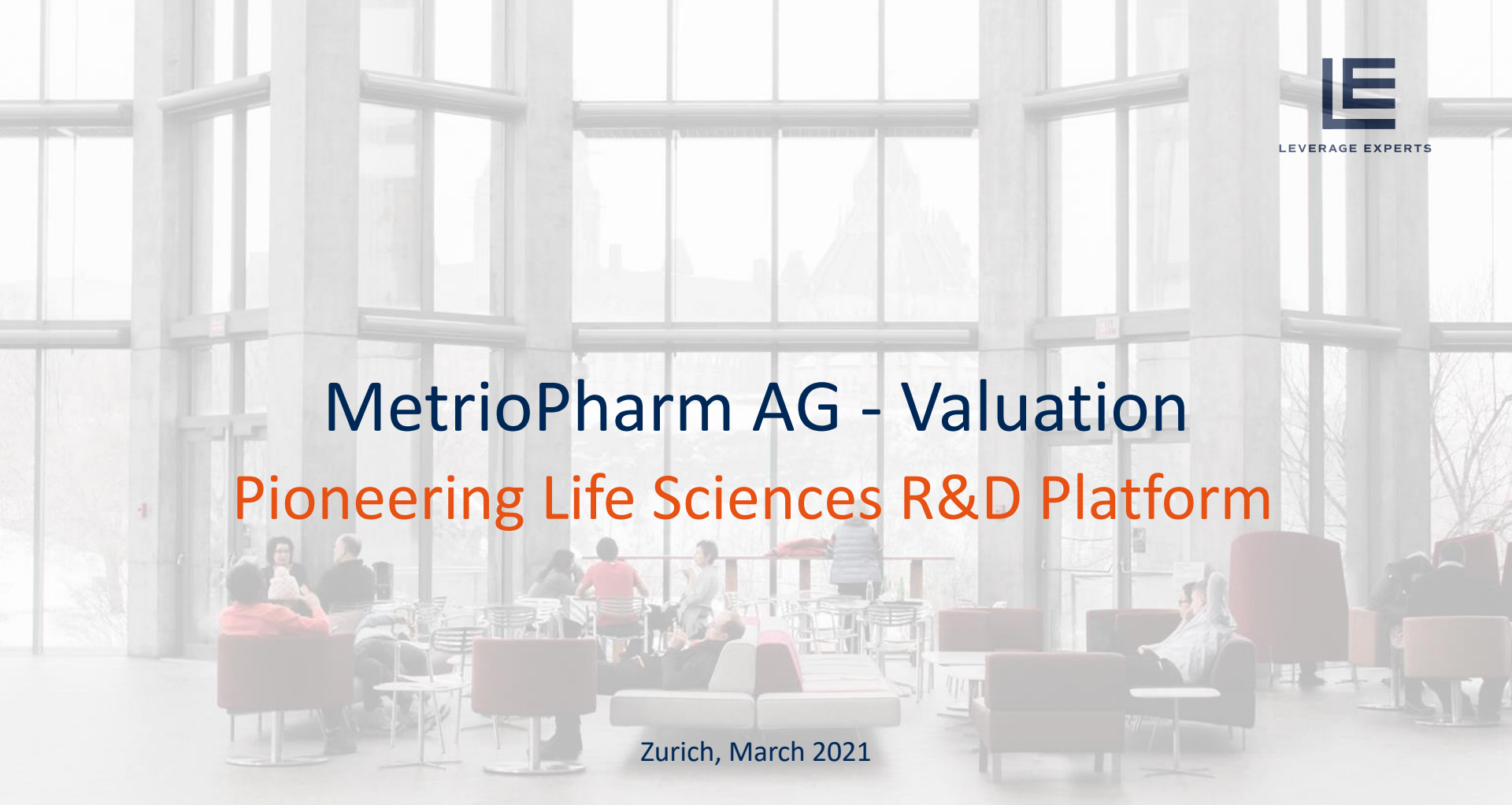

LEVERAGE EXPERTS

MetrioPharm AG - Valuation

Pioneering Life Sciences R&D Platform

Zurich, March 2021

MetrioPharm AG | Disclaimer

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Photo: Ahmed Zayan

COVID and Economies of Scope lead to an increase to past valuations, opening a range from CHF 537m up to (strategy-dependent) several bn

LEVERAGE EXPERTS

In the past, MetrioPharm has only been valued based on its two mid-stage indications in Psoriasis and urinary tract infection. For these assets we confirm the previous valuation ranges of CHF 253m to 305m.

Being positioned to deliver COVID therapies as first-mover, adds significant upside potential, which we account for in the range of CHF 284m to 400m.

The third valuation pillar, which has been ignored in earlier valuations, is a defining characteristic and core asset of MetrioPharm AG.

Through the platform-based R&D approach, deriving from the lean setup and collaboration with external parties, a multitude of therapies can be launched in parallel.

Resources are scalable. We valued this unique value-driver in a range of CHF 1.3bn+, however, this will also call for further organizational transformation.

Overall, this leads to a valuation average of CHF 684m with upside potential towards a multi-billion CHF scenario, depending on strategy, financing and R&D execution going forward.

Given the right financing and strategic partnerships, MetrioPharm can realize or even surpass this range, instigating a paradigm shift from product-based to indication-based R&D in pharma / biotech. This puts the company into a privileged position versus its competition and makes it an attractive asset for investors.

Legacy business model Anti-inflammatory:	mCHF 348
Eligibility of MP1032 as COVID medications:	mCHF 336
Sub Total	**mCHF 684**
Economies of Scope based on platform approach:	mCHF 1’322
Total	**mCHF 2’006**

MetrioPharm was founded in 2007, leveraging on the MP1000 platform

LEVERAGE EXPERTS

MetrioPharm AG was **founded in 2007** with the goal to further develop a class of small molecule compounds.

As a first achievement, the company is leveraging on the characterization of stable and bioavailable dosage forms, leading to several pharmaceutically effective variants of the molecule family: the MP1000 platform, which encompasses the lead compound MP1032.

This compound has been tested in various preclinical studies. Whereas **MP1032 showed efficacy in a wide range of disease models.**

A **Phase I** clinical trial of MP1032 was started in 2015, delivering good results with an **exceptionally good safety profile in humans** in the Phase I study. This first clinical trial was immediately followed by an exploratory Phase IIa study in psoriasis. This study was successfully completed in 2017.

In 2018, MetrioPharm AG initiated a **Phase II** dose-finding study in psoriasis. This was successfully completed in 2019: clinical efficacy was demonstrated for MP1032 and the **excellent safety profile was confirmed.**

In parallel to the clinical development of MP1032, the scientific team worked on clarifying the mechanism of action.

MetrioPharm AG was able to demonstrate that MP1032 modulates a fundamental trigger of chronic inflammation and diseases of aging: the **drug is the first self-regulating radical-scavenger to target pathological oxygen radicals.**

MetrioPharm AG focused its research on the treatment of immune-induced inflammatory diseases ("IMIDs"). These include rheumatoid arthritis, psoriasis and multiple sclerosis.

Today, the focus is on chronic inflammatory diseases, specifically on age-related inflammation (inflamm-aging).

Shares outstanding are 191'186'760 (WKN A0YD9Q; ISIN CH 0107076744 / delisted since 2012).

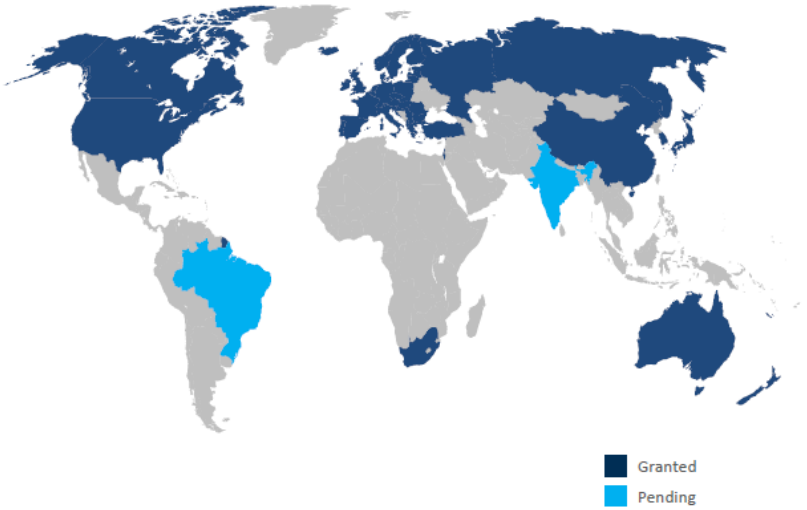
Most recent developments in favour of MetrioPharm are:

- ✓ Eligibility of MP1032 as **COVID treatment, opening significant opportunities** in the light of the current pandemic.
- ✓ Development of platform-based R&D approach; **unlocking Economies of Scope.**

Scientific pipeline supported by a strong patent portfolio

LEVERAGE EXPERTS

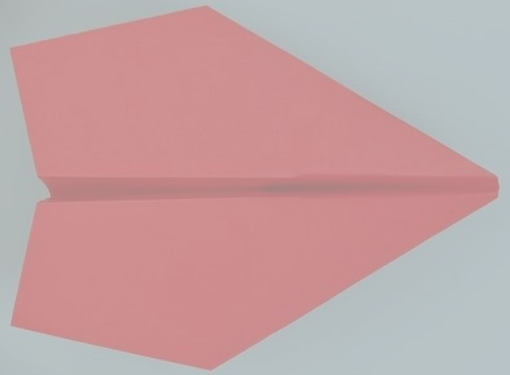
Paten #	Status (US)	Subject-matter	Expiry date
PCT/ EP 2011/001124 WO 2011/ 107295 A1	Granted	Two novel anhydric crystalline forms (polimorphs) of 5-amino-2,3-dihydrophthalazine-1,4-dione sodium salt (including MP1032, MetrioPharm's lead compound), their manufacturing and their use in medicine.	2031
PCT/ EP 2015/002555 WO 2016/ 096143 A1	Granted	Third novel anhydric polymorph of the sodium salt, methods for its manufacturing and its use in medicine.	2035
PCT/ EP 2017/000209 WO 2017/ 140422 A1	Pending	New method for producing a previously know anhydric polymorph of 5-amino-2,3-dihydrophthalazine-1,4-dione, includes pharmaceutical preparations and medical uses.	2037
PCT/ EP 2017 /000227 WO 2017/ 140430 A1	Pending	Novel anhydric polymorph of 5-amino-2,3-dihydrophthalazine-1,4-dione, method for producing said form, and medical uses of said form.	2037
EP 20000051.1	Priority application field	Favourable particle size distribution for inhalatory administration of MP1032, pharmaceutical compositions and medical uses for inflammatory pulmonary diseases	2041
EP 20000050.3	Priority application field	Uses of MP1032 in the treatment of rare chronic inflmmatory pulmonary diseases	2041



One of MetrioPharm's strengths is the swift execution of patent applications upon discovery of protectable IP, setting MetrioPharm into a favourable position from a competitive point of view

LEVERAGE EXPERTS

Valuation methodology



DCF and NAV valuation models are less feasible; while risk-adjusted NPV and market-based methods reflect the opportunity more appropriately

LEVERAGE EXPERTS

Methods feasible for valuing MetrioPharm AG

Risk-adjusted Net Present Value (for existing and future indications) - is the standard company valuation method in the pharma / biotech space. The model reflects upside per indication adjusted by clinical development risk per phase based on market benchmarks.

Comparable transactions - Transaction value of similar companies provide an indication of company value for potential similar strategic buyers or licensing partners. They serve as a relevant reference for the core business. However, considering the unique platform approach applied by MetrioPharm, these transactions do not take into account the scalable character of R&D operations.

Previous financing rounds - Provide an additional "market-based" valuation data point. Can be seen as the "most-conservative baseline" if no adverse events have affected the company / pipeline. Not taking into account recent developments and opportunity to act as multi-product R&D platform as focus has been on only two indications.

Valuation methods that we find inappropriate to apply

Discounted Cash Flow (*DCF*) - Discounted Cash Flow valuation is primarily used to value late-stage companies that operate under a going-concern paradigm. While the methodology can be applied for early-stage companies as well, we regard it as unfeasible, given the numerous assumptions, required, to arrive at a meaningful valuation. Also, the strong weight of the "terminal value" versus the detail planning period challenges a sound balance accordingly for a venture-stage operation.

Net Asset Value *(NAV)* – The NAV methodology is focusing on the existing assets of a company, typically either in a fixed asset-heavy scenario, under liquidation consideration or a combination of both. For R&D-intensive operations, where meaningful and marketable intellectual property is created, this method is less feasible, since the book value (BV) of the patent portfolio usually does not reflect the market opportunity. Also, team experience and market access as well as the networks established, are not accounted for, being an intangible assets.

Accumulated cost-base - Valuation method summarizing cost needed to "recreate a similar operation". It can apply for early-stage biotech operations with little pipeline progress. MetrioPharm however, has been operational for almost a decade, has proven clinical success and created unique operating leverage via its platform approach. Hence established know-how and networks are significantly undervalued.

Prior fairness opinions confirmed the promising pipeline, setting company value above latest valuation by financing rounds.

MetrioPharm's past valuations exclusively included the two first indication being pursued by the R&D team.

Value was computed with the help of rNPV and DCF methods. Whereas we confirm the rNPV approach with the underlying clinical phase model and acknowledge that the DCF approach used, delivered a result of right magnitude. However, refrain from the method per se, given its high sensitivity to input factors that cannot be accurately estimated at the present stage.

In line with promising clinical data, prior third-party valuations set the company value range above the current share price.

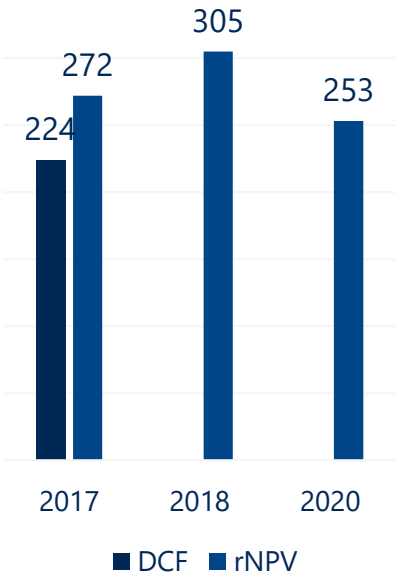
This can be confirmed. Factors justifying valuation significantly above past valuation methods conclude:

a) Past valuations have been conducted with the **focus on commercializing the main two pipeline developments** of Psoriasis and urinary tract infection. **Other indications have been excluded from financial valuation.**

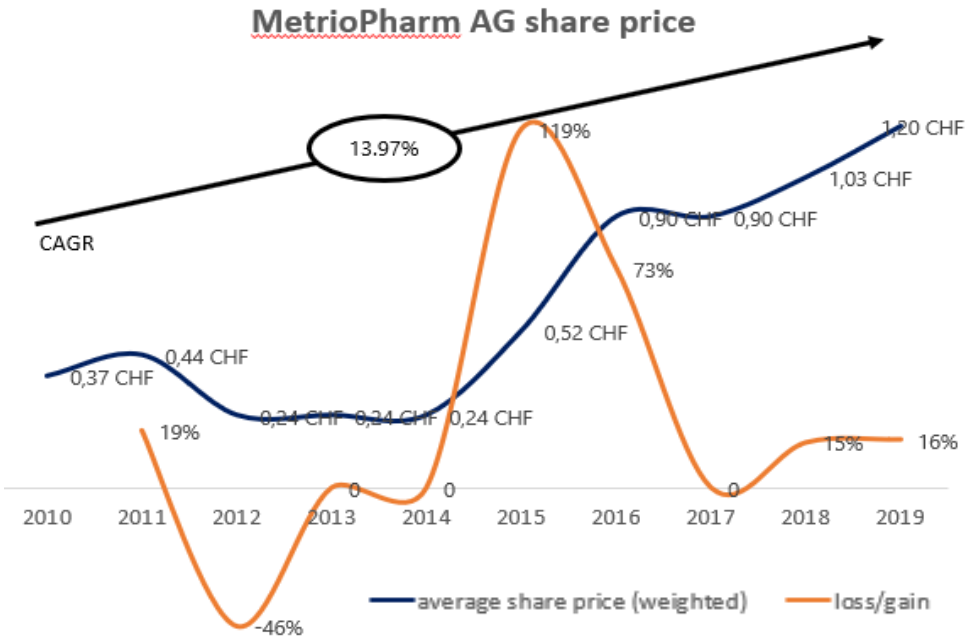
b) Only in 2020 a **unique market positioning amidst the global pandemic** is evolving for MetrioPharm. The COVID therapeutic development represents an opportunity for the company and any potential commercialization partners **of game changing character**. This represents significant upside, also confirmed by reference transactions (see subsequent slides).

c) Clinical developments in the R&D funnel, resulting from the **platform character of MetrioPharm's R&D approach, have not been financially valued**. However, this represents the core strength of the company, rendering it into a scenario where multiple indications can be seized, if funding and the right kind of partnerships are in place, **leveraging Economies of Scope** (see subsequent slides).

Prior valuations (mCHF)



Upward momentum of conducted external financing rounds



MetrioPharm AG shows upward momentum in share price given its progressing R&D results.

CHF 63m have been raised so far, with the last post-money valuation established at CHF 150m.

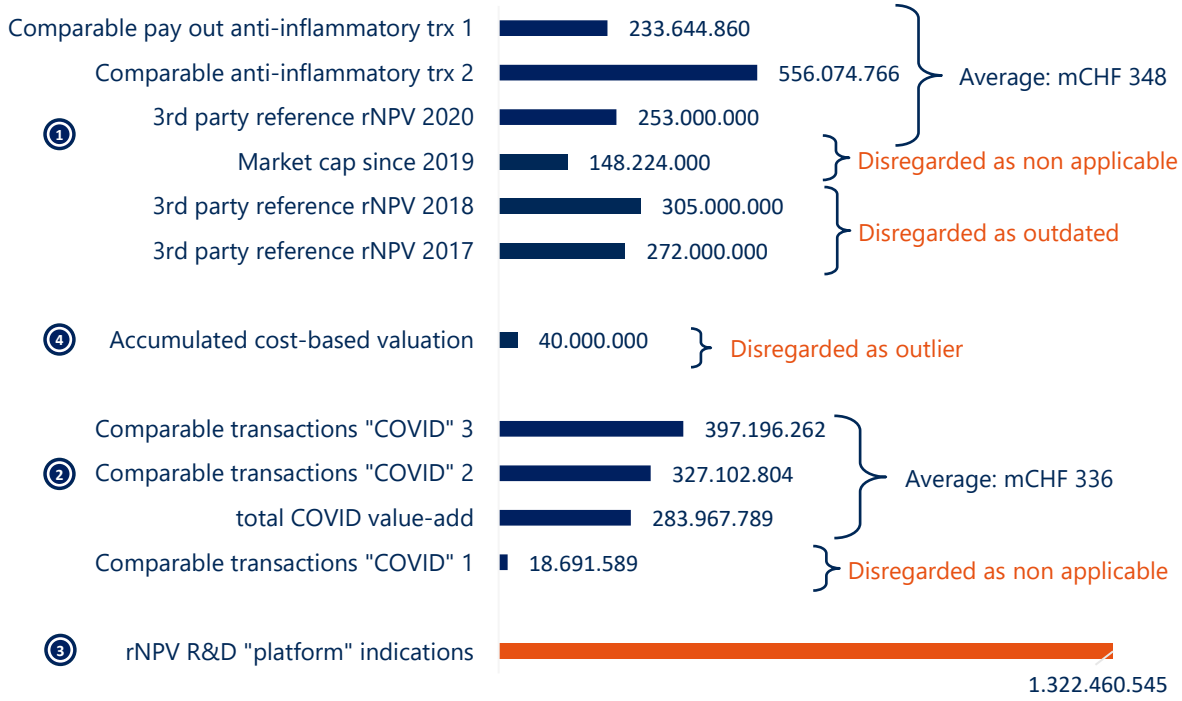
Current shareholders are comprised mainly of financial investors. At present, no major strategic investor is on board.

The consideration of winning a strategic investor to join the cap table, will most likely lead to further appreciation of company value (up to multiple times its current share price), considering (case-specific) synergies around:

- ✓ research & development
- ✓ operations
- ✓ distribution

Value is derived from three pillars

Weighted Value Drivers MetrioPharm AG



Value drivers are independent, hence accumulative.

1. **Anti-inflammatory drugs based on MP1032**

   The legacy business has been reflected in previous evaluations, previous financing rounds (market cap) and R&D investments. Benchmarking against comparable transactions, **value is derived with mCHF 348.**

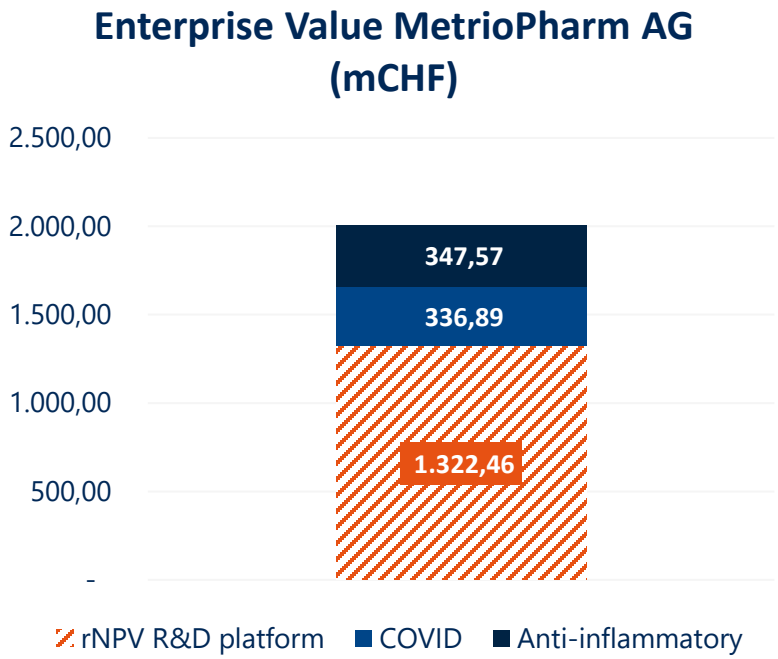
2. **Eligibility of MP1032 as COVID medication**

   rNPV + grant funding value is computed at mCHF 284, averaging against market transactions at **mCHF 336.**

3. **Unique positioning as platform, leveraging Economies of Scope**

   The considered pipeline of indications, utilizing **Economies of Scope is estimated at mCHF 1'322** (excl. COVID value add), to remain conservative, **WACC has been adjusted** when calculating this value pillar.

Value is derived from three pillars



Enterprise Value of MetrioPharm AG is computed in the range of:

Legacy business model Anti-inflammatory;	CHF 347'573'209.-
Eligibility of MP1032 as COVID medication;	CHF 336'088'959.-
Sub Total	**CHF 683'662'168.-**
Economies of Scope based on platform approach:	CHF 1'322'460'445.-
Total	**CHF 2'006'122'613.-**

Anti-inflammatory Drugs and application to COVID indications are based on the established and existing business model.

Leveraging the R&D platform character of the company will require various elements of organizational transformation. To account for this, WACC has been adjusted to a "Start Up consideration".

MetrioPharm AG

value drivers

1 A new class of immune-modulating, anti-inflammatory drugs

MetrioParm is developing a new class of immune-modulating and anti-inflammatory drugs, which target a central driver and control mechanism of the body's innate response: oxidative stress and cellular redox-balance.

Oxidative-stress-induced dysregulation of the cellular redox potential is implicated in a broad spectrum of inflammatory and infective diseases.

Currently all advanced pre-clinical and all clinical development activities are based on the company's lead compound MP1032.

MetrioPharm's clinical development and commercialization strategy was initially focused on chronic inflammatory and degenerative diseases (of aging), like rheumatoid arthritis, neuro-inflammatory diseases (multiple sclerosis) and psoriasis, with psoriasis serving as a model disease for many other chronic inflammatory conditions.

MetrioPharm AG is working on a new class of immune-modulating, anti-inflammatory drugs, applicable to a group of different indications.

1 Anti-inflammatory drugs have seen favorable valuations by big pharma

LEVERAGE EXPERTS

Relevant partnering deals regarding stage and therapeutic area (2016)

Total Deal Value	Upfront Payment	Companies	Interest Area	Development Phase
US $595 M	US $595 M	Boehringer Ingelheim AbbVie	BI 655066 an anti-IL23 (anti-interleukin-23) monoclonal antibody in phase III development for psoriasis	Phase III
US $1520 M	US $250 M	MedImmune AstraZeneca Allergen	MED 2070 an anti–IL23 (anti-interleukin-23) monoclonal antibody in Phase III clinical development for moderate –to-severe Crohn's diease)	Phase II

Similar indication, Phase III deal value

Similar field (anti-inflammatory) Similar dev. Stage (Phase II)

Market benchmarks for anti-inflammatory indications set favourable precedents regarding partnering and exit opportunities.

2 Filling the gap of treatment options in the world's largest pandemic

LEVERAGE EXPERTS

An urgent and high medical need for safer, non-immuno-suppressive anti-inflammatory drugs that can be used in early-intervention treatment of COVID-19 patients has been identified. Many of these patients are of older age and have a number of co-morbidities like diabetes, obesity, cardio-vascular disease etc. Safety of any additional therapy is of paramount clinical concern for these patients.

In this setting, MP1032 has a favorable safety and efficacy profile as early-intervention treatment of COVID-19.

- ✓ MP1032 has an anti-viral activity which may slow viral replication in early disease.
- ✓ MP1032 has pronounced anti-inflammatory and anti-cytokine-release activity without suppression of the body's anti-infective immune defenses.
- ✓ MP1032 has an excellent safety profile that allows use in patients with renal and hepatic impairments.
- ✓ MP1032 has no known negative drug-drug interactions that would limit its usability in patients who are on multiple other drug treatments.
- ✓ MP1032 is an orally available drug for convenient use in ambulatory and hospitalized settings.

MP1032 can thus fill the currently existing gap for an early-intervention basic drug treatment of COVID-19 patients.

While many pharmaceutical companies have been focusing on vaccinations, there has been no effective treatment on the market so far.

This rendered the virus lethal for millions of elderly and high-risk patients.

MP1032 shows promising results in phase II clinical trials for easing the burden of the pandemic, both on a patient / personal and economic level.

2 Launching a COVID therapeutic represents a unique market and non-dilutive state funding opportunity

LEVERAGE EXPERTS

Expected COVID-related value mCHF	expected (market) volume	peak market share	probability	rNPV value-add
COVID	market size and resulting cash flows over time have been modelled using 3rd party input (DataMonitor by Informa)	30%	15%	132.675.539
Long COVID		30%	10%	64.257.083
Reserve drug for other viral infections		15%	10%	83'535'167
German state funding (EUR/CHF=1.1)	6.600.000*		>50%	3.500.000
Total expected value-add				**283.967.789**

Due to the COVID pandemic, 2020 has been a defining year for MetrioPharm.

The company decided to shift capacity to the development of a therapeutic drug to combat the immediate effects of COVID 19 symptoms on patients' health.

Swift progress has been made, resulting in a phase II drug that is a candidate for accelerated admission and deployment given the nation-wide (Germany) and global urgency.

MetrioPharm is considered eligible for public funding amounting to EUR 6m, to support further development.

Whereas criteria for final approval are considered to be entirely met, resulting in high probability of successful approval, this has been discounted to remain conservative. However, MetrioPharm management is in active exchanges with granting authorities. Upon success, this will bolster company cash reserves and allow fast progression of ongoing activities.

2 Strong deal momentum for treatment options in COVID environment

LEVERAGE EXPERTS

October 2020

Roche-Atea: COVID-19 benchmark deal for MP1032 concludes to USD 350 Million

Roche has been announced to acquire global, ex-USA rights to Atea's anti-viral AT-527 in Phase II development. This drug is slated for early-intervention treatment of COVID-19 patients, mirroring MP1032 application.

AT-527 has a purely anti-viral mechanism of action (no effect on COVID-19 disease symptoms), while MP1032 has both, anti-viral and anti-inflammatory effects.

See Appendix: Roche Secures Covid-19 Treatment In USD 350 Million Deal with Boston-Based Atea

There have been other deals in this domain with similar and higher valuations, indicating the strong industry momentum for this therapeutic area, given the global need. Further details in the Appendix.

3 Significant upside is found in rNPV of full pipeline. Upside potential subject to alignment of financing, commercialization and R&D execution (beyond COVID application)

	Pipeline value
Musculo-Skeletal	
Rheumatoid arthritis	44.329.247
Osteoarthritis	954.714.340
Diabetic Neuropathy	176.162.334
Orphan	
Duchenne Muscular Dytrophy (orphan)	14.652.326
Lung diseases	
COPD	48.515.123
ARDS	5.249.448
Cystic fibrosis	863.391
Reperfusion Injury, Critical Care (Sepsis)	
Sepsis	74.998.843
Reperfusion injury after PCTA	2.975.492
TOTAL	**1.322.460.545**

The platform setup of MetrioPharm's R&D operation, allows to identify additional indications that can significantly increase company cashflows in the event of successful market entry, co-commercialization or prior out-licensing.

A comprehensive early- and mid-stage pipeline has been established to date, taking the company's potential from a product-focused biotech firm to indication-focused platform solution provider, which in nature is more similar to a small-cap pharmaceutical research company or CRO than a traditional biotech operation.

Regarding the execution of the potential, it will depend to a great extent on:

- ✓ Future financing
- ✓ Strategic / commercialization partners
- ✓ Further increase / acceleration of R&D efficiency

3 MetrioPharm AG as semi-virtual drug discovery platform

LEVERAGE EXPERTS

MetrioPharm's past and current business model follows a semi-virtual model. The company does not maintain in-house laboratories, production or clinical research capacities.

These functions are outsourced to eligible contractors from academia and the biotech/pharma service industry.

Building on a lean, focused, and qualified in-house team of research scientists from diverse backgrounds in science, chemistry, production, clinical development, regulatory affairs and quality control, MetrioPharm retains control over the entire R&D program. The R&D process is fully designed, managed and controlled by the full-time in-house staff.

Thus, core scientific and product IP is accumulated and fully contained within the company.

The MetrioPharm business model provides full control of drug development activities, know-how, intellectual property, avoiding heavy CAPEX and OPEX for installations, resources and overhead cost of traditional in-house 'brick and mortar' research facilities.

Similar business models have been employed by a small but growing number of R&D-focused biotech/small pharma companies. This business model has generally improved the productivity and value generation per employee several-fold compared to the classical biotech and pharma model with full in-house R&D facilities.

Industry example:

"…Debiopharm being one of the most prominent examples with an estimated value of $2.3 million/employee. This metric is in stark contrast to that of large pharmaceutical companies that are in the range of $300-500,000/employee."

S. Naylor and K. Pritchard "The reality of virtual pharmaceutical companies" Drug Discovery World Summer Issue 2019

3 Additional potential: non-pandemic use / MP1032 - Pipeline MP1032

Given its multiple routes of administration and application vectors, MP1032 has the potential to succeed as treatment option for several diseases, to which today no satisfactory solutions are available, or only such with heavy negative side-effects.

MetrioPharm AG

Management

An experienced team to execute on the clinical and commercial opportunities

LEVERAGE EXPERTS

Competencies	Leading organizational growth	Clinical development	Inflammatory diseases	Regulatory	Fundraising	M&A and IPO	
 **Wolfgang Brysch MD** *Chief Executive Officer*	✓	✓	✓		✓		BIOMEDION, antisense pharma
 **Astrid Kaiser PhD** *Head of Drug Development*	✓	✓		✓			JERINI, MOLOGEN AG
 **Barry Frankel** *SVP Strategy and Business Development*	✓	✓	✓		✓	✓	Pfizer, HURON, citibank
 **Jan-Anders Karlsson** *Pulmonary Drug Development Consultant*		✓	✓	✓	✓	✓	BAYER, Verona Pharma

Metriopharm has the relevant experts on board to conduct the necessary clinical development work and commercialize the results thereof.

Available expertise conducive to later-stage commercial exploitation

LEVERAGE EXPERTS

CEO and co-founder: Wolfgang Brysch MD

Dr Wolfgang Brysch was appointed as CEO of MetrioPharm in 2016 and previously served as chief scientific officer, director and chairman of the company (2007-16). Before that, he co-founded BioMedion. an IT company specializing in pharmaceutical industry solutions. Dr Brysch also served as managing director and chief scientific officer of Biognostik. Prior to these appointments, he served as the head of a research group for molecular neurobiology and cancer at the Max Planck Institute.

COO and co-founder: Ekkehard Brysch

Ekkehard Brysch is a co-founder of MetrioPharm and Executive Vice President of the Board and was appointed COO in 2016. He previously served as CEO of the company from 2007 to 2016 and currently also serves as temporary CFO. Mr. Brysch is also managing director of Athenion, a holding company and largest shareholder of MetrioPharm, focused on pharmaceutical and healthcare industries. Before these appointments, he served as managing partner of BioMedion.

Head of Drug Development: Astrid Kaiser PhD

Dr Astrid Kaiser was appointed head of drug development at MetrioPharm in 2015. She previously served as senior project manager of MP1000 drug development for five years. Before joining the company, she worked as a research and development consultant for Jerini, which was acquired by Shire in 2008. Dr Kaiser also worked as a senior researcher in human cancer research at Benjamin Franklin University Hospital.

Chairman of the board and co-founder: Rudolf Staeger

Rudolf Stager is a co-founder of MetrioPham and serves as Chairman of the board of directors. He is an independent management consultant and primarily advises small and medium-sized enterprises. Mr Staeger previously served as an active bank manager and member of the executive boards of Schroder & Co Bank, Vontobel Bank and Luzemer Kantonalbank.

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Leverage Experts AG (LE) was founded in 2012 in Zurich as an independent group of interdisciplinary experts. The experienced team supports companies throughout complex and critical challenges with a strategic mindset and a passion for implementation. LE focuses on Situations of Rapid Change (SRC), transformation, restructuring, and turnaround management. LE implements corporate and growth strategies, accompanies entrepreneurs through crisis situations, leads (digital) transformation and restructuring processes and is a trusted partner for M&A and corporate finance goals. Since 2021 an office is established in Germany. The team of Leverage Experts enhances an active and effective shaping of the future - ***At short notice, with high impact.***

Appendix

Weighted Value Drivers

Value driver	Rationale
rNPV new "platform" indications	Excluded from immediate value drivers but considered as untapped upside potential. Calculated on management assessment of potential market share.
Comparable transactions "COVID" 1	Disregarded as non applicable transaction. The transaction must be considered a capital increase rather than a strategic acquisition.
total COVID value-add	Calculated on management assessment of potential market share.
Comparable transactions "COVID" 2	Roche benchmark deal – most relevant reference transaction (1 USD = 1.07 CHF)
Comparable transactions "COVID" 3	Merck & Co. Acquired OncoImmune, a phase 3 COVID-19 therapy
Accumulated cost-based valuation	Disregarded as outlier, ignoring FMV of company's IP.
3rd party reference rNPV 2017	Disregarded as outdated.
3rd party reference rNPV 2018	Disregarded as outdated.
Market cap since 2019	Disregarded as mark-to-market is subject to non-public trading (inefficient market)
3rd party reference rNPV 2020	Most recent 3rd party valuation (Edison): only accounts for anti-inflammatory indications.
Comparable anti-inflammatory trx 2	Boehringer / Abbvie Psoriasis partnering: full deal value considered given indication match
Comparable pay out anti-inflammatory trx 1	MedImmune / Astra Zeneca Crohn's partnering: only upfront payment considered given clinical mid-stage (phase II) and large total deal value, to large extent composed of milestone payments

1 Fields of application beyond pandemics and infectious diseases

LEVERAGE EXPERTS

Intravenous MP1032

MP1032 is also dosable via the intravenous route. This route of administration allows for rapid-onset systemic anti-inflammatory action while maintaining the high safety profile of the drug. Injected MP1032 has shown impressive rapid-onset therapeutic effects in several pre-clinical models of bacterial sepsis. Addition of MP1032 to standard treatment (broad band antibiotics) dramatically increased survival of animals and cut recovery times by more than 60%.

An intravenous formulation of MP1032 can serve as a broadly applicable addition of the therapeutic armamentarium for patients to prevent or treat (septic) shock. Systemic inflammation and oxidative stress are a major confounding factor in shock and organ failure. A rapid systemic re-balancing of oxidative stress and redox potential can have a substantial stabilizing effect on the clinical state of these patients. The absence of potentially detrimental drug-drug interactions, cardio-vascular, renal or hepatic side effects constitutes an ideal profile for a drug used in critical-care medicine.

MP1032 has several potential additional indications that are yet unexplored in depth.

The anti-inflammatory profile and minimum side-effects render it an interesting candidate for critical care medicine and auto-immune therapies, among others.

2 Relieving health sector of pandemic-induced capacity constraints

LEVERAGE EXPERTS

Health-economic rationale leveraging MP1032 against COVID-19, Influenza and others*

The current SARS-CoV-2 pandemic and COVID-19 cases push public health systems beyond maximum capacity. This holds true for hospital beds - especially in intensive care - and medical personnel. Thus, relieving the health system of need for hospitalizations and intensive care has high priority in the current and potential future epidemics.

An effective, safe and broadly applicable early-intervention drug treatment, which helps to lower the number of cases that progress from home-care to the need for hospitalization could play a crucial role in taking pressure off hospital capacities. The same holds true for the even more limited in-hospital critical care capacities.

Similar effects can be expected from reducing recovery times to hospital discharge, where every day that a patient can be safely discharged earlier, frees up urgently needed capacities for other patients in need.

All of the above would also translate into major savings in health care costs, as every day of hospitalization incurs considerable costs to public and private health care providers.

Full admissibility of MP1032 would allow for more flexible management of COVID and other pandemics, with the ability to

- ✓ reduce lethal outcomes
- ✓ shorten hospitalization time
- ✓ alleviate the severity of cases

*Diseases with a "pandemic flu" characteristic in several cases have the same Cytokine stem. MP1032 has been deemed a promising remedy to combat this family of molecular structures.

MP1032 and COVID-19_White Paper-v1-83201165-28

2 Market projection COVID patients

COVID Patient number assumptions*	Patients total so far Average active Cases USA + Europe	Average symptomatic cases in USA + Europe	Long Covid Cases (10% of total cases EU+ USA)
03/2020 - 02/2021	18 m	9 m	6,8 m
2022 expected	9 m	4,5 m	3 m
2023 expected	4,5 m	2,25 m	1,5 m
2024 expected	2,25m	1,25m	1m

50% of infected patients become symptomatic and are potential target market for acute use of MP1032 (28 days of treatment on average/patient)

2 Market peers

LEVERAGE EXPERTS

Licensing and Asset Acquisition Deals

Merck & Co. Buys Out OncoImmune For Phase III COVID-19 Therapy

Having previously inked two partnerships and a small M&A deal to add vaccine and therapeutic candidates for COVID-19 to its portfolio this year, Merck & Co. Inc. announced on 23 November that it will pay $425m to acquire privately held OncoImmune Inc. and its Phase III recombinant fusion protein candidate, which posted noteworthy Phase III data in September in hospitalized patients requiring oxygen support. Departing Merck Research Laboratories president Roger Perlmutter said that CD24Fc may offer therapeutic benefit beyond standard-of-care for hospitalized COVID-19 patients who require oxygen support including supplemental oxygen, high-flow oxygen or mechanical ventilation. Scrip November 2020

Novartis Puts Down $50m For Mesoblast COVID-19 Cell Therapy

Just a couple of months after Mesoblast Limited's remestemcel-L got rejected by US regulators, the NASDAQ-listed Australian biotech has bagged Novartis AG as a partner for the allogeneic cell therapy as a treatment of acute respiratory distress syndrome (ARDS), including that associated with COVID-19. The Swiss major is making a $25m upfront payment and investing another $25m in Mesoblast equity to acquire the worldwide rights to develop, commercialize and manufacture remestemcel-L for ARDS. The deal gives it access to "an innovative cell-therapy platform with a range of potential applications in severe respiratory conditions and beyond," Novartis added. Mesoblast could also receive over $1.25bn milestones and tiered double-digit royalties on any product sales. Scrip November 2020

Humanigen Reaches Asia Deal For Lenzilumab In COVID-19

US firm Humanigen Inc. has announced its first Asia deal, licensing its lead drug candidate lenzilumab to South Korea's Telcon RF Pharmaceutical Inc. and KPM Tech Co. Ltd., for development and commercialization in South Korea and the Philippines for hyper-inflammation in hospitalized COVID-19 patients. Telcon is an affiliate of KPM Tech and both companies recently invested in Humanigen's June 2020 offering. The agreement comprises payments of up to $20m, including $6m up front and the balance of $14m in two tranches based on specified milestones in the US. Telcon and KPM Tech will be responsible for gaining regulatory approval and subsequent commercialization of lenzilumab in their territories, paying double-digit sales royalties. Scrip November 2020

Pharma intelligence | informa

Source: Scrip

See: Roche Secures Covid-19 Treatment In $350 Million Deal With Boston-Based Atea

https://www.forbes.com/sites/roberthart/2020/10/22/roche-secures-covid-19-treatment-in-350-million-deal-with-boston-based-atea/

3 Additional potential: pandemics management / alleviating future pandemics

LEVERAGE EXPERTS

Future prospects

Oxidative-stress-facilitated viral replication and immune over-activation are hallmarks of many corona virus" (SARS-1, MERS) and other RNA virus infections (e.g. HCV, dengue, West Nile, Zika). For many of these infections, no specific therapy or vaccine is available. Targeting oxidative stress and the disturbed redox-balance that these and other viruses utilize to enhance their replication, represents a new and highly promising early-intervention anti-viral treatment modality. Since oxidative stress is a universal host response, irrespective of the particular pathogen or viral strain, this therapeutic approach is largely pathogen agnostic, meaning that this therapy could be instantly used to treat new, emerging epidemic or pandemic viral diseases.

Drugs based on MP1032 could therefore serve as a first line of defense for new viral outbreaks before more specific anti-viral or vaccine-based therapies become available. The excellent long-term stability with storage at ambient temperatures, oral availability and outstanding safety profile would facilitate stockpiling and rapid distribution in times of need.

MP1032-based drugs counteract and modulate immune responses brought about by viral mechanisms.

This can reduce and prevent future pandemic outbreaks or make them manageable.

Given these properties, in its full remedy effect, on a national / global level, MP1032 could be compared to reserve antibiotics that are essential to prevent severe damage at early stages.

From an economic point of view, this would massively drive-up demand internationally.

3 Broadening the scope to infectious diseases

Pre-clinically the company has in parallel explored the utility of MP1032 in a number of anti-infective disease models. This research revealed a surprisingly potent efficacy of MP1032 and the underlying drug mechanism in the treatment of severe infections, i.e. sepsis and viral infections.

With the appearance of the SARS-CoV-2 pandemic and recent in-vitro studies demonstrating a SARS-CoV-2 anti-viral activity of MP1032, MetrioPharm decided to start clinical development of MP1032 in COVID-19 with a potential diversification into other infectious diseases in the future.

Thus, MetrioPharm now follows a dual track pipeline strategy for MP1032, with one track being chronic inflammatory diseases (1) and a parallel pipeline track in infectious diseases (2).

A third concurrent development activity—the API track (3) — concerns optimization and scaling of the chemical drug-substance production process and is supportive of all pipeline applications.

Promising pre-clinical results make it feasible to explore medical use in the infectious diseases area.

Particularly interesting is an application in the ongoing COVID pandemic.

However, while this is the most attractive commercial opportunity as of now, MP1032 is not limited to this indication when it comes to infectious diseases.

3 market share build up / discounted

LEVERAGE EXPERTS

	Pipeline value	clinical	clinical	# people	marke	peak	commerc	year of	expected	product	commerc	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
COVID	132'675'539	Phase II	15%	2250000	20%	30%	2023	2024	400	0	production	20%	30%	30%	30%	30%	0%	0%	0%	0%	0%	0%	0%	0%	
Long Covid	64'257'083	Phase I	10%	1500000	5%	30%	2023	2024	500	0	production	5%	30%	30%	30%	30%	0%	0%	0%	0%	0%	0%	0%	0%	
reserve drug for other viral infections	83'535'167	Phase I	10%	5000000	2%	15%	2025	2029	400	0	production	0%	0%	2%	6%	10%	13%	15%	15%	15%	8%	0%	0%	0%	
Musculo-Skeletal																									
Rheumatoid arthritis	44'329'247	Phase I	10%	5400000	0.10%	8%	2027	2031	1200	0	production	0%	0%	0%	0%	0.10%	2%	4%	6%	8%	4%	2%	1%	0%	
Osteoarthritis	954'714'340	Phase I	10%	60000000	0.10%	15%	2027	2031	1200	0	production	0%	0%	0%	0%	0.10%	4%	8%	12%	15%	8%	4%	2%	0%	
Diabetic Neuropathy	176'162'334	Phase I	10%	23000000	1%	10%	2026	2030	600	0	production	0%	0%	0%	1%	3%	5%	8%	10%	10%	5%	3%	1%	0%	
Orphan																									
Duchenne Muscular Dytrophy (orphan)	14'652'326	Phase I	10%	25000	5%	30%	2026	2029	10800	1200	self-comm	0%	0%	0%	5%	12%	24%	30%	30%	30%	30%	30%	10%	5%	[1]
Lung diseases																									
COPD	48'515'123	pre-clinical	2%	315000000	0.10%	5%	2026	2031	100	0	production	0%	0%	0%	0.10%	1%	2%	3%	4%	5%	5%	5%	5%	5%	[2]
ARDS	5'249'448	pre-clinical	2%	500000	3%	50%	2025	2028	500	0	production	0%	0%	3%	20%	35%	50%	50%	50%	50%	30%	30%	30%	30%	[3]
Cystic fibrosis	863'391	pre-clinical	2%	80000	5%	30%	2026	2029	1000	0	production	0%	0%	0%	5%	13%	22%	30%	30%	30%	30%	30%	10%	5%	[4]
Reperfusion Injury, Critical Care (Sepsis)																									
Sepsis	74'998'843	pre-clinical	2%	5100000	1%	25%	2025	2029	1800	200	self-comm	0%	0%	1%	7%	13%	19%	25%	25%	25%	12%	6%	3%	1%	
Reperfusion injury after PCTA	2'975'492	pre-clinical	2%	2300000	1%	20%	2025	2029	200	0	production	0%	0%	1%	5%	10%	15%	20%	20%	20%	10%	5%	2%	1%	
TOTAL	**1'602'928'335**																								

Calculation methods and assumptions

Expected average net income per patient/year for indications with production and distribution via licensing partners reflect net royalty revenues per patient/year for Metriopharm.

Patient numbers (epidemiological data) are largely based on market analyses by DataMonitor (an Informa Data Service)

peak market share to last for 3 more years until competition / patent cliff kicks in

Note MetrioPharm: after patent expiration, sales shold be down-scaled by 50% of previous year. Generics usually kick-in from day 1 of patent expiry.

[1] 8 Year market exclusivity through Orphan Status

[2] Longer patent protection through pending application with prio-date 2019

[3] Longer patent protection through pending application with prio-date 2020

[4] 8 Year market exclusivity through Orphan Status

4 MetrioPharm AG is running an efficient, semi-virtual R&D operation, representing the cornerstone of a precedent-setting new R&D model

Main pillars of MetrioPharm cost base	2007-2019	2020*
R&D	11.194.642	2.032.207
Personnel cost	10.277.846	1.260.671
Administrative cost	12.967.453	1.818.883
Sum	34.439.941	5.111.761
Total	**39.551.702**	

Leveraging the platform R&D setup, MetrioPharm can run extensive R&D operations in collaboration with 3rd party providers without extensive requirements for a fully-fledged in-house team.

This modus operandus enabled MetrioPharm to obtain external validation for valuations of 4-7x of its cost base.

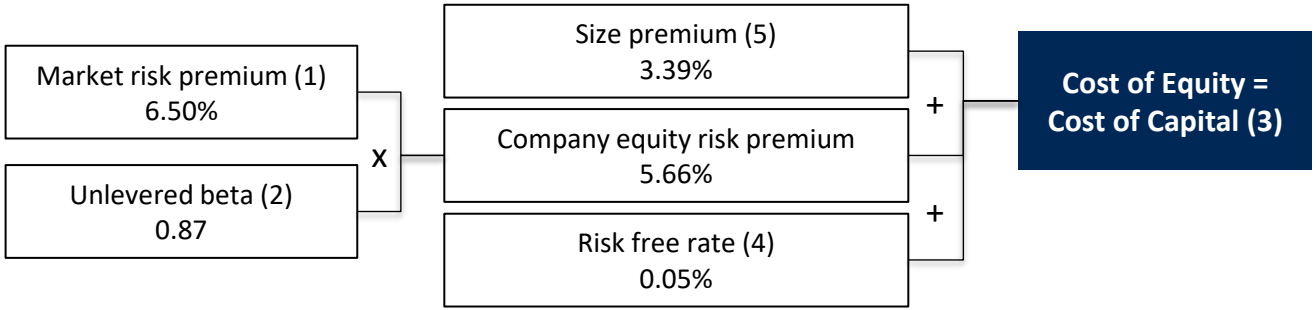
This is proof of its efficiency and scalability, expected to further unfold Economies of Scope, when scaling up operations.

*2020 expenses were assumed in line with 2019 figures in absence of audited company numbers and assuming similar complexity / economic demand in R&D and overhead

WACC for late-stage pipeline (incl. COVID application) is computed at 9.10%

LEVERAGE EXPERTS

Cost of Equity



(1) Average Market Risk premium for Switzerland, Valuation Essentials EY Switzerland Q4/2019

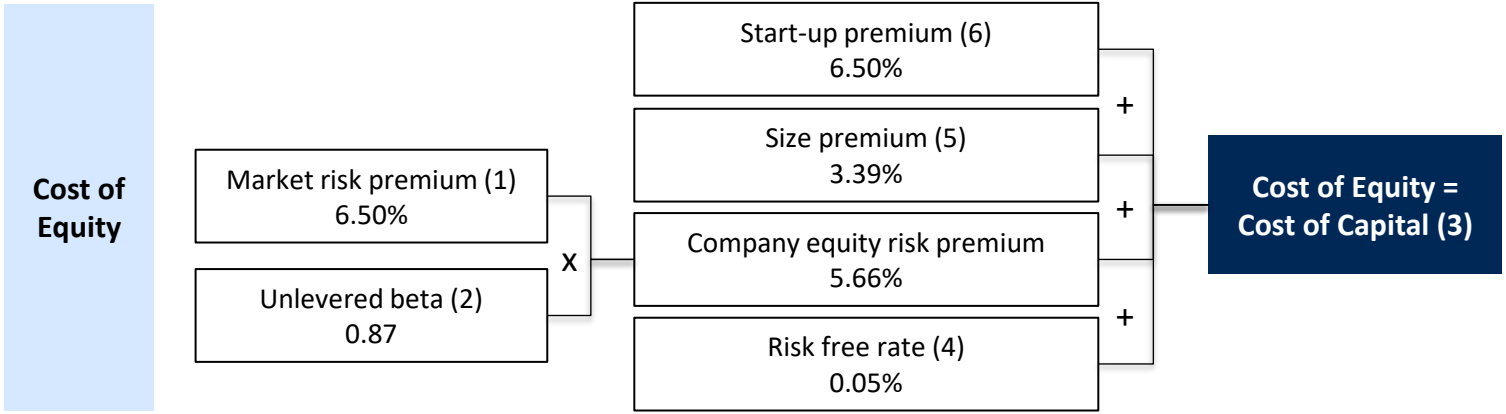
(2) Unlevered Beta for industry: Healthcare (Median) = 0.87, Valuation Essentials EY Switzerland Q4/2019

(3) Target future financing ratio: 100% Equity / 0% Debt – this assumption was taken given the back-end loaded, strongly growing EBITDA profile rather than "steady-state"-like cash flows, making the business unattractive for debt providers within the next 5 years, considering debt capacity assumptions which go beyond that period speculative and hence not relevant for this calculation

(4) Risk free rate Valuation Essentials EY Switzerland Q4/2019 calculated as average between Switzerland and Eurozone 5yr Ø rates, given starting geographies

(5) Size Premium for micro-cap (Duff & Phelps, Valuation Handbook 2019 & Practitioner's guide to cost of capital EY Switzerland, Feb. 2020)

WACC for emerging platform business is computed at 15.60%



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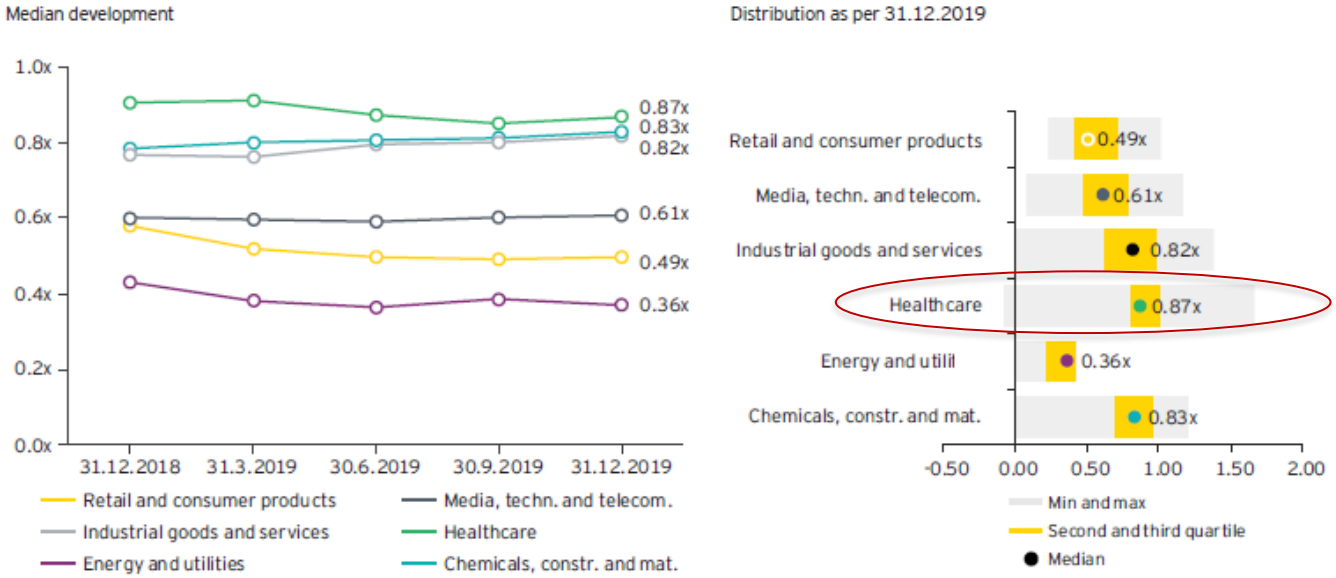
(6) Start-up premium - market average 1x market risk premium

EY valuation essentials I (basis for WACC calculation)

LEVERAGE EXPERTS

Current market risk premium: 6.5%

Unlevered beta



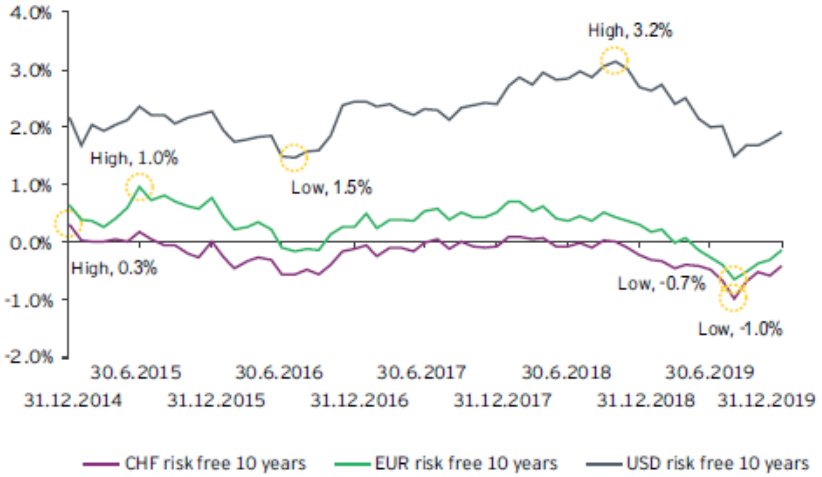
EY valuation essentials II (basis for WACC calculation)

LEVERAGE EXPERTS

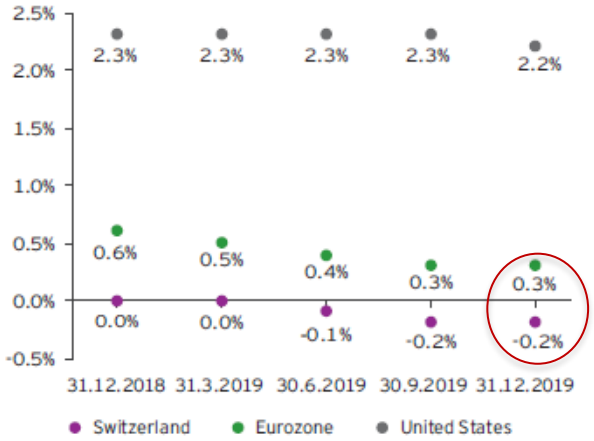
Cost of capital components

Risk free rate

Implied yield on 10-year government bonds, monthly development over five years



Implied yield on 10-year government bonds, monthly average over five years



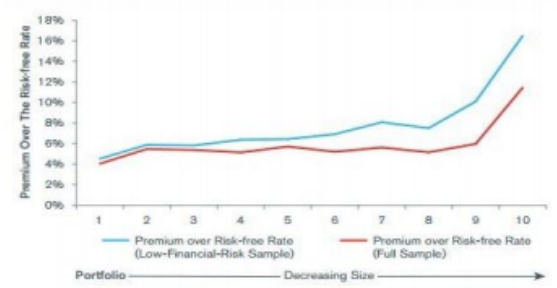
EY valuation essentials III (basis for WACC calculation)

LEVERAGE EXPERTS

EY Switzerland best practice

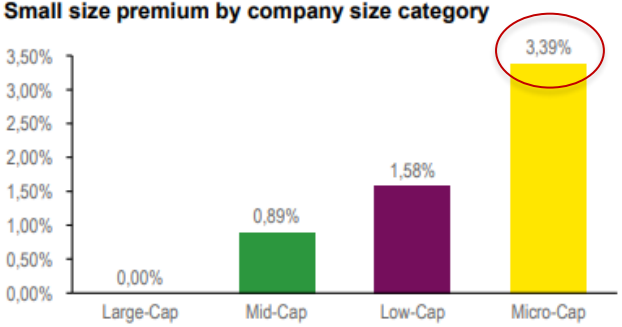
- EY Switzerland applies the size premium derived from a study published in Duff & Phelps - Valuation Handbook. The smaller a company's market capitalization, the higher the size premium
- According to standard Anglo-Saxon valuation literature, systematic risk is considered in the cost of capital (i.e. the WACC), whereas unsystematic is accounted for in the cash flows or with discounts on the asset / company value. We recommend including only the small size premium in the WACC. Other unsystematic risks should be accounted for in the cash flows (e.g., with scenario analysis) or with general discounts on the asset / company value (with the exception of start-up / venture valuation, where we suggest to apply hurdle rates, next to the probability of success approach)

Size premium over the risk free rate by size portfolio



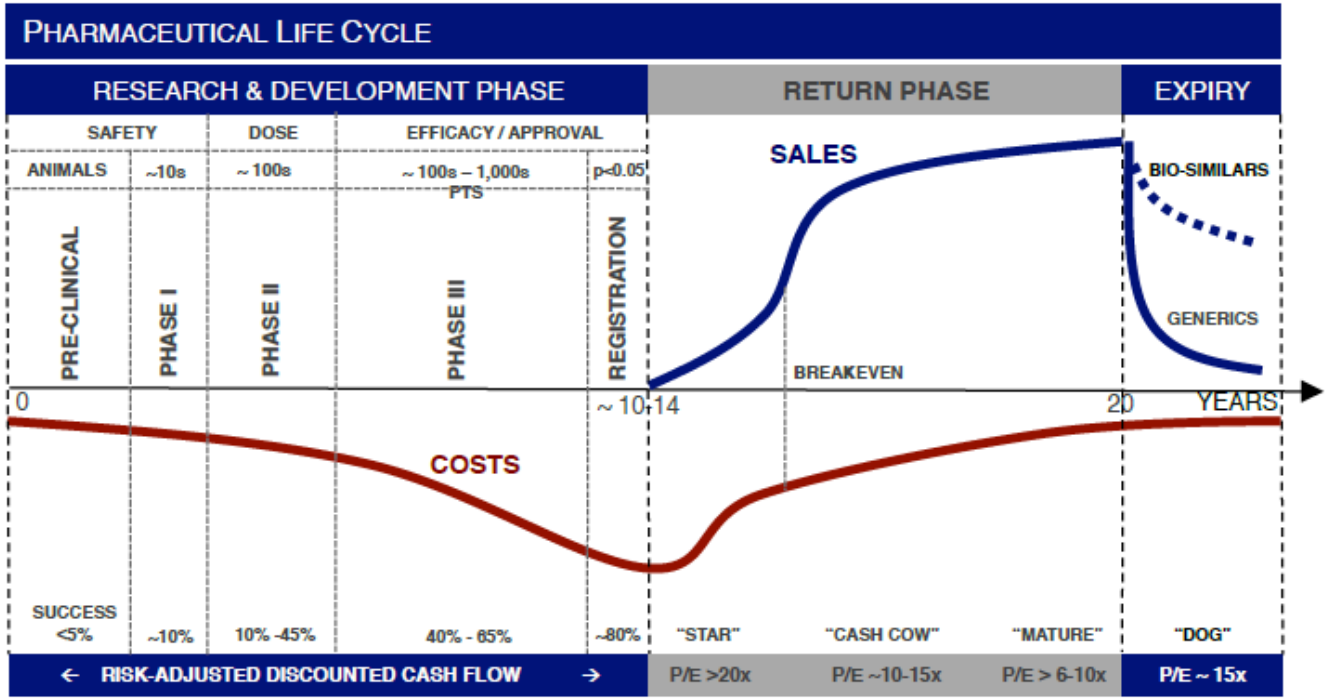
Source: Duff & Phelps – 2014 European size study

Small size premium by company size category



Source: Duff & Phelps, 2019

Clinical Phase Model for Assessment of R&D Pipeline Outcome Probabilities



SOURCE: VALUATIONLAB