-8.65	-19.46	-25.95	-34.60	-43.25	-43.25	-43.25	-43.25	-43.25	-43.25	
EBIT				5.36	12.05	16.07	21.42	26.78	26.78	26.78	26.78	26.78	30.89	30.89
EBIT margin				32.50%	32.50%	32.50%	32.50%	32.50%	32.50%	32.50%	32.50%	32.50%	37.50%	
Taxes				-1.39	-3.13	-4.18	-5.57	-6.96	-6.96	-6.96	-6.96	-6.96	-8.03	-8.03
Net Capex				-0.66	-1.48	-1.98	-2.64	-3.30	-3.30	-3.30	-3.30	-3.30	-3.30	-3.30
D&A				0.58	1.30	1.73	2.31	2.88	2.88	2.88	2.88	2.88	2.88	2.88
delta NWC				2.31	2.88	4.04	5.19	6.34	5.19	6.34	5.19	6.34	5.19	5.19
FCF				1.57	5.85	7.60	10.33	13.06	14.21	13.06	14.21	13.06	17.26	17.26
discount factor @6.95%			1.00	0.94	0.87	0.82	0.76	0.71	0.67	0.62	0.58	0.55	0.51	0.51
NPV (2016)														110.843

CYSTADROPS	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TV
Sales				2	5	7	9	11	11	11	11	11	11	11
Fixed Royalties				-	-	-	-	-	-	-	-	-	-	
Variable Royalties				-	-	-	-	-	-	-	-	-	-	
Other Expenses				-1.34	-3.01	-4.01	-5.34	-6.68	-6.68	-6.68	-6.68	-6.68	-6.68	
EBIT				0.89	2.00	2.67	3.56	4.45	4.45	4.45	4.45	4.45	4.45	4.45
EBIT margin				40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	
Taxes				-0.23	-0.52	-0.69	-0.93	-1.16	-1.16	-1.16	-1.16	-1.16	-1.16	-1.16
Capex				-0.09	-0.20	-0.27	-0.36	-0.45	-0.45	-0.45	-0.45	-0.45	-0.45	-0.45
D&A				0.08	0.18	0.23	0.31	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Delta NWC				0.31	0.39	0.55	0.70	0.86	0.70	0.86	0.70	0.86	0.70	0.70
FCF				0.96	1.85	2.49	3.29	4.10	3.94	4.10	3.94	4.10	3.94	3.94
discount factor @6.95%			1.00	0.94	0.87	0.82	0.76	0.71	0.67	0.62	0.58	0.55	0.51	0.51
NPV (2016)														32.422

REAGILA	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TV
Sales					4	8	15	21	32	38	42	42	42	42
Fixed Royalties														
Variable Royalties					-0.85	-1.70	-2.97	-4.24	-6.37	-7.64	-8.49	-8.49	-8.49	
Other Expenses					-2.23	-4.46	-7.80	-11.14	-16.71	-20.05	-22.28	-22.28	-22.28	
EBIT					1.17	2.33	4.08	5.84	8.75	10.50	11.67	11.67	11.67	11.67
EBIT margin					27.50%	27.50%	27.50%	27.50%	27.50%	27.50%	27.50%	27.50%	27.50%	
Taxes					-0.30	-0.61	-1.06	-1.52	-2.28	-2.73	-3.03	-3.03	-3.03	
Capex					-0.17	-0.34	-0.59	-0.85	-1.27	-1.53	-1.70	-1.70	-1.70	-1.70
D&A					0.15	0.30	0.52	0.74	1.11	1.34	1.49	1.49	1.49	1.49
NWC					0.59	1.19	2.08	2.97	4.46	5.35	5.94	5.94	5.94	5.94
FCF					1.44	2.87	5.03	7.18	10.77	12.93	14.37	14.37	14.37	14.37
discount factor @6.95%			1.00	0.94	0.87	0.82	0.76	0.71	0.67	0.62	0.58	0.55	0.51	0.51
NPV (2016)														86.550

Exhibit 6: M&A

EUR mm	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016 3Q	Avg since 2007
Total sales	355,9	433,4	492,7	487,5	479,2	576,1	576,186	628,435	689,634	747,5	728,1	762	828,317	941,6	987,4	1047,676	862,4	
Sales "as is"	311,1	381,1	492,7	487,5	479,2	529,5	576,186	582,5	645,8	717,3	728,1	762	796,317	843,1	935,6	1047,676	848,1	
Acquisition effect	44,8	52,30	-	-	-	46,6	-	45,935	43,834	30,2	-	-	36	98,5	51,8	-	14,3	
Portion of sales coming from M&A	12,6%	12,1%	n.a.	n.a.	n.a.	8,1%	n.a.	7,3%	6,4%	4,0%	n.a.	n.a.	4,3%	10,5%	5,2%	n.a.	1,7%	5,63%
Bouchara Recordati SAS	44,8	52,3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Merckle Recordati	-	-	-	-	-	41,5	-	-	-	-	-	-	-	-	-	-	-	
Zanidip selling rights in UK	-	-	-	-	-	5,1	-	-	-	-	-	-	-	-	-	-	-	
Jaba Farmaceutica SA	-	-	-	-	-	-	-	45,9	-	-	-	-	-	-	-	-	-	
Orphan Europe	-	-	-	-	-	-	-	-	43,8	-	-	-	-	-	-	-	-	
Yeni Ilac	-	-	-	-	-	-	-	-	-	18,0	-	-	-	-	-	-	-	
Herbacos-Bofarma	-	-	-	-	-	-	-	-	-	12,2	-	-	-	-	-	-	-	
Frik Ilac Sanayi & Ticaret	-	-	-	-	-	-	-	-	-	-	-	-	32,0	-	-	-	-	
Farma-Projekt Sp.	-	-	-	-	-	-	-	-	-	-	-	-	4,0	11,3	-	-	-	
Portfolio of products - Russia	-	-	-	-	-	-	-	-	-	-	-	-	-	30,0	-	-	-	
Portfolio of products - US	-	-	-	-	-	-	-	-	-	-	-	-	-	47,2	-	-	-	
Laboratorios Casen-Fleet	-	-	-	-	-	-	-	-	-	-	-	-	-	7,2	38,5	-	-	
Opalia Pharma	-	-	-	-	-	-	-	-	-	-	-	-	-	2,8	13,3	-	-	
Pro Farma AG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,6	
Italchimici	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,7	
Tot Sales growth	30,9%	21,8%	14,0%	-1,0%	-1,7%	20,2%	0,0%	9,1%	9,7%	8,4%	-2,6%	4,7%	8,7%	13,7%	4,9%	6,1%	9,9%	
Sales "as is" growth	14,4%	7,1%	14,0%	-1,0%	-1,7%	10,5%	0,0%	1,0%	2,7%	4,0%	-2,6%	4,7%	4,5%	2,6%	1,0%	6,1%	8,1%	
M&A contribution	16,5%	14,7%	n.a.	n.a.	n.a.	9,7%	n.a.	8,1%	7,0%	4,4%	n.a.	n.a.	4,2%	11,1%	3,9%	n.a.	1,8%	
Portion of growth coming from M&A	53,4%	67,4%	n.a.	n.a.	n.a.	48,0%	n.a.	89,0%	72,2%	52,4%	n.a.	n.a.	48,3%	81,0%	79,6%	n.a.	18,2%	62,9%
EBIT	46,6	65,2	89,2	81,0	88,2	111,1	120,3	131,5	144,7	162,2	154,8	163,5	167,0	195,4	231,0	278,5	252,4	
EBIT margin	13,1%	15,0%	18,1%	16,6%	18,4%	19,3%	20,9%	20,9%	21,0%	21,7%	21,3%	21,5%	20,2%	20,8%	23,4%	26,6%	29,3%	22,6%

Exhibit 7: Historical M&A deals

Announcement Date	Target	Primary care/Orphan	Announced Value (€mn)	Target EV/LTM sales	Country	Key assets acquired
14/07/2016	Pro Farma AG	Primary care	14	1.6x	Switzerland	Lacdigest (tilactase), Tretinac (isotretinoin), Urocit (potassium citrate)
31/05/2016	Italchimici	Primary care	130	2.8x	Italy	n.a.
09/09/2013	Laboratorios Casen-Fleet	Primary care	93	2.0x	Spain	Citrafleet
24/07/2013	Opalia Pharma	Primary care	37	2.0x	Tunisia	n.a.
14/12/2012	Portfolio of products	Orphan	78	2.5x	USA	Panhematin (acute intermittent porphyria), NeoProfen (ibuprofen lysine injection), indocin I.V. (to close clinically significant patent ductus arteriosus (PDA) in premature infants), Cosmegen (three rare cancers)
16/10/2012	Portfolio of products	Primary care	68	2.7x	Russia	OTC pharma and dietary supplements (Alfavit, Qudesan, Vetoron, Focus, Camitone)
02/08/2012	Farma-Projekt Sp.	Primary care	16	1.5x	Poland	n.a.
04/07/2011	Frik Ilac Sanayi & Ticaret	Primary care	93	2.2x	Turkey	n.a.
19/01/2009	Herbacos-Bofarma	Primary care	18	1.6x	Czech Rep	Analgesic, anti-inflammatory and dermatological products
29/10/2008	YENI ILAC	Primary care	42	2.8x	Turkey	Proprietary and licensed drugs. Leading market position in the area of Urology. Also involved in contract manufacturing for other pharma companies
28/09/2007	Oprhan Europe SARL	Orphan	140	3.4x	France	Rare and Orphan diseases
28/07/2006	Jaba Farmaceutica SA	Primary care	46	1.2x	Portugal	Prescription drugs sold under license as well as proprietary brands, plain generics and a well-known line of OTC products. Includes modern production facilities which offer manufacturing services for third parties
17/01/2006	Beniel Pharmaceutical	Primary care	-10	n.a.	Spain	n.a.
25/10/2005	Rights to Tenstaten drug	Primary care	n.a.	1.1x	n.a.	n.a.
17/06/2005	Zanidip selling rights in UK	Primary care	22	n.a.	UK	Recordati bought back selling rights of Zanidip (lercanidipine) from licensee Napp Pharma for a price close to £15mn
18/01/2005	Merckle Recordati	Primary care	68	n.a.	Germany	Branded pharma business
27/04/2004	Sophartex SA	Primary care	22	n.a.	France	n.a.
29/03/2004	Polfa Kutno (25% stake)	Primary care	20	1.7x	Poland	n.a.
26/04/2000	Bouchara Recordati SAS	Primary care	111	n.a.	France	n.a.
17/02/2000	Vectorpharma International	Primary care	n.a.	n.a.	Italy	n.a.
12/01/1999	Laboratorios Doms-Adrian	Primary care	27	n.a.	France	n.a.

(Source: Previous Annual Reports of Recordati; Mergermarket; Factset)

Exhibit 8: M&A Best Scenario

EUR mm	2016E	2017E	2018E	2019E	2020E	2021E
Total Sales	1.142,95	1.194,05	1.262,83	1.324,23	1.377,49	1.411,43
Acquired Sales through M&A	64,36	67,24	71,11	400,00	77,57	79,48
% of total sales	5,63%	5,63%	5,63%	5,63%	5,63%	5,63%
<i>Acquired Sales growth post M&A 2016</i>		66,64	69,01	71,46	74,00	76,62
<i>growth rate</i>		3,6%	3,6%	3,6%	3,6%	3,6%
<i>Acquired Sales growth post M&A 2017</i>			69,62	72,10	74,66	77,31
<i>growth rate</i>			3,6%	3,6%	3,6%	3,6%
<i>Acquired Sales growth post M&A 2018</i>				73,63	76,25	78,99
<i>growth rate</i>				3,6%	3,6%	3,6%
<i>Acquired Sales growth post M&A 2019</i>					414,40	429,32
<i>growth rate</i>					3,6%	3,6%
<i>Acquired Sales growth post M&A 2020</i>						80,36
<i>growth rate</i>						3,6%
Total future sales from M&A	64,36	133,88	209,74	617,19	716,87	822,08
Synergies from M&A	0,92	1,98	3,13	9,20	10,68	12,25
% of costs	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%
EBIT	18,83	35,32	54,28	159,73	185,52	212,75
EBIT margin %	28,8%	26,0%	25,5%	25,5%	25,5%	25,5%
Taxes	(4,89)	(9,18)	(14,11)	(41,53)	(48,24)	(55,32)
tax rate	26,0%	26,0%	26,0%	26,0%	26,0%	26,0%
Capex	(2,57)	(5,36)	(8,39)	(24,69)	(28,67)	(32,88)
% of sales	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%
D&A	2,25	4,69	7,34	21,60	25,09	28,77
% of sales	3,5%	3,5%	3,5%	3,5%	3,5%	3,5%
FCF	13,61	25,47	39,12	115,11	133,70	153,33
WACC	6,95%					
(1+WACC) ^t	1,0695	1,1438	1,2233	1,3083	1,3993	1,4965
PV FCF	12,72	22,27	31,98	87,98	95,55	102,46
TV	3.998,15					
growth rate	3,0%					
PV TV	2.671,61					
PV TOT	3.024,58					
Price paid for each transaction	(128,72)	(134,47)	(142,22)	(800,00)	(155,13)	(158,96)
Average EV/Sales multiple in M&A for REC	2.0x	2.0x	2.0x	2.0x	2.0x	2.0x
(1+WACC) ^t	1,0695	1,1438	1,2233	1,3083	1,3993	1,4965
PV Price paid for each transaction	(120,35)	(117,56)	(116,26)	(611,46)	(110,87)	(106,22)
TOT PV price paid	(1.182,72)					
POTENTIAL VALUE OF M&A	1.841,86					
NOSH	209,13					
Potential value / Nosh	8,81					

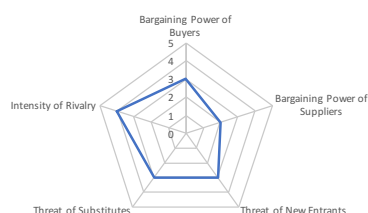
Exhibit 9: SWOT Analysis

Strengths - Geographically diversified - Presence in growing Central and Eastern European markets - Adequate free cash flow generation and growing cash account - Successful 'Rare Diseases' strategy	Weaknesses - Sales dependent on government regulations on the reimbursement of the drugs - Weak presence in the US market
Opportunities - Rapid growth through mergers & acquisitions - Organic growth through pipeline products - Licensing patents could expand market share in foreign markets	Threats - Changes in government regulations could hurt growth - Patent expirations leading to competition from generic drug manufacturers

(Source: Team Analysis)

Exhibit 10: Porter's Five Forces

To assess the attractiveness pharmaceutical industry in which Recordati operates, we have performed an analysis on Porter's Five Forces.



Legend

- 0 – No Threat
- 1 – Insignificant Threat
- 2 – Low Threat
- 3 – Moderate Threat
- 4 – Significant Threat
- 5 – High Threat

Bargaining Power of Buyers – Moderate: In this industry, the switching costs for buyers are high for licensed drugs and low for generic drugs. In the case of licensed drugs there are often no substitute products. The sole manufacturer of the licensed drug has will price the product at monopolistic prices, which is higher than the minimum price. Although patients are the end-consumers, the providers of funds are the health insurance companies that either purchase the drug for the patient or reimburse the patient for their purchase. In the first case, the insurance companies can exert more power, as they are large purchasers. In the United States, pharmaceutical companies can advertise their products to consumers directly, while this is often illegal in other countries. Governments can impose pricing rules and, therefore, increasing the power of buyers. In Europe, there are almost no countries where the pharmaceutical company can price its products freely. Overall, the bargaining power of buyers is moderate.

Bargaining Power of Suppliers – Low: The main suppliers to the pharmaceutical industry are manufacturers of active pharmaceutical ingredients (API). Although there are multiple suppliers of APIs, the supply of the products is often based on contracts, which results in high switching costs. Furthermore, for the development of newer drugs, the APIs could be new, which increases the power of suppliers. As there is little differentiation in laboratory equipment and chemicals, which are often commodities, the power of suppliers is reduced. However, in the case of specialized equipment, which depends on the research and development of the product, the power of suppliers is increased. Overall, the bargaining power of suppliers is low.

Threat of New Entrants – Moderate: This factor highly depends on the stage of the companies considered. Start-up companies planning to develop an entirely new drug will need high levels of funding, which they can receive from venture capitalists. Furthermore, to launch a new drug, it needs to go through three phases of clinical testing, which can take up to 15 years. However, entering a new country with an existing drug can be easier, depending on the licensing authority in that country. If the drug is approved, there is little to no problems in launching an existing product in a new market. This seems the easiest for producers of generic brands, depending on the expiry of patents. Therefore, the strength of intellectual property affects the threats of new entrants substantially. Overall, the threat of new entrants is moderate.

Threat of Substitutes – Moderate: The threat of substitutes depends highly on the drug. In the case of a unique drug for the disease for which the pharmaceutical company is the first to market, there is little threat of substitutes. However, if there is a possibility to cure the disease more cost-effectively and safely through a surgery, the patient would more likely choose the surgery over the drug. In the case of a generic drug, there are numerous substitutes, as the pharmaceutical company does not hold the patent for the drug anymore. These generics can be priced more competitively, as they do not have to incorporate the clinical testing costs. Overall, the threat of substitutes is moderate.

Intensity of Rivalry – Significant: In an industry that relies on patents, the intensity of rivalry can be quite high. There are several major corporations and a few smaller firms. Furthermore, the major corporations often grow by acquiring other companies within this industry to diversify their product portfolios or to replace products that have lost their patents, which lowers the intensity of rivalry. However, once a new patent has been released, competitors analyze the public information of the patent to find possibilities to recreate drug without violating the patent. Furthermore, pharmaceutical companies can license their products to producers in other countries to increase their market share, which boosts rivalry. However, the barriers to exit are rather low, as most assets are intangibles, such as patents and trademarks, which can be sold to other companies. Overall, the intensity of rivalry is significant.

(Source: Team Analysis)

Exhibit 11: Recordati S.p.A. Key Executives

Name	Title	Recordati Career History	Background
Alberto Recordati	Chairman	Chairman since 2016. Deputy Chairman from 2004 to 2016. Director of the Fine Chemicals Sector from 1999. Head of the Chemical Research and	Alberto Recordati is the current Chairman of Recordati. He graduated in Biochemistry at the University of London King's College in 1977 and completed a research PhD in Biochemistry in the same university in 1984. Afterwards, he has joined Recordati in 1984 as a researcher in the biochemistry department. During his career at Recordati he has been a research project coordinator for the US subsidiary Pharmetrix Corp between 1990 and 1992. In 1995 he became the Industrial

		Technologies Division from 1995 to 1999. Head of the Planning and Product Development Office from 1987 to 1995.	Manager for Biochemicals at the Cascina dè Pecchi biochemical/fermentation production site. Considering his background, he has the most worked the longest Recordati within the Board of Directors.
Andrea Recordati	Vice Chairman and Chief Executive Officer	Chief Executive Officer and Vice Chairman since 2016. Chief Operating Officer from 2013 to 2016. General Manager of the International Pharmaceuticals Division from 2011 to 2013. Head of Northern and Central Europe Subsidiaries Division from 2007 to 2011. Sole Director of Recordati Pharma GmbH from 2006 to 2007.	Andrea Recordati is the current Vice Chairman and Chief Executive Officer of Recordati. He graduated in Medieval and Modern History from the University of London Royal Holloway and Bedford New College. Between 1995 and 1998 he was in the SmithKline Beecham Management Access Program, where he worked as an Assistant Product Manager in Consumer Healthcare and the Project Manager responsible for the SmithKline Beecham market initiative. In 1998 he joined Recordati as Project Leader responsible for improving the marketing department. In the same year, he became a member of the Board of Directors. Since 1999 he oversaw the Pharmaceutical Business Development. He has been responsible for the Lercanidipine Business Unit, which was set up in March 2002, and for the UK subsidiary, which was set up in November 2002. Therefore, he has experience in the business development of Recordati. Furthermore, he sits on other Boards of Directors within the Group and he is Director of FIMEI S.p.A..
Fritz Squindo	Managing Director and Chief Financial Officer	Managing Director since 2008. Chief Financial Officer since 1995. Head of Management Accounting Department from 1992 to 1995.	Fritz Squindo is the Chief Financial Officer and Managing Director of Recordati. He is responsible for the internal control and risk management system, with the help from the Chief of Audit Group. Fritz Squindo graduated cum laude in Economics at the Bocconi University in Milan, Italy. He joined the finance department of Telettra S.p.A. in 1981. From 1986 he has been Head of Finance and from 1990 Head of the Management Accounting department at Sanofi S.p.A. before joining Recordati as Head of the Management Accounting Department.

(Source: Recordati Annual Report 2015)

Exhibit 12: Recordati S.p.A. Board Members

Name	Independent	Background	Tenure
Alberto Recordati	No	See Exhibit 11	31 Years
Andrea Recordati	No	See Exhibit 11	19 Years
Fritz Squindo	No	See Exhibit 11	4 Years
Rosalba Casiraghi	Yes	Rosalba Casiraghi is a Non-Executive Director at Recordati since 2014. She is an Official Registered Auditor and has been a Chief Financial Officer in a US corporation. She is a Director and/or auditor in multiple listed and non-listed companies operating in the industrial and financial sectors, including but not limited to Banca IntesaSanpaolo, Università degli Studi di Milano and Telecom Italia Foundation. She been a Director for 13 companies in the past and is currently a Director for nine companies.	3 Years
Michaela Castelli	Yes	Michaela Castelli is a Non-Executive Director at Recordati since 2014. She has been the Head of Legal Affairs – Listing Department, Head of the Secretariat of the Institutional Committee and Secretary of the Supervisory Board at Borsa Italiana S.p.A. between 2001 and 2010. Furthermore, she is an advisor at international law firms and at the London branch of Banca Commerciale Italiana S.p.A..	3 Years
Paolo Fresia	Yes	Paolo Fresia is a Non-Executive Director at Recordati since 2014. He has worked as a fixed income sales trader at Goldman Sachs between 2008 and 2010. He worked as Financial Coordinator for the NGO Médecins Sans Frontières – Doctors without Borders in Haiti between 2011 and 2013. Since September 2013 he has been a sustainability and corporate social responsibility consultant at the Hong Kong office of Business for Social Responsibility.	3 Years
Mario Garraffo	Yes	Mario Garraffo is a Non-Executive Director at Recordati since 1999. He is the Chairman of the Compensation Committee. He has worked as Controller and Development Director at La Centrale Finanziaria Generale from 1960 to 1970. He was Investment Director at the IFI group from 1970 to 1980. He was CEO of IFIL – Finanziaria di Partecipazioni from 1980 to 1985 and President of IFINT from 1985 to	18 Years

		1993. He was CEO of Lazard Italia from 1993 to 1998 and CEO of UNIM – Unione Immobiliare from 1998 to 2000. Afterwards, he was the Chairman of General Electric Italia until 2004 and Senior Advisor for General Electric Europe from 2004 to 2007.	
Marco Vitale	Yes	Marco Vitale is a Non-Executive Director at Recordati since 1997. He is the Chairman of the Audit and Risk Committee. He has been teaching business economy at Pavia University, Bocconi University and Libero Istituto Universitario Carlo Cattaneo. He was a former partner of Arthur Andersen & Co., and founding partner and president of Vitale-Novello & Co. S.r.l., a management consulting firm. He is consultant and member of the Board of Directors for many important companies, such as Banca di Popolare of Milan and Fondo Italiano di Investimenti S.G.R. S.p.A..	20 Years

(Source: Recordati Annual Report 2015)

Exhibit 13: Recordati S.p.A. Committee Assignments

Audit and Risk Committee	Title
Marco Vitale	Chairman
Mario Garaffo	Member
Michaela Castelli	Member
Remuneration Committee	Title
Mario Garaffo	Chairman
Rosalba Casiraghi	Member
Michaela Castelli	Member

(Source: Recordati Annual Report 2015)

Exhibit 14: Compliance with the “2015 Italian Corporate Governance Code”

The assessment of the corporate governance of Recordati S.p.A. is based on the compliance with the Italian Corporate Governance Code (the “Code”) updated in July 2015 and promoted by Borsa Italiana S.p.A. for all Italian listed companies. The company has stated that the Code has been adopted. The evaluation of the adoption is found below. The purpose of the Code is to promote the creation of value for all stakeholders in the long-term and is composed of the following ten articles:

1. Role of the Board of Directors
2. Composition of the Board of Directors
3. Independent directors
4. Internal committees of the Board of Directors
5. Appointment of directors
6. Remuneration of directors
7. Internal control and risk management system
8. Statutory auditors
9. Relations with the shareholders
10. Two-tier and one-tier systems

Scorecard – Compliance with the Code
5 – Excellent. No known improvements possible.
4 – Good. Minor improvements possible.
3 – Neutral. Some compliance with the Code, but could be improved.
2 – Poor. Little compliance with the Code.
1 – No compliance.

No.	Assessment	Score
1	The role of the Board of Directors is clearly defined in the Corporate Governance Report and is in compliance with the Code. The Board of Directors have met an adequate amount of times, namely seven, in the 2015 financial year with an average attendance of 95%.	5
2	The composition of the Board is diverse with enough independent (five out of eight) directors. The directors are adequately competent and the non-executive directors have specific expertise.	5
3	Two out of the five independent directors (Mario Garaffo and Marco Vitale) are qualified as such by Recordati, while they have been directors at the company for more than nine years during the past twelve years. Moreover, Marco Vitale is appointed as a professional consultant for a yearly fee of €50,000.00 (considered as non-significant).	3
4	Recordati has an Audit and Risk Committee and a Remuneration Committee with clear duties and adequate members, as suggested by the Code. However, no Nomination Committee has been set-up, as there is no need for one. There is no problem with appointing a new Board of Directors, as the Recordati family is a majority shareholder and holds legal control of the company.	5
5	As mentioned in the above point, Recordati does not have a Nomination committee. In relation to the fact that the Recordati family holds legal control of the company, it has to be noted that the both the Chairman	1

	and Vice-Chairman are members of the Recordati family. Also, no official succession plan for executive directors has been adopted.	
6	A Remuneration Committee with three independent directors has been set-up in accordance with the Code. The detailed Remuneration Policy as proposed by the Committee and accepted by the Board of Directors complies with the Code.	5
7	The duties assigned to the Audit and Risk Committee are clearly defined and in accordance with the Code. Recordati has written the "Catalogue of Risks", which identifies the main risks of the company. Furthermore, there is an extensive internal control and risk management system in place, which has been aligned with the company's operations by the responsible Executive Director, Fritz Squindo, and the Chief of Group Audit, who is independent from any operational area.	5
8	Recordati follows a strict procedure in the appointment of statutory auditors, as it follows Article 26 of its By-Laws. Furthermore, the statutory auditors are independent and can devote the necessary time to the company, as two statutory auditors do not hold positions in other offices and the other three statutory auditors hold only one other position in other offices.	5
9	On the website of Recordati there is a defined section for investors. Furthermore, an Investor Relations Manager has been appointed. However, certain initiatives regarding the attendance of Shareholder Meetings and the exercise of voting rights are not adopted by Recordati. It is suspected that the reason for this is the fact that the Recordati family is the majority shareholder and, therefore, holds legal control.	4
10	Recordati has adopted a one-tier board and is in compliance with the articles of the Code.	5
Total		4.3

(Source: Recordati Annual Report 2015; Corporate Governance Code Italy)

Disclosures:

Ownership and material conflicts of interest

The author(s), or a member of their household, of this report does not hold a financial interest in the securities of this company. The author(s), or a member of their household, of this report does not know of the existence of any conflicts of interest that might bias the content or publication of this report.

Receipt of compensation

Compensation of the author(s) of this report is not based on investment banking revenue.

Position as an officer or a director

The author(s), or a member of their household, does not serve as an officer, director, or advisory board member of the subject company.

Market making

The author(s) does not act as a market maker in the subject company's securities.

Disclaimer

The information set forth herein has been obtained or derived from sources generally available to the public and believed by the author(s) to be reliable, but the author(s) does not make any representation or warranty, express or implied, as to its accuracy or completeness. The information is not intended to be used as the basis of any investment decisions by any person or entity. This information does not constitute investment advice, nor is it an offer or a solicitation of an offer to buy or sell any security. This report should not be considered to be a recommendation by any individual affiliated with CFA Society Italy, CFA Institute, or the CFA Institute Research Challenge with regard to this company's stock.



CFA Institute

CFA Institute Research Challenge