

A Work Project, presented as part of the requirements for the Award of a Master's degree in Finance from the Nova School of Business and Economics.

**POTENTIAL LEVERAGED BUYOUT OF DERMAPHARM HOLDING SE: BUSINESS PLAN, VALUATION, DUE DILIGENCE, EXIT AND RETURNS**

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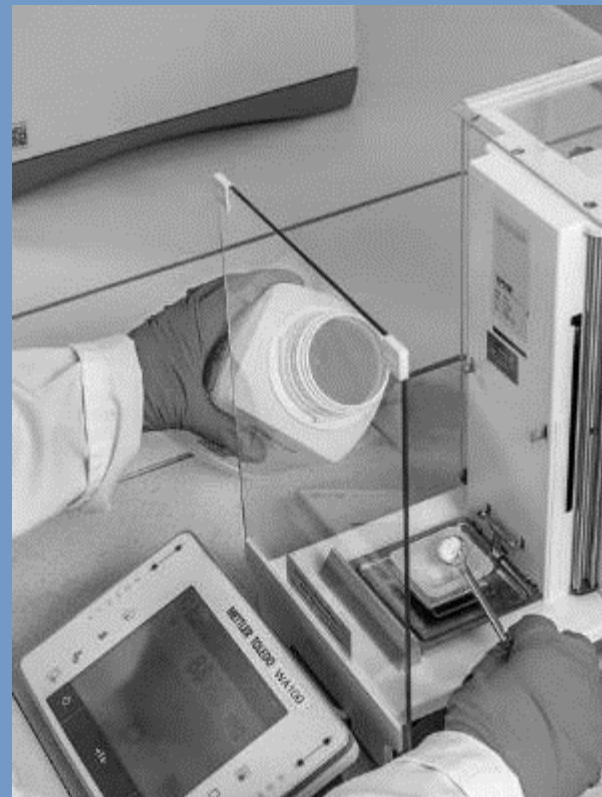
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**Abstract:** The following paper focuses on developing an investment thesis and a respective value creation strategy for the potential leveraged buyout of Dermapharm Holding SE, a German developer, producer, and distributor of niche prescription and over-the-counter pharmaceuticals. Hence, this thesis determines an entry value based on distinguished valuation methods and assesses the value upon exit by creating a business plan that incorporates the proposed value creation strategies to derive potential returns for investors. Qualitatively, this work evaluates potential exit opportunities and highlights the key points to be investigated during a due diligence.

**Keywords:**

Field lab, Corporate Finance, Private Equity, Leveraged Buyout, Dermapharm Holding SE, Sepcialty Pharmaceuticals & Generics, Valuation, Business Plan, Capital Structure, Due Diligence, Exit and Returns,

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# DERMAPHARM HOLDING SE (ETR: DMP)

## Investment Committee Paper

**Group A**

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**Dermapharm Holding SE**



### **Disclaimer**

*This paper was developed with an academic purpose, using publicly available information and information made available directly by the company. The document offers dynamical navigation by selecting certain chapters with clicks in the table of contents and bottom navigation bar.*

# 1 | Executive summary

Investing into Dermapharm is recommended and yields an IRR of c. 23.2% if a fair valuation can be assured by (a) a family re-investment<sup>1</sup> or (2) an earn-out structure<sup>2</sup>

### About Dermapharm

**Dermapharm** (ETR: DMP), founded in **1991** and based in **Grünwald** (Germany) with **2,311 employees**, develops, produces, and distributes

- Branded pharmaceuticals** (9%)
- Herbal extracts** (32%)
- Parallel import pharmaceuticals** (59%)

as **prescription, over-the-counter pharmaceuticals** and healthcare products through its main sales channels, **pharmacies** and **wholesalers**, which supply patients either directly or indirectly through hospitals.

Financials (€m)	'21E	'22P	'23P	'24P	'25P	'26P
Total output	704	839	986	1,132	1,384	1,643
% growth	23%	19%	18%	15%	22%	19%
Gross profit	570	686	792	902	1,081	1,279
% total output	81%	82%	80%	80%	78%	78%
EBITDA	299	329	388	446	536	640
Organic		294	326	367	426	512
Inorganic		35	62	78	110	128
% total output	42%	39%	39%	39%	39%	39%
Operating FCF	138	80	51	313	259	447
% EBITDA	46%	24%	13%	70%	48%	70%
Sponsor IRR		8.6%	17.2%	19.9%	22.1%	23.2%

### Market information

#### Dermapharm's markets

**BP** (€bn): 39 (2015A), 58 (2020A), 87 (2025P) CAGR: 8%

**HE** (€bn): 4 (2015A), 6 (2020A), 9 (2025P) CAGR: 8%

**PI** (€bn): 3 (2015A), 3 (2020A), 4 (2025P) CAGR: 5%

#### Growth drivers

- Demographics
- Lifestyle products
- Health awareness
- Supplements
- Additives
- Sustainability
- Price pressure
- Legislation
- Healthcare spending

### Investment highlights

- Ambitious management team**  
12 add-ons purchases since 2017
- Robust financials**  
Top-line growth CAGR of c. 12.5%
- Market leader in niche markets**  
C. 14% Ø core market share
- Strong market growth**  
C. 7.4% global market growth

### Capital structure

Uses and sources		Exit ownership <sup>3</sup> and return		
Sources (€m)	Uses (€m)	Holder	%	x
Debt 1,982	EV 5,352	Sponsor	65.9%	2.84x
Equity 3,532	Fees 163	Family	33.3%	2.86x
<b>Sum 5,514</b>	<b>Sum 5,514</b>	Management	0.8%	10.63x

Waterfall chart showing EV (11,090) and TLB (991) leading to Mgmt. (60), SOL Family (865), Family (2,501), SOL spons. (1,730), and Sponsor (4,943).

### Value creation and strategy

Entry equity: 3,532 → Sales growth (1.15x, 4,051) → Margin... (0.51x, 1,728) → Multiple exp. (0.01x, 52) → Cash gen. (0.21x, 737) → Exit equity: 10,100 (2.86x)

- Fostering **sales growth** mainly through buy-and-build
- Achieving **margin growth** by operational improvements
- Expanding multiples** by divesting a low-margin segment
- Fully exploiting leverage effect for **cash generation**

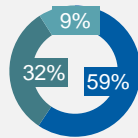
# 1 | Company overview | Description

Dermapharm (ETR: DMP) is a leading and rapidly growing manufacturer of branded pharmaceuticals and herbal extracts with an integrated import business

## About Dermapharm

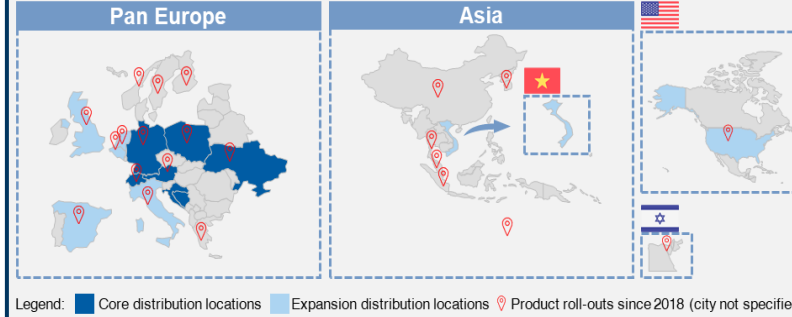
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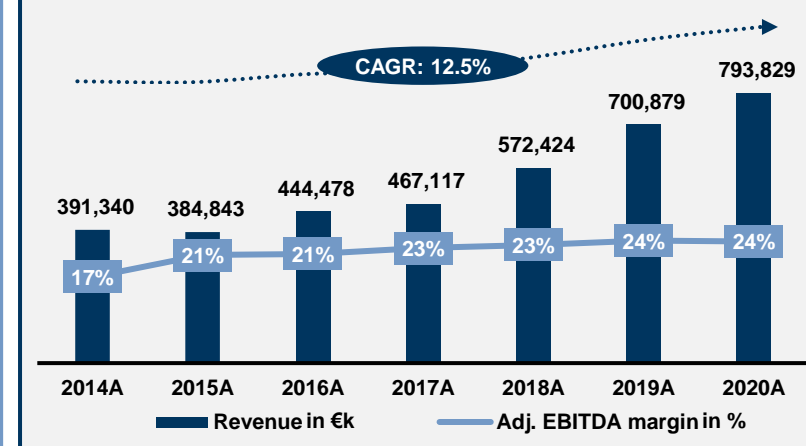
as **prescription, over-the-counter pharmaceuticals** and healthcare products through its main sales channels, **pharmacies** and **wholesalers**, which supply patients either directly or indirectly through hospitals.

## Geographical presence and revenues



Revenues by geographies	
83%	9% <sup>1</sup> 5%  5%
Rest of world <sup>2</sup> 3%	

## Historic financials



## Key growth drivers

- M&A activity**  
12 add-ons drove >11% of past 5-year sales growth
- Inhouse development**  
reapproval of generics or partial new developments
- Internationalization**  
98% international sales of herbal extracts

## Facts and figures

<b>380</b> Active pharmaceutical ingredients	<b>1,300</b> Marketing authorizations	<b>&gt;50</b> Products under development
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## Company history

1991 - 2002	2003 - 2009	2010 - 2016	2017 - today
<ul style="list-style-type: none"> <li>Emphasis on <b>branded pharmaceuticals</b> as flagship products of the company</li> <li><b>Enhancement</b> of the already established <b>dermatological product portfolio</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Acquisitions</b> of unique <b>brands</b>, e.g., Zyloric®, and licensing of <b>generic products</b></li> <li><b>Extension</b> and <b>reorganization</b> of branded pharma <b>therapeutic areas</b></li> </ul>	<ul style="list-style-type: none"> <li>Start of <b>own R&amp;D activities</b> and positioning in <b>selected markets</b></li> <li>Portfolio expansion to <b>food supplements, dietary products and health-care products</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Acceleration</b> in markets with <b>low regulation</b>, e.g., <b>over-the-counter products</b></li> <li>Entry into the <b>herbal extracts market</b></li> <li><b>Internationalization</b> advancements</li> </ul>
<b>Dermatological focus</b>	<b>Portfolio extension</b>	<b>Selected market growth</b>	<b>Growth acceleration</b>

# 1 | Company overview | Business segments

Dermapharm's business is mainly divided into three business units which operate independently and serve the same customer base on a broad level

Segment activity	Branded pharmaceuticals		Herbal extracts		Parallel import business	
	<ul style="list-style-type: none"> <li>Production of <b>branded pharmaceuticals</b>, with <b>1,300+ market authorizations</b> and 380+ active pharmaceutical ingredients and healthcare products, i.a., supplements and skincare products</li> <li><b>Inhouse development of niche generics and acquisitions</b> of niche players lever further growth in <b>less competitive markets</b></li> <li>With its well know brands, Dermapharm is a <b>market leader in selected therapeutic areas</b></li> </ul>		<ul style="list-style-type: none"> <li><b>Euromed</b> (acquired in 2019) is a producer of <b>herbal extracts</b> in form of raw materials for the <b>phyto-pharma, nutraceutical, and cosmetic</b> industry</li> <li>Legal entity is located in <b>Murcia, Spain</b></li> <li>The business model combines <b>inhouse production</b> with <b>B2B distribution</b></li> <li><b>Highly diversified</b> business unit with 98% international sales in <b>43 countries</b> to <b>more than 300 customers</b></li> </ul>		<ul style="list-style-type: none"> <li>Import of pharmaceuticals to lever arbitrage from <b>different pricing</b> and <b>free trade</b> within the European Economic Area</li> <li><b>Legally required arbitrage business</b> to lower Germany's statutory healthcare spending</li> <li>By importing, repackaging, and reselling <b>low-margin</b> goods from EEA states in <b>high volume</b>, steady cash flows are secured</li> <li>Leading market position due to <b>strong sales force</b></li> </ul>	
Successes	#1 Dermatology <sup>1</sup>	#1 Pain and inflammation <sup>1</sup>	~50 years of experience	98% international sales	9.6% market share	Intercompany synergies
	#1 Vitamins, minerals, food supplements <sup>1</sup>	#1 Cardiovascular support <sup>1</sup>	>200 stock keeping units	> 800 tons extracts sold	Top 5 parallel import business in 2020	Own call center with 190,000 calls p.a.
	#3 Allergology <sup>1</sup>	#10 Gynecological and urological compounds <sup>1</sup>	>300 customers	Sales to 43 countries	Business program for pharmacies	90% coverage rate of pharmacies <sup>2</sup>
Brands						
Offering						

Sources: Company filings, Insight Health | Notes: (1) Ranking according to market share according to own analysis based on Insight Health figures for H1 2021 (2) The coverage applies to all customer groups

# 1 | Company overview | Management

Dermapharm's management is highly experienced in its industry and achieved stellar growth in the past years boosted by employee growth in R&D and sales

## Executive board

High



**Dr. Hans-Georg Feldmeier, CEO (\*1962 | joined in 2003)**

- Gained know-how as **Chief Production & Development Officer**
- Prior experience at **Schering AG (Bayer AG)** and **Berlin Chemie**
- PhD in pharmacy** at Humboldt University in Berlin

C-level experience



**Karin Anna Samusch, CBDO (\*1965 | joined in 1991)**

- Stations in **BD, global/regulatory affairs, pharmacovigilance**
- Prior experience in the **pharmaceutical field** at **Dorsch GmbH**
- Marketing management apprenticeship** and executive training



**Dr. Jürgen Ott, CMO (\*1968 | joined in 2019)**

- Responsible for **marketing and sales** at Dermapharm
- Prior experience at **Bionorica SE** and **Procter & Gamble**
- PhD in Inorganic Chemistry** at Vienna University of Technology

Moderate



**Hilde Neumeyer, CFO/CCO (\*1967 | joined in 2020)<sup>1</sup>**

- Head of accounting** since 2005; escorted all add-on integrations
- Prior experience in **Novartis' accounting** department for **10 years**
- Business management training**

Ø Company tenure 17¾ years Industry expertise ●●●●●

## Operational achievements (last 5y)

- Successful **IPO** in 2018
- Revenue increase** of 78.6%
- Adj. EBITDA growth** of 100.8%

## Strategical achievements (last 5y)

- 12 successful **acquisitions**
- Expansion** to 22 new countries
- ~**600** new launched **products**

## Supervisory board



**Wilhelm Beier (\*1956 | joined in 2017)**

- Family owns **65.05%** of Dermapharm's shares
- Led Dermapharm's success by **selecting attractive products**
- Started his career in the **salesforce** of **ratiopharm GmbH**



**Dr. Erwin Kern (\*1960 | joined in 2017)**

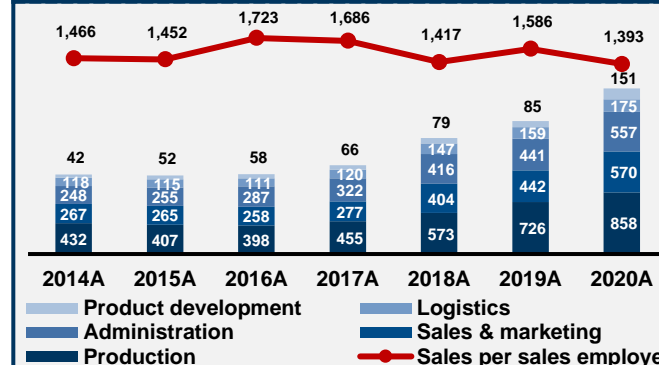
- Active in **various companies** in the **stone and earth industry**
- Managed stone- and earth-related companies** and **associations**
- PhD in economics** at University of Paderborn



**Lothar Maximilian Kranz (\*1948 | joined in 2018)**

- Serves as **supervisor** for, i.a., **Axel Springer SE** and **Zalando SE**
- Former **CFO** of **ProSiebenSat.1 Media AG** and **Axel Springer AG**
- Business administration degree** at University of Stuttgart and Berlin

## Employment development



- Product development employee** growth over the past years was the highest with a CAGR of c. **23.8%**
- Sales per sales employee** are **slightly decreasing** by a CAGR of a negative c. **0.8%**
- As of **09/2021**, the company has c. **50 vacancies** across the group, especially in the sales segment

# 1 | Company overview | Historical financials: Income statement

Past revenue growth is driven by organic base growth within the past seven years supplemented by further top-line value creation through add-on investments

Income statement (€k)	2014A	2015A	2016A	2017A	2018A	2019A	2020A
Revenue	391,340	384,843	444,478	467,117	572,424	700,879	793,829
% growth		-2%	15%	5%	23%	22%	13%
Branded pharmaceuticals and other health products			208,531	224,129	334,658	385,147	471,298
Parallel import business			235,946	242,988	237,766	243,462	250,606
Herbal extracts			-	-	-	72,269	71,924
Reconciliation/group holding			-	-	-	-	-
Increase/decrease in finished goods and work-in-process	8,300	2,887	1,007	180	4,264	13,779	19,771
Own work capitalised	8,465	7,983	8,301	10,487	10,200	12,632	13,812
Total output	408,105	395,713	453,786	477,784	586,888	727,290	827,412
% growth		-3%	15%	5%	23%	24%	14%
Cost of material	(237,077)	(215,912)	(252,756)	(256,311)	(287,124)	(339,970)	(359,331)
Gross profit	171,028	179,801	201,030	221,473	299,764	387,320	468,081
% growth		5%	12%	10%	35%	29%	21%
Personnel expenses	(57,676)	(55,739)	(58,749)	(64,124)	(92,257)	(114,323)	(150,220)
Other operating income	2,367	4,653	4,662	776	949	836	1,793
Other operating expenses	(46,846)	(44,940)	(49,879)	(50,379)	(72,585)	(99,133)	(124,770)
Adjusted EBITDA	68,873	83,775	97,064	107,746	135,871	174,700	194,884
% growth		22%	16%	11%	26%	29%	12%
Adjustments	2,671	(91)	4,178	856	1,965	(5,062)	(8,867)
Reported EBITDA	71,544	83,684	101,242	108,602	137,836	169,638	186,017
% growth		17%	21%	7%	27%	23%	10%
Depreciation and amortization	(28,289)	(22,921)	(14,448)	(16,161)	(25,455)	(48,748)	(44,695)
Adjusted EBIT	40,584	60,854	82,616	91,585	110,416	125,952	150,189
% growth		50%	36%	11%	21%	14%	19%
Adjustments	-	-	-	(326)	(4,872)	(1,377)	(4,471)
Reported EBIT	43,255	60,763	86,794	92,115	107,509	119,513	136,851
% growth		40%	43%	6%	17%	11%	15%
Result from investments measured at equity	863	985	1,464	1,641	1,796	(1,111)	(1,504)
Financial income	3,325	9,365	7,297	8,392	3,949	2,736	565
Financial expenses	(11,956)	(15,814)	(12,689)	(14,119)	(9,018)	(11,073)	(10,631)
EBT	35,487	55,299	82,866	88,029	104,236	110,065	125,281
% growth		56%	50%	6%	18%	6%	14%
Income taxes	(2,244)	(2,920)	(5,871)	(10,286)	(29,011)	(32,254)	(39,357)
Profit or (loss) for the period	33,243	52,379	76,995	77,743	75,225	77,811	85,924
% growth		58%	47%	1%	-3%	3%	10%

### Comments

1 Revenues are significantly driven by inorganic growth<sup>1</sup>:

Year	Organically generated revenues (%)	Revenues generated by M&A (%)
2014A	100%	0%
2015A	100%	0%
2016A	99%	1%
2017A	98%	2%
2018A	86%	14%
2019A	87%	13%
2020A	93%	7%

2 The acquisitions of **Trommsdorff<sup>2</sup>** and **Strathmann<sup>2</sup>** lead to **more branded pharmaceuticals revenues** in 2018

- Acquiring **Euromed<sup>2</sup>** in 2019, enhanced this effect and added the third business unit, **herbal extracts**
- In the course of the acquisition of **Allergopharma<sup>2</sup>**, the **branded pharmaceuticals** unit experienced high **growth**

3 Steadily improved purchasing conditions, insourcing, and synergies led to an **improved materials expense ratio**

- Consequently, **gross profit** hiked with a **CAGR of c. 18%**

4 Adj. **EBITDA-margin** steadily increases while acquisition-related personnel costs are rising despite restructuring

- EBITDA is adjusted<sup>3</sup>** for one-off items, largely driven by **acquisition-related restructuring and asset reduction**

5 While **software, licenses, patents and similar rights** accounts for **most D&A**, EBIT is adjusted for capitalized development costs, which reflect an impairment

Sources: Company filings | Notes: (1) See detailed breakdown in appendix (2) See organigram in appendix (3) See adjustments in appendix

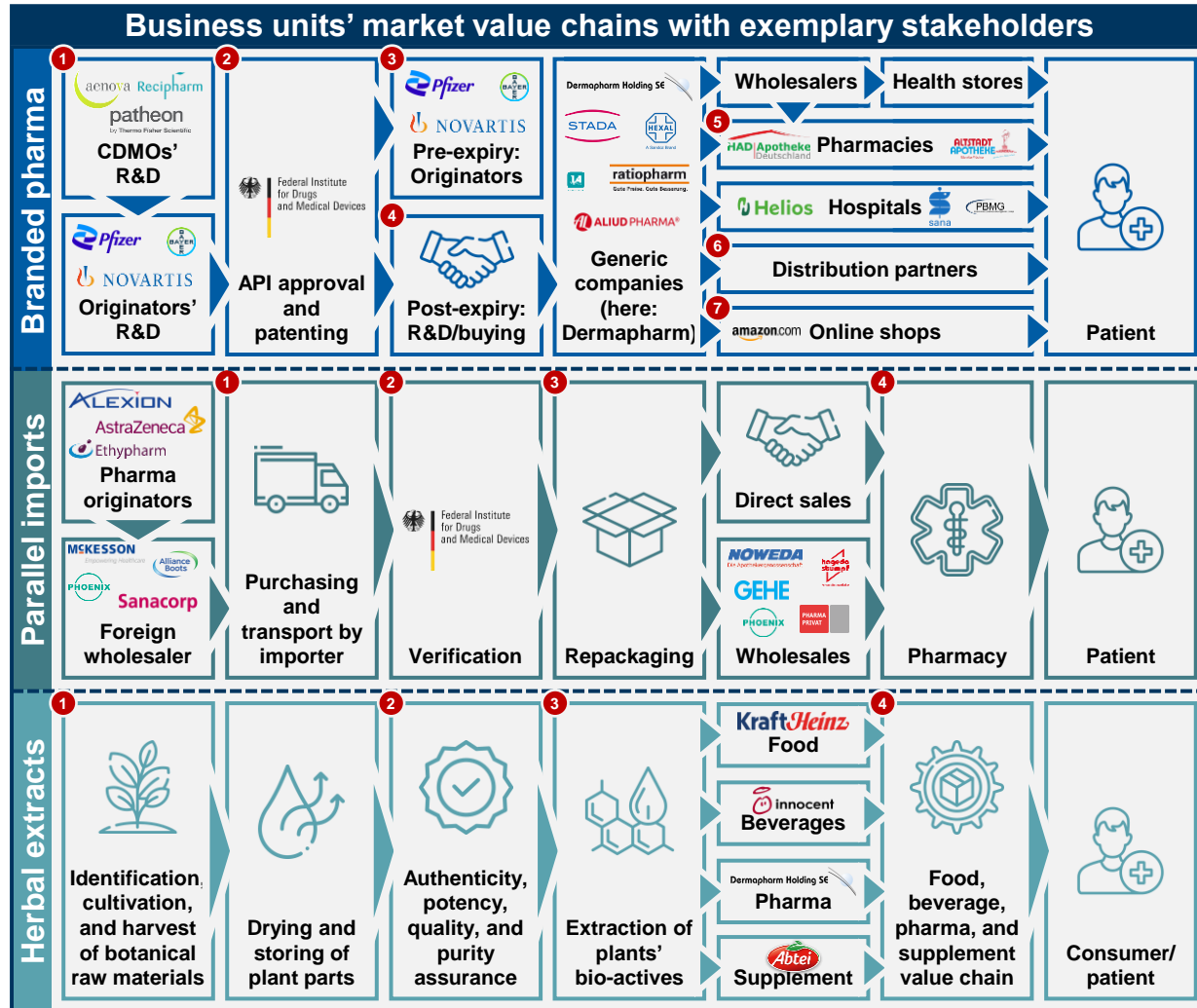
# 1 | Market overview | General market

Strong underlying market growth in the three business segments of Dermapharm imply a promising growth outlook for the diversified pharmaceutical player

	Branded pharmaceuticals	Herbal extracts	Parallel import business				
Growth	<p>Market (€bn)</p> <p>CAGR: 8.4%</p> <p>2015A 2016A 2017A 2018A 2019A 2020A 2021P 2022P 2023P 2024P 2025P</p>	<p>Market (€bn)</p> <p>CAGR: 8.0%</p> <p>2015A 2016A 2017A 2018A 2019A 2020A 2021P 2022P 2023P 2024P 2025P</p>	<p>Market (€bn)</p> <p>CAGR: 5.0%</p> <p>2015A 2016A 2017A 2018A 2019A 2020A 2021P 2022P 2023P 2024P 2025P</p>				
Key facts	<ul style="list-style-type: none"> <li>Dermapharm's market size amounts to c. <b>€58bn</b> in 2020, with a CAGR of c. <b>8.4%</b> (2015-2025)</li> <li>The market size does not only include <b>products offered by Dermapharm</b> in its markets (DACH), but all drugs sold in Germany, Austria, and Switzerland</li> <li><b>Germany</b> is one of the global top public <b>healthcare spenders</b> and <b>generics</b> consumers</li> </ul>	<ul style="list-style-type: none"> <li>With the sum of its competitors' revenues adding up to c. <b>€6bn</b> in 2020, the <b>market for Euromed's</b> herbal extracts is growing at c. <b>8.0% annually</b></li> <li>The business model consists of the <b>cultivation of herbals</b> and the mechanical and chemical <b>extraction of food and supplement additives</b> from the agricultural and horticultural products to sell them B2B</li> </ul>	<ul style="list-style-type: none"> <li>Driven by regulatory standards in Germany and asymmetric branded drug prices in Europe, <b>Axicorp's</b> market of parallel imports into Germany amounts to c. <b>€3bn</b> in 2020, growing at a c. <b>5.0% CAGR</b></li> <li>By <b>German law</b>, min. <b>2%</b> of prescription pharma sold in Germany <b>must</b> be imported from EEA other states with <b>lower prices</b> for the respective pharma</li> </ul>				
Trends	<ul style="list-style-type: none"> <li>Market growth results from the two megatrends of the <b>demographic shift</b> (over-aging, increased prevalence/chronification of diseases) and rising <b>health awareness</b> (self-medication, increased consumption of OTC/non-brand drugs)</li> <li>Product-wise, <b>vitamins</b> and <b>dermatological products</b> are the strongest growth drivers</li> </ul>	<ul style="list-style-type: none"> <li>Megatrend of rising demand for supplements due to <b>aging population</b> and <b>health awareness</b></li> <li><b>Food additives</b>, especially <b>taste additives</b>, are an upcoming trend; <b>organic additives</b> as niche in <b>sustainable future</b>; adjacent trends are alternative healthcare and self-medication; beyond Euromed, Dermapharm's Hübner targets many of those trends</li> </ul>	<ul style="list-style-type: none"> <li>The <b>key trend</b> is <b>over-aging</b> (leading to stress on statutory health insurances), creating the need for a constant inflow of cheaper branded drugs</li> <li><b>Currency effects</b> can create asymmetries between Euro- and non-Euro-countries</li> <li>Changes in and around <b>federal health system</b> can shock pharma prices in Germany</li> </ul>				
Players	<table border="0"> <tr> <th>Generics producers</th> <th>Original producers</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>	Generics producers	Original producers				
Generics producers	Original producers						

# 1 | Market overview | Market value chain

The value chains of the comparatively independent business units are all geared towards B2B sales while a well-oiled sales machine drives end-user demand



- Comments**
- Optionally, originators utilize **CDMOs** for **pharmaceutical contract development**
  - BfArM** approves developed **APIs**, which are **patented** by originators thereafter
  - Pre-expiry, originators **produce pharmaceuticals** based on patented APIs
  - Post-expiry** of **APIs** (after 20 years), generic companies can **develop** pharma themselves using those APIs; **pre-expiry, acquisition** from originators possible
  - Pharmacy sales** are additionally accelerated thanks to **rebate agreements** with **SHI providers** and **direct marketing to doctors**, which **increase prescriptions**
  - Distribution partners sell **Hübner brands**
  - Hyperthermic medical devices** only
- 
- If **pharmaceuticals** are **less pricy** in **foreign EEA states**, parallel importers utilize **arbitrage** by purchasing and importing them to their home state
  - BfArM** (for Germany) reviews the **therapeutic identity** of the **imported drug** with the **original** and **verifies it for distribution** in the importer's home state
  - Repackaging** happens under quality control according to the **home state's pharma law** with **descriptions and instructions** in the **right language** enclosed
  - Utilizing **direct salesforces** (Dermapharm employs a **call center** covering 90%<sup>1</sup> of pharmacies in Germany), **customers** are targeted **directly and indirectly**
- 
- The **optimal seed source** is identified for the plants' successful cultivation, the **ideal environment** for the maximum plant health and productivity, and the **most suitable harvest period** to achieve peak plant quality
  - Quality of the goods is guaranteed **from the field to the finished extract**
  - Within targeted **extraction centers** (Euromed's innovation center), **concentration of bio-actives** is achieved in an **environment-friendly way**
  - Each of the targeted end market companies utilizes the herbal extracts in its individual way to **valorize its products** with **evidence-based health ingredients**

Sources: Company filings, desktop research | Notes: (1) 90% coverage applies to pharmacies, doctors, wholesalers, and hospitals

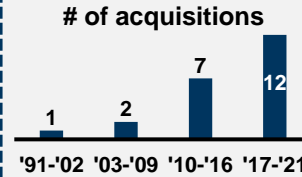
# 1 | Investment thesis | Investment highlights and value creation

Four strong growth pillars enable Dermapharm to create substantial value in the future with targeted strategies, mainly revenue growth and deleveraging

## Investment highlights: Dermapharm's "growth DNA"

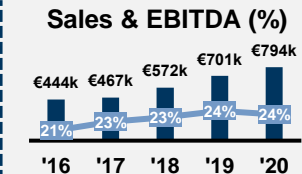
### Proficient management team for successful buy-and-build

- Total of **115 years** industry experience
- M&A** is part of the **business model**
- 22 total add-ons**, 12 since 2017



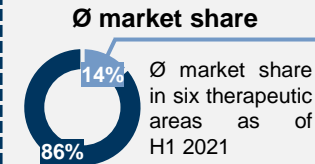
### Robust financials to exploit various value creation levers

- 6-year top-line growth** of c. **12.5%**
- Long-term EBITDA margins >20%**
- Operating CF** reflects **67%** of EBITDA



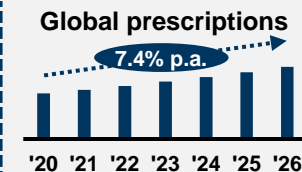
### Market leader in highly regulated niche markets

- High market shares** in niche markets
- Complexity** prevents **competition**
- Limited competition** in core markets



### Strong underlying market growth with high momentum

- C. **4.9%** market growth in Germany
- Most healthcare spending** by GDP
- 45-50%** total **EBITDA growth** in 2021



## Value creation

High



### Revenue growth: Buy-and-build

Value creation: **0.59x**

- Past growth** was partially driven by **add-on acquisitions**
- Add-ons** with an average **EV** of c. **€191m** offer **top-line growth**
- Targets' segments** are **niche pharma** and **cannabis**



### Margin growth: Operational optimization

Value creation: **0.51x**

- Margins** showed **good past performance** compared to peers
- Better performance** results from the **divestment** of Axicorp, **lowered DIO**, and **personnel and material expenses** of add-ons



### Revenue growth: Internationalization

Value creation: **0.41x**

- Internationalization** is part of Dermapharm's **past growth story**
- Patented hyperthermic devices** were rolled out in **Europe**
- Global roll-out** enables legally and regulatory **safe expansion**



### Revenue growth: Direct sales

Value creation: **0.22x**

- USP** of **direct selling** the products led to **niche market leadership**
- Extending **customer coverage** from **90%** to **100%** boosts sales
- Influencer marketing** increases growth of lifestyle products' sales



### Revenue growth: Strong market growth

Value creation: **0.16x**

- Growth** of c. **4.9% p.a.** in Germany's pharma market drives value
- Markets** with **highest projected growth** (allergology and pain) are focused; **BioNTech partnership** offers on-top growth



### Deleveraging: Reallocation of assets

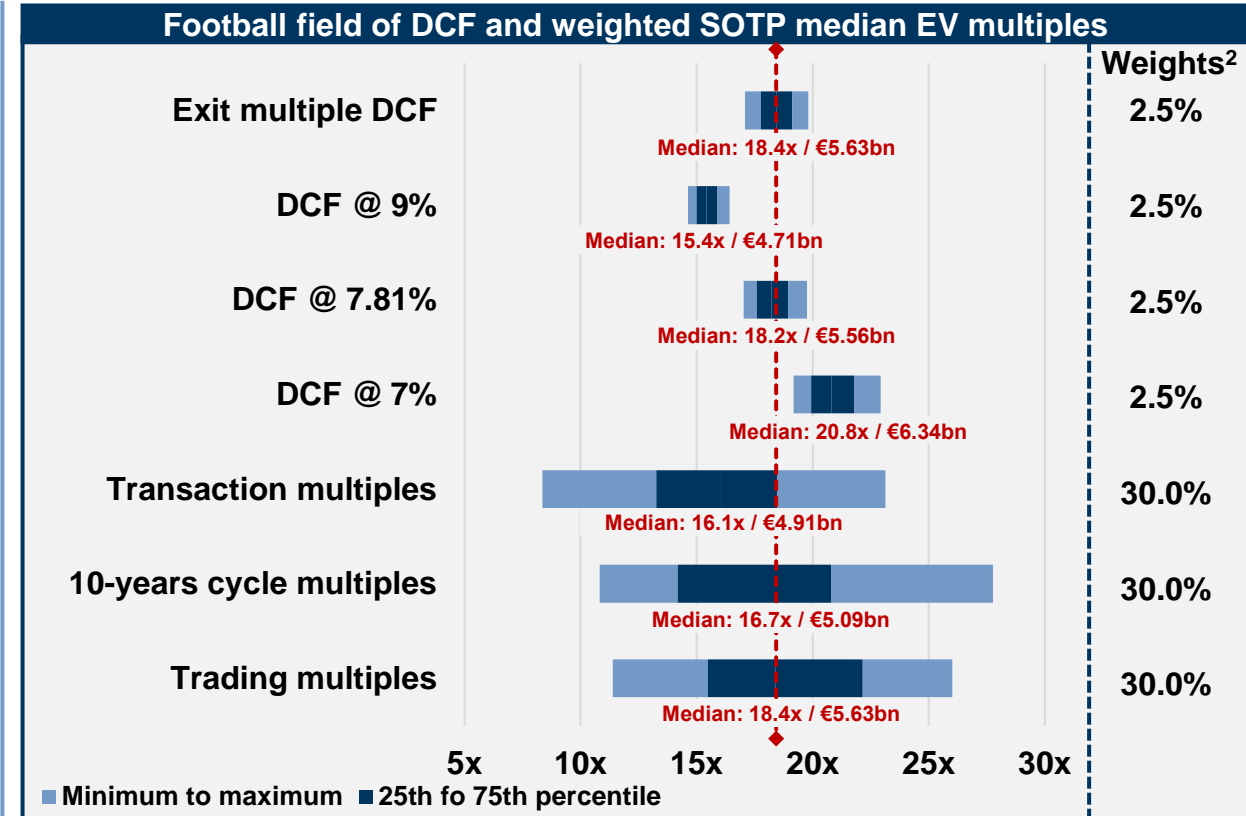
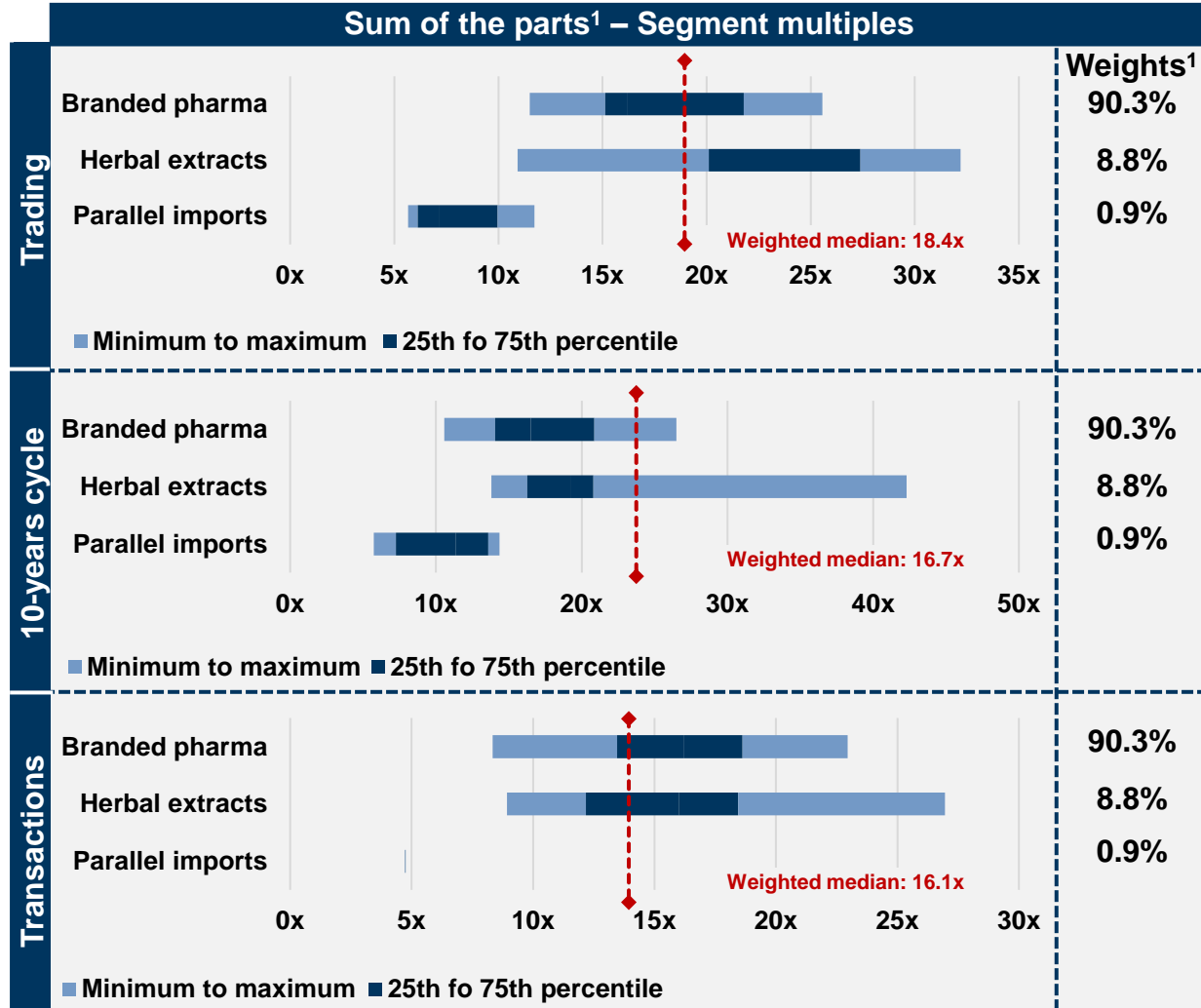
Value creation: **0.01x<sup>1</sup>**

- Parallel import business** allowed low-risk **arbitrage** imports
- Divesting** the **low-margin** unit offers **improved capital allocation**
- Low EBITDA** and **multiple** allows **asset deal** to be more suitable

Moderate

# 1 | Valuation | Valuation summary

The weighted median EV/EBITDA multiple derived from the applied valuation methods amounts to 17.25x, implying an EV of €5,260m based on 2021 EBITDA



Sources: Bloomberg, Zephyr | Notes: (1) According to segment EBITDAs of 2021 (2) Multiples are weighted higher than DCF due to the higher accuracy of sum of the parts multiples and the difficulties regarding the determination of cost of capital

# 1 | Business plan | Capital structure: Sources and uses

To finance the enterprise value including transaction and due diligence fees, a senior debt package with an amortizing and bullet debt component were chosen

Sources (€k)	Option 1	Option 2	Option 3
Excess cash	91,877	91,877	91,877
Term loan A	670,865	-	-
Term loan B	1,219,755	1,219,755	-
2nd lien	-	670,865	-
Unitranche	-	-	1,890,620
<b>Debt</b>	<b>1,982,497</b>	<b>1,982,497</b>	<b>1,982,497</b>
Subordinated loan	1,765,949	1,769,303	1,767,131
Sponsor loan	1,177,299	1,179,536	1,178,087
Family loan	588,650	589,768	589,044
Common stock	1,765,949	1,769,303	1,767,131
Sponsor equity	1,171,652	1,173,888	1,172,440
Family equity	588,650	589,768	589,044
Management equity	5,647	5,647	5,647
<b>Equity</b>	<b>3,531,898</b>	<b>3,538,607</b>	<b>3,534,261</b>
<b>Total sources</b>	<b>5,514,395</b>	<b>5,521,104</b>	<b>5,516,758</b>
Leverage	6.5x	6.5x	6.5x
Sponsor money multiple at exit	2.84x	2.79x	2.53x

Arguments for the choice of debt option 1	
<b>Securitization</b>	<ul style="list-style-type: none"> <li>Fully secured package over fixed assets and working capital</li> <li>Securitization allows for <b>increasing the leverage</b> per tranche</li> </ul>
<b>Covenants</b>	<ul style="list-style-type: none"> <li>First preference is <b>covenant-lite</b>; second is <b>covenant-loose</b></li> <li>Interest is five times covered; leverage cover steadily decreases</li> </ul>
<b>Call protection</b>	<ul style="list-style-type: none"> <li><b>Soft call 101 protection</b> for the first six months is usual</li> <li><b>First debt sweep in 2025</b> will not trigger prepayment penalties</li> </ul>
<b>Pros</b>	<ul style="list-style-type: none"> <li><b>High flexibility</b> in covenant options and term A to C weighting</li> <li><b>Low costs</b> in terms of both bank fees and original issue discount</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li><b>Securitization</b> requires more “<b>skin in the game</b>”</li> <li><b>Capex covenants</b> might be <b>sensitive</b> to add-on acquisitions</li> </ul>

Sources	xEBITDA	€k	%	Pricing	Uses	xEBITDA	€k	%
Excess cash	0.3x	91,877	2%		Equity purchase price	14.9x	4,553,570	83%
Term loan A	2.2x	670,865	12%	3M LIBOR+350bps	Debt refinancing	2.6x	797,994	14%
Term loan B	4.0x	1,219,755	22%	3M LIBOR+400bps				
<b>Debt</b>	<b>6.5x</b>	<b>1,982,497</b>	<b>36%</b>		<b>Enterprise value</b>	<b>17.5x</b>	<b>5,351,564</b>	<b>97%</b>
Subordinated loan	5.8x	1,765,949	32%	3M LIBOR+700bps	M&A and sponsor fee	0.2x	52,597	1%
Sponsor loan	3.9x	1,177,299	21%		Due diligence fee	0.2x	52,597	1%
Family loan	1.9x	588,650	11%		Arrangement fee (OID)	0.1x	19,825	0%
Common stock	5.8x	1,765,949	32%		Financing fees	0.1x	37,812	1%
Sponsor equity	3.8x	1,171,652	21%					
Family equity	1.9x	588,650	11%					
Management equity	0.0x	5,647	0%					
<b>Equity</b>	<b>11.6x</b>	<b>3,531,898</b>	<b>64%</b>		<b>Total fees</b>	<b>0.5x</b>	<b>162,831</b>	<b>3%</b>
<b>Total sources</b>	<b>18.1x</b>	<b>5,514,395</b>	<b>100%</b>		<b>Total uses</b>	<b>18.1x</b>	<b>5,514,395</b>	<b>100%</b>

Comments
<ul style="list-style-type: none"> <li><b>Excess cash</b> (here displayed under debt) beyond the operating cash of 3% of sales is utilized to <b>repay parts of the enterprise value</b>, which amounts to <b>17.2x of 2021 EBITDA</b> with the excess cash included</li> <li>Both the <b>private equity sponsor</b> and <b>family Beier</b> as the former majority shareholders issue an equity-like <b>subordinated loan</b> to the <b>HoldCo 2</b> to achieve partial <b>seniority</b> to the management</li> <li>C. <b>163m</b> in M&amp;A, due diligence, and financing <b>fees</b> (capitalized) as well as in original issue discounts cover related <b>transaction costs</b></li> </ul>

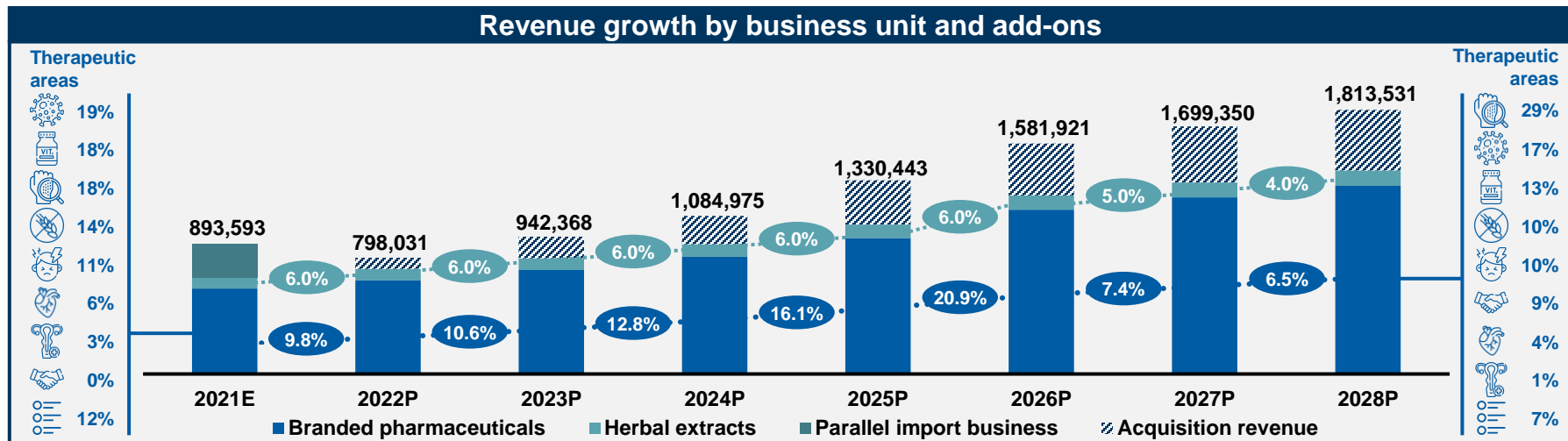
# 1 | Business plan | IC case: Top-line forecast

Revenue growth is achieved by focusing on expanding growth segments while adding on inorganic revenues with a distinct strategic fit to the business model

Revenues (€k)	2021E	2022P	2023P	2024P	2025P	2026P	2027P	2028P	CAGR
<b>Standalone revenues</b>	<b>893,593</b>	<b>721,781</b>	<b>794,958</b>	<b>891,148</b>	<b>1,025,485</b>	<b>1,225,988</b>	<b>1,314,354</b>	<b>1,397,039</b>	<b>14.1%</b>
<b>Branded pharmaceuticals</b>	<b>586,828</b>	<b>644,545</b>	<b>713,088</b>	<b>804,366</b>	<b>933,496</b>	<b>1,128,479</b>	<b>1,211,970</b>	<b>1,290,560</b>	<b>14.9%</b>
Vitamins, minerals, and food supplements	106,240	113,336	120,906	128,982	137,597	146,787	156,591	167,051	8.1%
Dermatology	103,320	119,465	144,114	182,759	244,534	344,673	356,924	369,611	25.3%
Hyperthermic medical device	21,000	34,107	55,606	90,985	149,373	246,000	254,610	263,521	50.5%
Other products	82,320	85,358	88,508	91,774	95,161	98,673	102,314	106,090	4.4%
Allergology	82,940	88,575	94,594	101,021	107,885	115,215	123,044	131,404	8.2%
Pain & inflammation	61,920	68,926	76,724	85,405	95,068	105,824	117,797	131,125	13.7%
Cardiovascular support	36,000	37,385	38,823	40,316	41,867	43,477	45,150	46,887	4.6%
Gynaecological & urological compounds	15,520	15,831	16,149	16,473	16,803	17,140	17,484	17,835	2.4%
BioNTech cooperation	110,000	121,770	134,799	149,223	165,190	182,865	202,432	224,092	13.0%
Direct sales add-on revenues	-	6,597	12,502	23,849	46,305	92,294	110,339	118,292	78.1%
Others	70,888	72,660	74,477	76,339	78,247	80,203	82,208	84,264	3.0%
<b>Parallel import business</b>	<b>233,901</b>	-	-	-	-	-	-	-	<b>0.0%</b>
<b>Herbal extracts</b>	<b>72,864</b>	<b>77,236</b>	<b>81,870</b>	<b>86,782</b>	<b>91,989</b>	<b>97,508</b>	<b>102,384</b>	<b>106,479</b>	<b>6.6%</b>
<b>Acquisition revenue</b>	-	<b>76,250</b>	<b>147,410</b>	<b>193,827</b>	<b>304,958</b>	<b>355,933</b>	<b>384,996</b>	<b>416,492</b>	<b>40.4%</b>
PharmaSGP Arzneimittel GmbH	-	76,250	83,722	91,927	100,936	110,827	121,688	133,614	11.9%
OmniVision GmbH	-	61,439	65,248	69,294	73,590	78,152	82,998	88,144	7.5%
BEDROCAN INTERNATIONAL B.V.	-	36,393	63,688	101,900	130,432	166,953	180,310	194,734	39.9%
<b>Total revenues</b>	<b>893,593</b>	<b>798,031</b>	<b>942,368</b>	<b>1,084,975</b>	<b>1,330,443</b>	<b>1,581,921</b>	<b>1,699,350</b>	<b>1,813,531</b>	<b>17.8%</b>

### Comments

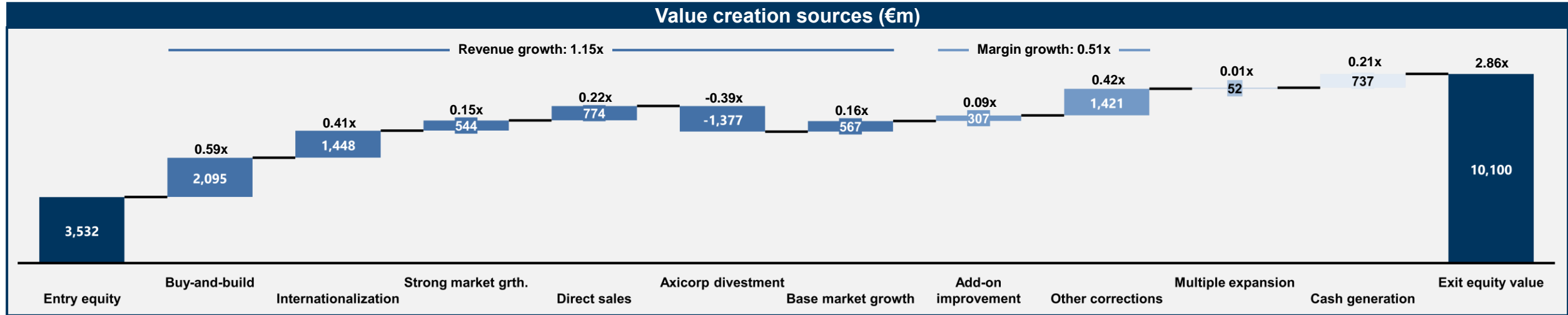
- Dermatology** sales are starkly driven by the expansion of Dermapharm's hyperthermic devices
- BioNTech cooperation** will lead to sustainable vaccine add-on revenue (confirmed by management)
- Vitamins, minerals, food, supplements, allergology** as well as **pain and inflammation** grow by **2 pp. p.a. above market** due to R&D in the core growth areas
- Direct sales** growth due to more capacity
- Cardiovascular diseases, gynecologicals and urologicals, and other products** of Dermapharm grow at their **market growth rates** of 3.9%, 2.0%, and 2.5%, respectively, p.a.
- Herbal extracts** sales of Euromed grow with the **market growth** at c. 6% annually driven by **increased lifestyle revenues**
- M&A add-ons** will nurture growth, i.a., **Bedrocan's sales** growing by c. 28% p.a. due to cannabis legalization in Germany



Sources: Company filings, management team, Euromonitor, marketresearch.com, Fortune Business Insights, Trading Economics

# 1 | Exit and returns | Value creation bridge

Value creation mainly results from revenue growth, especially buy-and-build, while margin growth nurtures equity value as the second-largest value lever



## Revenue growth

- Applying buy-and-build by acquiring **PharmaSGP**, **OmniVision**, and **Bedrocan** accounts for the majority of **c. 31.9% of total value creation**
- The **internationalization** of the **hyperthermic medical devices** bite away, Herpotharm, and EPIIVO drives **c. 22.0% of value creation**
- Margin growth** (captured in other corrections) and **deleveraging** from Axicorp sale offset its revenue gap

## Margin growth

- The **reduction of headcount** and **material expenses** due to economies of scale during the acquisition of the three add-on companies allows for a **value creation of c. 0.09x**
- Additionally, the **forecast corrected inefficiencies** such as marketing expenses, contributions, fees, and charges as well as legal, consulting and audit fees thanks to the **insourcing of M&A capabilities**

## Multiple expansion

- The **entry valuation** is based on a **sum-of-the-parts** multiple valuation for the three business units paired with an overall DCF valuation
- By **divesting Axicorp**, the EBITDA of the **parallel import business** would **not influence** the sum-of-the-parts valuation
- However, **Axicorp's sale** does not pay off due to multiple expansion but due to **margin and multiple growth**

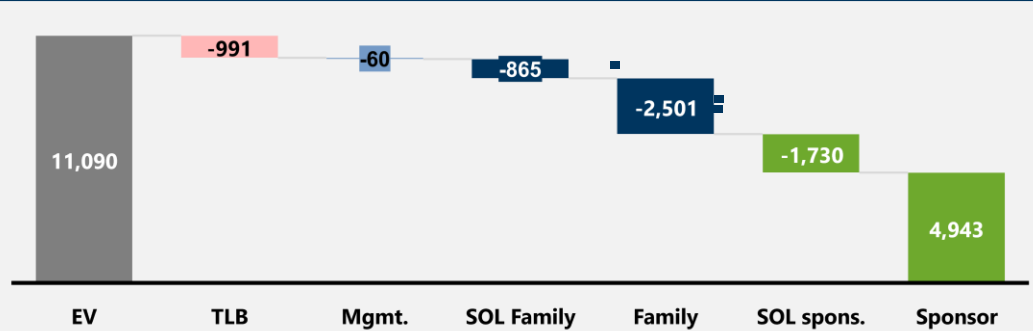
## Cash generation

- Cash generation** results from both the **repayment of credit facilities** as well as the **payment of interest** on the **shareholder loans** for the private equity sponsor and family Beier as the co-investor
- Generated cash** is also **reinvested** into add-on companies
- All in all, the value creation source accounts for **c. 11.2% of total value creation** within the investment period

# 1 | Exit and returns | Return breakdown

The LBO-model expects an appealing money multiple of 2.84x with an IRR of 23.2% for the holding period of 5 years for the sponsor until 2026

Exit waterfall (€m)



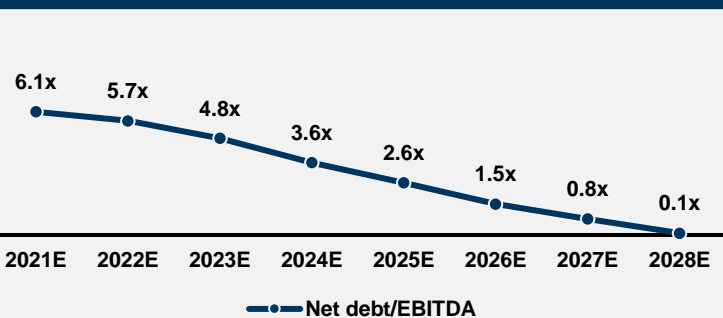
- The implied enterprise value at the planned exit year 2026 measures **€11.09bn** with an exit multiple of **17.33x** on an EBITDA of €640m
- A multiple expansion from the **17.25x** entry multiple to the 17.33x exit multiple is assumed due to the divestment of the parallel import business as well as a **different EBITDA split in 2026**

Sponsor ROI (€k)	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Sponsor equity	2,550,534	3,228,874	4,055,411	5,230,066	6,673,632	7,491,820	8,306,307
Investment in 2021	(2,348,951)	(2,348,951)	(2,348,951)	(2,348,951)	(2,348,951)	(2,348,951)	(2,348,951)
Absolute return	201,583	879,923	1,706,459	2,881,114	4,324,681	5,142,868	5,957,356
IRR (%)	8.6%	17.2%	19.9%	22.1%	23.2%	21.3%	19.8%
Money multiple	1.1x	1.4x	1.7x	2.2x	2.84x	3.2x	3.5x

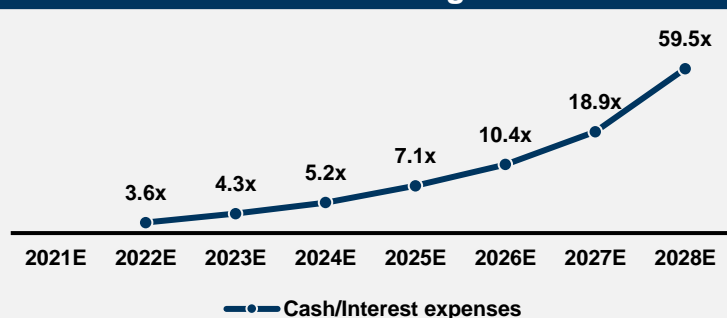
Family ROI (€k)	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Family equity	1,278,040	1,620,259	2,038,280	2,633,494	3,366,819	3,780,039	4,191,318
Investment in 2021	(1,177,299)	(1,177,299)	(1,177,299)	(1,177,299)	(1,177,299)	(1,177,299)	(1,177,299)
Absolute return	100,741	442,960	860,981	1,456,195	2,189,520	2,602,739	3,014,019
IRR (%)	8.6%	17.3%	20.1%	22.3%	23.4%	21.4%	19.9%
Money multiple	1.1x	1.4x	1.7x	2.2x	2.86x	3.2x	3.6x

- The estimated exit returns an appealing money multiple of **2.84x** with an IRR of **23.2%** for the holding period of 5 years until 2026 for the sponsor
- For the **family** the exit yields a **slightly higher money multiple** of **2.86x** and an IRR **23.4%**, which **due to the sweet equity given to the management** by the sponsor

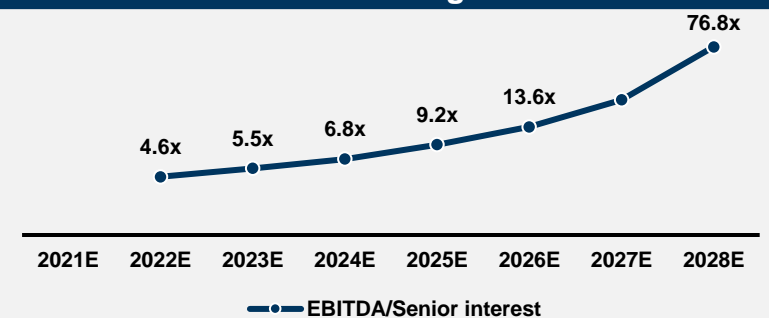
Net debt/EBITDA



Cash coverage



Interest coverage ratio



# 1 | Exit and returns | Exit options

From four assessed possible exit options, a secondary buyout and a trade sale are the most desirable and realistic opportunities and hence highly recommended

	Secondary buyout	Trade sale	IPO	Recapitalization by family
Potential buyer				
Rationale	<ul style="list-style-type: none"> <li>Already <b>high interest in buyout</b> from private equity funds <b>in the past</b></li> <li>All-time highs for <b>dry powder</b> available in the market (<b>\$2.3tn</b> as of 01/2021)</li> <li>Due to the high exit valuation, the buyout could be performed by <b>(a) a club-deal</b> by multiple funds or <b>(b) a single fund</b> with a large commitment</li> </ul>	<ul style="list-style-type: none"> <li><b>Excess cash</b> forces large players to invest their cash to <b>avoid opportunity cost</b></li> <li>Possibility to acquire a <b>leading position in niche markets</b> with strong growth prospects</li> <li><b>Synergies</b> in the areas of <b>supply chain</b> and <b>economies of scale</b> in production and material acquisition</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate size for a direct placement in the <b>MDAX</b> with a highly experienced management team</li> <li>Attractive since the <b>family and management can keep their stake</b></li> <li>Going public at the MDAX by <b>(a) a standard IPO</b> or <b>(b) by using a SPAC</b> to reduce cost and time</li> </ul>	<ul style="list-style-type: none"> <li>The family <b>recapitalizes the company</b> by buying back the sponsor equity and <b>regains control of the company</b></li> <li>The family <b>already owns a significant stake</b> and stays involved during the holding period</li> </ul>
Pros	<ul style="list-style-type: none"> <li>Professional and fast sales process</li> <li>Still high growth prospects and returns</li> <li>Shortlist from prev. interested funds</li> </ul>	<ul style="list-style-type: none"> <li>Generally higher return than secondary buyout due to synergy realization</li> <li>Very large potential acquirors</li> </ul>	<ul style="list-style-type: none"> <li>Highest possible return</li> <li>Acts as an advertisement for the company and benefits all stakeholders</li> </ul>	<ul style="list-style-type: none"> <li><b>Fastest possible sale process</b></li> </ul>
Cons	<ul style="list-style-type: none"> <li>Private equity funds are likely to <b>pressure the valuation multiple</b> as much as possible</li> </ul>	<ul style="list-style-type: none"> <li><b>Synergy creation must be assessed individually</b></li> </ul>	<ul style="list-style-type: none"> <li><b>High placement fees</b></li> <li><b>Time intensive</b></li> <li><b>Depended on market</b></li> </ul>	<ul style="list-style-type: none"> <li>Unlikely due to the <b>very high implied exit value</b></li> </ul>
Recc.	<p>↑ <b>Highly recommended</b></p>	<p>↑ <b>Highly Recommended</b></p>	<p>↗ <b>Recommended</b></p>	<p>↓ <b>Not recommended</b></p>

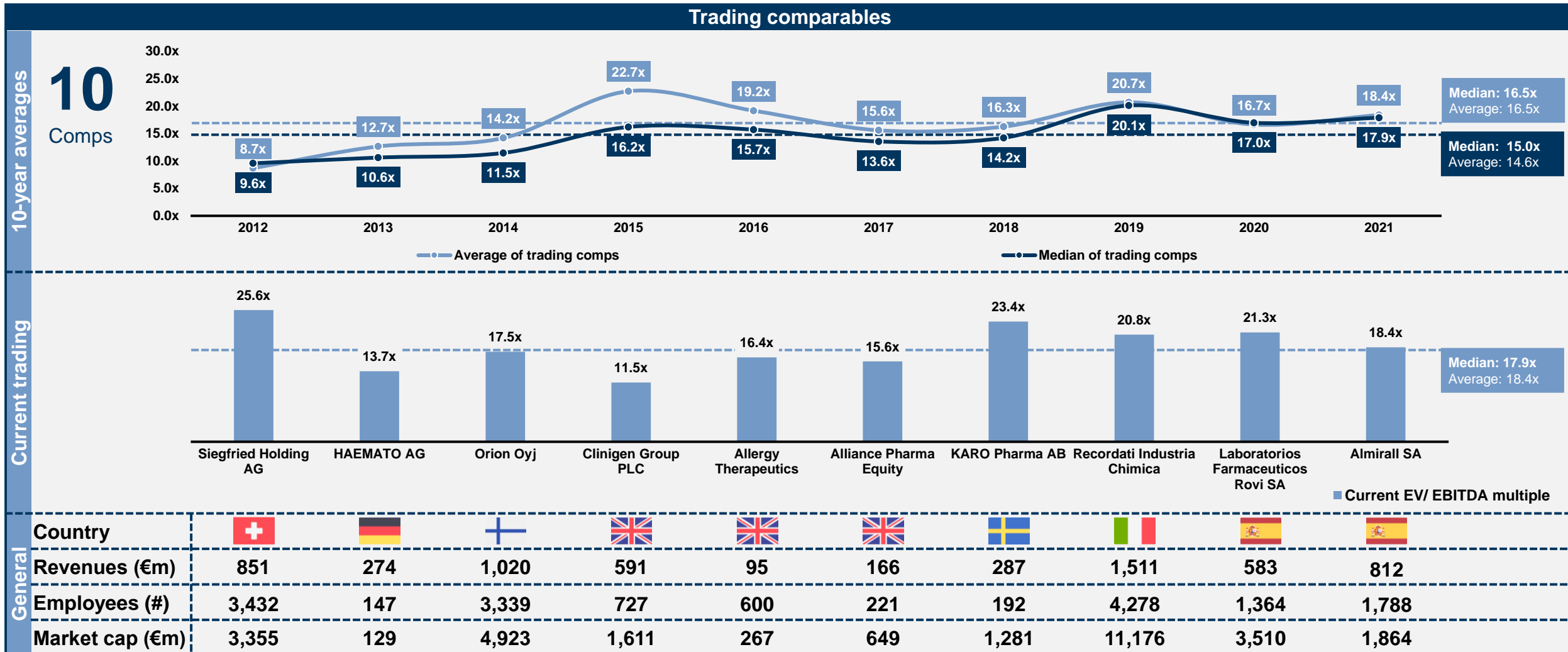
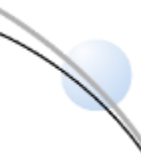
# 1 | Due diligence | Overview

While Dermapharm offers an attractive investment case, selected pain points, mainly commercial- and legal-wise, have to be assessed in the due diligence

	Topic	Description and potential red flags	Mitigation strategies	Relevance
HR	<b>Direct sales recruitment</b>	Inability to attract experienced sales force; overestimating the marginal benefits of additional sales employees	Increasing remuneration and work-life-balance; assessing benefit of in more detail	● ● ● ● ●
Commercial	<b>Brand awareness</b>	Unsuccessful addressing of the products' target groups leading to inability to strengthen sales in a targeted way	Reidentification of the target group of the respective products and dedicated marketing towards it	● ● ● ● ●
	<b>M&amp;A reliability</b>	Dermapharm being heavily reliant on successful add-on acquisitions to sustain past growth levels	In case of few acquisition opportunities, capital will be reallocated to R&D as second market entry strategy	● ● ● ● ●
	<b>COVID-19 vaccines</b>	Unsustainability of COVID vaccination market over the investment period lowers value creation	Deepening BioNTech partnership beyond the vaccine production to exploit further potential	● ● ● ● ●
	<b>Top products</b>	Business model is sensitive to cluster risk since 5 products account for roughly 30% of branded pharma revenues	Diversifying by internationalizing with Euromed as well as adding new therapeutical segments, e.g., cannabis	● ● ● ● ●
Financial	<b>Entry valuation</b>	Due to COVID-biased market situation, the current EBITDA-level might not be sustainable	Considering an earn-out structure as an alternative structure to reassure fair entry price	● ● ● ● ●
	<b>Inventories</b>	No plannability of production and demand on product level; increased level as hint at greater inadequacies	Optimize operational planning and increase order book forecast; estimation of balance sheet fair values	● ● ● ● ●
Law	<b>(Non-EU) regulation</b>	Dependence on approval process driven by German and EU regulation, potentially hurdling internationalization	Extensive expertise in R&D and regulatory approval processes; legal capability inclusion in global sales team	● ● ● ● ●
ESG	<b>Environmental impact</b>	Pharma companies (acquisitions) might have negative environmental effects, creating backlash	C-level is conscious of potential environmental impact and keeps on improving ESG-compliance	● ● ● ● ●

## 2 | Deep-dive: Valuation | Trading comparables: Branded pharma

10 comparable trading companies of the branded pharma segment show a slightly increasing 10-years average trend with current median EV/EBITDA multiple of 17.9x



## 2 | Deep-dive: Valuation | Transaction comparables: Branded pharma

10 comparable transactions for the branded pharmaceuticals segment show a historic median enterprise valuation of 16.0x EBITDA



Target	Country	Acquirer	Industry	Year	Revenues <sup>1</sup>	EBITDA <sup>1</sup>	Deal value <sup>1</sup>	EV/EBITDA	Stake acquired
			Specialty (critical care)	2021	461.0	167	1,635	8.3x	100%
			Specialty (allergology)	2019	277.1	39	118	18.7x	16.1%
			Specialty (pain)	2019	N/A	N/A	1,407	23.0x	100%
			Specialty (cardiovascular)	2018	1,448.9	563	2,825	13.4x	48.2%
			Specialty (immunology)	2018	484.2	28	1,300	11.5x	100%
			Generics	2018	N/A	N/A	135	13.5x	100%
			Generics	2017	3,010.3	623	5,318	15.2x	100%
			Specialty (ophthamology)	2017	52.3	11	120	18.3x	80%
			Specialty (various)	2017	37.6	N/A	70	17.3x	100%
			Generics	2016	20.8	13	89.2	20.9x	100%

Sources: BvD Zephyr, desktop research | Notes: (1) In €m pre-deal values, which might differ from EV/EBITDA due to adjustments etc.

## 2 | Deep-dive: Valuation | Discounted cash flow: Gordon growth model

The Gordon Growth DCF valuation based on a high-level forecast suggests an enterprise value of €5,560m with an implied EV/EBITDA multiple of 18.2x

WACC calculation			
β Unlevered (comps)		Ru and WACC	
β debt	0.023	Expected market return	13.45%
β unlevered	0.587	Risk-free rate	-0.19%
<b>β Re-levered (Dermapharm)</b>		Exp. MRP	13.64%
Net D/E	16.29%	<b>Ru</b>	<b>7.82%</b>
<b>β re-levered</b>	<b>0.679</b>	Cost of debt	0.12%
Statutory tax rate	31.41%	Cost of equity	9.07%
<b>WACC</b>		<b>7.81%</b>	

Assumptions	
β unlevered/β debt:	EBITDA weighted average of 10 same trading comps per segment
β debt:	from comps credit rating
Exp. market returns:	Weekly SDAX returns of last 5 years
Risk-free rate:	10Y German Government Bond as of Nov 21

Forecast assumptions	
Revenue growth:	After revenue jump in 2021 due to BioNTech partnership, Dermapharm will further grow along the partnership and additionally, generate growth organically mainly in the <b>branded pharma</b> segment; however, growth will lower <b>from 2024</b> tending to the level of Dermapharm's <b>past organic growth</b>
EBITDA margins:	Strong increase in 2021 due to BioNTech partnership; margin will <b>tend to old levels subsequently</b> due to possible price pressures and <b>uncertainty</b> regarding <b>demand</b> and <b>profitability of vaccine production</b>
CAPEX:	Dermapharm continues to utilise their assets efficiently such that CAPEX are not overweighing D&A
D&A:	To keep up with growing sales, the company needs to inject capital into NWC amounting to c. 5% of sales in the first two years and decreasing thereafter

Free cash flow to firm forecast and EV													
Core Cash Flows (€m)	2019A	2020A	2021E	2022P	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	TV
Revenue	728	829	943	1,038	1,141	1,198	1,258	1,321	1,354	1,388	1,423	1,458	
YoY Growth		14%	14%	10%	10%	5%	5%	5%	2%	2%	2%	3%	
Adj. EBITDA	175	195	305	325	346	357	369	381	388	395	402	409	
EBITDA margin %	24%	24%	32%	31%	30%	30%	29%	29%	29%	28%	28%	28%	
EBITDA growth %		12%	56%	7%	6%	3%	3%	3%	2%	2%	2%	2%	
EBIT	126	150	257	273	289	298	306	315	320	325	330	350	
Taxes	36	45	76	81	85	88	90	93	94	96	98	103	
NOPLAT	90	105	333	354	374	385	396	408	414	421	428	454	
D&A	46	44	48	52	57	60	63	66	68	69	71	58	
Gross cash flow	136	149	381	406	431	445	459	474	482	491	499	512	
CAPEX	(35)	(39)	(53)	(52)	(57)	(60)	(63)	(66)	(54)	(56)	(57)	(58)	
Change in NWC	(78)	(27)	(39)	(52)	(57)	(48)	(50)	(53)	(41)	(42)	(43)	(44)	
Free cash flow to firm			289	302	317	337	346	355	387	393	410	421	426
@WACC			7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	
EV in year t			5,560	5,584	5,703	5,811	5,919	6,027	6,110	6,194	6,268	6,336	












Sensitivity analysis		Perpetual growth rate				
		0.30%	0.70%	1.10%	1.50%	1.90%
WACC	6.00%	22.7x	23.8x	25.1x	26.7x	28.6x
	7.00%	19.2x	19.9x	20.8x	21.8x	22.9x
	7.81%	17.0x	17.6x	18.2x	18.9x	19.8x
	9.00%	14.6x	15.0x	15.4x	15.9x	16.4x
	10.00%	13.1x	13.3x	13.7x	14.0x	14.4x

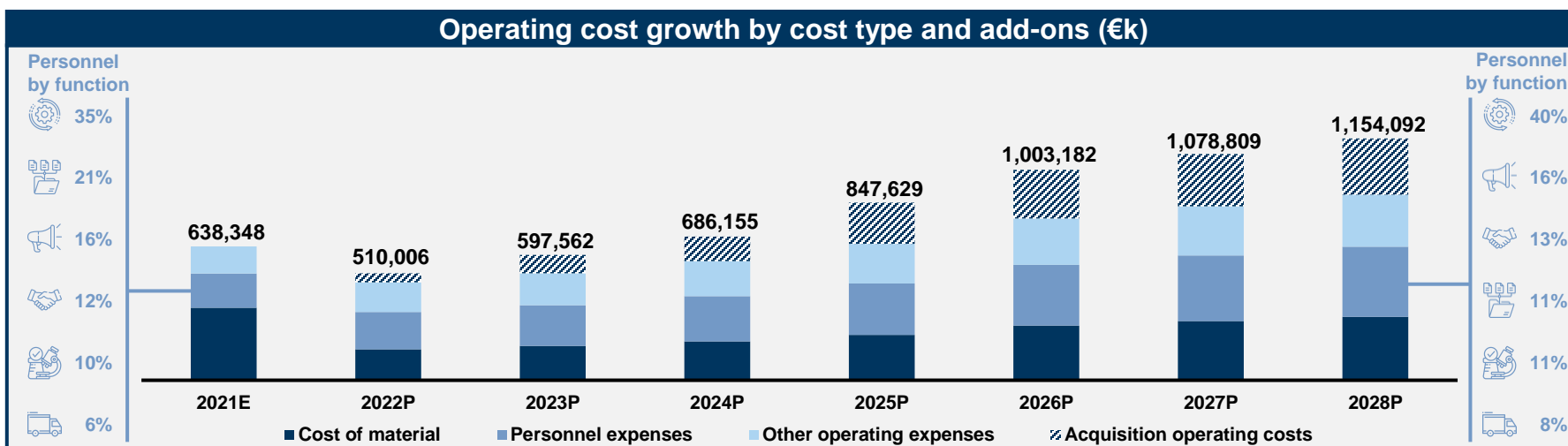
Assumptions	
Perpetual growth rate	refers to the 10-year average GDP growth in Germany

## 2 | Deep-dive: Business plan | IC case: Bottom-line forecast

Apart from minor improvements in personnel expenses, the optimized cost structure following the divestment of axicorp supports the EBITDA growth

Operating costs (€k)	2021E	2022P	2023P	2024P	2025P	2026P	2027P	2028P	CAGR
<b>Total revenues</b>	893,593	798,031	942,368	1,084,975	1,330,443	1,581,921	1,699,350	1,813,531	10.6%
Other operating income and similar	49,693	40,703	43,400	46,754	53,627	61,257	65,954	70,555	5.1%
<b>Total output</b>	943,287	838,734	985,768	1,131,729	1,384,070	1,643,177	1,765,303	1,884,087	10.4%
<b>Cost of material</b>	<b>(346,012)</b>	<b>(152,463)</b>	<b>(193,497)</b>	<b>(230,069)</b>	<b>(302,821)</b>	<b>(363,824)</b>	<b>(393,021)</b>	<b>(421,938)</b>	2.9%
% of revenues	38.7%	19.1%	20.5%	21.2%	22.8%	23.0%	23.1%	23.3%	-7.0%
<b>Gross profit</b>	597,275	686,271	792,270	901,660	1,081,250	1,279,353	1,372,283	1,462,148	13.6%
% of revenues	66.8%	86.0%	84.1%	83.1%	81.3%	80.9%	80.8%	80.6%	2.7%
<b>Personnel expenses</b>	<b>(163,387)</b>	<b>(181,891)</b>	<b>(209,655)</b>	<b>(239,985)</b>	<b>(286,740)</b>	<b>(340,658)</b>	<b>(366,411)</b>	<b>(392,352)</b>	13.3%
% of revenues	18.3%	22.8%	22.2%	22.1%	21.6%	21.5%	21.6%	21.6%	2.4%
<i>Personnel expenses of Dermapharm</i>	<i>(163,387)</i>	<i>(177,342)</i>	<i>(193,533)</i>	<i>(214,913)</i>	<i>(245,152)</i>	<i>(290,327)</i>	<i>(312,552)</i>	<i>(334,077)</i>	10.8%
# Production employees	748	826	910	1,019	1,173	1,401	1,501	1,595	11.4%
# Direct sales branded pharma employees	250	300	330	363	399	439	483	531	11.4%
# Marketing excl. direct sales branded pharma	341	369	396	439	510	632	648	653	9.7%
# Administration employees	455	455	455	455	455	455	455	455	0.0%
# Logistics employees	130	158	174	196	225	269	288	307	13.0%
# Product development employees	155	216	238	267	307	368	394	419	15.3%
<i>Personnel expenses of acquisitions</i>	<i>0</i>	<i>(4,549)</i>	<i>(16,122)</i>	<i>(25,072)</i>	<i>(41,588)</i>	<i>(50,330)</i>	<i>(53,859)</i>	<i>(58,275)</i>	53.0%
<b>Other operating expenses</b>	<b>(128,949)</b>	<b>(175,652)</b>	<b>(194,410)</b>	<b>(216,101)</b>	<b>(258,069)</b>	<b>(298,700)</b>	<b>(319,377)</b>	<b>(339,801)</b>	14.8%
% of revenues	14.4%	22.0%	20.6%	19.9%	19.4%	18.9%	18.8%	18.7%	3.8%
<b>Total EBITDA</b>	<b>304,939</b>	<b>328,728</b>	<b>388,205</b>	<b>445,574</b>	<b>536,441</b>	<b>639,996</b>	<b>686,495</b>	<b>729,995</b>	13.3%
EBITDA margin	32.3%	39.2%	39.4%	39.4%	38.8%	38.9%	38.9%	38.7%	

Comments	
	<b>Cost of material</b> , as a variable cost, are expected to develop <b>parallelly to sales</b> with sensitive <b>adjustments possible</b> in the course of the <b>BioNTech partnership</b>
	<b>Production employees</b> will increase in line with production (material expenses)
	<b>Marketing employees</b> expand due to branded pharma product roll-outs
	<b>Direct sales and branded pharma employee</b> expenses increase significantly driven by an instant 20% expansion of the direct salesforce as Dermapharm's USP
	<b>Administration employees</b> remain steady over the investment horizon; only employees from acquisitions are added
	<b>R&amp;D employees</b> are increasing as an M&A team works hand in hand with an R&D team for a two-fold market entry
	<b>Logistic employees</b> rise in number due to the ongoing BioNTech cooperation
	<b>Other operating expenses</b> rise steadily
	<b>Acquisition operating costs</b> are forecasted individually; administrative headcount receives one-time adjustment



## 2 | Deep-dive: Exit and returns | Sensitivity analyses: Sponsor returns

The proposed investment is highly sensitive towards its entry and exit multiple; entering for 0.5x less or exiting for 0.5x more leads to a min. 0.1x return expansion

Management case	Multiple expansion						Exit timing					Leverage conditions								
	Entry multiple	Exit multiple					Exit multiple	Exit year					Entry multiple	Senior debt level						
		16.3x	16.8x	17.3x	17.8x	18.3x		2024	2025	2026	2027	2028		5.2x	5.7x	6.2x	6.7x	7.2x		
16.2x	3.7x	3.8x	3.9x	4.1x	4.2x	16.3x	22.5%	25.5%	27.6%	25.4%	23.5%	16.2x	29.2%	30.4%	31.6%	32.8%	34.1%			
16.7x	3.5x	3.6x	3.8x	3.9x	4.0x	16.8x	24.1%	26.6%	28.4%	26.0%	24.0%	16.7x	28.1%	29.2%	30.3%	31.5%	32.8%			
17.2x	3.4x	3.5x	3.6x	3.7x	3.8x	17.3x	25.6%	27.6%	29.2%	26.6%	24.5%	17.2x	27.1%	28.1%	29.2%	30.3%	31.5%			
17.7x	3.2x	3.3x	3.4x	3.6x	3.7x	17.8x	27.0%	28.7%	30.0%	27.3%	25.0%	17.7x	26.1%	27.1%	28.1%	29.1%	30.3%			
18.2x	3.1x	3.2x	3.3x	3.4x	3.5x	18.3x	28.5%	29.7%	30.8%	27.9%	25.5%	18.2x	25.1%	26.1%	27.0%	28.0%	29.1%			
IC case	Entry multiple	Exit multiple					Exit multiple	Exit year					Entry multiple	Senior debt level						
		16.3x	16.8x	17.3x	17.8x	18.3x		2024	2025	2026	2027	2028		5.2x	5.7x	6.2x	6.7x	7.2x		
		2.9x	3.0x	3.1x	3.2x	3.3x		16.3x	17.0%	20.0%	21.6%	20.1%		18.7%	16.2x	23.3%	24.3%	25.5%	26.7%	27.9%
		2.8x	2.9x	3.0x	3.1x	3.2x		16.8x	18.5%	21.1%	22.4%	20.7%		19.3%	16.7x	22.2%	23.2%	24.3%	25.4%	26.6%
		2.7x	2.8x	2.8x	2.9x	3.0x		17.3x	19.9%	22.1%	23.2%	21.3%		19.8%	17.2x	21.2%	22.2%	23.2%	24.3%	25.4%
		2.6x	2.6x	2.7x	2.8x	2.9x		17.8x	21.4%	23.2%	24.0%	21.9%		20.2%	17.7x	20.3%	21.2%	22.2%	23.2%	24.2%
18.2x	2.4x	2.5x	2.6x	2.7x	2.8x	18.3x	22.8%	24.2%	24.7%	22.5%	20.7%	18.2x	19.4%	20.2%	21.2%	22.1%	23.1%			
Bank case	Entry multiple	Exit multiple					Exit multiple	Exit year					Entry multiple	Senior debt level						
		16.1x	16.6x	17.1x	17.6x	18.1x		2024	2025	2026	2027	2028		5.2x	5.7x	6.2x	6.7x	7.2x		
		2.0x	2.1x	2.2x	2.2x	2.3x		16.3x	9.4%	12.2%	13.3%	12.7%		12.2%	16.2x	14.6%	15.6%	16.6%	17.8%	18.9%
		1.9x	2.0x	2.1x	2.1x	2.2x		16.8x	10.9%	13.2%	14.1%	13.4%		12.7%	16.7x	13.6%	14.6%	15.6%	16.6%	17.7%
		1.8x	1.9x	2.0x	2.0x	2.1x		17.3x	12.4%	14.3%	14.9%	14.0%		13.2%	17.2x	12.7%	13.6%	14.5%	15.5%	16.6%
		1.8x	1.8x	1.9x	2.0x	2.0x		17.8x	13.8%	15.3%	15.7%	14.6%		13.7%	17.7x	11.8%	12.7%	13.6%	14.5%	15.5%
18.2x	1.7x	1.8x	1.8x	1.9x	1.9x	18.3x	15.2%	16.3%	16.4%	15.2%	14.1%	18.2x	11.0%	11.8%	12.6%	13.5%	14.5%			

## 2 | Deep-dive: Exit and returns | Secondary buy-out (1/2)

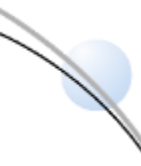
A club deal between previously interested large cap private equity parties would enable to finance Dermapharm's exit valuation of an equity value beyond €7bn



Name	Country	Description and rationale	Current fund	Equity ticket	Deal activity	Portfolio fit
THE CARLYLE GROUP		<ul style="list-style-type: none"> <li>Focus: I.a., <b>healthcare</b> companies in <b>Europe</b></li> <li>Owns various <b>healthcare</b> and <b>healthtech</b> companies in <b>Asia</b></li> <li><b>High momentum</b> in <b>pharma acquisitions</b>; four deals in 2021</li> </ul>	<b>Carlyle P. VII</b> €16.3bn AUM Raised in 2018	<b>N/A</b> (EV size up to €5bn)	<b>16</b> investments in 2021	
Advent International GLOBAL PRIVATE EQUITY		<ul style="list-style-type: none"> <li>Focus: I.a., <b>pharmaceuticals</b> companies in <b>Germany</b></li> <li>Acquired <b>Zentiva</b>, a Czech <b>generics pharma</b> company, in <b>2018</b></li> <li><b>Industry knowhow</b> benefits acquisition of Dermapharm</li> </ul>	<b>GPE IX</b> €15.6bn AUM Raised in 2019	<b>€100m - €2bn</b> (EV size up to €5bn)	<b>12</b> investments in 2021	
Cinven		<ul style="list-style-type: none"> <li>Focus: I.a., <b>healthcare</b> companies in the <b>DACH region</b></li> <li>Owns <b>63%</b> in German generics firm <b>Stada</b> jointly with Bain Capital</li> <li><b>Plenty experience</b> with owning <b>major German generics player</b></li> </ul>	<b>Cinven F. VII</b> €10.0bn AUM Raised in 2019	<b>&gt; €100m</b> (Ø EV size: €2.6bn)	<b>6</b> investments in 2021	
NORDIC CAPITAL		<ul style="list-style-type: none"> <li>Focus: I.a., <b>healthcare</b> companies in <b>Germany</b></li> <li>Acquired the <b>dermatology competitor LEO Pharma</b> in <b>2021</b></li> <li><b>High exposure</b>; <b>50%</b> of 2021 buy-outs transacted in <b>healthcare</b></li> </ul>	<b>N.C. Fund X</b> €6.1bn AUM Raised in 2020	<b>N/A</b> (Ø EV size: €480m)	<b>8</b> investments in 2021	
PAI PARTNERS		<ul style="list-style-type: none"> <li>Focus: I.a., <b>healthcare</b> companies in <b>Germany</b></li> <li>Owns French <b>specialty pharma</b> firm <b>Ethypharm</b> (pain drugs)</li> <li>Pharma producer would complement <b>healthcare service</b> portfolio</li> </ul>	<b>PAI Europe VII</b> €5.1bn AUM Raised in 2018	<b>N/A</b> (Ø EV size: €901m)	<b>9</b> investments in 2021	
BC PARTNERS		<ul style="list-style-type: none"> <li>Focus: I.a., <b>healthcare</b> companies in <b>Germany</b></li> <li>Acquired <b>Pharmathen</b>, a Dutch <b>generics producer</b>, in <b>2015</b></li> <li><b>High fit to Pharmathen</b> enables <b>reinvesting</b> into the <b>industry</b></li> </ul>	<b>BC E.C. XI</b> €3.1bn AUM Raised in 2021	<b>N/A</b> (Ø EV size: €1.3bn)	<b>3</b> investments in 2021	

## 2 | Deep-dive: Exit and returns | Secondary buy-out (2/2)

An exemplary case study of Dermapharm's canceled sales process in 2016 proves that the company offers high potential for a secondary Private Equity buy-out



### Longlisted buyers in 2016 sales process

### Shortlisted buyers in 2016 sales process

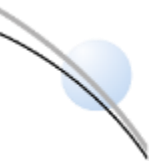
 <b>BC Partners Ltd. (<a href="#">link</a>)</b> London, United Kingdom €35bn committed capital	 <b>Nordic Capital (<a href="#">link</a>)</b> Stockholm, Sweden €7bn committed capital
<ul style="list-style-type: none"> <li>▪ <b>Geographical focus:</b> Europe and North America</li> <li>▪ <b>Sector focus:</b> Healthcare, telecommunication, media, and technology, business and financial services, industrials</li> <li>▪ <b>Similar current holding:</b> Pharmathen</li> <li>▪ <b>Offer price for Dermapharm:</b> €1.1bn</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Geographical focus:</b> Europe, North America, and China</li> <li>▪ <b>Sector focus:</b> Healthcare, tech and payments, financial services, industrial and business services</li> <li>▪ <b>Similar current holding:</b> LEO Pharma</li> <li>▪ <b>Offer price for Dermapharm:</b> N/A</li> </ul>

### Timeline of 2016 sales process

- **June 2014: Owner Wilhelm Beier examines sales opportunities**
  - According to Handelsblatt, the company's major shareholder, **Wilhelm Beier**, examined the **option to sell his stake** at various Private Equity companies
  - Various Private Equity managers and investment bankers were unsure of his motives, leading to speculation that he was **"testing" the market value**
- **Beginning of 2015: Share buyback by Wilhelm Beier**
  - Wilhelm Beier **bought back 10%** of the company's shares from **Bettina Strohscheer-Mies**, the founder of Dermapharm
- **Beginning of 2016: sales process with Private Equity companies**
  - Due to the **lack of succession**, Wilhelm Beier entered a sales process of Dermapharm with **major Private Equity companies** in the beginning of **2016**
  - **Ferber & Co.**, which also advised Dermapharm with the acquisition of Hübner, supported the company in the sales process
  - PEs participating in the process were **PAI Partners, Nordic Capital, The Carlyle Group, Cinven, BC Partners, and Advent International**
  - Besides the Private Equity firms, a minimum of **one competitor of the industry** also participated in the bidding process
  - At an EBITDA level of c. €100m in 2016 and **Beier's expectation** of a **12x multiple** for the company, **Beier expected a valuation of c. €1.2bn**
- **April 2016: Wilhelm Beier cancels the sales process**
  - In the second round of the sales process with **BC Partners and Nordic Capital** as **favorite buyers**, Wilhelm Beier canceled the sales process
  - After all, he was **not satisfied** with the **offered bids** according to insiders

## 2 | Deep-dive: Due diligence | Extensive due diligence

Various in-depth questions are required to be answered throughout the full-blown due diligence, which is already priced in in the uses and sources



	Topic	Potential red flags	Mitigation strategies	Relevance
Commercial	COVID-19 vaccines	Unsustainable COVID vaccine market over investment period	Deepening BioNTech-partnership beyond vaccine production	●●●●●
	Top products	Cluster risk, shrinking market size and market share	Diversifying in the product mix and global distribution	●●●●●
	M&A reliability	High reliability on further add-ons to sustain past growth levels	Capital reallocation in R&D as second market entry strategy	●●●●●
	Brand awareness	Unsuccessful addressing of products' target groups	Target group identification and dedicated marketing	●●●●●
Financial	Entry valuation	Unsustainable high valuation over investment horizon	Co-investment by family Beier assures fair entry valuation	●●●●●
	Margins	Lack in flexibility of add-ons' cost structures for improvements	Optimize operations by scaling (economies of scale)	●●●●●
	Inventories	No plannability of production and demand on product level	Optimize operational planning and increase order book forecast	●●●●●
	Cash flow	Inability to lever to the planned extent based on the cash flows	Increasing cash flows by performing less add-on acquisitions	●●●●●
Legal	Non-EU regulation	Potential hurdling of internationalization due to global regulation	Including legal capability in the global sales management team	●●●●●
	Direct sales regulation	Expiring permission of direct selling in Germany	Retaining current customers in Axicorp-like partner programs	●●●●●
	Patents	Competitive threats within the current patent portfolio	Increasing brand values by systematic target group marketing	●●●●●
	Cannabis regulation	Cannabis' inability to be rolled out as a lifestyle product	Development of plan A for medical and B for lifestyle purposes	●●●●●
Tax	Tax structure	Inefficient tax structure within the corporate group	Tax due diligence shall assess tax optimization potential	●●●●●
	Tax shield utilization	Inability of utilization due to "Zinsschranke" (German §4h EStG)	Reallocating between common stock and subordinated loan	●●●●●

### 3 | Individual reflection and paper (1/2) | Co-investment essentials

Co-investments by limited partners (LPs) of a fund (GP) are becoming increasingly attractive as a yield-enhancing tool, but what are the key considerations to make?

#### Types of co-investments

##### Direct co-investment

- **No parallel stake** in the fund
- Require **deep examination** of the target company and a **more active contribution**

##### Sidecar co-investment

- Fund investors receive **individual** investment opportunities **in addition** to the fund investment
- **Abbreviated examination** of the target company using information prepared by the **asset manager**

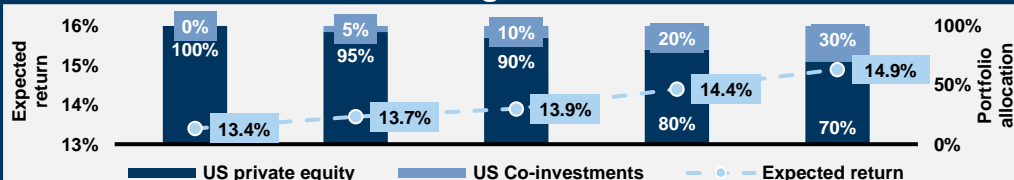
##### Co-investment funds

- Funds consisting of a **portfolio** of co-investments or Alternative Investment Funds (AIFs), e.g. fund of funds, with **co-investments as sub strategy**

#### Driver of co-investments

- **Considerable dry powder** in private equity and private debt funds
- **High demand of alternative investments in general** as they provide additional investment incentives, especially to **large investors** like pension funds or insurances

#### Return enhancement through addition of co-investments<sup>2</sup>



#### Limited partner's perspective

- Pros and chances**
- + **Lower fees** (in average 725 basis points), lifting the J-curve
  - + **Faster capital deployment** (few month)
  - + Enable **disproportional weighting of attractive high-yield** investments
  - + Institutional investors have **broader scopes of actions** in terms of sectors, currencies and other investment criteria
  - + Investor is **closer to the target**
  - + **Stronger relation** between GP and LP


- Cons and risks**
- Depending on allocation, **reduction of diversification**, leading to **cluster risks**
  - **Risk of pro-cyclicality**, especially if many big co-transactions in a short time period
  - **Decision-delaying inefficiencies** and divergences if **several co-investors** are involved
  - Goes along with **time and effort** and requires **experienced** professionals

#### General partner's perspective


- + **Sidecars:** Investments can be made **even if limits of the fund** have been **reached**, e.g. regarding maximum weight in individual investments, regions, or sectors
- + **Transaction security** can be increased by working with **reliable co-investors**
- + Tackling investment opportunities together with **experienced** and **well-known co-investor partners** can be beneficial for **future deal sourcing**

- Participation of co-investors can lead to a **slow down** of the overall process if they are **lacking sufficient expertise** in co-investments or if the **internal decision-making paths** are **too long**
- The **allocation of larger co-investment commitments** to a **few investors (LPs)** might **upset other investors** if they **feel disadvantaged**


#### Best practice set-up for co-investments



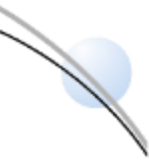
**Experience**  
in asset class



**Fast investment**  
decisions and **capacity**



**Sufficient capital** and  
opportunities



#### Reflection on the work project

##### What hard skills did I learn during the work project?

During this work project, I especially improved my PowerPoint and Excel skills. In PowerPoint, I increasingly used shortcuts and optimized my approach to building slides that display an essential message in a smooth way. I deepened my expertise in structuring and building up a complex financial model in Excel. Furthermore, I improved my knowledge about databases, such as Zephyr, Bloomberg, or Orbis.

##### What soft skills did I learn during the work project?

Due to several meetings with the CFO and investor relations of the company we analyzed, I further strengthened my professional appearance and confidence when discussing complex topics with people with in-depth know-how and great authority. Moreover, I strengthened my teamwork skills by tackling a long-term work project with three colleagues remotely and in different time zones

##### Retrospectively, what would I change about the way I work?

Sometimes I found myself not structured enough when it comes to building something from scratch like a model or a new slide. Down the road, I started improving my structure by setting up a standardized approach applicable on any task. As a result, this approach allowed me to work efficiently and faster. In the future, I will continue and further improve that approach.

##### Retrospectively, what would I change about my contribution to the team?

In general, I think we did a great job in working together. Obviously, there can be different opinions and approaches in a team of four people. Hence, communication is crucial to discuss discrepancies among the group and find solutions for our work going forward. I think we did very well on that topic. However, I will address specific issues earlier in the future to avoid unnecessary discussions.

#### Reflection on the overall master's program

##### What did I learn throughout the master's program at Nova SBE?

My time at Nova has enriched me not only professionally but also personally. In the context of several group work and Nova events, I gained many close international friendships and expanded my network significantly. I am sure that those contacts will last for a long time and positively influence my way of life. Additionally, I learned to tackle tasks and assignments efficiently and structured as I developed a process to follow throughout several individual and group works. Moreover, Nova SBE offered me excellent preparation for my future career by allowing me to focus on my favorite corporate finance topics, such as corporate valuations, M&A, and private equity, in-depth and opened many doors through its excellent reputation internationally. As a result, I will now start an internship in a private equity fund, which was my main goal.

##### How did I increase my Private Equity knowledge through this program?

The Private Equity Challenge allowed me to look into all aspects of a typical Investment committee paper in-depth. Since my master's focused on corporate finance topics, I enjoyed looking into strategical and market-related elements, such as competitive positioning, USPs, market trends, among others. Furthermore, it was thriving to understand the company and its business model in-depth and derive conclusions for our value creation strategies and projections. Throughout this project, I set myself into the position of an investment professional and adapted an intuitive instinct when looking into the company and its financials. I further enhanced my universe of quantitative and qualitative information about a company and its markets, essential in evaluating an investment case. With this, I understood the interests and goals investors, or the actual owner of the company have.



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