

# Fairness Opinion Cassiopea

**For the public tender offer by Cosmo Pharmaceuticals N.V. for all publicly held registered shares of Cassiopea S.p.A.**

Zurich, 1 October 2021

# Fairness Opinion Cassiopea

## Content

<b>1</b>	Introduction	Page 3
<b>2</b>	Company and market description	Page 8
<b>3</b>	Valuation analysis	Page 17
<b>4</b>	Conclusion	Page 28
<b>5</b>	Appendix	Page 31

# Fairness Opinion Cassiopea

## I Introduction

I.1	Background	Page 4
I.2	Our mandate	Page 5
I.3	Our approach	Page 6
I.4	Sources	Page 7

# I Introduction

## I.1 Background



Cassiopea is a specialty pharmaceutical company in the dermatology field listed on the Swiss Stock Exchange

Cassiopea S.p.A. ("Cassiopea" or "the company") is a specialty pharmaceutical company developing and commercializing prescription drugs with novel mechanisms of action to address long-standing and essential dermatological conditions, particularly acne, androgenetic alopecia and genital warts. The portfolio comprises four unencumbered clinical candidates.

The company is headquartered in Lainate (Milan), Italy, and generated a loss of EUR 12.3 million in FY2020. Cassiopea will launch its first product in Q4 2021 in the U.S. market.

Since its IPO in 2015, with the sale of secondary shares by Cassiopea's majority shareholder Cosmo Pharmaceuticals N.V.<sup>1</sup> ("Cosmo"), a specialty pharmaceutical company with a focus on gastroenterology and endoscopy, Cassiopea is listed on the Swiss Stock Exchange and currently has a market capitalization of CHF 378.4 million. As of 1 October 2021, Cassiopea had 10.75 million registered shares with a nominal value of EUR 1 each ("shares").<sup>2</sup>

On 4 October 2021 Cosmo will announce a public exchange offer of 0.467 Cosmo shares for 1 Cassiopea share

On 22 September 2021, the Board of Directors ("BoD") of Cassiopea received a first offer from Cosmo to purchase the entire share capital of Cassiopea by means of a voluntary public exchange offer. The final offer from Cosmo was sent to the company on 1 October 2021. Cosmo offers an exchange ratio of 0.467 Cosmo shares for 1 Cassiopea share. The transaction agreement was signed on 1 October 2021 and the voluntary public exchange offer will be announced on 4 October 2021.

In such a case, the BoD of the target company will assess the offer and prepare a recommendation to the shareholders. To support the board members in their assessment an independent Fairness Opinion is usually prepared.

---

<sup>1</sup> At the time of the IPO in 2015, it operated as Cosmo Pharmaceuticals S.A. In 2016, as effect of the merger of Cosmo Pharmaceuticals S.A. into Cosmo Pharmaceuticals N.V., shares in Cosmo Pharmaceuticals S.A. were replaced by shares in Cosmo Pharmaceuticals N.V.

<sup>2</sup> Swiss Stock Exchange, 1 October 2021.

## 1.2 Our mandate

The present Fairness Opinion provides a valuation analysis of Cassiopea within the proposed transaction

IFBC is an independent advisor and does not receive any compensation depending on the result of the valuation analysis or of the success of the proposed transaction

Valuation date is 1 October 2021

IFBC AG (“IFBC”) was mandated on 2 September 2021 by the BoD of Cassiopea to prepare an independent valuation report (“Fairness Opinion”) for the public tender offer by Cosmo for all publicly held registered shares of Cassiopea.

This report was solely prepared to support the BoD of Cassiopea assessing the public tender offer by Cosmo. It may be used only for the financial assessment of Cosmo’s offer by the BoD of Cassiopea. The use for any purpose other than assessing the financial fairness of the offer is excluded. In particular, the Fairness Opinion does not constitute a recommendation to the shareholders to accept or reject the offer.

IFBC issues this Fairness Opinion as an independent corporate finance advisor and will receive usual marketable fees for its services. IFBC does not receive any compensation that depends on the statements in this valuation report nor is IFBC entitled to receive a success fee if the proposed transaction is successfully completed. IFBC confirms that it is independent of the involved parties. IFBC also confirms that it is authorized to issue Fairness Opinions according to the applicable Art. 30 para. 6 of the takeover ordinance and that it is independent of the target company.

When preparing our valuation analyses, we relied on the accuracy and completeness of the information received by the management of Cassiopea. We further have assumed that the information received has been reasonably prepared on bases reflecting the best currently available estimates and good faith judgments of management of Cassiopea. Our responsibility is limited to accuracy and professional valuation and plausibility of the provided information and calculation. In particular, no audit or due diligence was performed by IFBC.

This Fairness Opinion was handed out to the BoD of Cassiopea on 1 October 2021 with the valuation analyses as per end of this day. The valuation is based on the current business plan, approved by the BoD on 23 September 2021 and the half-year financial statements of Cassiopea as of 30 June 2021.<sup>3</sup> According to management of Cassiopea, no significant events and transactions occurred between 30 June 2021 and the publication of the valuation report, which are not considered in the current forecast for FY2021.

---

<sup>3</sup> Sources: Cassiopea management; Cassiopea half-year report 2021.

The offered exchange ratio corresponds to an implicit price offered of CHF 37.13 per Cassiopea shares

Based on the closing price of Cosmo shares on the last trading day prior to the publication of the announcement (1 October 2021) of CHF 79.50 the offered exchange ratio corresponds to an implicit price offered of CHF 37.13 per Cassiopea share. Based on the volume-weighted average price (“VWAP”) of the Cosmo share over the last 60 trading days on the Swiss Stock Exchange prior to the publication of the announcement of this transaction (CHF 83.56) the offered exchange ratio corresponds to an implicit price offered of CHF 39.02 per Cassiopea share.

The price of Cosmo shares may change between the date of the announcement and the effective exchange for Cassiopea shares. Changes in Cosmo’s share price have an impact on the implicit price offered for a Cassiopea share. However, this Fairness Opinion relates exclusively to the implicit price offered of CHF 37.13 per Cassiopea share based on the closing price of the Cosmo share on the last trading day prior to the publication of the announcement.

### 1.3 Our approach

The present assessment of the financial fairness of the offer by Cosmo to the shareholders of Cassiopea is based on valuation considerations of IFBC. These rely on the following analyses which are described in detail within this report:

- Analyses of the company’s business, its product pipeline and strategy as well as the market environment
- High-level assessment of the business plan, approved by the BoD of Cassiopea
- Company valuation and calculation of the value per share based on a sum-of-the-parts valuation applying the risk-adjusted discounted cash flow method
- Analysis of the share price and current target prices made by analysts.

The assessment of the financial fairness of the offer of Cosmo to the shareholders of Cassiopea does not consider tax, legal and other issues which are specific to each investor. Therefore, quantitative statements on the value of Cassiopea are only possible in the context of this valuation report from the perspective of all shareholders. In accordance with best practice, the valuation analyses presented in this Fairness Opinion were performed on a stand-alone basis. Any possible benefits in connection with the exchange of Cassiopea shares into Cosmo shares were not considered.

## **I.4 Sources**

Among others, our valuation work is based on the analysis of the following information:

- Audited annual reports of Cassiopea (consolidated)
- Unaudited actual financial statements H1 FY2021 as of 30 June 2021
- Business plan of Cassiopea approved by the BoD as of 23 September 2021
- Information on employee stock option plan (“ESOP”)
- Capital market and financial data of selected comparable companies (source: Refinitiv Eikon)
- Other publicly available information
- Management discussions

## Fairness Opinion Cassiopea

### **2 Company and market description**

<b>2.1</b>	Overview of Cassiopea	Page 9
<b>2.2</b>	Business model of Cassiopea	Page 10
<b>2.3</b>	Historical key events and KPIs of Cassiopea	Page 13
<b>2.4</b>	Market overview	Page 15



## 2 Company and market description

### 2.1 Overview of Cassiopea

Cassiopea is a specialty pharmaceutical company in the dermatology field

Cassiopea is an Italian specialty pharmaceutical company domiciled in Lainate, Italy, focusing on the development and commercialization of innovative dermatology prescription drugs to tackle highly prevalent skin diseases. In particular, the company strives to target unmet needs regarding the treatment of acne, androgenetic alopecia (hair loss) and genital warts with product candidates based on novel mechanisms of action and new chemical entities. Cassiopea has a lean organization in managing the ongoing clinical trials and development programs with an average number of employees of 11.5 during FY2020.

Since July 2015, Cassiopea is listed on the SIX Swiss Exchange (“SIX”) pursuant to the sale of secondary shares by Cassiopea’s majority shareholder Cosmo within the IPO of Cassiopea. Cosmo retained a 45.1% stake which was increased to 46.6% after the conclusion of a capital increase by the amount of EUR 23.3 million in June 2020.

Today, strategic and financial investors with a stake of at least 3.0% each hold together 62.6% of the shares of the company. Thereof, Cosmo holds 46.6%, Cosmo Holding S.a.r.l. 7.5%, Herz/Logistable Group 4.7% and LLB Swiss Investment AG 3.8%.

The company currently has a market capitalization of CHF 378.4 million.



Cassiopea is headquartered in Lainate, Italy



The product pipeline comprises four innovative dermatology drug candidates



62.6% of Cassiopea are held by strategic and financial investors with a stake > 3.0%



The current market cap amounts to CHF 378.4 million

## 2.2 Business model of Cassiopea

Product pipeline of Cassiopea



CB-06-01

Cassiopea's product pipeline currently consists of four different dermatology product candidates in mid to late-stage development phases. All of them are based on novel mechanisms of action and new chemical entities targeting unmet medical needs for the treatment of acne, androgenetic alopecia, and genital warts.

### Winlevi

Winlevi is Cassiopea's most advanced product and a first-in-class topical androgen receptor inhibitor for the treatment of acne vulgaris in patients of 12 years and older which tackles the androgen hormone component of acne in both males and females. These receptor inhibitors limit the effects of the hormones on increased sebum production and inflammation. After demonstrating highly statistically significant improvements in efficacy and a favorable safety profile in several clinical studies, Winlevi was approved by the United States Food and Drug Administration ("FDA") in August 2020. The last approval by the FDA for a novel acne drug with a new mechanism of action dates back about 40 years. The product launch in the U.S is expected to take place during Q4 2021 by Cassiopea's partner Sun Pharmaceutical Industries Ltd. ("Sun Pharma").

### Breezula

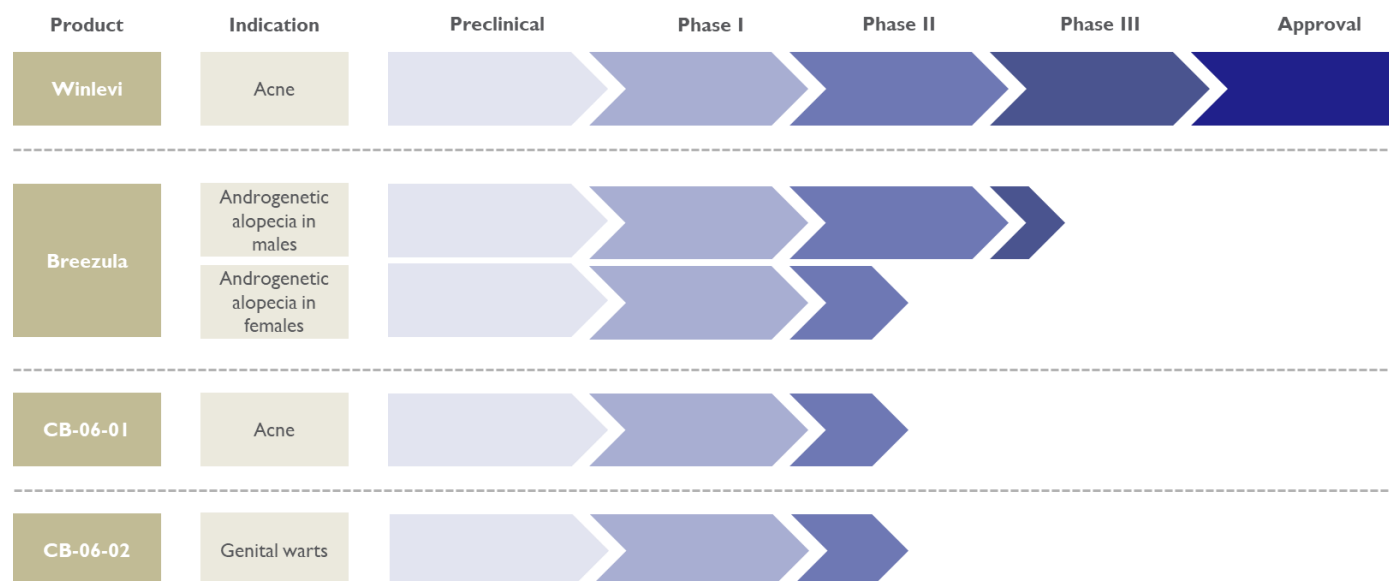
Based on the same novel androgen receptor inhibitor and new mechanism of action as used for the treatment of acne, Breezula is subject to a different formulation (anhydrous solution) and a higher dosage (7.5x) and intended to reduce hair thinning and hair loss in patients suffering from androgenetic alopecia ("AGA"). AGA is the most common cause of hair loss. Clinical safety and dosage studies achieved widely positive results regarding the application of Breezula in different groups of males and a phase 3 program is expected to start shortly. However, recently published first phase 2 topline results for the treatment of AGA show less promising results for females. The treatment showed only significant improvement for women younger than 30 years.

### CB-06-01

Many of the bacteria strains are resistant to commonly prescribed antibiotics for acne. CB-06-01 is Cassiopea's second compound in clinical development for the topical treatment of acne with an attractive clinical profile targeting the bacteria with a low propensity to resistance. Further phase 2 trials are expected to start after the development of a new absorption-improved formulation and the conduction of skin penetration tests. If successful, the drug can be administered in combination with Winlevi or other existing medication to target as many factors as possible causing acne.

**CB-06-02**

CB-06-02 is based on a rare chemical element called tellurium and is being developed for the treatment of genital warts caused by Human Papilloma Virus (“HPV”) infections. The drug is intended to support the natural response of the immune system against HPV in contrast to current treatment options which solely focus on the removal of the warts. Since positive results were achieved during a phase 2 proof of concept trial, further development is pursued with the preparation for a subsequent phase 2 dose ranging trial.

**Product development pipeline of Cassiopea**

Source: Cassiopea management, annual report FY2020.

## Strategy

The strategy of Cassiopea is built on the intention to solely provide new innovative treatment for skin diseases based on novel chemical entities. Since the dermatology market overall lacks innovation in terms of research and development, patients suffering from acne, androgenetic alopecia or genital warts are to this day limited to only a few effective treatment options with partially limited use due to systemic side effects. In combination with the fact that most of the currently available mechanisms of action have already been available since decades, the company is convinced of the exceptional opportunities the dermatology market has to offer.

Superficially, Cassiopea is focusing on optimizing the commercial potential for its drugs in the U.S. market. Product launches outside the U.S. and Canada only play a subordinated role for the company since on the one hand the American healthcare system bears a higher price potential for prescription drugs than any other around the globe. On the other hand, usually further clinical studies must be conducted requiring additional financial effort to receive approval by other organizational healthcare authorities regardless of an already existing approval by the FDA.

## Cassiopea signed exclusive license and supply agreements with Sun Pharma

Due to a service agreement with Cosmo, Cassiopea has access to a very experienced team in terms of product development and manufacturing. This partnership preserves the company from having to build its own highly cost-intensive organization in the short-term to launch their approved products. Therefore, the activities are mainly geared towards managing ongoing clinical trials, development programs for the own pipeline as well as pre-launch activities. After receiving the first-ever FDA approval in the company's history for Winlevi in August 2020, Cassiopea recently signed exclusive license and supply agreements with Sun Pharma for the commercialization of the first-in-class topical acne treatment in the U.S. and Canada.

Consequently, Winlevi as Cassiopea's first market-ready drug is expected to be available in the U.S. in Q4 2021. Based on the current setup of corporate partnering with Cosmo and the established supply and license agreements with Sun Pharma, the company will generate its revenues through specific milestone and royalty payments as well as supply margins.<sup>4</sup>

---

<sup>4</sup> Sources: Cassiopea management; Cassiopea annual reports; Cassiopea half-year report 2021; Cassiopea press releases 27 August 2020 and 31 August 2021.

## 2.3 Historical key events and KPIs of Cassiopea

### Historical key events

- Shortly after the listing and commencement of trading of Cassiopea's shares on the Swiss stock market as per mid-2015, the company received FDA approval to initiate the phase 3 clinical trial program for Winlevi. At the same time, the phase 2 POC trials for Breezula, CB-06-01 and CB-06-02 were ongoing.
- During 2016, first promising top line efficacy results of the phase 2 POC trials were published for both Breezula and for CB-06-01.
- In 2017, the phase 3 clinical trial program for Winlevi reached the final stage of enrolment. Furthermore, the company completed the recruitment for the phase 2 dose ranging study for Breezula and the Phase 2 POC study for CB-06-02.
- After completing the phase 3 program for Winlevi in 2018, Cassiopea announced positive data for the pivotal phase 3 studies. In addition, Cassiopea announced positive interim results of its phase 2 dose ranging study for Breezula and positive POC data for CB-06-02.
- In 2019, Cassiopea announced positive results of its open-label study evaluating Winlevi for a treatment period up to one year. Additionally positive results were communicated to the public in conjunction with the phase 2 dose ranging trial in men for Breezula. An important milestone was reached in 2019 when Cassiopea announced the FDA submission of the New Drug Application for Winlevi. Furthermore, Cassiopea communicated the first patient enrolment into the Phase 2 POC study for Breezula in females with Androgenetic Alopecia ("AGA").
- As per June 2020, Cassiopea successfully concluded a capital increase among its existing shareholders generating gross proceeds of EUR 23.3 million to maintain the further development of its product candidates. Two months later the company received its first-ever approval by the FDA for its topical drug Winlevi for the treatment of acne in patients of 12 years and older, the first new mechanism for acne in nearly 40 years. Later in the year the company announced the completion of enrollment of its Phase 2 POC study for Breezula in females with AGA.
- Highly focusing on the preparations for the US commercial launch of Winlevi, Cassiopea ultimately announced the signing of exclusive license and supply agreements with Sun Pharma on 26 July 2021. From these agreements Cassiopea received an upfront payment of USD 45 million. Furthermore, the company will receive potential commercial milestones totaling up to USD 190 million and customary double-digit royalties. Winlevi is expected to be available in the U.S. in Q4 2021.<sup>5</sup> In addition, the company announced the top line results of the Phase 2 POC study for Breezula in females.

<sup>5</sup> Sources: Cassiopea management; Cassiopea annual reports; Cassiopea half-year report 2021; Cassiopea press releases 27 August 2020 and 31 August 2021.

## Historical KPIs of Cassiopea

## Historical KPIs of Cassiopea

in EUR'000	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	H12021
Revenue	0	0	0	0	0	0	0
Other income	0	5'883	3'820	916	686	594	0
R&D costs	-7'597	-14'310	-13'061	-12'240	-7'875	-6'440	-3'753
Selling and G&A costs	-760	-2'026	-1'484	-1'890	-3'879	-5'175	-2'535
<b>Operating result</b>	<b>-8'357</b>	<b>-10'453</b>	<b>-10'725</b>	<b>-13'214</b>	<b>-11'068</b>	<b>-11'021</b>	<b>-6'288</b>
Total liabilities	2'655	2'776	2'115	2'028	12'334	3'012	8'557
Total equity	47'181	39'149	26'354	14'512	3'727	15'615	9'845
CAPEX	228	151	83	128	2'514	86	40

Sources: Cassiopea annual reports FY2015 – FY2020; Cassiopea half-year report 2021.

Since the company historically neither had any products on the market nor entered any licensing agreements for any of the drug candidates under development, no operating revenues were generated between Cassiopea's IPO in 2015 and the 30 June 2021. Therefore, most of the operating result was driven by R&D costs as well as administrative costs regarding the management and advancement for the companies own clinical programs. Overall, Cassiopea spent an amount of roughly EUR 83 million for the development of its product candidates within the above illustrated time period. This corresponds to annual R&D-related expenses of EUR 12.8 million per year on average.

With two capital injections made by the shareholders in 2015 (EUR 49.9 million) and 2020 (EUR 23.3 million), the company raised funds by a total amount of EUR 73.2 million to maintain a solid equity base for covering the annual losses carried forward arising from the R&D efforts made. Except for FY2019 when Cassiopea has drawn an intermediate loan facility granted by Cosmo, liabilities mainly composed of trade payables in the past.

Historical CAPEX is particularly linked to patents and rights referring to costs for filling and extension of patents owned by Cassiopea as well as fee payments for the submission of new drug applications ("NDA"). The sharp one-time increase in FY2019 is caused by the PDUFA<sup>6</sup> fee paid to FDA for the Winlevi NDA.

<sup>6</sup> PDUFA: Prescription Drug User Fee Act.

## 2.4 Market overview

### Overview on selected dermatology markets

The below following statements regarding the dermatology market are explicitly related to acne, hair loss and genital warts as single parts of the entire dermatology market representing Cassiopea's focus areas.

### Acne

Acne vulgaris is one of the most common skin conditions and ranks among the top 10 of the most prevalent diseases worldwide. Elevated levels of androgen and estrogen during onset of puberty are the main reason for the development for some degree of acne. Based on recent estimations, approximately 10% of the global population are affected.<sup>7</sup> Depending on factors like geographical location, ethnicity, and age, among others, the prevalence of having acne at some point in time varies between 35% and almost 100%.<sup>8</sup> Specifically in the U.S., Cassiopea's targeted key market for Winlevi, up to 50 million people suffer from acne according to the American Academy of Dermatology Association. Since factors such as emotional stress, hot and humid climate and excessive use of cosmetics are suspected to foster the onset of the disease, the number of people suffering on acne is expected to grow substantially in the future. The global acne medication market is estimated to surpass a size of USD 13.1 billion by 2027 based on a compounded annual growth rate ("CAGR") of roughly 6% between 2021 and 2027.<sup>9</sup>

### Androgenetic Alopecia ("AGA")

AGA or patterned hair loss is the most common type of progressive hair loss. Depending on age and race up to 30% of men by the age of 30 years suffer from AGA. This proportion steadily increases with age to a share of nearly 80% by 70 years. Generally, people from the Far East (e. g. China and Japan) as well as African American are less affected than Caucasians.<sup>10</sup> However, women suffer from AGA almost as often as men. In the U.S. for instance, approximately 50–60 million men and 30–35 million women in the U.S. show a certain degree of patterned hair loss. Nevertheless, likely due to the limitations of current treatments and the lack of available options, only a minority sought for treatment.<sup>11</sup> Globally, the market size for alopecia treatments was valued to USD 7.6 billion in 2020 with an expected annual growth rate of 8.1% between 2021 and 2028.<sup>12</sup>

<sup>7</sup> Source: Tan, J.K.L & Bhate, K., A global perspective on the epidemiology of acne, British Journal of Dermatology, p. 3, 2015.

<sup>8</sup> Source: Heng, A.H.S & Chew, F.T., Systematic review of the epidemiology of acne vulgaris, Scientific Reports, p. 1, 2020.

<sup>9</sup> Source: Global Market Insights, Acne Medication Market Size By Formulation, [...], Competitive Market Share & Forecasts, 2021-2027, June 2021.

<sup>10</sup> Source: Lolli F et al., Androgenetic alopecia: a review, Endocrine, p. 9, 2017.

<sup>11</sup> Source: Cassiopea annual report FY2020, p. 12.

<sup>12</sup> Source: Grand View Research, Alopecia market size, share & trends analysis by disease type, [...], and segment forecasts, 2021 – 2028, July 2021.

## Genital warts

Cassiopea's third dermatology product candidate is focusing on the treatment of genital warts, a sexual transmitted disease caused by HPV. In the U.S., approximately 14 million people are newly infected with Human Papillomavirus every year and 79 million people are estimated to be infected at any time. However, there are more than 100 different virus types and only few of them lead to a potential development of warts.<sup>13</sup> The global market size was estimated to a value of USD 6.4 billion in 2020 and is expected to reach a size of USD 10.6 billion by 2028 at a CAGR of 6.8%.<sup>14</sup>

---

<sup>13</sup> Source: The American Sexual Health Association, HPV: Fast Facts, September 2021.

<sup>14</sup> Source: Data Bridge Market Research, Global Genital Warts Market – Industry Trends and Forecasts to 2028, August 2021.



## Fairness Opinion Cassiopea

### **3 Valuation analysis**

<b>3.1</b>	Valuation approach	Page 18
<b>3.2</b>	Risk-adjusted DCF valuation	Page 19
<b>3.3</b>	Share price analysis	Page 25

## 3 Valuation analysis

### 3.1 Valuation approach

According to best practice, we basically focus on the risk-adjusted DCF method to value Cassiopea

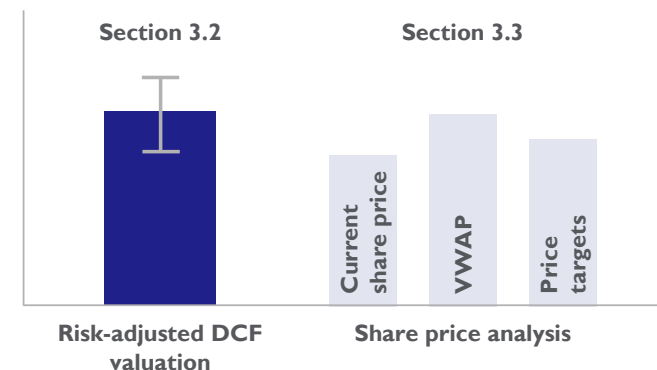
We value Cassiopea on a consolidated, stand-alone basis, applying the best practice valuation approach to assess the fairness of the offer made by Cosmo from a financial point of view. We calculated the value per share of Cassiopea as per relevant valuation date of 1 October 2021 in accordance with the signing of the transaction agreement between the parties on 1 October 2021.

Within our valuation framework the risk-adjusted discounted cash flow approach (“DCF approach”) is of the greatest importance. This approach is best practice to value pharmaceutical companies with a limited number of products. In this context, the single drug candidates are valued separately (sum-of-the-parts) to consider the likelihood of future positive cash flow realizations attributable to each product in dependence of the development phase and the corresponding probability of success.<sup>15</sup> In addition, overhead costs are considered. In line with best practice, only products that are currently in the product pipeline of Cassiopea are valued.

The equity value of Cassiopea is then divided by the dilutive number of shares outstanding to present the value per share of Cassiopea. The resulting value per share from the sum-of-the-parts valuation is compared to the current share price of Cassiopea, the VWAP of Cassiopea and the target share prices published by analysts. Additionally, we analyzed the market liquidity of Cassiopea’s shares.

Since Cassiopea’s first product launch is expected in Q4 FY2021 and to date neither revenues nor positive earnings have been realized, we explicitly waive comparison with trading and transaction multiples due to insufficient expressive power and reliability.

#### Valuation approach



<sup>15</sup> Source: See among others H. Sanchez et al., How to Approach Asset Valuation in Pharma & Biotech: Putting a price tag on emerging therapies, 2018.

## 3.2 Risk-adjusted DCF valuation

### 3.2.1 Introduction to the valuation approach

The applied sum-of-the-parts risk-adjusted DCF valuation approach is in line with corporate finance theory as well as best practice for clinical-stage life science and healthcare company valuation. In general, the value of a company results by discounting the probability-weighted expected future free cash flows (“FCF”) to equity with the cost of equity to the defined valuation date.<sup>16</sup>

Based on the described valuation approach, the equity value as of 1 October 2021 can be determined as follows:

Determination of equity value

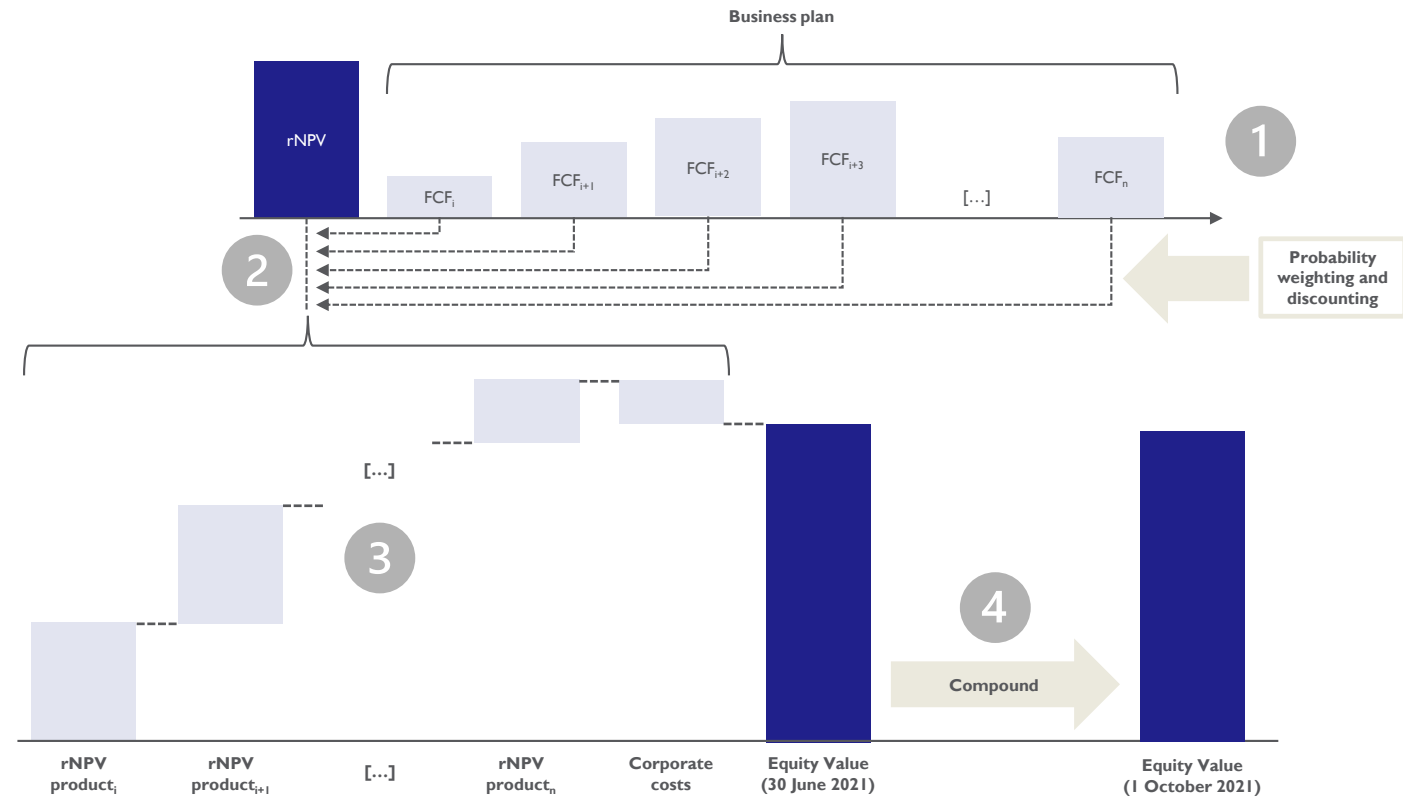
- 1 The product-specific expected free cash flows until FY2042 are determined according to the business plan provided by the management of Cassiopea. Assumptions were reconciled with the management of Cassiopea and the latest financial statement as of 30 June 2021. Thereby, the product-specific expected life cycles are considered. Since Cassiopea expects free cash flows of products to significantly decrease after patent expiration due to marketed generics, fade-out periods of six years after patent expiry are considered reflecting the declining market share expectations. Due to insignificant profits and high uncertainty thereafter, no additional terminal value component is considered.
- 2 The expected free cash flow components of the planning period are then risk-adjusted using development stage-specific probabilities of success for the different products. Subsequently, the expected free cash flows to equity of the products as well as the overhead corporate costs are discounted to 30 June 2021 by applying an appropriate cost of equity for Cassiopea.
- 3 The sum of the risk-adjusted discounted free cash flows of the different products as well as the overhead corporate costs leads to the equity value as of 30 June 2021.
- 4 The resulting equity value is then compounded with the cost of equity to receive an equity value as per valuation date (1 October 2021).

---

<sup>16</sup> We applied the equity approach as the company will have no financial liabilities from 2022 onwards.

The illustration below summarizes the determination of the equity value of Cassiopea as of 1 October 2021:

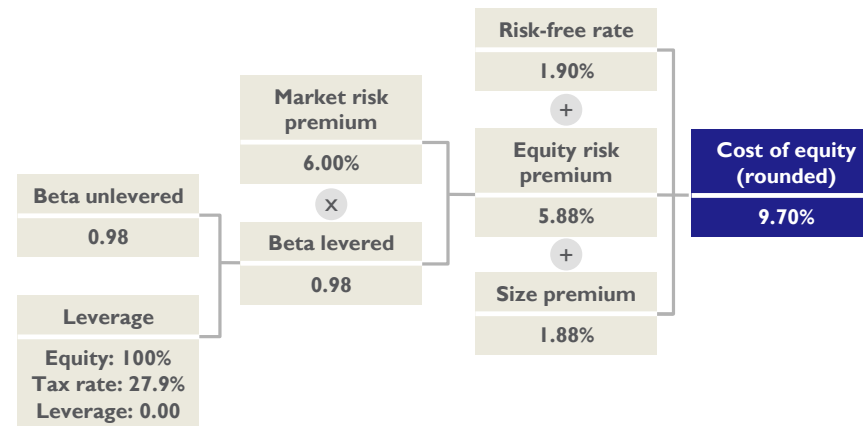
### Determination of equity value of Cassiopea as of 1 October 2021



As the valuation of Cassiopea is performed in EUR, the functional currency of Cassiopea, the equity value in EUR must be converted into CHF applying the exchange rate EUR/CHF as of valuation date. The resulting equity value is then divided by the current number of dilutive shares outstanding to calculate the value per share as of 1 October 2021.

The illustration below summarizes the determination of the cost of equity:<sup>17</sup>

#### Determination of cost of equity of Cassiopea



### 3.2.2 Business plan

Free cash flow estimations are based on the business plan approved by the BoD of Cassiopea and independent assessment and verification by IFBC

The forecasted free cash flows for H2 FY2021 through FY2042 are based on the business plan of Cassiopea as well as assumptions reconciled with the management of Cassiopea and the latest financial statement as of 30 June 2021. To perform our valuation, we received a business plan approved by the BoD of Cassiopea on 23 September 2021.

The business plan is based on a product-specific bottom-up planning. Market share and volume of Winlevi is based on brand leader products with similar profiles to Winlevi and projected market acceptance based on qualitative and quantitative market research studies. Brand pricing is based on overall branded acne competitors. Breezula is based on an epidemiology model to quantify the number of patients seeking treatment. Its market share is estimated based on previous similar products and projected market acceptance based on qualitative market research studies. Pricing is based on competitive pricing according to market research.

<sup>17</sup> For further details see appendix.

Primary revenue components for all products are milestone payments, royalties and supply chain margins consistent with an out-licensing business model. Main cost components are R&D expenses, cost of goods sold and structural costs of Cassiopea. The business plan is based on FY2021 which is characterized by the upfront payment of USD 45 million by Sun Pharma plus royalties and supply chain revenues to a relatively small extent. The resulting key value drivers and main assumptions are shown in the table on the right. The year 2030 represents the expiration date of Winlevi US patent while the patents of the other products are expected to expire in 2036.

#### Summary of the main assumptions in the business plan

Average	FY22 - FY30	FY22 - FY36
Revenue growth (CAGR)	18.7%	6.1%
EBITDA margin		Ø 58.6%
CAPEX in EUR		Ø 100k
NWC (incl. operating cash) in % of revenue		Ø 27.5%

Source: Business plan Cassiopea, analysis by IFBC.

We assessed and verified the business plan received from an independent point of view. For this reason, the main business plan assumptions have been cross checked with the analysts' forecasts for Cassiopea as well as for the peer group companies and market studies. The main assumptions are in the following described in more detail:

#### Probability of success

Based on the current development stage of the products, the analysis of research papers<sup>18</sup>, comparisons to similar products and discussions with the management of Cassiopea, the following risk-weights were applied within the risk-adjusted DCF calculations in relation to a successful market launch:

- 1) Winlevi U.S. and Canada: 100%
- 2) Winlevi Ex-U.S. and Canada: 90%
- 3) Breezula: 60%
- 4) CB-06-01 and CB-06-02: 15%.

In addition, the likelihood of a halt of R&D expenses in case of unsuccessful clinical trial results has been adequately considered.

#### Capex assumptions

Between FY2015 to FY2020 Cassiopea had capital expenditures ("CAPEX") between EUR 83k to EUR 228k, averaging at EUR 135k (excluding FY2019 which entailed extraordinary investments). Until FY2042, a stable CAPEX amount of EUR 100k p.a. is planned. Depreciations were considered according to the business plan.

<sup>18</sup> E.g. BIO, QLS Advisors, Informa UK Ltd, 2021, Clinical Development Success Rates and Contributing Factors 2011–2020.

Net working capital (“NWC”) In the period FY2022 to FY2042 Cassiopea expects that NWC including operating cash will on average correspond to 27.5% of revenue. The NWC planning considers the payment terms of the supply and licensing agreements with Sun Pharma, general payment terms and the required inventory in relation to sales volumes. Operating cash is reflected with a cash burn rate of 60 days.

Taxes The forecasted tax asset stemming from the tax loss carry forwards prior to 30 June 2021 as well as tax credits, relating to R&D expenses and withholding taxes, are considered in this valuation. For the years FY2021 to FY2042 the planned effective tax charges by Cassiopea are taken into account. Based on their analysis, Cassiopea estimates a long-term tax rate of 27.9% (3.9% IRES plus 24.0% IRAP)<sup>19</sup> and a reduction of the tax basis due to the establishment of a patent box structure. It is assumed that the patent box will take effect as soon as Cassiopea’s tax asset has been utilized. The new structure should reduce the IRES tax basis in relation to milestone and royalty revenues by 50%.

### 3.2.3 Discounted cash flow analysis

Determination of the equity value Discounting the risk-weighted expected free cash flows for H2 FY2021 to FY2042 with the cost of equity of 9.70%<sup>20</sup> results in an equity value as of 30 June 2021 of EUR 382.5 million. As of 30 June 2021, Cassiopea has no excess liquidity or other non-operating assets or debt-like items that require additional consideration. The repayment of the financial liability as of 30 June 2021 of EUR 6.2 million is considered in the free cash flow to equity in the second half-year 2021.

The equity value is compounded with the cost of equity to the valuation date (1 October 2021) and then converted from EUR into CHF, applying an exchange rate of 1.0784<sup>21</sup>. This results in an equity value as of 1 October 2021 of CHF 422.3 million.

Calculation of value per share in CHF As of 1 October 2021, a total of 10’750’000 shares are outstanding.<sup>22</sup> Additionally, the dilutive effect of the outstanding employee stock option plan (“ESOP”) is considered. Based on the implicit offer price of CHF 37.13 per Cassiopea share, proceeds of CHF 8.5 million in relation to the ESOP are added to the equity value. Dividing the ESOP-adjusted equity value as of 1 October 2021 by the total diluted number of shares of 10’998’332 results in a value per share of CHF 39.17.

<sup>19</sup> IRES: imposta sul reddito sulle società, IRAP: imposta regionale sulle attività produttive.

<sup>20</sup> See appendix for details on the calculation of the cost of equity.

<sup>21</sup> EUR/CHF-spot rate as of 1 October 2021, Source: Refinitiv Eikon.

<sup>22</sup> Source: Cassiopea management.

## Sensitivity analysis

### Sensitivity analysis of value per share as of 1 October 2021 (in CHF)

		Cost of equity				
		10.20%	9.95%	9.70%	9.45%	9.20%
Δ Probability of success (in pp)	10.00%	41.38	42.07	42.78	43.51	44.25
	5.00%	39.65	40.31	40.97	41.66	42.36
	0.00%	37.93	38.54	39.17	39.81	40.47
	-5.00%	36.20	36.77	37.36	37.96	38.58
	-10.00%	34.47	35.01	35.55	36.12	36.69

Source: IFBC.

The table above shows a sensitivity analysis for the value per share in CHF. Thereby, the valuation impact of a change in the cost of equity by  $\pm 50$  basis points and a change in the development-phase specific probability of success by  $\pm 10$  percentage points leads to a value range between CHF 34.47 and CHF 44.25.

## Consideration of additional sales scenarios

Besides the previously discussed business plan, the management of Cassiopea has developed two additional scenarios regarding the number of Winlevi units sold and the sales prices per unit in the U.S. and Canada which have an impact on the peak sales in these markets. The sales of Winlevi in other territories than the U.S. and Canada as well as the sales of other products are unchanged to the business plan.

## Upside scenario

The upside scenario assumes about 20% higher peak sales for Winlevi in the year 2030 in comparison to the business plan. Taking the associated increase in milestones, royalties and sales margins into account, the value per share in the upside scenario is CHF 44.26.

## Downside scenario

By contrast, the downside scenario assumes about 50% lower peak sales for Winlevi in the year 2030 in comparison to the business plan. The value per share in the downside scenario is CHF 27.73.



## Summary

- Applying the risk-adjusted DCF approach to determine a company value is recognized as best practice for a clinical-stage specialty pharmaceutical company.
- The assumptions regarding free cash flows are based on the business plan approved by the BoD on 23 September 2021.
- This business plan of Cassiopea is subject to various risks, especially the probability of success of the products in its pipeline. Hence, development stage-specific probabilities are applied.
- To determine the equity value of Cassiopea a cost of equity of 9.70% was applied.
- The resulting value per share of Cassiopea is CHF 39.17.
- The sensitivity analysis results in a value range for the value per share of CHF 34.47 to CHF 44.25.
- The assessment of scenarios regarding peak sales volumes of Winlevi in the U.S. and Canada results in a value per share of CHF 27.73 in a downside scenario and CHF 44.26 in an upside scenario.

### 3.3 Share price analysis

Development of share price

Due to the outbreak of the COVID-19 pandemic and the prevailing uncertainties in the market, Cassiopea's share price dropped to an all-time low of CHF 25.4 on 20 March 2020. After a quick recovery phase and the announcement of Cassiopea's first ever achieved approval for one of its dermatology drugs by the FDA, the share price further increased until the end of August 2020 to CHF 58.6 and thus almost reached its all-time high of CHF 60.1 (end of August 2018). However, in the subsequent months the share price traded primarily between CHF 40.0 and CHF 50.0. The development was fairly stable until the end of July 2021 and a recent clearly visible correction. The share price closed on 1 October 2021 at a price of CHF 35.2.

**Cassiopea share price development since January 2019 (in CHF)**



Sources: SIX Swiss Exchange, Refinitiv Eikon, analysis by IFBC.

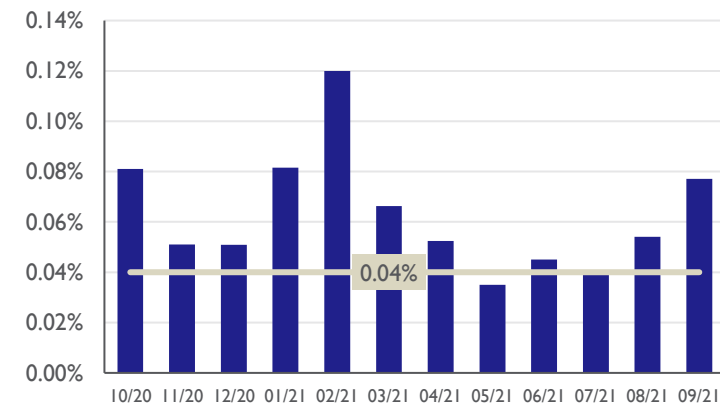
The implicit price offered of CHF 37.13 per Cassiopea share is 5.5% higher than this last price prior to the announcement date of the offer of Cosmo. Compared to the VWAP of the last 60 trading days of CHF 39.01 as of 1 October 2021, the implicit price offered represents a discount of 4.8%.

#### Liquidity analysis

According to applicable takeover law, shares of companies not listed in the Swiss Leader Index ("SLI") are liquid "if the monthly median of the daily volume of a security relative to its free float has been at least equal to 0.04% over 10 of the 12 months prior to the publication of the offer or prior announcement."<sup>23</sup>

As shown in the graph on the right the median of the trading volume is higher than the benchmark in every month except for May und July 2021 during the twelve-month period prior to the announcement day. Consequently, the shares of Cassiopea can be considered as liquid and are therefore a valid reference to assess the offer by Cosmo.

**Median of the number of traded shares in % of free float per month**



Sources: Refinitiv Eikon, analysis by IFBC.

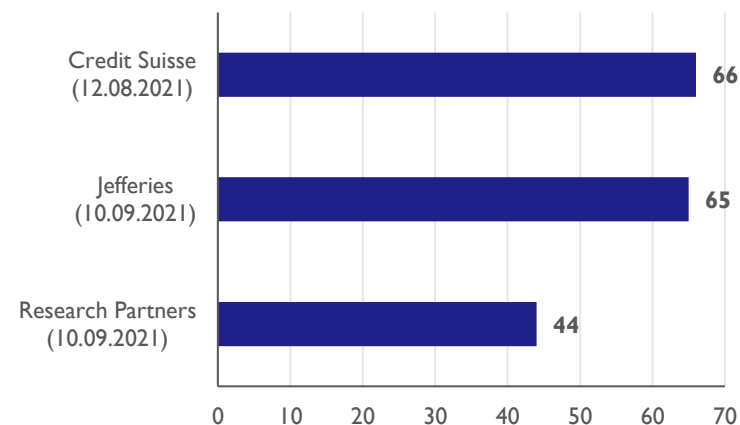
<sup>23</sup> See Swiss Takeover Board: TOB Circular No. 2 on liquidity in the context of takeover law, 26 February 2010.

## Analysts' target prices

Since July 2021, when the license and supply agreements for Winlevi with Sun Pharma were signed, three analysts published an updated estimate for the target price of Cassiopea. The target prices range between CHF 44.00 and CHF 66.00 per Cassiopea share. While the target price by Research Partners is close to the upper end of the risk-adjusted DCF valuation, the analysts of Credit Suisse and Jefferies conclude a target price of CHF 66.00 and CHF 65.00, respectively.

The average of all target prices published since July 2021 is CHF 58.33 per share. A major reason for the higher price estimates of the analysts compared to the results of the DCF valuation are clearly higher estimates for the peak sales for the individual products of Cassiopea.

## Analysts' target prices per share (in CHF)



Sources: Refinitiv Eikon, analysts' reports.

## Summary

- The shares of Cassiopea are liquid in the sense of the applicable takeover law. Therefore, the share price is a valid reference to assess the offer by Cosmo.
- The share price closed at CHF 35.20 on 1 October 2021, the last trading day before the announcement of the offer made by Cosmo. The implicit offered price of CHF 37.13 is 5.5% higher compared to last trading price.
- The implicit offered price is 4.8% below the average volume-weighted share price of the last 60 trading days as of 1 October 2021.
- Target prices of analysts published since July 2021 are in a range between CHF 44.00 and CHF 66.00 with an average target price of CHF 58.33 per share. Some of the analysts' target prices are considerably higher than the valuation results presented in this Fairness Opinion, in particular due to the analysts' optimistic assessment of the future peak sales of Cassiopea's products.

## Fairness Opinion Cassiopea

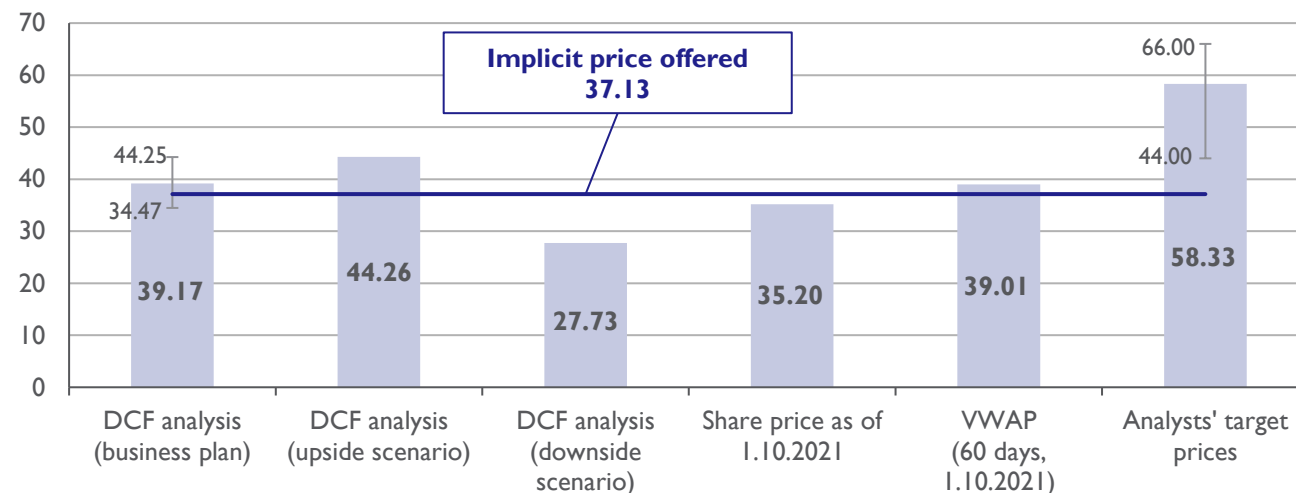
### **4 Conclusion**

## 4 Conclusion

Based on the analyses described above and the information provided, IFBC arrives at the following assessment regarding the financial fairness of the offer made by Cosmo for all outstanding shares of Cassiopea:

Overview of the valuation results

**Overview of the valuation results for Cassiopea as of 1 October 2021 (value per share in CHF)**



Source: IFBC.

- According to best practice we applied the risk-adjusted DCF approach to fundamentally determine the value per share of Cassiopea.
- Our fundamental valuation leads to a value per share of CHF 39.17 with a valuation range between CHF 34.47 and CHF 44.25 as of 1 October 2021. The valuation result is especially sensitive regarding the estimated peak sales and the applied probability of success. In addition to the base case, an upside as well as a downside scenario have been considered reflecting an above and below average development of future sales quantity and price level in the U.S. and Canada leading to a value per share of CHF 44.26 and CHF 27.73, respectively.

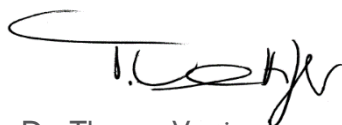
- Since Cassiopea's first product launch is expected in Q4 FY2021 and to date neither revenues nor positive earnings have been realized, we explicitly waive comparison with trading and transaction multiples due to insufficient expressive power and reliability.
- The shares of Cassiopea fulfil the liquidity requirements according to the applicable Swiss takeover law. Therefore, the share price as of 1 October 2021 as well as the VWAP of the last 60 trading days can be considered for assessing the offer by Cosmo.
- Based on the closing price of the Cosmo share on the last trading day prior to the publication of the Offer (October 1, 2021) of CHF 79.50, the offered exchange ratio of 0.467 Cosmo shares for one Cassiopea share corresponds to an implied offer price of CHF 37.13 per Cassiopea share. The offer thus represents a premium of 5.5% over the closing price of the Cassiopea shares prior to the publication of the offer (CHF 35.20) and a discount of 4.8% over the VWAP of the Cassiopea shares (CHF 39.01).
- Analysts assess the share of Cassiopea at a target price between CHF 44.00 and CHF 66.00 with an average of CHF 58.33.

Final assessment of the offer

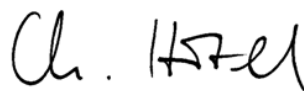
Based on the analyses, the value consideration and the valuation results shown in this report, IFBC assesses the implicit price offered by Cosmo per Cassiopea share of CHF 37.13 for all outstanding Cassiopea shares as fair from a financial point of view for the following reasons:

1. The implicit price offered is within the value range of the risk-adjusted DCF valuation of the business plan approved by the BoD.
2. The implicit price offered is above the current share price of Cassiopea which is assessed as liquid and therefore a valid benchmark.
3. The implicit price offered is slightly below the VWAP.

Zurich, 1 October 2021



Dr. Thomas Vettiger  
Managing Partner



Christian Hirzel  
Partner

## Fairness Opinion Cassiopea

### 5 Appendix

5.1	Cost of equity	Page 32
5.2	Beta analysis as of 30 September 2021	Page 33
5.3	List of abbreviations	Page 34

## 5 Appendix

### 5.1 Cost of equity

Parameter	Value	Comment
Inflation	1.90%	<ul style="list-style-type: none"> <li>■ Rounded cash flow weighted inflation expectations for Cassiopea.</li> <li>■ Source: Company information and IMF, World Economic Outlook, April 2021.</li> </ul>
Minimum real risk-free rate	0.00%	<ul style="list-style-type: none"> <li>■ A sustainable real risk-free rate of 0.00% is applied in the current low interest rate environment.</li> </ul>
<b>Risk-free rate</b>	<b>1.90%</b>	
Market risk premium	6.00%	<ul style="list-style-type: none"> <li>■ The market risk premium reflects the long-term difference between the return of a market portfolio and the risk-free rate. It reflects the additional premium an investor expects of an investment in stocks compared to a risk-free investment. In accordance with best practice a sustainable implied market risk premium of 6.00% is considered.</li> <li>■ Source: IFBC.</li> </ul>
Unlevered beta	0.98	<ul style="list-style-type: none"> <li>■ The unlevered beta captures the systematic, non-diversifiable risk of a comparable, unlevered company.</li> <li>■ In order to increase the statistical quality of the beta analysis, not only the beta of Cassiopea is analyzed, but also statistically significant betas of peer group companies.</li> <li>■ The average unlevered beta is calculated as of 30 September 2021 (last month-end before valuation date) based on weekly returns over 2 years (see appendix 5.2).</li> <li>■ Source: Refinitiv Eikon.</li> </ul>
Leverage factor	0.00	<ul style="list-style-type: none"> <li>■ Calculation of the leverage factor under consideration of the target capital structure and the corresponding relevant tax rate (Hamada approach).</li> </ul>
Levered beta	0.98	<ul style="list-style-type: none"> <li>■ The levered beta reflects the systematic risk and includes the operating as well as the financial risk of a company.</li> </ul>
<b>Equity risk premium</b>	<b>5.88%</b>	
Size premium	1.88%	<ul style="list-style-type: none"> <li>■ Empirical evidence and practice show that smaller companies have significantly higher cost of equity than comparable larger companies.</li> <li>■ Due to that fact, a size premium is added to the CAPM. The size premium is statistically determined based on the market capitalization of the company.</li> <li>■ Based on the current market capitalization of Cassiopea of CHF 378.4 million a small-cap premium of 1.88% (average of 8<sup>th</sup> and 9<sup>th</sup> decile) is applied.</li> <li>■ Source: Refinitiv Eikon, Duff &amp; Phelps.</li> </ul>
<b>Cost of equity (rounded)</b>	<b>9.70%</b>	



## 5.2 Beta analysis as of 30 September 2021

Company	Local currency	Country	Tax <sup>1)</sup>	Leverage <sup>2)</sup>	Levered adj. Beta <sup>3)</sup>	Unlevered adj. Beta
Aclaris Therapeutics Inc	USD	United States of America	27.00%	0.00	1.48	1.48
AnaptysBio Inc	USD	United States of America	27.00%	0.00	0.82	0.82
Biofrontera AG	USD	Germany	30.00%	0.02	1.02	1.01
Botanix Pharmaceuticals Ltd	AUD	Australia	30.00%	0.00	0.79	0.79
Cassiopea SpA	EUR	Italy	27.90%	0.00	0.96	0.96
Edesa Biotech Inc	USD	Canada	26.50%	0.00	1.40	1.40
Forte Biosciences Inc	USD	United States of America	27.00%	0.00	0.73	0.73
Inflarx NV	EUR	Germany	30.00%	0.00	0.61	0.61
Innovation Pharmaceuticals Inc	USD	United States of America	27.00%	0.01	0.76	0.75
Krystal Biotech Inc	USD	United States of America	27.00%	0.00	0.95	0.95
Novan Inc	USD	United States of America	27.00%	0.00	0.79	0.79
Revance Therapeutics Inc	USD	United States of America	27.00%	0.00	1.33	1.33
Sol Gel Technologies Ltd	USD	Israel	23.00%	0.00	0.94	0.94
Verrica Pharmaceuticals Inc	USD	United States of America	27.00%	0.00	1.14	1.14
Vyne Therapeutics Inc	USD	United States of America	27.00%	0.00	0.66	0.66
XBiotech Inc	USD	United States of America	27.00%	0.00	0.89	0.89
<b>Median</b>				<b>0.00</b>	<b>0.99</b>	<b>0.98</b>

### Notes:

1) Source: KPMG, Corporate Tax Rates Table.

2) Leverage = 2 years average (net debt x (1-tax) / equity). Effects attributable to operating lease (IFRS 16 / ASC 842) were eliminated.

3) Source: Refinitiv Eikon, adj. weekly beta (2 years), September 2021.

Not considered for beta analysis due to insufficient statistical significance.

### 5.3 List of abbreviations

AGA	Androgenetic alopecia
ASC	Accounting Standards Codification
BoD	Board of Directors
CAGR	Compound annual growth rate
CAPEX	Capital expenditures
CAPM	Capital Asset Pricing Model
Cassiopea	Cassiopea S.p.A.
CHF	Swiss Franc
Cosmo	Cosmo Pharmaceuticals N.V.
DCF	Discounted cash flow
DCF approach	Risk-adjusted discounted cash flow approach
ESOP	Employee stock option plan
EUR	Euro
FCF	Free cash flows
FDA	United States Food and Drug Administration
FY	Financial year
H1	First half-year of a FY
H2	Second half-year of a FY
HPV	Human Papilloma Virus
IFBC	IFBC AG
IRES	Imposta sul reddito sulle società
IFRS	International Financial Reporting Standards

IMF	International Monetary Fund
IRAP	Imposta regionale sulle attività produttive
k	Thousand
KPIs	Key performance indicators
NDA	New drug application
NWC	Net working capital
p.	Page
p.a.	Per annum
PDUFA	Prescription Drug User Fee Act
POC	Proof of concept
pp	Percentage points
Shares	Registered shares of Cassiopea with a nominal value of EUR 1
SIX	SIX Swiss Exchange
SLI	Swiss Leader Index
Sun Pharma	Sun Pharmaceutical Industries Ltd.
TOB	Swiss Takeover Board
VWAP	Volume-weighted average price

