



CFA Institute

CFA Institute Research Challenge

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Riders On The Storm

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24/02/2017

February 2017

Recordati S.p.A.

Recommendation:

HOLD

Share Price: €29.50

Target Price: €30.37

Upside: 2.95%

Market and Stock Data

Italian Stock Exchange

Market Cap. (€mln): 6.175
Shares Outstanding (mln): 209.1
52w Price Range (€): 20.66-29.75
Avg 3m volume: 449.266

Source: FactSet

Main Shareholders

FIMEI (Recordati Family)	51.8%
Free Float	46.2%
Treasury Stock	2.0%

Source: Company Data

Key Financial Data (2016)

Book value per share (€)	4.64
Earning per share (€)	1.15
Dividend per share (€)	0.72
Dividend Yield	2.37%
NFP (€thousands)	198.750
Net Debt/Tot Equity	16.88%
Financial Debt/Tot Equity	35.35%
ROE	26.03%
ROIC	23.84%
ROS	28.37%
Price/Earning	26.40x
EV/EBITDA	16.76x
EV/EBIT	19.01x

Source: Team estimates

Sector: Healthcare	Industry: Pharmaceutical			Ticker: REC-IT (FactSet)		
€ mln	2015	2016E	2017E	2018E	2019E	2020E
Revenues	1.047,68	1.153,90	1.227,33	1.311,90	1.398,58	1.498,60
Gross Profit	750,95	836,85	890,10	951,43	1.014,30	1.086,84
EBITDA	317,00	371,21	392,10	419,64	447,88	480,46
EBIT	278,52	327,36	347,64	372,12	397,21	426,17
Net Income	198,80	237,37	251,01	268,70	286,84	307,76
NOPAT	208,60	245,18	260,37	278,70	297,50	319,19
FCF to Firm	223,66	186,95	226,42	242,06	258,90	276,86

Investment Summary

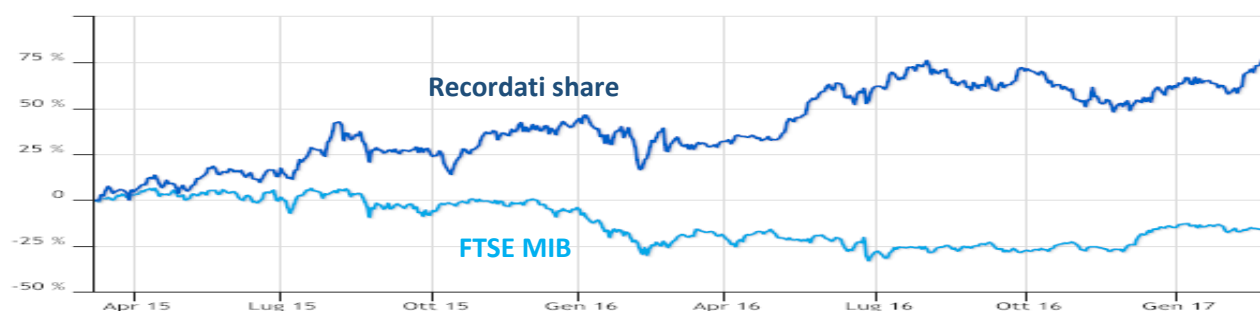
We initiate our coverage of Recordati (REC) with a **HOLD** recommendation and a target price of **€30.37**. With respect to the closing price **€29.50** on **24/02/2017** our target price has an upside of **2.95%**. Although we are positive on the company's ability to generate growth, we concluded that the current stock price already reflects that potential.

Strong financial results

Recordati's revenue in 2015 was €1047,68 (2016 revenue €1.153,9 mln) with a 5YCAGR (2010-2015) of 7.55% and an expected CAGR of 7.42% for the 2015-2020 period. The company's margins (32.17% 2016 EBITDA margin) are among the highest when compared to peers, being inferior only to those of some of the big pharma players, such as Shire and Roche. Recordati's strategy of organic and inorganic growth should maintain these margins in the future, being also supported by the strong expected growth of the rare disease market (11.5% worldwide 2016-2022 CAGR according to *EvaluatePharma*) in which the group operates and continues to expand its presence (approximately 20 % of total revenues by 2020). Running a high cash generating business allows Recordati to accumulate high levels of excess cash, which can be used for future acquisitions, according to the company's growth strategy. In 2015 the company had €225 mln liquidity which declined to €138 mln in 2016 as a result of two acquisitions paid entirely in cash: Italcimichi S.p.A. and Pro Farma AG.

Stable and reliable growth

We foresee a stable growth for Recordati in the next few years as a result of the recent strengthening of its rare diseases business (acquisition of Lundbeck's U.S. portfolio of rare disease products in 2012) and due to the company's focus on sales volume rather than price growth, which should shield it from downward pressures on prices exercised by governments. The continuous geographic expansion and the increasing presence in *pharmerging* markets boosted Recordati's client base. Another positive fact is the new exclusive license agreement signed in March 2016 by Recordati with Gedeon Richter for the commercialization of Reagila (cariprazine), a treatment for schizophrenia. EMA's approval is expected in 2017 and this product could reach over €100 mln peak sales. Moreover, the expiry of Seroquel XR's patent in November 2016, which is an important treatment for schizophrenia developed by AstaZeneca, could improve Reagila's sales even more. The combined effect of the above cited facts, Recordati's well diversified portfolio and a reliable pipeline should, according to our estimates, allow the company to exceed worldwide prescription drug sales 2016-2022 CAGR.



A preferred partner

Despite its medium size, Recordati has a direct presence in 80% of European national pharmaceutical markets and it continues to expand into emerging markets. Combined with its efficient marketing network this puts the group among the most important European players in primary and specialty care, making it an ideal partner for the development and commercialization of new products. Please refer to Appendix 3.

Valuation

For the valuation of Recordati, we use a three-stage DCF model with a 7.19% WACC and a terminal growth rate of 2%. The key variable to compute forecasts in the DCF model is sales, since it is the company's main growth driver in terms of value creation. We counterchecked our result using market multiples for the valuation of Recordati: target price is a weighted average between the DCF output (80% weight) and the market multiples output (20% weight).

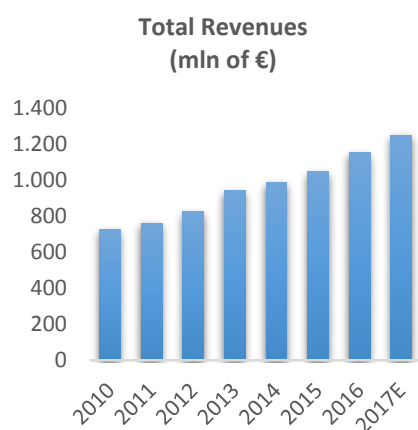


Chart 1 – Source: Company's Data

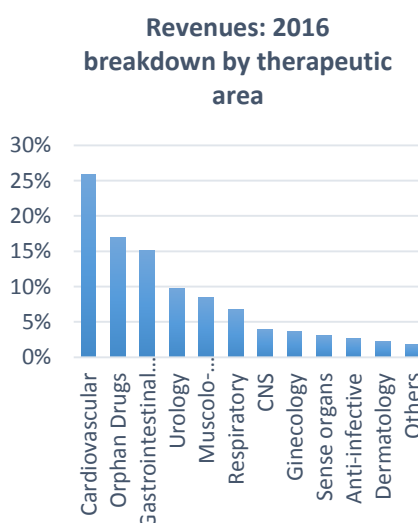


Chart 2 – Source: Company's Data

Business Description

Recordati is an international pharmaceutical group dedicated to the research, development, manufacturing and marketing of pharmaceuticals. Founded in 1926 in Correggio – Reggio Emilia as *Laboratorio Farmacologico Reggiano*, Recordati moved to a new facility in Milan in 1953 and listed on the Italian Stock Exchange in 1984. The company managed to grow through the development of new products, geographic expansion and acquisitions (see Appendix 2) to become a group with a total staff of around 4,000 people, a market cap of €5.73bn and a consolidated revenue, as of 2015, of €1.047 mln, reaching €1.154 mln in 2016.

Recordati S.p.A is the parent company of the group which incorporates thirty-four subsidiaries, two pharmaceutical chemical plants and six sites for pharmaceutical production. The group sells its products in 135 markets worldwide both directly and through license agreements.

Recordati: what does it do

Recordati is directly present in three different markets; a) pharmaceutical market (80.3% of 2016 revenues) where the company researches, develops, manufactures and sells prescription and OTC drugs for many therapeutic areas (Chart 2); b) orphan drugs market (16.2% of 2016 revenues) where the group researches, develops and markets a number of drugs for rare diseases through two of its subsidiaries: Orphan Europe and Recordati Rare Diseases; c) pharmaceutical chemical market (3.5% of 2016 revenues) where the group produces a number of active ingredients and intermediates for Recordati's brands and for the international pharmaceutical industry.

A well-diversified portfolio

Recordati's well balanced drug portfolio aim is to diminish concentration risk, both in geographical terms, as well as in terms of single products. An important milestone in Recordati's portfolio composition is given by the entry into rare disease business with the acquisition of *Orphan Europe* in 2007. Given a CAGR of 9.93% from 2007 to 2013 for orphan drugs sales (Orphan Drug Report 2015, EvaluatePharma), Recordati decided to strengthen its position in this market by acquiring in 2012 a portfolio of products indicated for the treatment of rare

Segment % of Total Revenues

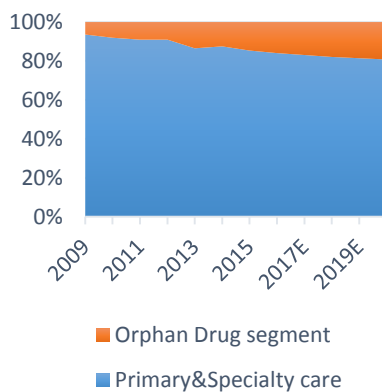


Chart 3 – Source: Company's Data

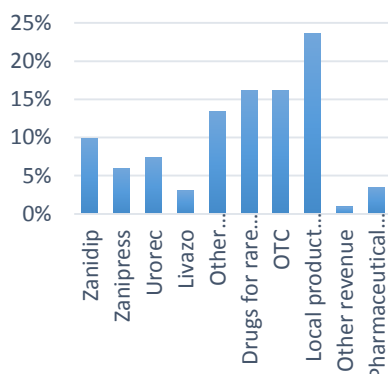
Revenues: 2016
breakdown by products

Chart 4 – Source: Company's Data

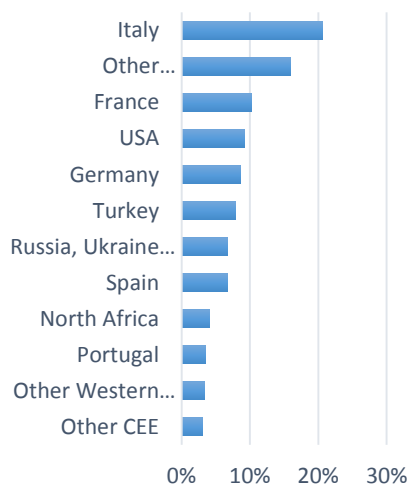
Revenues: 2016
breakdown by geographic area

Chart 5 – Source: Company's Data

diseases and marketed mainly in the U.S. from the Danish company Lundbeck LLC. See Chart 3 for the relative importance of Recordati's segments over time. In 2012 Recordati boosted the OTC business with acquisitions in different countries because OTC drugs are characterized by limited patent exposure and significantly reduced R&D risk.

Key revenue drivers – the cash machines

The group offers a large variety of products with the most important ones being *Zanipress* (5.99% of 2016 revenues), an antihypertensive drug developed by Recordati and *Zanidip* (9.88% of 2016 revenues), another antihypertensive drug discovered and developed entirely by Recordati. Among Recordati's core corporate products we also find *Urorec* (7.38% of 2016 revenues), a treatment for benign prostatic hyperplasia discovered by researchers at Kissei (a Japanese company) and developed by Recordati for European markets. (Chart 4).

Within the orphan drug segment the most important product is Carbaglu, the only specific treatment for NGACS deficiency, which has been granted orphan drug status for multiple uses in US and Europe. All of Recordati's products are marketed through its commercial structure, specifically designed to penetrate the relative markets.

Future strategy

As far as primary care business (prescription and OTC drugs) is concerned Recordati is pursuing a strategy to maintain profitability in the markets the group is currently present in by enriching the product portfolio both through the development and launch of pipeline products as well as through the acquisition of new ones. In addition, given the higher margins and the lower marketing expenses, the rare disease business is a priority for Recordati and their strategy in this area is to succeed in achieving a global presence by acquiring or by developing new orphan drugs and by establishing new subsidiaries in new markets with a special attention to *pharmerging markets*. In fact, in 2015 Recordati entered directly in three *pharmerging* markets: Brazil, Mexico and Colombia. What is more, there are over 7.000 known rare diseases and treatment exists for only 200-300 of these. The combined effect of the large spectrum of existing untreated diseases and the growth forecasted for the *pharmerging* markets (2015-2020 CAGR of pharmaceutical sales growth for Brazil, Mexico is 9.3% and for Colombia is 8.1% as forecasted by McKinsey&Company) gives Recordati good opportunities ahead.

Industry overview

The Pharmaceutical industry (2016 worldwide sales: \$812 bn)¹ is a sub-segment of the Health Care sector (2016 worldwide sales: \$7.000 bn) and it is further divided in different therapeutic areas. The pharmaceutical industry is one of the strongest and fastest markets in terms of growth with an expected 2016-2022 CAGR of 6.2% (2022 worldwide sales: \$1.164 bn)¹. This growth will be driven mainly by four therapeutic areas: immunology, oncology, dermatological and rare disease with 2016-2022 CAGRs, respectively 12.8%, 12.5%, 11.5% and 10.4%. Recordati is present in the last three of these four areas.

Market highlights

The mature and highly consolidated pharmaceutical market is characterized by the presence of few huge companies (Big Pharmas) and a myriad of small-to-medium sized ones. The main difference between big pharma and small-to-medium sized companies is the fact that large players tend to be active in a considerable amount of therapeutic areas whereas smaller ones tend to be niche marketers, focusing their attention on a maximum of three to four areas. Moreover, it can be observed that some big pharmas tend to diversify by producing animal health products, livestock feed supplements, vitamins and a host of other goods; however,

¹ EvaluatePharma: World Preview 2016, Outlook to 2022

the majority of these large players are not diversified and are concentrated exclusively on pharmaceutical products. Successful companies in this market generate high returns, thus providing them with excess cash for further rapid growth – whether organic or through mergers and acquisitions. As far as research and development activity (R&D) is concerned, on average pharmaceutical companies spend about 18% of their budget on R&D with some companies spending substantially more than that. R&D spending is expected to grow at a 2015-2022 CAGR of 2.8% compared to a 2008-2015 CAGR of 1.7% (source EvaluatePharma) highlighting the fact that, with many patent expirations in the near future, pharmaceutical industry players have to strengthen their innovation capacity if they don't want to lose market shares to generic competitors. Competition in the pharmaceutical industry happens on three layers: first of all, pharma players compete among themselves as almost all of them are active in R&D and production of drugs in the therapeutic areas with the highest potential. Secondly, competition from generic drug manufacturers starts after the patent is expired and erodes revenues and market share as generic drugs usually come with a much lower price. Last but not least, there is competition with other health care industries; pharmaceutical companies should demonstrate high efficiency and cost advantages to win this battle.

Growth drivers and Restraints for the Pharmaceutical market

- **Emerging markets (+):** Government spending in EMEs is expected to increase. Slowing revenue growth in mature markets is pushing pharma-companies towards countries characterized by high growth potential. Recordati tries to capture this trends both by establishing a direct presence as well as indirectly through out-licensing;
- **Ageing population/lengthening life expectancies (+):** This should fuel demand for treatments of chronic diseases such as heart diseases over a longer time horizon;
- **Increasing population growth (+):** This should translate into a rise in demand for global healthcare products;
- **Changing lifestyle and rising wealth (+):** According to a Deloitte study “*the number of high income households is expected to rise globally by about 30%*”. The combined effect of the latter and an increase in overweight and a sedentary lifestyle could increase demand for certain therapeutic areas such as metabolism-related conditions and cardiovascular diseases. Together with cancer, cardiovascular disease will cause half of all deaths worldwide by 2025 as WHO predicts;
- **Rising consumer's expectations (-):** consumers, especially in EU, tend to shift from a “get more, pay more” attitude towards “get more, pay the same” or “get the same, pay less” as a consequence of lower government health care budgets and prudent spending policies. This confirms the trend that sees a replacement of volume based models with value based models;
- **Protectionism (-):** a return to protectionist policies in various countries forces pharma players to invest in plants for local production. The recent production plant in Turkey might be cited as an example as far as Recordati is concerned;
- **Prevention over treatment (-):** health care payers are also beginning to emphasise the importance of prevention.

Porter's five forces

Industry rivalry

Primary&Specialty care (high): industry rivalry is very high and derives from the race for new formulations (Active Pharmaceutical Ingredients, APIs), the importance of continuous innovation and the highly concentrated market shares. Generic players furthermore increase competitive rivalry and heavily erode sales volumes. However, Recordati tends to develop and commercialize products from other companies, thus, this risk is partly mitigated.

Rare Disease market (medium): competition from generic players is low due to low volumes and the need of a personalized marketing approach.

Threat of new entrances

Primary&Specialty care (low): new competitors may have little interest of entering a market protected by several entry barriers, such as: high costs due to regulation and R&D, elevated professional skills required, the relative

Porter's Five Forces

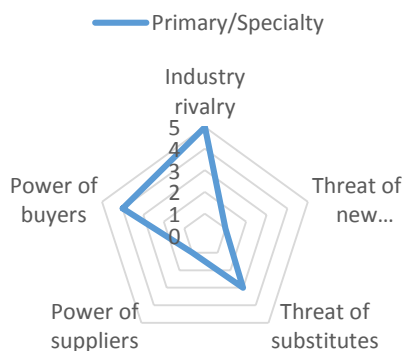


Chart 6 – Source: Team Estimates

Porter's Five Forces

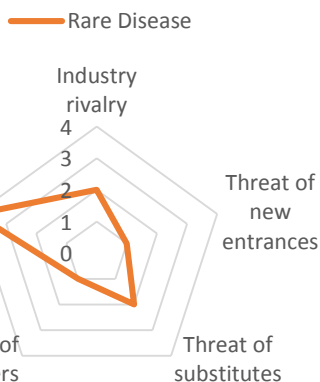


Chart 7 – Source: Team Estimates

unattractiveness of an already saturated market, economies of scale, capital requirements and financial resources, access to distribution channels and high switching costs.

Rare Disease market (low): entrance costs are even higher; legal barriers also provide a strong disincentive.

Threat of substitutes

Primary&Specialty care (medium): therapeutic equivalent patented drugs are present and generate a moderate threat, given the limited number. Generics and biosimilars substitutes impact, however, is harder and can erode a considerable market share after patent expiry. This phenomenon is of different entity across countries as every country can impose, or not, the selling of generics if present. Please refer to investment risk section.

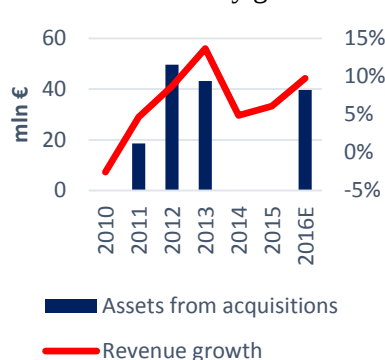
Rare Disease market (low): given the high number of rare diseases and the low number of existing treatments it is unlikely that a company will enter the very same market's sub-segment in terms of therapeutic needs.

Bargaining power of suppliers

Primary&Specialty care and Rare Disease market (low): Suppliers have very little power in the pharmaceutical industry. Chemical industry is fragmented, hence very competitive, meaning that pharma companies could switch from one supplier to another without incurring a very high cost. Recordati owns manufacture plants and 60% of its needs are self-supplied, as confirmed by the management.

Bargaining power of buyers

Primary&Specialty care and Rare Disease market (medium-high): depending on countries there are several type of buyers: medical patients, physicians who prescribe drugs, pharmacies, hospitals and even insurance companies. Medical patients have an absolute lack of power as they are price takers, but pharmacies and hospitals buy in bulk quantities and can exert pressures on pharma companies. Furthermore, prices are strongly influenced by government/health authorities who consistently seek price reductions.

**Competitive Positioning – Playing Big**

It emerges that Recordati is particularly well diversified in terms of therapeutic, as well as geographical areas. In this regard, the firm's portfolio can be compared to those of the bigger players in the market, rather than to similar-sized competitors. Please refer to Appendix 5. The strategy is to diversify away an excessive position risk and at the same time capture profit opportunities in growing markets. Compared to peers, Recordati isn't a research driven company; R&D as percentage of sales is half of its peers: ~8% compared to an industry average of 18%. This means that the company dedicates resources to its business development unit which is dedicated to acquiring entire R&D capabilities from other candidates. Please refer to Appendix 2 for main acquisitions.

Chart 8 – Source: Team Estimates

Drivers of profitability

Growth through M&A: companies in the pharmaceutical industry usually grow through acquisitions in order to capture cost synergies or to acquire new interesting products that the target company owns. Recordati is very active in this regard.

Dimension: although size on its own does not guarantee success, it gives some advantages: besides economies of scale in manufacturing, clinical trials and marketing, being bigger means being able to invest more resources into R&D activity, this again may lead to a more diversified drug portfolio. Recordati strives towards globalization while maintaining a medium size. The idea is to go global without losing the flexibility and attention to quality which characterizes smaller entities.

R&D efficiency/Portfolio management: essential for a stable and secure growth in the long term as companies have to cover losses from generic competition once a patent expires. Even though Recordati isn't research driven, it manages to refresh its portfolio when needed by in-licensing products developed by other companies or by acquiring entire portfolios of products. This can be seen in the 2015-2020 period; Recordati is planning to hedge against sales erosion from generic players following Zanipress' patent expiry in 2016 and Livazo and Urorec's patent expiry in 2020 with the launch of already predisposed products, by means of in-

licensing: Cystadrops in early 2017 (developed by Recordati), Reagila in mid-2017 (in-licensed from Gedeon Richter), Fortacin end-2017 (in-licensed from Plethora Solutions). This shows how Recordati is able to anticipate adverse product events even without employing internal research activity.

Patent protection: it is important for the company to be able to protect exclusivity and patent rights of medicines available for sale.

Financial Analysis

€ mln	2009	2010	2011	2012	2013	2014	2015	2016E
Total Revenues	747,52	728,13	762,04	828,32	941,63	987,36	1.047,68	1.153,90
Ebitda Margin	26,4%	25,0%	24,6%	23,1%	24,4%	27,7%	30,3%	32,2%
Ebit Margin	21,7%	21,3%	21,5%	20,2%	20,8%	23,4%	26,6%	28,4%
Net Income Margin	14,8%	14,9%	15,3%	14,3%	14,2%	16,3%	19,0%	20,6%

Historical revenues

Looking at sales growth from 2009 to 2015 it is possible to notice an upward trend interrupted only in 2010, following the patent expiry of Zanidip. The increasing revenues are a result of organic growth and acquisitions; increased revenues are due to an increase in volumes that allowed to counterbalance price erosion deriving from stricter pricing regulation. The years 2012 and 2013 exhibit the highest growth rates, respectively with a 13.5% and 15.5% increase in revenues; both years are characterized by important acquisitions. Chart 8 shows how external growth accounts for a large share in Recordati's total revenue growth. Sales analysis can be further split up according to the two main segments, primary and specialty care and orphan drugs; the latter is characterized by high and erratic growth rates due to a more dynamic market and important acquisitions, while the primary and specialty care segment is characterized by a less discontinuous growth trend. The only main corporate product that has a descending trend is Zanidip which has lost ~40% of its sales from 2009 to 2016 following Recordati's strategy to contain losses from generic competition by matching the generic's prices to keep sales volumes. Zanipress has an ascending trend in the 2010-2016 period due to Recordati's switch of promotional effort from Zanidip to Zanipress and as a result of the rolling-out to new markets strategy pursued by the Group. The other corporate products, Urorec and Livazo, launched respectively in 2010 and 2011 have an ascending trend in revenues growth by cause of license and co-marketing agreements with important players and due to the products' good quality and rapid expansion in different markets given Recordati's strong commercial structure. Revenues 2010-2015 CAGR was 7.55%, with 21.11% CAGR in the orphan drugs segment and 5.97% in primary and specialty care.

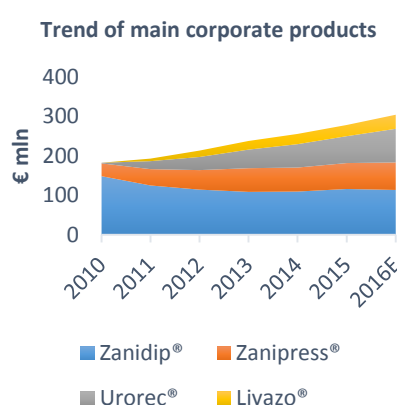


Chart 9 – Source: Company's Data

€ mln	2009	2010	2011	2012	2013	2014	2015	2016E
Primary-Specialty Care	698,65	669,36	692,72	752,39	813,70	864,17	894,55	967,10
% of Total Revenues	93,5%	91,9%	90,9%	90,8%	86,4%	87,5%	85,4%	83,8%
% growth		-4,2%	3,5%	8,6%	8,1%	6,2%	3,5%	8,1%
Rare Disease	48,88	58,77	69,32	75,92	127,93	123,18	153,13	186,80
% of Total Revenues	6,5%	8,1%	9,1%	9,2%	13,6%	12,5%	14,6%	16,2%
% growth		20,2%	17,9%	9,5%	68,5%	-3,7%	24,3%	22,0%

Marginality

EBITDA margin increased by 3.91% from 2009 to 2015, with an initial negative phase until 2012 and an increase from 2012 to 2015. Chart 10 and 11 show the composition of both trends: from 2009 to 2012 there was an important decrease in gross margin, partly compensated by an increase from 2012 to 2015; the total impact of cost of sales (ex. D&A) hence grows from 2009 to 2015, in part as an effect of increased labor manufacturing costs. Selling expenses show the same trend: an increase from 2009 to 2012 and a decrease from 2012 to 2016. In this case the overall effect from 2009 to 2015 on Ebitda margin is positive. R&D costs decline both from 2009 to 2012 and from 2012 to 2015 due to the interruption of

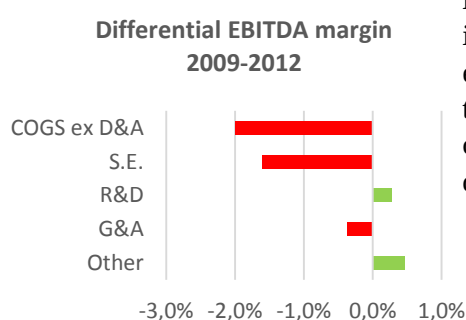


Chart 10 – Source: Team Estimates

Differential EBITDA margin 2012-2015

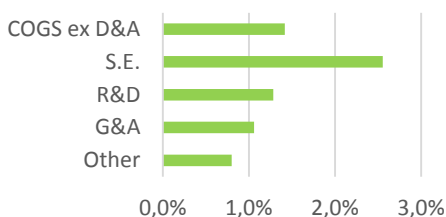


Chart 11 – Source: Team Estimates

Differential ROE margin 2009-2015

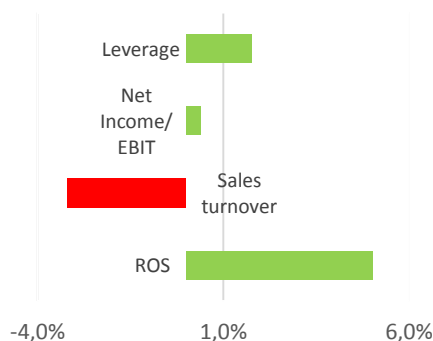


Chart 12 – Source: Company's Data

ROIC decomposition: competitive analysis

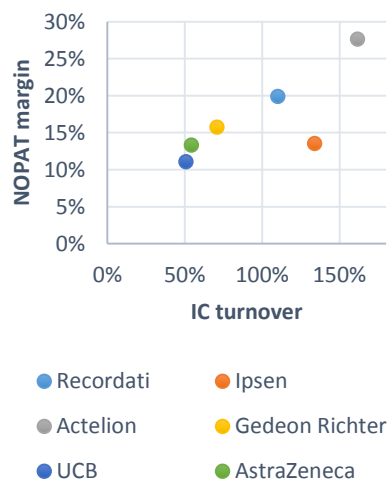


Chart 13 – Source: Team Estimates and FactSet

ROIC decomposition: change in time

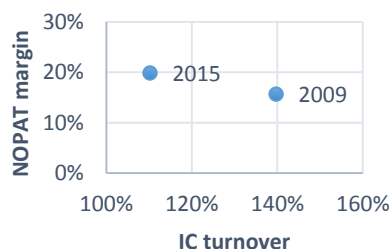


Chart 14 – Source: Company's Data

expenses related to the phase-III clinical development for the product Nymox and a less research intensive business model.

Please refer to Appendix 8 for Recordati's operating segments' marginality.

% on Total Sales	2009	2010	2011	2012	2013	2014	2015	2016E
COGS ex D&A	26,9%	29,3%	30,9%	32,5%	31,1%	28,8%	28,3%	27,5%
Selling Expenses	29,9%	29,7%	30,5%	30,3%	29,2%	28,7%	28,0%	26,6%
R&D	9,3%	9,5%	7,3%	7,7%	7,9%	8,6%	7,3%	7,3%
G&A	5,8%	6,0%	6,0%	5,5%	5,7%	5,8%	5,6%	5,4%

Profitability

ROE increased by 3.97% over the period from 2010 to 2015. Decomposition (Chart 12) shows an important positive contribution from return on sales and therefore an increased operating efficiency. Changes in sales turnover have a negative effect on ROE differential – this shows a decrease in terms of production advantage, also visible in ROIC decomposition: an increase in ROIC margin is partly offset by a decrease in the invested capital turnover. This points to a higher focus on consumer advantage and a loss in terms of production advantage. The general effect is positive, ROIC increases from 20.8% to 21.9% with a ROIIC of 24.08%. The overall situation shows a substantial decrease in marginality and profitability from 2009 to 2012 followed by an increase from 2012 in 2015.

ROIC analysis and competitive positioning

We used a modified version of DuPont analysis in order to determine Recordati's competitive positioning relative to five comparable firms (Chart 13). We used the ratio of NOPAT/Sales (NOPAT margin) as a measure of profit per unit. Sales/Invested Capital (IC turnover) was used as a proxy of capital efficiency. Comparative analysis shows that Recordati places high, both in terms of IC turnover, as well as in terms NOPAT margin. While in the latter it is second only to Actelion, in terms of IC turnover it places behind Actelion and Ipsen. Recordati seems to have both, a consumer and a production advantage. Analyzing the change in Recordati's strategy over the last five years it is possible to see how IC turnover declined while NOPAT margin increased consistently (Chart 14). This points to a shift from production to consumer advantage.

Cash flows

Recordati runs a highly cash generating business, with an average annual FCF (2010-2015) of €100 mln. FCF is high on average but variable as a result of large acquisitions in cash form. FCF is largely absorbed by dividend payouts, which reach 60% of net income in 2015. Interest expense absorbs a relatively small share of FCF. Chart 15 shows yearly FCF's destination: Recordati distributes dividends even in low cash flow years, generating a negative balance. This balance is restored in high cash years, i.e. low acquisition years, such as 2014 and 2015.

Financial structure and debt service

In 2013 Recordati's net financial position reached the lowest point within the 2010-2015 period with a net debt of €258.821 (thousands) following the acquisition of *Lundbeck's* drug portfolio, *Laboratorios Casen Fleet S.L.U.* and *Opalia Pharma S.A.* Net debt decreased to €101.408 (thousands) by 2015 due to the lack of major acquisitions in 2014 and 2015. However, following the 2016 acquisitions net debt increased again to €198.750 (thousands). Long term bank loans have been following an upward trend since 2009, in absolute as well as in relative terms. Recordati is prevalently equity financed, with equity accounting for 80% of total source of funds. As a consequence, EBITDA interest coverage ratios remain stable at around 20x.

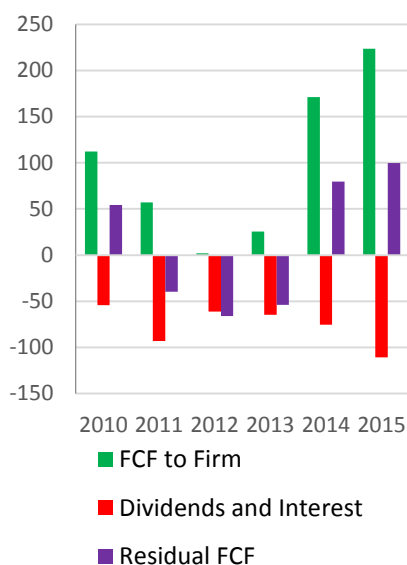
FCF destination
in € mln

Chart 15 – Source: Company's Data

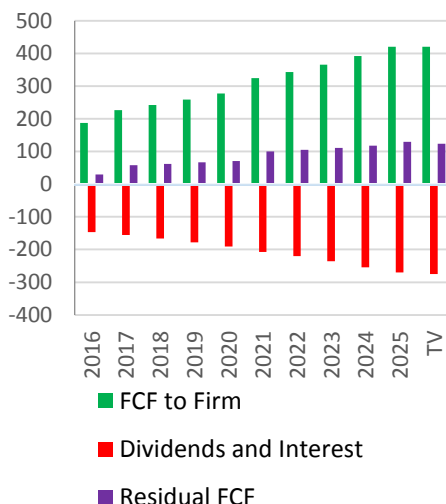
FCF destination - forecast
in € mln

Chart 16 – Source: Team Estimates

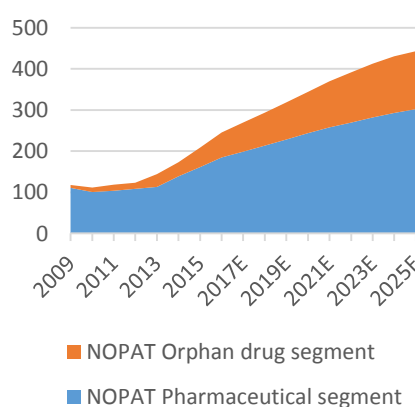
NOPAT by operating segment
in € mln

Chart 17 – Source: Team Estimates

Forecast

We expect a stable revenue growth over the next ten years, primarily due to increased sales volume in the orphan drug segment.

Overall, sales growth derives primarily from an increase in sales volume, rather than price levels, given Recordati's limited pricing power (as stated by corporate management). As the importance of the orphan drugs segment increases, marginality may improve due to a lower impact of sales costs and selling expenses: 2020 EBITDA margin forecast is 32.06%, while for 2025 we expect a margin of 33.07%. Over the long term horizon, we expect a ROIIC (2015-2025) of 29.12%, as result of an increase in both IC turnover and NOPAT margin. While the first may derive from profitable acquisitions which could allow Recordati to operate with a lighter capital structure, the latter may depend on an even stronger focus on the orphan drugs segment and potential economies of scale. This should translate into a ROIC of approximately 26% in 2025. We furthermore expect a stable growth in FCFs, which should reach 23.7% of IC in 2025. As for above, Chart 16 shows FCF destination. Since we assume an average acquisition intensity, FCF balance is positive for every year.

Valuation

For the purpose of Recordati's valuation we used a Discounted Cash Flow (DCF) model because we believe that cash flow generation is the key value driver of this particular company. We decided to base our analysis on free cash flow to firm since Recordati's capital structure depends on acquisition cycles. We then performed a sensitivity analysis in order to assess the impact of a change in key variables (WACC and perpetual growth). We also built upside and downside scenarios to catch particularly positive and negative developments in Recordati's business. As a control method we used market multiples. Please refer to Appendix 14, 15 and 16.

Target price is €30.37, determined as a weighted average of DCF base scenario valuation and market multiples with weights, respectively being 80% and 20%.

Discounted Cash Flow analysis

Our model is structured on three stages in order to account for slight shifts in marginality. As can be seen from *Financial analysis forecast*, we assume a slight improvement in the impact of selling expenses and COS, primarily due to a lower impact of fixed costs. Other costs are kept constant in percentage terms, according to 2016 levels.

First stage: 2016-2020

We started our simulation by modelling future sales on Recordati's main corporate products. Marginality is kept constant to 2016 levels. Overall revenue CAGR over the years 2016-2020 is expected to be around 6.75%, respectively 13.52% for the orphan drug segment and 5.29% for primary&specialty care. Please refer to Appendix 14 for a detailed outline of growth drivers.

Second stage: 2021-2025

Overall revenues CAGR should, according to our estimates, be roughly around 6.68%, with respectively 12.88% for the orphan drug segment and 4.70% for primary&specialty care. We expect a slight increase in marginality due to a higher presence in the orphan drugs segment, characterized by a slenderer commercial structure, and due to a lower impact of fixed costs following an increase in sales volume. Ebitda margin is expected to be around 33% in 2025 and Ebit margin should reach approximately 29.5%. Please refer to Appendix 15.

Perpetual growth

For the calculation of terminal value, we assume a constant growth rate equal to the long-term inflation rate, i.e. 2%. We implicitly retain both market segments will be mature by then. Total revenues CAGR over the total estimate period should be around 6.1%: 11.99% in the orphan drug segment and 4.52% in primary&specialty care. For the final year of our estimate we expect the orphan drug segment to account for roughly 28% of total revenue.

Weighted Average Cost of Capital (WACC)

Given the varying net financial position of Recordati with financial debt superior to cash, we used a mixed capital structure with a cost of equity 7.46% and a cost of debt of 2.92%. As far as the cost of equity is concerned we used the CAPM model:

- Risk free rate: 2.32%; obtained as a weighted average of 10Y Government bonds yields of the countries where Recordati operates with 2015 sales percentage of that country as weights;
- Equity risk premium: 6.77%; as we did for the risk free rate, equity risk premium is weighted for each region considered on the basis of the revenues coming from that region (source: Damodaran);
- Beta: 0.76; levered beta based on a bottom up approach.

Cost of debt has been obtained as the sum of the risk-free rate and the spread deriving by a synthetic rating implicit in the value of the interest coverage ratio (source: Damodaran).

Please refer to Appendix 13 for a detailed outline of WACC calculation methodology.

Market multiples

We chose two sets of pharmaceutical companies for the market multiple valuation: one consisting of companies with a particular focus on the orphan drugs segment and one comprising companies focused on the Primary-Specialty care segment. We used the average EV/Sales multiple from both set of companies and, using Recordati's 2016 orphan drugs and primary-specialty care segment sales levels as weights, we calculated a theoretical EV/Sales multiple for the company. We obtained a multiple of 5.39x that gave us a multiple base price of €29.35. Please refer to Appendix 16 for a more detailed explanation.

Investment Risks

Market Risks:

Geographical diversification – a double edged sword

A natural consequence of geographical diversification is the geopolitical exposure which arises from dealing with different national and regional realities. This is particularly true for a company that seeks growth opportunities in emerging and notoriously unstable contexts. Recordati makes no exception in this sense: in our opinion the relatively high exposure to Turkey (7.7% of revenues) and Russia and other CIS countries (7.1% of revenues) is a factor of risk given the political turmoil that has recently characterized these particular countries. Another example of country risk derives from the U.S. market: protectionism and political arbitrariness may impact in various manners; the direction of the effect in this case is hard to gauge.

Increased competition

Increased competition may arise from biosimilar players as well as from a possible entry of multinational pharma companies into Recordati's strategic markets.

Operating Risks:

Approval procedures and Reimbursement

Given the peculiarities of the pharma market, dependence on political decisions is particularly high. Pharmaceutical sales depend extensively on reimbursement policies and are, hence, not directly under control of the single industry operator. A further factor of exposure to the competent authorities derives from approval procedures: a refused approval of any of the firm's pipeline products can generate important losses since R&D expenses might not be compensated by future sales and have to be considered sunk costs. This is particularly true for the primary&specialty care sector since these particular drugs require tests on a larger scale than those in the orphan drugs segment. This fact denotes a lower intrinsic riskiness of orphan drug's R&D processes. The lower riskiness of orphan drugs is furthermore enlarged by the specific protection status granted. However, Recordati manages to hedge against the risk of seeing a pipeline product fail approval tests thanks to its strategy of acquiring complete drug portfolios. For many of Recordati's current products there has been no such risk in

the past and it is likely to remain so in the near future: Graspa, Fortacin and Reagila are examples of such products, since they have not been developed internally.

Investment opportunities

The particular mitigating strategy explained above exposes Recordati to another kind of risk: the possibility of not finding any available investment opportunities. This might, given Recordati's past performance and its past ability to consistently beat market expectations, translate into short-termism and a potential treadmill effect which might tamper long term performance focus. Recordati might in fact be induced to investing in companies with a high short term profitability, rather than long term growth outlooks.

Strategic Risks:

Price erosion

It's the consequence of the combined effect of competition from generics, lower list prices given by the fact that governments try to control healthcare spending due to the actual global financial crisis which automatically produces another negative effect, that is delays in the introduction of new products. This risk, once again, is particularly high for the primary&specialty care segment and moderate within the orphan drugs segment, where low sales volumes and the need for highly specialized sales personnel provide a natural protection against generic players.

Failure to catch on to new developments

In a sector where innovation plays a crucial role, not being able to catch on to new developments, both in technology as well as in consumer preferences, may seriously damper a well-positioned company's performance. Recent developments in production techniques, such as 3-D printing, may be one of those factors.

Financial Risks:

Exchange rate risk

Recordati has assets and transactions denominated in foreign currency therefore is exposed to fluctuations of exchange rates. However, this financial risk is covered through a natural hedge: since for any country there are both, cash in and outflows denominated in the same currency, exchange rate movements are largely compensated. Moreover, the Group uses forward contracts for the purchase and sale of currencies to cover amounts at risk.

Credit risk

Due to the current difficult economic and financial conjecture and the trend of expanding into pharmerging markets (like Turkey, LatAm countries, Russia) exposes Recordati to this type of financial risk. The Group mitigates it by controlling its credit exposure through the allocation of credit limits to each single customer.

Corporate Governance

Recordati's majority shareholder, with a 51.8% stake, is FIMEI S.p.A., the holding company of the Recordati family. Furthermore, members of the family occupy key roles within the company, with Alberto (Chairman) and Andrea (CEO and Vice Chairman). They inherited the legacy of the late Giovanni Recordati, giving the corporation a sound signal of continuity and financial stability. The Board of Directors, however, retains its independency with six out of eight members not being Recordati family members. In addition, a Remuneration Committee and an Audit and Risk Committee were formed from among the independent directors, whose primary role is to assess respectively the fixed and variable earnings to the top employees and the adequacy of the Internal control and Risk management system. Finally, the BoD approved on 12th December 2002 and subsequently amended the Ethics Code of the Recordati Group, with the aim of implementing the best practices within the Parent Company as well as the controlled subsidiaries. Please refer to Appendix 17 and 18.

Stock options plan

On 17 April of 2014 REC has approved the "2014-2018 Stock Option Plan" in order to enhance the loyalty and the motivation of the senior managers as also of other key employees. The Company accomplished the objective aforementioned through a share buy-back program, pursuant Consob and EU regulation in force, thanks to which on 31 December 2016, REC has n. 3,747,262 own shares which amount to 1.79% of the current share capital.

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Appendix 1: Recordati's history

1926 - Recordati is founded in Correggio - Reggio Emilia - as Laboratorio Farmacologico Reggiano
1953 - Recordati moves to a new facility in Milano
1984 - Recordati is listed on the Italian Stock Exchange
1995 - Recordati incorporated a Spanish subsidiary, known today as Recordati Espana
1997 - First launch of Zanidip (lercanidipine)
1999 - Recordati ensures a direct presence in France through the acquisition of pharma company Doms Adrian
2000 - Recordati acquires the French pharmaceutical group Bouchara
2002 - Recordati starts selling Zanidip (lercanidipine) in the U.K.
2003 - Zanidip (lercanidipine) was also launched in Germany, France and Australia
2004 - Acquisition of Merckle Recordati in Germany
2005 - Establishment of Recordati Pharmaceuticals in the UK Establishment of Recordati Hellas Pharmaceuticals in Greece - Establishment of Recordati Hellas Pharmaceuticals in Greece - Recordati opened a new plant in Ireland
2006 - Recordati acquires the pharmaceutical activities of the Grupo Jaba in Portugal
2007 - First launch of Zanipress and Acquisition of Orphan Europe
2008 - Acquisition of the Turkish pharmaceutical company Yeni Ilac - Acquisition of FIC and FIC Medical, a pharmaceutical services network operating in Russia and other CIS countries
2009 - Acquisition of the pharmaceutical company Herbacos-Bofarma present in Czech and Slovak Republics - Recordati obtained marketing authorization for the medical products Urorec and Silodyx, treatments for BPH - FDA approved Carbaglu in the U.S. market for the treatment of NAGS deficiency
2010 - Recordati acquired ArtMed International, a Romanian company
2011 - Recordati acquired the Turkish pharmaceutical company Frik Ilac
2012 - Acquisition of OTC products in Germany, Poland, Russia and Italy - Acquisition of a portfolio of products for the treatment of rare diseases in the U.S.A. - Acquisition of Farma-Projekt, a polish pharmaceutical company - License agreement with Erytech for Graspia in development for the treatment of lymphoblastic leukemia and AML
2013 - Acquisition of 90% of the share capital of Opalia Pharma S.A., a Tunisian pharmaceutical company - Acquisition of Laboratorios Casen Fleet S.L.U., a Spanish pharmaceutical company
2014 - License agreement with Apricus Biosciences Inc. for the marketing and sale of Vitaros - License agreement with Plethora Solutions for the commercialization of Fortacin - Carbaglu has been granted orphan drug designation in the U.S. for the treatment of organic acidemias
2015 - Subsidiaries of the business dedicated to treatments for rare diseases established in Brazil, Mexico and Colombia
2016 - Acquisition of the Italian pharmaceutical company Italchimici S.p.A. - Acquisition of the Swiss pharmaceutical company Pro Farma AG - License agreement with Gedeon Richter to commercialize cariprazine, a novel atypical antipsychotic - License agreement with AP-HP for the development and commercialization of a treatment for MSUD (maple syrup urine disease)

Source: Company's Data

Appendix 2: Recordati's main acquisitions

Year	Firm	% Acquired	Price (mln)	Payment
2000	Group Bouchara (France)	100%	L. 526.3 bn	Not Available
This acquisition allowed Recordati to have a direct presence in France’s pharmaceutical market the world’s fourth biggest at that time.				
2004	Merckle GmbH (Germany)	100%	EUR 65	Internal resources
With this operation, Recordati strengthened furthermore its European expansion with particular focus on Germany the first pharmaceutical market in Europe and the third in the world.				
2006	Grupo Jaba (Portugal)	100%	EUR 45	Not Available
It permitted Recordati to expand its activities in the European pharmaceutical market, more precisely in Portugal.				
2007	Orphan Europe (France)	100%	EUR 135	Internal resources
This acquisition reinforced Recordati’s product pipeline and enhanced the groups know-how in the management of highly specialized products (orphan drugs) a developing segment in the current pharmaceutical market.				
2008	FIC/FIC Médical (France)	100%	EUR 12	Internal resources
The acquisition of these companies permitted Recordati to expand its presence in Russia and Commonwealth of Independent States.				
2008	Yeni İlaç (Turkey)	100%	EUR 48	Internal resources
In line with Recordati’s strategy of establishing a direct presence in the new Central and Eastern Europe markets.				
2009	Herbacos-Bofarma (Czech Republic)	100%	EUR 19	Internal resources
This acquisition gave Recordati the opportunity to expand into the Czech and Slovakian market.				
2010	ArtMed International (Romania)	100%	EUR 1.2	Internal resources
The operation expanded the Group’s reach into Central and Eastern European markets.				
2011	Dr. F. Frik İlaç (Turkey)	100%	USD 130	Internal resources
Dr. F. Frik İlaç strengthened Recordati’s position in the Turkish pharmaceutical market.				
2012	Farma-Projekt (Poland)	100%	USD 21.3	Internal resources
The acquisition of Farma-Projekt strengthened Recordati’s experience and product portfolio in the cardiovascular and urological therapeutic areas.				
2013	Lab. Casen Fleet (Spain)	100%	EUR 93	Internal resources
This operation reinforced Recordati’s presence in Spain and improved the company’s product portfolio with CitraFleet®, a portfolio with worldwide marketing rights.				
2013	Opalia Pharma (Tunisia)	67%	EUR 22.6	Internal resources
2014		23%	EUR 5.9	Internal resources
This acquisition represents a strategic platform to establish direct presence in North Africa with the objective of extending the groups operations also to countries in Central Africa and in the Gulf states.				
2016	Italchimici (Italia)	100%	EUR 130	Internal resources
This operation consolidates Recordati’s positioning in the gastroenterological and respiratory therapeutic areas.				
2016	Pro Farma (Switzerland)	100%	CHF 16	Internal resources
Pro Farma allows Recordati to have a direct presence in Switzerland.				

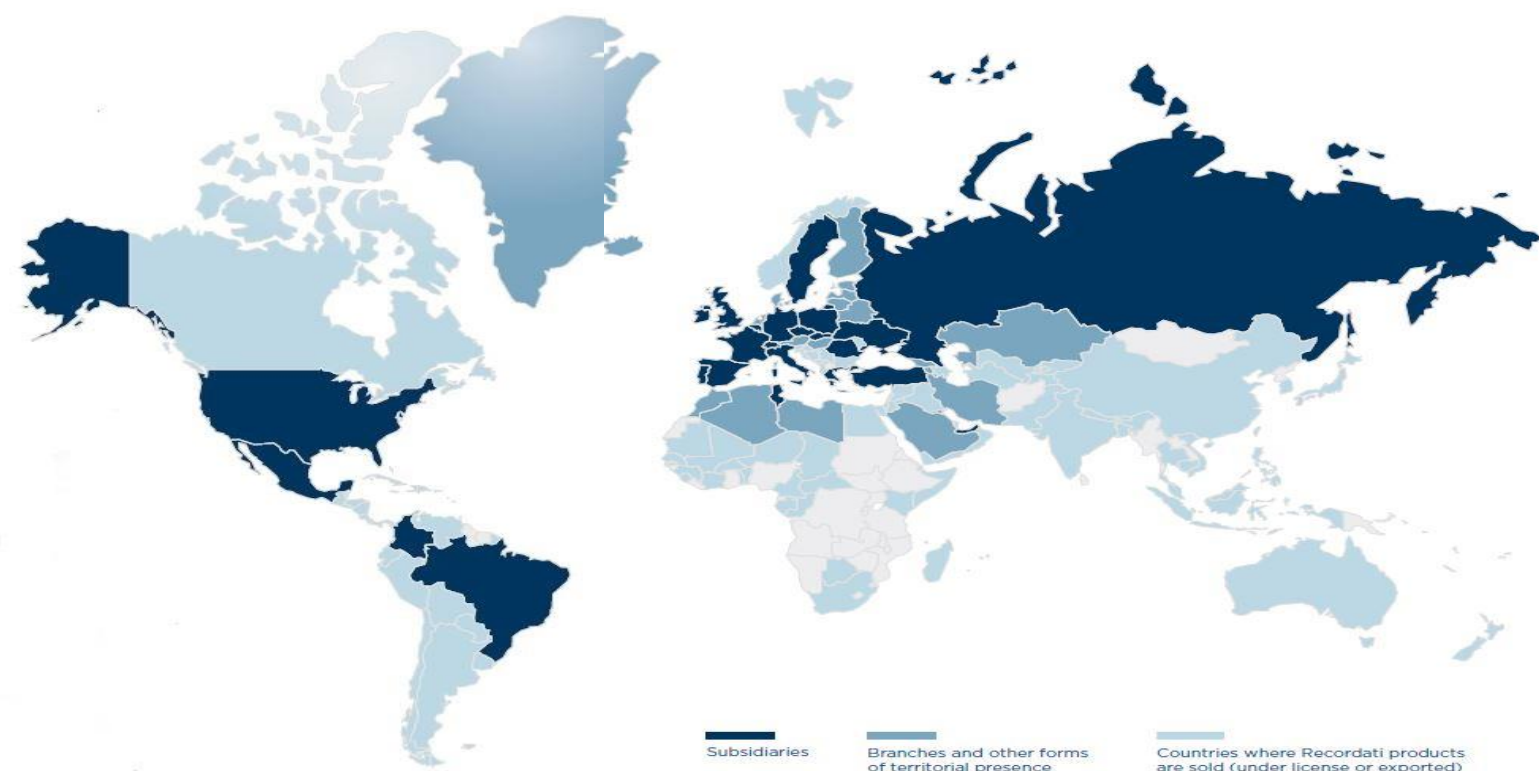
Source: Company's Data

Appendix 3: Recordati's main licenses

Year of agreement	Licensor	Product	Active ingredient	Type of agreement	Rights for
2004	Grupo Uriach	Wystamm®/Rupafin®	rupatadine	Marketing and sale	Italy, France
2004	Almirall Prodesfarma	Cidine®	cinitapride	Marketing and sale	Spain
2004	Kissei Pharmaceutical	Urorec®/Silodyx™/Silosin®	silodosin	Development and marketing	European countries
2005	Ipsen	Tenstaten®	cicletanine	Marketing and sale	France
2005	Ono-UCB	Alprostar®	PGE 1 Alpha	Marketing and sale	Italy
2006	Ony Inc.	Infasurf®		Marketing and sale	European Union
2008	Actavis	Kentera®	oxybutynin TDS	Marketing and sale	29 European countries
2008	Kowa Pharmaceutical	Livazo®/Alipza®	pitavastatin	Marketing and sale	Europe (exc. UK, Germany)
2009	Amdipharm	TransAct® LAT	flurbiprofene LAT	Marketing and sale	Italy, Portugal
2010	Merck KGaA	Cardicor®	bisoprolol	Marketing and sale	Italy
2012	Erytech Pharma	Graspa®		Marketing and sale	Europa
2014	Apricus Bioscience	Vitaros®	alprostadil	Marketing and sale	Europe, Russia, CIS, Turkey, North Africa
2014	Plethora	Fortacin™	lidocaine + prilocaine	Marketing and sale	Europe, Russia, CIS, Turkey, North Africa
2014	Takeda	Peptazol®	pantoprazole	Marketing and sale	Europe, Russia, CIS
2016	Assistance Publique – Hopitaux de Paris	Treatment for MSUD		Development and marketing	
2016	Gedeon Richter	Reagila®	cariprazine	Marketing and sale	Western Europe, Algeria, Tunisia, Turkey

Source: Company's Data

Appendix 4: Geographical presence



Source: Company's Data

Recordati is present in 135 markets worldwide.

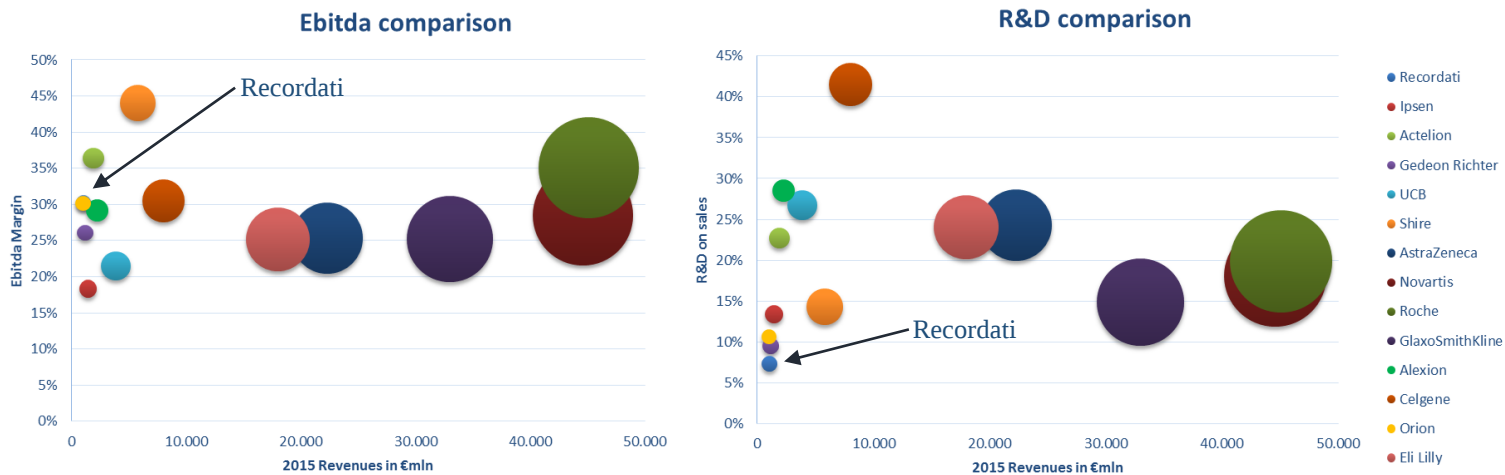
Pharmaceutical Production: 6 plants

- **Milan (Italy)** – It's the Group's principal pharmaceutical manufacturing site. Its production capacity is of 58 million units per year. It specializes in the manufacturing and packaging of oral solid, liquids, injectable and products for topical use. Is licensed to produce pharmaceutical specialties for the major world markets.
- **Saint Victor (France)** – This is the pharmaceutical manufacturing facility of Bouchara Recordati and is specialized in the production and packaging of liquid, solid oral and spray formulations. It produces 35 million packages per year.
- **Cerkezkoy (Turkey)** – The Turkish plant has a production capacity of a total of 80 million packs per year.
- **Utebo – Zaragoza (Spain)** – This plant produces around 12 million packs a year and is specialized in the production and packaging of solid and liquid oral and topical formulations.
- **Ariana (Tunisia)** – This plant is specialized in liquid, semi-solid and oral solid forms for the local market and for some of the countries in the Arabian Peninsula. It produces around 17 million packs a year.
- **Pardubice (Czech Republic)** – This plant produces creams, gel and ointments for a total 2.5 million packages per year, some of which for third parties.

Pharmaceutical Chemical: 2 plants

- **Campoverde di Aprilia (Italy)** – This plant mainly supplies the active ingredients used in the preparation of the various pharmaceutical specialties produced by the company, but is also established independent producer of APIs for the pharmaceutical industry internationally.
- **Ringaskiddy, Cork (Ireland)** – This plant became operational at the end of 2005 and is the Lercanidipine manufacturing facility.

Appendix 5: Competitive Analysis



Ipsen is a French pharmaceutical company headquartered in Paris, France. It primarily develops and markets drugs in the primary (22.8% of sales) and specialty care areas (77.2%) focusing on the following therapeutic areas: oncology (52.1% of sales), neurosciences (19.5% of sales) and endocrinology (5.6% of sales). Ipsen invests, on average, 18% of sales in R&D every year and has 4635 employees as of 2015.

Ipsen (€ mln)	2010	2011	2012	2013	2014	2015
Sales	1.100,17	1.159,82	1.219,55	1.224,80	1.274,80	1.443,90
Gross Income	844,78	894,00	935,88	942,76	964,50	1.106,90
Gross Margin %	76,79%	77,08%	76,74%	76,97%	75,66%	76,66%
Ebitda	162,32	167,90	169,54	188,09	246,50	264,80
Ebitda Margin %	14,75%	14,48%	13,90%	15,36%	19,34%	18,34%
Ebit	115,99	122,55	129,54	146,79	202,60	217,80
Ebit Margin %	10,54%	10,57%	10,62%	11,98%	15,89%	15,08%
Net Income	95,27	-0,26	95,34	141,65	154,00	189,40
Net Income Margin %	8,66%	-0,02%	7,82%	11,57%	12,08%	13,12%
Net Operating Working Capital	221,87	235,69	231,78	221,74	182,30	223,30
WC Turnover	4,96x	5,07x	5,22x	5,40x	6,31x	7,12x
Invested Capital	964,72	938,35	936,85	964,73	977,20	1.076,80
Net Debt/Mkt Cap	-8,05%	-5,82%	-4,72%	-3,70%	-4,53%	-3,75%

Source: Team estimates on Factset data



GEDEON RICHTER

Gedeon Richter is a Hungarian pharmaceutical company headquartered in Budapest, Hungary. The company produces more than 200 medicines which provide effective treatment in therapeutic areas such as: gynaecology (38% of sales), cardiovascular (22% of sales), central nervous system (13% of sales), gastrointestinal (4% of sales) and others. Gedeon Richter spends on average 11% of sales in R&D every year and has 11465 employees as of 2015.

Gedeon Richter (€ mln)	2010	2011	2012	2013	2014	2015
Sales	998,83	1.100,66	1.130,17	1.183,91	1.145,57	1.178,58
Gross Income	610,14	691,21	697,75	726,72	693,28	714,66
Gross Margin %	61,09%	62,80%	61,74%	61,38%	60,52%	60,64%
Ebitda	292,96	305,88	265,56	269,77	253,86	307,27
Ebitda Margin %	29,33%	27,79%	23,50%	22,79%	22,16%	26,07%
Ebit	216,28	218,44	172,56	174,42	158,76	206,50
Ebit Margin %	21,65%	19,85%	15,27%	14,73%	13,86%	17,52%
Net Income	233,93	176,54	170,42	144,07	80,81	175,15
Net Income Margin %	23,42%	16,04%	15,08%	12,17%	7,05%	14,86%
Net Operating Working Capital	397,08	419,88	473,77	472,25	427,32	424,46
WC Turnover	2,52x	2,69x	2,53x	2,50x	2,55x	2,77x
Invested Capital	1.565,87	1.545,91	1.639,29	1.684,27	1.641,01	1.662,00
Net Debt/Mkt Cap	-6,84%	-10,67%	-5,65%	-5,90%	-9,12%	-8,97%

Source: Team estimates on Factset data



UCB is a Belgian company headquartered in Brussels. The company's efforts are focused on treatments for severe diseases treated by specialists, particularly in the fields of central nervous system disorders and in the immunology therapeutic area. It also has products for the cardiovascular and urology therapeutic areas. UCB invests 25% of sales in R&D every year and has 7788 employees as of 2015.

UCB (€ mln)	2010	2011	2012	2013	2014	2015
Sales	3.218,00	3.246,00	3.462,00	3.411,00	3.344,00	3.876,00
Gross Income	2.165,00	2.227,00	2.372,00	2.293,00	2.290,00	2.718,00
Gross Margin %	67,28%	68,61%	68,52%	67,22%	68,48%	70,12%
Ebitda	717,00	668,00	641,00	671,00	607,00	833,00
Ebitda Margin %	22,28%	20,58%	18,52%	19,67%	18,15%	21,49%
Ebit	462,00	422,00	411,00	433,00	387,00	581,00
Ebit Margin %	14,36%	13,00%	11,87%	12,69%	11,57%	14,99%
Net Income	104,00	221,00	239,00	202,00	115,00	264,00
Net Income Margin %	3,23%	6,81%	6,90%	5,92%	3,44%	6,81%
Net Operating Working Capital	607,00	904,00	1.024,00	1.137,00	727,00	766,00
WC Turnover	5,30x	4,30x	3,59x	3,16x	3,59x	5,19x
Invested Capital	7.471,00	7.728,00	7.932,00	8.015,00	7.514,00	7.636,00
Net Debt/Mkt Cap	31,19%	30,31%	25,63%	22,79%	15,24%	7,31%

Source: Team estimates on Factset data

Company	Gastrointestinal/Metabolism Cardiovascular Urology Dermatology Gynecology Anti-infective Musculo/Skeletal/Analgesia Central Nervous system Respiratory Sense-organs Oncology Endocrinology Common therapeutic areas Market Capitalization (€mln)													
Ipsen	X					X		X			X	X	4	6.933
Gedeon Richter		X			X			X					3	3.796
UCB		X	X					X				X	4	12.902
AstraZeneca	X	X				X		X	X		X		6	68.933
Eli Lilly	X	X	X				X	X			X	X	7	86.512
Novartis	X	X		X				X	X	X	X	X	8	191.600
Roche	X	X				X		X	X	X	X		7	199.300

Source: Companies and Factset data

Appendix 6: SWOT Analysis

Strenghts

- Diversified portfolio diminishing concentration risk;
- Strong commercial structure;
- Solid parterships;
- Efficient portfolio management;
- Entrance into the schizophrenia market to be expected in 2017.

Weaknesses

- Relatively small dimention if compared to main pharmaceutical players;
- Dependence on acquisition opportunities;
- Limited pricing power.

Opportunities

- Further expansion in the orphan drugs market;
- Already established launch platforms for the African market;
- Possibility of new profitable partnerships given Recordati's recognition;
- Not fully exploited production capacity in Turkey's production site.

Threats

- Revenues erosion due to increased competition by generic and biosimilar players;
- Downward pressure on prices by regulating authorities.

Appendix 7: Ratio Analysis

Capital Intensity & Efficiency Ratios	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Sales / Employee	0,26	0,24	0,25	0,24	0,25	0,27					
R&D / Employee	0,025	0,017	0,019	0,019	0,022	0,02					
R&D / Sales	9,45%	7,34%	7,65%	7,94%	8,64%	7,32%	7,25%	7,94%	7,94%	7,94%	7,94%
Capex / Sales	5,83%	8,73%	13,47%	15,36%	3,09%	3,22%	6,64%	5,54%	5,54%	5,54%	5,54%
Capex / Ebit	27,45%	40,71%	66,82%	74,02%	13,22%	12,10%	23,40%	19,56%	19,54%	19,51%	19,49%
D&A / Ebitda	14,81%	12,94%	12,89%	15,08%	15,63%	12,14%	11,81%	11,34%	11,33%	11,31%	11,30%
Days of sales outstanding	68	72	65	63	62	59					
Working Capital Turnover	11,56x	9,21x	7,07x	7,45x	7,01x	8,02x	7,39x	7,37x	7,37x	7,37x	7,37x
Liquidity & Coverage Ratios	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Ebitda Coverage	Net Cash	0,31x	0,81x	1,12x	0,68x	0,32x	0,54x	0,45x	0,36x	0,27x	0,18x
Current Ratio	2,26x	1,98x	1,81x	1,80x	2,28x	2,59x	1,96x	2,04x	2,18x	2,32x	2,45x
Acid Test (Quick Ratio)	1,78x	1,42x	1,15x	1,17x	1,63x	1,95x	1,37x	1,45x	1,59x	1,73x	1,86x
Cash Ratio	0,91x	0,55x	0,20x	0,23x	0,63x	1,01x	0,45x	0,54x	0,67x	0,81x	0,94x
Financial Ratios	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Total Debt / Total Asset	0,36	0,39	0,39	0,45	0,43	0,41	0,42	0,41	0,41	0,4	0,4
Financial Debt / Total Debt	0,36	0,42	0,45	0,53	0,55	0,55	0,49	0,48	0,49	0,5	0,51
Net Financial Position / TSE	Net Cash	0,1	0,23	0,37	0,24	0,12	0,21	0,17	0,13	0,1	0,06
DuPont Analysis - ROE	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
ROE	20,02%	19,90%	18,87%	19,61%	21,65%	23,99%	26,03%	25,06%	24,41%	23,78%	23,33%
NI Margin	14,91%	15,28%	14,31%	14,20%	16,33%	18,98%	20,57%	20,45%	20,48%	20,51%	20,54%
IC Turnover	1,36	1,28	1,12	1,05	1,02	1,1	1,12	1,06	1,07	1,07	1,08
Financial Leverage	0,99	1,02	1,17	1,32	1,3	1,15	1,13	1,15	1,12	1,08	1,05
DuPont Analysis - ROIC	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
ROIC	20,80%	20,01%	16,73%	16,11%	17,92%	21,94%	23,84%	22,56%	22,67%	22,76%	23,00%
ROS	21,26%	21,45%	20,16%	20,75%	23,40%	26,58%	28,37%	28,32%	28,36%	28,40%	28,44%
IC Turnover	1,36	1,28	1,12	1,05	1,02	1,1	1,12	1,06	1,07	1,07	1,08
1- Tax Rate	71,91%	72,77%	73,90%	73,95%	75,05%	74,90%	74,90%	74,90%	74,90%	74,90%	74,90%

- **WC Turnover:** Sales / WCO
- **Ebitda coverage:** Net Debt / Ebitda
- **Current Ratio:** (Current operating assets + Cash) / Current operating liabilities
- **Acid Test:** (Current operating assets – Inventory + Cash) / Current operating liabilities
- **Cash Ratio:** Cash / Current operating liabilities
- **Net Financial Position:** Financial Debt – Cash
- **IC Turnover:** Sales / ((Invested Capital_t - Invested Capital_{t-1}) / 2)
- **Financial Leverage:** ((IC_t - IC_{t-1}) / 2) / ((Total Shareholders' Equity_t - Total Shareholders' Equity_{t-1}) / 2)

Source: Team estimates on Company's data

Appendix 8: Segment Marginality

Segment Marginality (€ mln)	2009	2010	2011	2012	2013	2014	2015
Sales Primary-Specialty Care	698,65	669,36	692,72	752,39	813,70	864,17	894,55
Expenses Primary-Specialty Care	-545,50	-529,25	-550,02	-606,04	-660,54	-679,64	-678,90
EBIT Primary-Specialty Care	153,14	140,11	142,70	146,35	153,17	184,54	215,65
NOPAT Primary-Specialty Care segment	110,92	100,75	103,85	108,16	113,26	138,50	161,51
Tax rate	27,6%	28,1%	27,2%	26,1%	26,1%	24,9%	25,1%
Nopat margin Primary-Specialty Care	15,9%	15,1%	15,0%	14,4%	13,9%	16,0%	18,1%
EBIT margin Primary-Specialty Care	21,9%	20,9%	20,6%	19,5%	18,8%	21,4%	24,1%
Sales Orphna drug	48,88	58,77	69,32	75,92	127,93	123,18	153,13
Expenses Orphan drug segment	-39,82	-44,10	-48,54	-55,31	-85,67	-76,69	-90,26
EBIT Orphan drug segment	9,06	14,68	20,78	20,61	42,26	46,49	62,87
NOPAT Orphan drug segment	6,56	10,55	15,12	15,23	31,25	34,89	47,09
Tax rate	27,6%	28,1%	27,2%	26,1%	26,1%	24,9%	25,1%
Nopat margin Orphan drug segment	13,4%	18,0%	21,8%	20,1%	24,4%	28,3%	30,7%
EBIT margin Orphan drug segment	18,5%	25,0%	30,0%	27,2%	33,0%	37,7%	41,1%

Source: Team estimates on Company's data

Appendix 9: Shareholders' Income

Shareholders' Income	2010	2011	2012	2013	2014	2015
Dps (Dividend per share)	0,28	0,30	0,30	0,33	0,50	0,60
Eps (Earning per share)	0,55	0,58	0,59	0,66	0,79	0,97
TSR (Total Shareholder Return)	41,06%	-16,57%	28,98%	56,15%	27,63%	92,14%

Source: Team estimates on Company's data

Appendix 10: Balance Sheet

Amounts in million euros	2009	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Operating non-current assets	151,89	166,53	205,05	291,44	376,79	358,29	355,44	398,62	422,17	447,35	474,18	502,94
% growth		9,6%	23,1%	42,1%	29,3%	-4,9%	-0,8%	12,1%	5,9%	6,0%	6,0%	6,1%
Tangible assets (PP&E)	55,38	53,02	55,40	59,97	81,29	92,27	108,99	112,77	112,00	118,68	125,80	133,43
% on total operating non-current assets	36,5%	31,8%	27,0%	20,6%	21,6%	25,8%	30,7%	28,3%	26,5%	26,5%	26,5%	26,5%
Intangible Assets	96,51	113,51	149,65	231,47	295,50	266,02	246,45	285,85	310,17	328,66	348,38	369,51
% on total operating non-current assets	63,5%	68,2%	73,0%	79,4%	78,4%	74,2%	69,3%	71,7%	73,5%	73,5%	73,5%	73,5%
Goodwill	303,65	305,74	365,72	413,21	469,21	463,47	453,29	562,71	602,71	642,71	682,71	722,71
Δ Goodwill		2,09	59,98	47,49	55,99	-5,73	-10,19	109,43	40,00	40,00	40,00	40,00
Goodwill growth		0,7%	19,6%	13,0%	13,6%	-1,2%	-2,2%	24,1%	7,1%	6,6%	6,2%	5,9%
Net working capital for operations	79,64	63,00	82,73	117,19	126,32	140,85	130,58	156,07	166,47	177,94	189,70	203,26
Δ WCO		-16,64	19,73	34,47	9,13	14,52	-10,27	25,50	10,40	11,47	11,76	13,57
As % of sales	10,7%	8,7%	10,9%	14,1%	13,4%	14,3%	12,5%	13,5%	13,6%	13,6%	13,6%	13,6%
Trade receivables	132,62	126,58	141,23	155,36	179,78	179,03	177,22	236,54	252,30	269,68	287,50	308,07
Inventories	86,63	85,19	108,25	126,39	140,43	141,22	143,09	180,77	192,81	206,10	219,72	235,43
Other current assets	25,60	29,56	24,51	27,15	30,34	37,24	34,16	45,87	48,92	52,30	55,75	59,74
Trade payables	81,75	93,07	98,68	106,93	107,16	112,54	106,60	157,27	167,75	179,31	191,16	204,83
Tax payable	12,56	9,69	12,09	9,79	15,95	12,54	14,59	18,48	19,72	21,07	22,47	24,07
Other current liabilities	70,90	75,57	80,50	74,99	101,12	91,57	102,71	131,35	140,10	149,76	159,65	171,07
Invested Capital	535,18	535,27	653,49	821,85	972,31	962,61	939,30	1.117,40	1.191,35	1.268,00	1.346,59	1.428,92
% IC growth		0,02%	22,1%	25,8%	18,3%	-1,0%	-2,4%	19,0%	6,6%	6,4%	6,2%	6,1%
Non-operating assets	29,31	25,80	27,54	34,92	35,40	58,98	80,16	82,34	82,34	82,34	82,34	82,34
Δ Non-operating assets		-3,51	1,74	7,38	0,48	23,58	21,19	2,18				
Other current	21,79	21,39	24,29	24,21	25,21	37,15	43,17					
Other non-current	7,52	4,42	3,26	10,71	10,20	21,82	36,99					
TOTAL FUNDS INVESTED	564,50	561,07	681,04	856,77	1.007,71	1.021,59	1.019,46	1.199,75	1.273,70	1.350,34	1.428,93	1.511,26
Loans – due within one year	2,42	16,60	11,62	8,15	80,28	28,28	34,47	40,40				
Bank overdrafts and short-term loans	28,85	3,51	13,56	55,99	34,02	8,55	9,85	15,75				
Loans – due after one year	79,99	96,77	137,52	129,11	196,79	286,20	282,62	281,10				
Cash and short-term financial investments	93,78	161,68	105,16	38,42	52,27	136,99	225,53	138,50	175,37	235,31	302,51	376,62
Total financial debt	111,26	116,88	162,69	193,25	311,09	323,04	326,93	337,25	352,56	386,91	423,57	462,91
Δ Total financial debt		5,62	45,81	30,56	117,85	11,94	3,90	10,32	15,31	34,34	36,66	39,34
Total financial debt/Total Equity	21,9%	20,3%	27,4%	29,2%	44,3%	41,0%	37,6%	35,4%	33,6%	33,6%	33,6%	33,6%
Net financial position	17,49	-44,80	57,53	154,83	258,82	186,05	101,41	198,75	177,19	151,60	121,06	86,29
Δ Net financial position		-62,29	102,33	97,30	103,99	-72,78	-84,64	97,34	-21,56	-25,59	-30,54	-34,77
Other liabilities	38,03	29,86	29,03	40,55	47,07	48,12	48,06	47,01	47,01	47,01	47,01	47,01
Δ Other liabilities		-8,17	-0,83	11,52	6,53	1,05	-0,06	-1,05				
Other current	6,30	4,30	4,23	4,98	4,48	5,08	4,29					
Other non-current	31,74	25,56	24,80	35,56	42,59	43,04	43,77					
Total shareholder equity	508,98	576,01	594,48	661,40	701,82	787,42	869,99	953,99	1.049,49	1.151,73	1.260,86	1.377,96
Retained earnings								90,32	95,50	102,24	109,14	117,10
TOTAL SOURCE OF FUNDS	564,50	561,07	681,04	856,77	1.007,71	1.021,59	1.019,46	1.199,75	1.273,70	1.350,34	1.428,93	1.511,26

Source: Team estimates on Company's data

Appendix 11: Profit & Loss

Profit&Loss (€ mln)	2009	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E
Primary-Specialty Care	698,65	669,36	692,72	752,39	813,70	864,17	894,55	967,10	1.013,68	1.067,33	1.123,30	1.188,37
% growth		-4,2%	3,5%	8,6%	8,1%	6,2%	3,5%	8,1%	4,8%	5,3%	5,2%	5,8%
% of Total Revenues	93,5%	91,9%	90,9%	90,8%	86,4%	87,5%	85,4%	83,8%	82,6%	81,4%	80,3%	79,3%
Rare Disease	48,88	58,77	69,32	75,92	127,93	123,18	153,13	186,80	213,66	244,57	275,29	310,23
% growth		20,2%	17,9%	9,5%	68,5%	-3,7%	24,3%	22,0%	14,4%	14,5%	12,6%	12,7%
% of Total Revenues	6,5%	8,1%	9,1%	9,2%	13,6%	12,5%	14,6%	16,2%	17,4%	18,6%	19,7%	20,7%
Total Revenues	747,52	728,13	762,04	828,32	941,63	987,36	1.047,68	1.153,90	1.227,33	1.311,90	1.398,58	1.498,60
% growth		-2,6%	4,7%	8,7%	13,7%	4,9%	6,1%	10,1%	6,4%	6,9%	6,6%	7,2%
Cost of Sales (excl. D&A)	-200,81	-213,17	-235,68	-268,86	-292,63	-284,25	-296,73	-317,05	-337,23	-360,46	-384,28	-411,76
% growth		6,2%	10,6%	14,1%	8,8%	-2,9%	4,4%	6,8%	6,4%	6,9%	6,6%	7,2%
% of Total Sales	26,9%	29,3%	30,9%	32,5%	31,1%	28,8%	28,3%	27,5%	27,5%	27,5%	27,5%	27,5%
Gross Profit	546,72	514,97	526,36	559,46	649,00	703,10	750,95	836,85	890,10	951,43	1.014,30	1.086,84
% growth		-5,8%	2,2%	6,3%	16,0%	8,3%	6,8%	11,4%	6,4%	6,9%	6,6%	7,2%
Gross Margin	73,1%	70,7%	69,1%	67,5%	68,9%	71,2%	71,7%	72,5%	72,5%	72,5%	72,5%	72,5%
Selling expenses	-223,72	-216,48	-232,16	-250,57	-275,19	-282,95	-293,20	-307,49	-327,05	-349,59	-372,69	-399,34
% growth		-3,2%	7,2%	7,9%	9,8%	2,8%	3,6%	4,9%	6,4%	6,9%	6,6%	7,2%
% of Total Sales	29,9%	29,7%	30,5%	30,3%	29,2%	28,7%	28,0%	26,6%	26,6%	26,6%	26,6%	26,6%
R&D	-69,45	-68,84	-55,96	-63,41	-74,73	-85,27	-76,74	-83,70	-97,49	-104,21	-111,09	-119,04
% growth		-0,9%	-18,7%	13,3%	17,8%	14,1%	-10,0%	9,1%	16,5%	6,9%	6,6%	7,2%
% of Total Sales	9,3%	9,5%	7,3%	7,7%	7,9%	8,6%	7,3%	7,3%	7,9%	7,9%	7,9%	7,9%
G&A	-43,72	-44,03	-45,39	-45,49	-54,09	-57,17	-58,98	-61,85	-65,78	-70,32	-74,96	-80,33
% growth		0,7%	3,1%	0,2%	18,9%	5,7%	3,2%	4,9%	6,4%	6,9%	6,6%	7,2%
% of Total Sales	5,8%	6,0%	6,0%	5,5%	5,7%	5,8%	5,6%	5,4%	5,4%	5,4%	5,4%	5,4%
Other income (expenses) net	-12,81	-3,94	-5,08	-8,34	-14,87	-3,89	-5,03	-12,60	-7,68	-7,68	-7,68	-7,68
EBITDA	197,02	181,68	187,78	191,66	230,12	273,83	317,00	371,21	392,10	419,64	447,88	480,46
% growth		-7,8%	3,4%	2,1%	20,1%	19,0%	15,8%	17,1%	5,6%	7,0%	6,7%	7,3%
Ebitda Margin	26,4%	25,0%	24,6%	23,1%	24,4%	27,7%	30,3%	32,2%	31,9%	32,0%	32,0%	32,1%
D&A	-34,81	-26,90	-24,30	-24,70	-34,70	-42,80	-38,48	-43,85	-44,46	-47,52	-50,67	-54,29
% growth		-22,7%	-9,7%	1,6%	40,5%	23,3%	-10,1%	13,9%	1,4%	6,9%	6,6%	7,2%
% of Total Sales	4,7%	3,7%	3,2%	3,0%	3,7%	4,3%	3,7%	3,8%	3,6%	3,6%	3,6%	3,6%
EBIT	162,20	154,78	163,48	166,96	195,42	231,03	278,52	327,36	347,64	372,12	397,21	426,17
% growth		-4,6%	5,6%	2,1%	17,0%	18,2%	20,6%	17,5%	6,2%	7,0%	6,7%	7,3%
Ebit Margin	21,7%	21,3%	21,5%	20,2%	20,8%	23,4%	26,6%	28,4%	28,3%	28,4%	28,4%	28,4%
Net Interest	-9,55	-3,79	-3,47	-6,63	-14,63	-16,26	-13,08	-10,43	-12,50	-13,36	-14,24	-15,26
% of Total Sales	1,3%	0,5%	0,5%	0,8%	1,6%	1,6%	1,2%	0,9%	1,0%	1,0%	1,0%	1,0%
Pre Tax Income (EBT)	152,65	151,00	160,01	160,34	180,80	214,78	265,44	316,93	335,14	358,76	382,98	410,91
% growth		-1,1%	6,0%	0,2%	12,8%	18,8%	23,6%	19,4%	5,7%	7,0%	6,7%	7,3%
Taxes	-42,09	-42,42	-43,57	-41,84	-47,10	-53,58	-66,63	-79,56	-84,13	-90,06	-96,14	-103,15
Tax Rate	27,6%	28,1%	27,2%	26,1%	26,1%	24,9%	25,1%	25,1%	25,1%	25,1%	25,1%	25,1%
Net Income	110,57	108,58	116,45	118,50	133,69	161,19	198,80	237,37	251,01	268,70	286,84	307,76
% growth		-1,8%	7,2%	1,8%	12,8%	20,6%	23,3%	19,4%	5,7%	7,0%	6,7%	7,3%
Net Income Margin	14,79%	14,91%	15,28%	14,31%	14,20%	16,33%	18,98%	20,57%	20,45%	20,48%	20,51%	20,54%

Source: Team estimates on Company's data

Appendix 12: Cash Flow Statement

Cash Flow Statement (€ mln)	2015	2016E	2017E	2018E	2019E	2020E
Net Income	198,80	237,37	251,01	268,70	286,84	307,76
D&A	38,48	43,85	44,46	47,52	50,67	54,29
<i>As % of Sales</i>	3,7%	3,8%	3,6%	3,6%	3,6%	3,6%
Other Changes	-21,19	-2,18				
Change in Working Capital	-10,27	25,50	10,40	11,47	11,76	13,57
Cash Flows From Operations (CFO)	226,37	253,54	285,07	304,76	325,74	348,48
Capex	-33,69	-76,59	-68,01	-72,70	-77,50	-83,05
<i>D&A/Capex</i>	114,2%	57,3%	65,4%	65,4%	65,4%	65,4%
Goodwill from acquisitions		-114,36	-40,00	-40,00	-40,00	-40,00
Cash Flows From Investing (CFI)	-33,69	-190,95	-108,01	-112,70	-117,50	-123,05
Dividends paid	-110,77	-147,06	-155,50	-166,46	-177,70	-190,66
Capital Raise/Buybacks	-4,33	-11,82				
Other	-0,06	-1,05				
Change in Financial debt	3,90	10,32	15,31	34,34	36,66	39,34
Cash Flows From Financing (CFF)	-111,26	-149,62	-140,19	-132,12	-141,04	-151,33
Total Cash Flows (CFO+CFI+CFF)	81,41	-87,02	36,87	59,94	67,20	74,11

Source: Team estimates on Company's data

Appendix 13: WACC Computation

The steps for the computation of the weighted average cost of capital are illustrated below, which has been obtained by considering the weighted average of the cost of equity and the net cost of debt.

Coe	7,46%
Cod	2,92%
D/D+E	5,21%
Tax Rate	25,10%
WACC	7,188%

For the Coe, we applied CAPM model using a Risk-free of 2.32%, a β coefficient of 0.76 and an Erp of 6.77%.

Risk-free rate	2,32%
Equity risk premium	6,77%
Industry Beta	0,76
Cost of equity	7,46%

In order to consider a Risk-free rate that would have been comprehensive of Recordati's geographic revenues breakdown, we weighted the 10Y Government bonds yields (daily average from 30/06/2016 to 31/12/2016) with the sales percentage of that area.

Revenues by geographical areas	€ mln	Composition%
America	93,34	8,91%
Russia, Turkey, East-EU, other C.E.E countries	184,34	17,60%
Central-West-EU	562,76	53,71%
Other international sales	207,24	19,78%
Total Revenues	1.047,68	100,00%

Also, we used the same geographic revenues breakdown to compute the Equity risk premium.

Weights by geographical areas	Composition%	Rf-10Y Bond	Erp
America	8,91%	2,43%	5,95%
USA	91,08%	1,84%	5,69%
Colombia	2,97%	7,34%	8,40%
Mexico	2,97%	6,41%	7,40%
Brazil	2,97%	11,39%	9,96%
Russia, Turkey, East-EU, other C.E.E countries	17,60%	6,04%	6,42%
Russia	36,18%	8,26%	9,24%
Czech Republic	6,73%	0,32%	6,69%
Romania	1,90%	3,11%	8,82%
Poland	6,84%	3,06%	6,90%
Russia, Ukraine, other CIS, Other C.E.E. countries	58,04%	3,28%	4,43%
Turkey	41,96%	9,95%	9,24%
Central-West-EU	53,71%	1,06%	7,51%
Italy	37,70%	1,46%	8,40%
France	20,35%	0,38%	6,40%
Germany	17,44%	0,06%	5,69%
Spain	13,25%	1,18%	8,40%
Portugal	7,24%	3,29%	9,24%
United Kingdom	2,66%	0,91%	6,25%
Ireland	1,37%	0,57%	7,40%
Other international sales	19,78%	2,36%	5,42%

Source: Team estimates

For the Beta, first we regressed Recordati's return against the Italian index FTSE MIB with different time periods and frequencies, but since R^2 was low, we decided to use a bottom-up approach as we considered more reliable an estimation that reflects actual changes within the pharmaceutical market.

Recordati	Index	Time period	Frequency	Beta	Beta Adj.	R ²
	FTSE MIB	1Y	Daily	0,42	0,61	20,53%
		2Y	Daily	0,46	0,64	20,85%
		5Y	Monthly	0,49	0,66	19,66%
		10Y	Monthly	0,46	0,64	21,98%

To compute bottom-up approach we considered three firms: Ipsen, UCB and Gedeon Richter. We chose these particular companies since they are similar to Recordati in terms of type of business, geographical and therapeutic area presence. We regressed the firms' returns against the worldwide index MSCI using different time periods and frequencies and we used 5Y regressions to determine unlevered betas. Since Ipsen and Gedeon Richter have a positive financial position, we used a total equity structure for them. Then, we took the average unlevered peers' beta and, considering RECO's financial structure, we computed the adjusted levered beta for Recordati.

Firms	Net Debt/Mkt Cap	Tax Rate	Beta Unlevered 5Y	Average Beta
Ipsen	0,00%	19,63%	0,54	0,61
Gedeon Richter	0,00%	10,50%	0,72	
UCB	22,08%	20,59%	0,58	
Recordati	Net Debt/Mkt Cap	Tax Rate	Beta Levered (Raw)	Beta Levered (Adj.)
	5,77%	25,10%	0,64	0,76

The cost of debt has been obtained by the sum of the risk-free rate and the spread (+0.60%) deriving by the synthetic rating (AAA) related to the value of the interest coverage ratio, according to Damodaran.

Risk-free rate	2,32%
Spread	0,60%
Cost of debt	2,92%

<i>If interest coverage ratio is</i>	<i>Column1</i>	<i>Column2</i>	<i>Column3</i>
<i>></i>	<i>≤ to</i>	<i>Rating is</i>	<i>Spread is</i>
8.50	100000	Aaa/AAA	0.60%
6.5	8.499999	Aa2/AA	0.80%
5.5	6.499999	A1/A+	1.00%
4.25	5.499999	A2/A	1.10%
3	4.249999	A3/A-	1.25%
2.5	2.999999	Baa2/BBB	1.60%
2.25	2.49999	Ba1/BB+	2.50%
2	2.2499999	Ba2/BB	3.00%
1.75	1.999999	B1/B+	3.75%
1.5	1.749999	B2/B	4.50%
1.25	1.499999	B3/B-	5.50%
0.8	1.249999	Caa/CCC	6.50%
0.65	0.799999	Ca2/CC	8.00%
0.2	0.649999	C2/C	10.50%
-100000	0.199999	D2/D	14.00%

Source: Team estimates

Source: Damodaran

Appendix 14: DCF-Base scenario

Assumptions on revenues

Zanipress – we maintained a stable revenue for this product as stated by Recordati's latest business plan.

Zanidip - an antihypertensive drug discovered and developed entirely by Recordati (9.9% of 2016 sales) is one of its main products and its patent is going to expire in 2017. As stated by the company's business plan, we expect Zanidip to lose revenues and, given the loss experienced by Zanipress, we expect a similar loss in revenues for Zanidip; ~40% loss in 5 years time.

Urorec - a drug licensed from Kissei Pharmaceutical for the treatment of benign prostatic hyperplasia (BPH). According to GlobalData, the value of the global therapeutics market for BPH will grow at a 2015-2024 CAGR of around 8%. Being a valid and innovative alternative to treatments currently in use and given the fact that several important BPH drugs' patent expired (such as GlaxoSmithKline's product Avodart/Jalyn in 2015, Allergan's product named Rapaflo will expire in 2018) Urorec will be able to expand its market share and follow the BPH's market growth. The patent for this drug will expire in 2020 and we expect it to lose ~40% of revenues in 5 years.

Livazo - Recordati's drug for dyslipidemia, will experience a double digit growth rate in the 2017-2019 period. This is coherent with dyslipidemia's market projections estimated by GlobalData; in fact, the market is expected to grow from \$11.2bn in 2015 to \$29.2bn by 2025 at a CAGR of 10%. However, given the 2016 acquisition of Pro Farma AG, Recordati will start to sell Livazo directly in the Swiss market boosting the drug's revenues growth rate to 12.5% (team estimates). The patent for this drug will expire in 2020 and we expect it to lose ~40% of revenues in 5 years.

Other corporate products – as stated by the company's business plan we expect a mid-single digit growth rate.

Orphan drugs – The estimates for this segment do not include revenues that will derive from Cystadrops and Graspa in the near future. EvaluatePharma Orphan Drug Report estimated that the global CAGR from 2016 to 2022 will be 11.7%. We expect that Recordati's orphan drug segment will grow at the same rate.

OTC+Local portfolio – we expect it to grow at the 2010-2016 growth rate.

Pharmaceutical chemicals – we expect it to grow at the 2010-2016 growth rate.

Other revenues – we expect that other revenues will remain stable as % of total sales.

Recordati's main pipeline products are: Reagila, Graspa, Fortacin and Cystadrops. These products are expected to be launched in the 2017-2018 period.

Reagila - is a drug for schizophrenia developed by Gedeon Richter and in-licensed by Recordati in 2016. According to management this product should reach €100 mln peak sales. Given the fact that in 2016 the most widely prescribed antipsychotic drug's patent expired (AstraZeneca's schizophrenia drug Seroquel XR) we are confident that Reagila could reach the peak sales forecasted by the management in 7 years times.

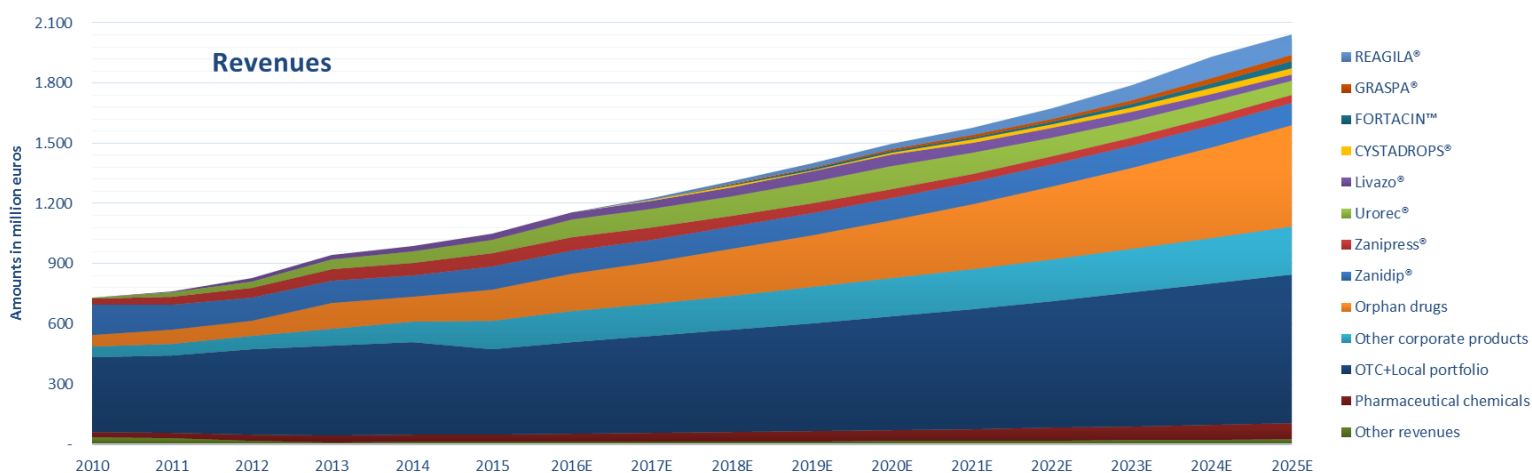
Graspa - Erytech Pharma's innovative orphan drug for acute lymphocytic leukemia (ALL) in-licensed by Recordati in 2012, should reach around €30 mln peak sales as forecasted by the company's business plan. According to a report from marketsandmarkets, the overall ALL therapeutics market is set to grow at a 2015-2025 CAGR of 4% and it is dominated by Linker regimen, Hyper-CVAD regimen and Nucleoside metabolic inhibitors. However, by 2020 the overall share of these drugs and regimens will be largely impacted by the launch of Graspa therefore, we are confident that the peak sales forecasted by the management are reachable.

Cystadrops – This recent EU approved product is going to be the main growth driven of the orphan drugs portfolio in Europe as it is the first product approved in the EU for ocular cystinosis, a hereditary ocular rare disease. Moreover, this product is the first eye-drop solution containing cysteamine, which, according to EMA's studies, is a more efficient manner to address ocular cystinosis. We expect Cystadrops to reach peak sales in 7 years time.

Fortacin - Recordati's treatment for premature ejaculation, which is expected to be launched in mid 2017 is supposed to reach peak sales of about €30 mil. Based on our analysis, management's forecasted sales for this drug are reachable given the fact that premature ejaculation market represents a distinct unmet treatment need, as there are very few therapies in development and those that are in use tend to be off-label (prescribed for an unapproved indication). Moreover, Fortacin is an innovative product given its topical application method. We expect it to reach peak sales in 7 years time.

REVENUES (€ mln)																
Portfolio	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Zanidip®	149	125	115	109	109	116	114	110	110	110	110	110	110	110	110	110
(Lercanidipine) growth %		-16,1%	-8,1%	-5,1%	0,5%	5,9%	-1,5%	-3,5%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
as % of Total Sales	20,4%	16,4%	13,8%	11,5%	11,1%	11,0%	9,9%	9,0%	8,4%	7,9%	7,3%	7,0%	6,6%	6,1%	5,7%	5,4%
Zanipress®	32	42	49	60	61	66	69	61	54	48	45	42	42	42	42	42
(Lercanidipine+Enalapril) growth %		31,4%	18,6%	21,3%	2,4%	7,2%	5,2%	-11,2%	-11,2%	-11,2%	-7,0%	-7,0%	0,0%	0,0%	0,0%	0,0%
as % of Total Sales	4,3%	5,5%	6,0%	6,4%	6,2%	6,3%	6,0%	5,0%	4,2%	3,5%	3,0%	2,7%	2,5%	2,3%	2,2%	2,0%
Urorec®	2	20	33	47	59	68	85	92	99	107	116	104	94	85	76	68
(Silodosin) growth %		860,6%	65,8%	42,8%	26,3%	15,6%	24,8%	8,0%	8,0%	8,0%	8,0%	-10,0%	-10,0%	-10,0%	-10,0%	-10,0%
as % of Total Sales	0,3%	2,6%	4,0%	5,0%	6,0%	6,5%	7,4%	7,5%	7,6%	7,7%	7,7%	6,6%	5,6%	4,7%	3,9%	3,3%
Livazo®	-	7	16	23	26	28	35	39	44	50	56	51	46	41	37	33
(Pitavastatin) growth %			139,9%	38,1%	13,3%	11,4%	23,5%	12,5%	12,5%	12,5%	12,5%	-10,0%	-10,0%	-10,0%	-10,0%	-10,0%
as % of Total Sales	0,0%	0,9%	2,0%	2,4%	2,6%	2,7%	3,0%	3,2%	3,4%	3,6%	3,8%	3,2%	2,7%	2,3%	1,9%	1,6%
Other corporate products	53	59	66	85	100	144	155	162	170	179	188	197	207	218	228	240
growth %		12,2%	11,4%	28,6%	17,4%	44,2%	7,7%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%
as % of Total Sales	7,2%	7,8%	8,0%	9,0%	10,1%	13,7%	13,4%	13,2%	13,0%	12,8%	12,5%	12,5%	12,4%	12,1%	11,8%	11,7%
Orphan drugs	59	69	76	128	123	153	187	209	233	260	291	325	363	405	453	506
growth %		17,9%	9,5%	68,5%	-3,7%	24,3%	22,0%	11,7%	11,7%	11,7%	11,7%	11,7%	11,7%	11,7%	11,7%	11,7%
as % of Total Sales	8,1%	9,1%	9,2%	13,6%	12,5%	14,6%	16,2%	17,0%	17,8%	18,6%	19,4%	20,6%	21,7%	22,6%	23,5%	24,7%
OTC	112	115	137	152	174	177	186									
Local portfolio products	262	268	291	298	290	247	272									
OTC+Local portfolio	375	383	428	450	464	424	458	483	510	538	568	599	632	666	703	742
growth %		2,2%	11,7%	5,1%	3,1%	-8,6%	8,0%	5,5%	5,5%	5,5%	5,5%	5,5%	5,5%	5,5%	5,5%	5,5%
as % of Total Sales	51,5%	50,3%	51,7%	47,8%	47,0%	40,5%	39,7%	39,4%	38,9%	38,5%	37,9%	37,9%	37,7%	37,2%	36,4%	36,3%
Pharmaceutical chemicals	26	28	31	32	34	36	40	44	47	51	55	59	64	69	75	81
growth %		9,9%	8,9%	2,5%	6,1%	7,1%	12,0%	8,0%	8,0%	8,0%	8,0%	8,0%	8,0%	8,0%	8,0%	8,0%
as % of Total Sales	3,6%	3,7%	3,7%	3,4%	3,4%	3,4%	3,5%	3,6%	3,6%	3,6%	3,7%	3,8%	3,8%	3,9%	3,9%	3,9%
Other revenues	33	29	14	9	12	13	11	12	13	14	15	16	18	19	21	23
growth %		-13,1%	-50,4%	-35,0%	27,0%	6,1%	-15,8%	9,0%	9,0%	9,0%	9,0%	9,0%	9,0%	9,0%	9,0%	9,0%
as % of Total Sales	4,6%	3,8%	1,7%	1,0%	1,2%	1,2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Pipeline	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
CYSTADROPS®								5	7	8	11	14	19	24	31	31
growth %								30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	0,0%
FORTACIN™								5	7	8		11	14	19	24	31
growth %								30,0%	30,0%	30,0%		30,0%	30,0%	30,0%	30,0%	30,0%
GRASPA®								5	7	8		11	14	19	24	31
growth %								30,0%	30,0%	30,0%		30,0%	30,0%	30,0%	30,0%	30,0%
REAGILA®							10	14	20	27		38	54	75	105	105
(Cariprazina) growth %							40,0%	40,0%	40,0%	40,0%		40,0%	40,0%	40,0%	40,0%	0,0%
Total Revenues	728	762	828	942	987	1.048	1.154	1.227	1.312	1.399	1.499	1.578	1.676	1.792	1.930	2.044

Source: Team estimates on Company's data



Source: Team estimates on Company's data

Base Scenario (€ mln)	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Primary-Specialty Care	669,36	692,72	752,39	813,70	864,17	894,55	967,10	1.013,68	1.067,33	1.123,30	1.188,37	1.227,87	1.280,05	1.343,73	1.421,68	1.475,60
% growth	-4,2%	3,5%	8,6%	8,1%	6,2%	3,5%	8,1%	4,8%	5,3%	5,2%	5,8%	3,3%	4,2%	5,0%	5,8%	3,8%
% of Total	91,9%	90,9%	90,8%	86,4%	87,5%	85,4%	83,8%	82,6%	81,4%	80,3%	79,3%	77,8%	76,4%	75,0%	73,7%	72,2%
Rare Disease	58,77	69,32	75,92	127,93	123,18	153,13	186,80	213,66	244,57	275,29	310,23	350,09	395,67	447,97	508,20	568,40
% growth	20,2%	17,9%	9,5%	68,5%	-3,7%	24,3%	22,0%	14,4%	14,5%	12,6%	12,7%	12,8%	13,0%	13,2%	13,4%	11,8%
% of Total	8,1%	9,1%	9,2%	13,6%	12,5%	14,6%	16,2%	17,4%	18,6%	19,7%	20,7%	22,2%	23,6%	25,0%	26,3%	27,8%
Total Revenues	728,13	762,04	828,32	941,63	987,36	1.047,68	1.153,90	1.227,33	1.311,90	1.398,58	1.498,60	1.577,96	1.675,72	1.791,71	1.929,88	2.044,00
% growth	-2,6%	4,7%	8,7%	13,7%	4,9%	6,1%	10,1%	6,4%	6,9%	6,6%	7,2%	5,3%	6,2%	6,9%	7,7%	5,9%
Cost of Sales (excl. D&A) (% of sales)	29,28%	30,93%	32,46%	31,08%	28,79%	28,32%	27,48%	27,48%	27,48%	27,48%	27,48%	27,00%	27,00%	27,00%	27,00%	27,00%
Gross Margin	70,7%	69,1%	67,5%	68,9%	71,2%	71,7%	72,5%	72,5%	72,5%	72,5%	72,5%	73,0%	73,0%	73,0%	73,0%	73,0%
Selling expenses (% of sales)	29,7%	30,5%	30,3%	29,2%	28,7%	28,0%	26,6%	26,6%	26,6%	26,6%	26,6%	26,2%	26,2%	26,2%	26,2%	26,2%
R&D (% of sales)	9,5%	7,3%	7,7%	7,9%	8,6%	7,3%	7,3%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%
G&A (% of sales)	6,0%	6,0%	5,5%	5,7%	5,8%	5,6%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%
Ebitda Margin	25,0%	24,6%	23,1%	24,4%	27,7%	30,3%	32,2%	31,9%	32,0%	32,0%	32,1%	33,0%	33,0%	33,0%	33,1%	33,1%
Ebit Margin	21,3%	21,5%	20,2%	20,8%	23,4%	26,6%	28,4%	28,3%	28,4%	28,4%	28,4%	29,3%	29,4%	29,4%	29,4%	29,5%
Net Income Margin	14,9%	15,3%	14,3%	14,2%	16,3%	19,0%	20,6%	20,5%	20,5%	20,5%	20,5%	21,2%	21,2%	21,3%	21,3%	21,3%
NOPAT	111,30	118,97	123,39	144,51	173,39	208,60	245,18	260,37	278,70	297,50	319,19	346,75	368,59	394,50	425,37	450,86
Net WC for operations (% of sales)	8,7%	10,9%	14,1%	13,4%	14,3%	12,5%	13,5%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%
CAPEX	42,49	66,55	111,56	144,66	30,54	33,69	76,59	68,01	72,70	77,50	83,05	69,13	73,42	78,50	84,55	89,55
D&A/Capex	63,3%	36,5%	22,1%	24,0%	140,2%	114,2%	57,3%	65,4%	65,4%	65,4%	65,4%	82,7%	82,7%	82,7%	82,7%	82,7%

Source: Team estimates on Company's data

Amounts in million euros	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
EBIT	278,52	327,36	347,64	372,12	397,21	426,17	462,98	492,14	526,73	567,94	601,98
Tax Rate	25,1%	25,1%	25,1%	25,1%	25,1%	25,1%	25,1%	25,1%	25,1%	25,1%	25,1%
NOPAT	208,60	245,18	260,37	278,70	297,50	319,19	346,75	368,59	394,50	425,37	450,86
D&A	38,48	43,85	44,46	47,52	50,67	54,29	57,16	60,70	64,91	69,91	74,05
Capex	33,69	76,59	68,01	72,70	77,50	83,05	69,13	73,42	78,50	84,55	89,55
Δ Net working capital for operations	-10,27	25,50	10,40	11,47	11,76	13,57	10,76	13,26	15,73	18,74	15,48
FCF to Firm	223,66	186,95	226,42	242,06	258,90	276,86	324,02	342,62	365,18	391,99	419,88

Source: Team estimates on Company's data

Sensitivity Analysis

		Terminal Growth									
		1,20%	1,40%	1,60%	1,80%	2,00%	2,20%	2,40%	2,60%	2,80%	
W A C C	6,39%	32,64	33,58	34,60	35,70	36,90	38,22	39,68	41,28	43,07	
	6,59%	31,27	32,13	33,05	34,04	35,13	36,31	37,61	39,03	40,61	
	6,79%	30,00	30,78	31,62	32,52	33,50	34,57	35,73	37,00	38,40	
	6,99%	28,82	29,54	30,30	31,12	32,01	32,97	34,02	35,16	36,41	
	7,19%	27,73	28,38	29,07	29,82	30,63	31,50	32,45	33,48	34,60	
	7,39%	26,70	27,30	27,94	28,62	29,36	30,15	31,01	31,94	32,95	
	7,59%	25,74	26,29	26,88	27,51	28,18	28,90	29,68	30,52	31,44	
	7,79%	24,84	25,35	25,89	26,47	27,08	27,74	28,45	29,22	30,05	
	7,99%	23,99	24,46	24,96	25,49	26,06	26,67	27,32	28,01	28,77	

Source: Team estimates

Appendix 15: DCF-Upside & Downside scenario

Up-side scenario

For the up-side scenario we assume a less severe impact on sales levels of Zanidip, Zanipress, Urorec and Livazo patent expiry (approximately 25-30%) and higher revenues for Reagila, starting from mid-2017, following Astra-Zeneca's *Seroquel XR* patent expiry in 16/11. We also expect other pipeline products such as Graspa and especially Cystadrops to perform better. Furthermore, we assume an increase in overall sales levels, deriving from a more profitable acquisition strategy, compared to our basic scenario. We assign the OTC portfolio and Orphan drug segment a higher growth rate (higher than market CAGR) and assume the *local portfolio* will perform better. We also assume a slightly better marginality as a consequence of a lower impact of fixed costs. Overall sales CAGR 2016-2022 increases from 6.42% (base scenario) to 7.7%, compared to a 6.3% market CAGR for worldwide prescription drug sales. 10YROIIC from 2015 to 2025 reaches 35.57%, compared to 29.12% within our base scenario.

Our up-side scenario target price increases by 13.5%, relatively to our base-scenario and reaches 34.77€ per share.

Motivations:

- Zanipress: given the quality of the product, sales might decline less than assumed in our base scenario, mirroring the trend followed by Zanidip. Furthermore, we base our up-side scenario on Recordati management's statement about containing sales erosion within 30% of peak sales.
- Zanidip: for our upside scenario we assume constant sales levels over the next years, given the product's high quality and the fact that Recordati has been able to maintain sales relatively constant after a first period of strong decline, following the drug's patent expiry.
- Urorec and Livazo: we assume a similar revenue trend as seen for Zanipress; for the up-side scenario, we assume a 25-30% sales erosion within the forecast period, starting from the year of patent expiry.
- Reagila: given the strong growth in the market of anti-schizophrenia treatments, we might expect a very good performance for this product.
- Cystadrops: given its unique administration method, Cystadrops might achieve a strong competitive positioning, which might translate in higher sales levels than expected
- Profitable acquisition strategy: given Recordati's experience in external growth strategies, we could, for our up-side scenario, expect a higher positive impact from acquired drugs and drug portfolios. We model this by assigning our *residual product category* a higher growth rate
- Higher marginality: this might be the consequence of a lower impact of fixed costs with increasing sales volumes, combined with a slendrer commercial structure following a stronger focus on the Orphan drug segment.
- All positive developments are volume-, rather than price-driven. This peculiarity derives from Recordati's relatively low pricing power; prices are essentially a function of regulator reimbursement policies.

Down-side scenario

For the down-side scenario we assumed a stronger negative effect of Zanipress, Urorec and Livazo patent expiry and, given its already expired patent, a further reduction of sales revenues for Zanidip. Furthermore, we assume a lower inorganic growth potential, deriving from a saturated market and less successful acquisitions. Since Recordati's growth depends to a large extent from external growth, this might seriously damper overall revenue growth. Furthermore. We also take into account a possible negative impact of a stricter pricing regulation, which could lead to a decrease in operating margins as single product margins decrease. This effect, combined with the higher impact of fixed costs following a reduction in sales volume, translate into a decreasing ROIIC, i.e. 17.15% and a lower overall sales CAGR, i.e. 4.48% from 2016 to 2022, 1.82% less than market growth.

Our down-side scenario target price shows a 22.4% decrease, relatively to our base-scenario and drops to 23.8€ per share.

- Higher sales erosion: generic players might be induced to take advantage of Zanipress, Urorec and Livazo patent expiry to a larger extent than assumed in our base-scenario. Furthermore, new production techniques, such as 3-D printing, might ease the entrance of generic players also in specialty care markets, which are characterized by higher product and production complexity. Biosimilar players might play an increasing role in sales erosion as well.
- Lower marginality: given Recordati's limited pricing power as stated by the management, regulatory decisions might affect operating margins heavily. Lower prices translate into a higher relative cost impact and a diminished product profitability.

Upside Scenario (€ mln)	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Primary-Specialty Care	669,36	692,72	752,39	813,70	864,17	894,55	967,10	1.025,40	1.087,82	1.156,57	1.226,93	1.289,71	1.368,88	1.462,77	1.579,66	1.690,48
% growth	-4,2%	3,5%	8,6%	8,1%	6,2%	3,5%	8,1%	6,0%	6,1%	6,3%	6,1%	5,1%	6,1%	6,9%	8,0%	7,0%
% of Total	91,9%	90,9%	90,8%	86,4%	87,5%	85,4%	83,8%	82,6%	81,3%	80,2%	78,9%	77,4%	76,0%	74,5%	73,2%	72,1%
Rare Disease	58,77	69,32	75,92	127,93	123,18	153,13	186,80	216,08	250,52	286,08	327,40	375,68	432,41	499,53	579,57	654,72
% growth	20,2%	17,9%	9,5%	68,5%	-3,7%	24,3%	22,0%	15,7%	15,9%	14,2%	14,4%	14,7%	15,1%	15,5%	16,0%	13,0%
% of Total	8,1%	9,1%	9,2%	13,6%	12,5%	14,6%	16,2%	17,4%	18,7%	19,8%	21,1%	22,6%	24,0%	25,5%	26,8%	27,9%
Total Revenues	728,13	762,04	828,32	941,63	987,36	1.047,68	1.153,90	1.241,48	1.338,34	1.442,65	1.554,34	1.665,39	1.801,28	1.962,30	2.159,23	2.345,21
% growth	-2,6%	4,7%	8,7%	13,7%	4,9%	6,1%	10,1%	7,6%	7,8%	7,8%	7,7%	7,1%	8,2%	8,9%	10,0%	8,6%
Cost of Sales (excl. D&A) (% of sales)	29,3%	30,9%	32,5%	31,1%	28,8%	28,3%	27,5%	27,0%	27,0%	27,0%	27,0%	27,0%	27,0%	27,0%	27,0%	27,0%
Gross Margin	70,7%	69,1%	67,5%	68,9%	71,2%	71,7%	72,5%	73,0%	73,0%	73,0%	73,0%	73,0%	73,0%	73,0%	73,0%	73,0%
Selling expenses (% of sales)	29,7%	30,5%	30,3%	29,2%	28,7%	28,0%	26,6%	26,0%	26,0%	26,0%	26,0%	26,0%	26,0%	26,0%	26,0%	26,0%
R&D (% of sales)	9,5%	7,3%	7,7%	7,9%	8,6%	7,3%	7,3%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%
G&A (% of sales)	6,0%	6,0%	5,5%	5,7%	5,8%	5,6%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%
Ebitda Margin	25,0%	24,6%	23,1%	24,4%	27,7%	30,3%	32,2%	33,1%	33,1%	33,2%	33,2%	33,2%	33,3%	33,3%	33,3%	33,4%
Ebit Margin	21,3%	21,5%	20,2%	20,8%	23,4%	26,6%	28,4%	29,5%	29,5%	29,5%	29,6%	29,6%	29,6%	29,7%	29,7%	29,7%
Net Income Margin	14,9%	15,3%	14,3%	14,2%	16,3%	19,0%	20,6%	21,3%	21,3%	21,4%	21,4%	21,4%	21,4%	21,5%	21,5%	21,5%
NOPAT	111,30	118,97	123,39	144,51	173,39	208,60	245,18	273,89	295,71	319,20	344,36	369,37	399,98	436,25	480,61	522,50
Net WC for operations (% of sales)	8,7%	10,9%	14,1%	13,4%	14,3%	12,5%	13,5%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%
CAPEX	42,49	66,55	111,56	144,66	30,54	33,69	76,59	68,80	74,16	79,94	86,13	72,96	78,92	85,97	94,60	102,75
D&A/Capex	63,3%	36,5%	22,1%	24,0%	140,2%	114,2%	57,3%	65,4%	65,4%	65,4%	65,4%	82,7%	82,7%	82,7%	82,7%	82,7%

Source: Team estimates

Downside Scenario (€ mln)	2010	2011	2012	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Primary-Specialty Care	669,36	692,72	752,39	813,70	864,17	894,55	967,10	980,13	1.018,82	1.058,01	1.101,34	1.103,52	1.137,60	1.183,70	1.244,24	1.283,05
% growth	-4,2%	3,5%	8,6%	8,1%	6,2%	3,5%	8,1%	1,3%	3,9%	3,8%	4,1%	0,2%	3,1%	4,1%	5,1%	3,1%
% of Total	91,9%	90,9%	90,8%	86,4%	87,5%	85,4%	83,8%	82,3%	81,1%	80,1%	79,0%	77,2%	75,8%	74,4%	73,2%	71,8%
Rare Disease	58,77	69,32	75,92	127,93	123,18	153,13	186,80	210,48	237,53	263,58	292,93	326,11	363,77	406,72	455,93	503,21
% growth	20,2%	17,9%	9,5%	68,5%	-3,7%	24,3%	22,0%	12,7%	12,9%	11,0%	11,1%	11,3%	11,5%	11,8%	12,1%	10,4%
% of Total	8,1%	9,1%	9,2%	13,6%	12,5%	14,6%	16,2%	17,7%	18,9%	19,9%	21,0%	22,8%	24,2%	25,6%	26,8%	28,2%
Total Revenues	728,13	762,04	828,32	941,63	987,36	1.047,68	1.153,90	1.190,61	1.256,35	1.321,59	1.394,27	1.429,62	1.501,38	1.590,42	1.700,17	1.786,26
% growth	-2,6%	4,7%	8,7%	13,7%	4,9%	6,1%	10,1%	3,2%	5,5%	5,2%	5,5%	2,5%	5,0%	5,9%	6,9%	5,1%
Cost of Sales (excl. D&A) (% of sales)	29,3%	30,9%	32,5%	31,1%	28,8%	28,3%	27,5%	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%
Gross Margin	70,7%	69,1%	67,5%	68,9%	71,2%	71,7%	72,5%	70,0%	70,0%	70,0%	70,0%	70,0%	70,0%	70,0%	70,0%	70,0%
Selling expenses (% of sales)	29,7%	30,5%	30,3%	29,2%	28,7%	28,0%	26,6%	27,0%	27,0%	27,0%	27,0%	27,0%	27,0%	27,0%	27,0%	27,0%
R&D (% of sales)	9,5%	7,3%	7,7%	7,9%	8,6%	7,3%	7,3%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%	7,9%
G&A (% of sales)	6,0%	6,0%	5,5%	5,7%	5,8%	5,6%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%	5,4%
Ebitda Margin	25,0%	24,6%	23,1%	24,4%	27,7%	30,3%	32,2%	29,1%	29,1%	29,1%	29,1%	29,2%	29,2%	29,2%	29,2%	29,3%
Ebit Margin	21,3%	21,5%	20,2%	20,8%	23,4%	26,6%	28,4%	25,4%	25,5%	25,5%	25,5%	25,5%	25,6%	25,6%	25,6%	25,6%
Net Income Margin	14,9%	15,3%	14,3%	14,2%	16,3%	19,0%	20,6%	18,3%	18,3%	18,3%	18,4%	18,4%	18,4%	18,4%	18,4%	18,4%
NOPAT	111,30	118,97	123,39	144,51	173,39	208,60	245,18	226,76	239,60	252,34	266,53	273,44	287,45	304,84	326,27	343,08
Net WC for operations (% of sales)	8,7%	10,9%	14,1%	13,4%	14,3%	12,5%	13,5%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%	13,6%
CAPEX	42,49	66,55	111,56	144,66	30,54	33,69	76,59	65,98	69,62	73,24	77,26	62,63	65,78	69,68	74,49	78,26
D&A/Capex	63,3%	36,5%	22,1%	24,0%	140,2%	114,2%	57,3%	65,4%	65,4%	65,4%	65,4%	82,7%	82,7%	82,7%	82,7%	82,7%

Source: Team estimates

Appendix 16: Market Multiples

We counter-checked our DCF based results using a market multiple based approach. For the purpose of the valuation, we chose two sets of pharmaceutical companies: one consisting of companies with a particular focus on the Orphan drug segment and one comprising companies focused on the Primary-Specialty Care market. Since many of the Orphan drug based companies are characterized by a negative operating income, we focused our analysis on the EV/sales multiple, of which we took the values for 2015, 2016 and 2017 for each company. We then calculated a simple cross-sectional average of EV/sales for both operating segments, Orphan drug and Primary-Specialty Care, obtaining a smoothed value which we used as base for our calculation: the respective average multiples can be seen as the value which the market assigns to each unit of revenue for Recordati's segments. The following tables summarize the procedure, respectively for the Orphan drug segment and the Primary-Specialty Care:

EV/sales Orphan drug	Dec '15	Dec '16E	Dec '17E
<i>Alexion Pharmaceuticals</i>	17,4x	9,6x	8,7x
<i>Shire PLC</i>	6,6x	6,6x	4,8x
<i>Ionis Pharmaceuticals</i>	25,1x	19,8x	13,8x
<i>Vertex</i>	29,9x	10,3x	9,9x
<i>Celgene Corporation</i>	10,9x	8,6x	7,2x
<i>BioMarin Pharmaceutical</i>	18,0x	19,0x	12,7x
Average	18,0x	12,3x	9,5x
Cross sectional average	13,27x		

Source: Factset

EV/sales Primary-Specialty Care	Dec '15	Dec '16E	Dec '17E
<i>Orion</i>	4,4x	5,5x	5,9x
<i>Eli Lilly</i>	4,8x	4,0x	4,2x
<i>Ipsen</i>	3,4x	3,5x	3,8x
<i>Gedeon Richter</i>	2,6x	2,8x	2,7x
<i>UCB</i>	4,4x	3,1x	3,2x
<i>AstraZeneca</i>	3,8x	3,5x	4,0x
Average	3,9x	3,7x	4,0x
Cross sectional average	3,87x		

Source: Factset

Using 2016 sales levels as weights we calculated a theoretical EV/sales multiple for Recordati, based on comparable's multiples. Using a weight of 16% for the Orphan drug segment and a 84% weight for the Primary-Specialty Care segment we obtained a multiple of 5.39x.

Orphan drug Weight	16%	Contribution	2.15
Primary-Specialty Care Weight	84%	Contribution	3.24
Theoretical REC EV/sales			5.39x

Multiplying Recordati's 2016 sales by our multiple estimate hence gave us an enterprise value estimate; subtracting the debt level and dividing by shares outstanding allowed us to derive a multiple based price per share estimate.

Entity value (€ mln)	6.223
Equity value (€ mln)	6.024
Multiple based price	29,35

Source: Team estimates

Appendix 17: Board of Directors

Name	Position held	Tenure	Age
Alberto Recordati	Chairman	31	63
Andrea Recordati	Vice Chairman & CEO	19	45
Fritz Squindo	CFO, Executive Director & Managing Director	4	60
Rosalba Casiraghi	Independent Non-Executive Director	3	66
Michaela Castelli	Independent Non-Executive Director	3	46
Paolo Fresia	Independent Non-Executive Director	3	28
Mario Garraffo	Independent Non-Executive Director	18	79
Marco Vitale	Lead Independent Non-Executive Director	20	81

Source: Company's data

Appendix 18: Top Management

Name	Position held	Company tenure
Alberto Recordati	Chairman	33
Andrea Recordati	Vice Chairman & CEO	19
Fritz Squindo	Managing Director and Chief Financial Officer	25
Enrico Baroncia	General Manager Italy	4
Luca Bolliger	Vice President and Director Corporate Licensing	5
Corrado Castellucci	VP and Director Orphan Drugs	4
Gabriele Finzi	VP and Director Corporate Development	9
Daria Ghidoni	VP and Director Corporate Legal Affairs	15
Antoine Grouès	VP and Director International Licensees Sales	10
Giuseppe Gualazzini	VP Group Human Resources	3
Luisa Mainoli	VP and Director Group Finance	27
Giovanni Minora	Director Corporate Auditing	10
Ismail Yormaz	VP and Regional Director South-Eastern Europe and North Africa	8
Paolo Romagnoli	Director Pharmaceutical Chemicals	23
Marianne Tatschke	Director Investor Relations & Corporate Communications	18
Roberto Teruzzi	Executive VP of Group Industrial Operations	2
Witold Urban	VP and Regional Director Central Eastern Europe	4

Source: Company's data

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