# **Herantis Pharma**

**Initiation of coverage** 

06/20/2024 07:00 EEST





# Early stage drug development requires good nerves

Herantis is a drug development company focused on neurodegenerative diseases. Herantis currently has one candidate in the clinical Phase I, HER-096, which the company develops as a disease-modifying drug for Parkinson's disease. The risk level of the stock as an investment is very high, as the likelihood of successful drug development is still low due to the early development phase. As a counterbalance, the market for Parkinson's disease is large and no disease-modifying drugs are available yet. Our DCF model suggests that the stock is attractively priced. Value creation can also materialize through a development and commercialization agreement or an acquisition. We initiate coverage with an Accumulate recommendation and a target price of EUR 2.2.

#### Herantis'drug development currently focuses exclusively on Parkinson's disease

In the past, Herantis has had clinical trials outside neurodegenerative diseases, but now the company focuses solely on HER-096 for Parkinson's disease. The Phase 1a study has so far shown that the candidate is well tolerated and passes through the blood-brain barrier to the central nervous system. We expect that Phase 1b, starting in late 2024, will continue to investigate the correct dosage, safety and tolerability, and how the candidate acts in both healthy volunteers and patients with Parkinson's disease. If the results support further development, the clinical Phase 2 that examines the long-term safety and preliminary efficacy could begin in 2026. Herantis has announced that it aims for a development and commercialization agreement with which it would finance the development starting from Phase 2. We estimate that current cash assets will suffice until Q2'25, which should be enough for the completion of Phase 1b. We expect one share issue of around 5 MEUR that would serve as bridge funding for starting Phase 2 before the development and commercialization agreement sought by Herantis.

#### Significant market potential but the goal is still far away

In the absence of disease-modifying drugs, the need for new treatments for Parkinson's disease patients is high. The market for drug treatment for the disease is around 5.6 BNUSD and is expected to grow steadily by about 4% per year. The slope of growth depends on the market entry of new drug treatments, but there are only a few noteworthy candidates in late-stage clinical development. We consider the Herantis candidate promising and the development risk has already been slightly reduced due to good tolerability and passing the blood-brain barrier. However, there is no evidence of the safety of long-term use of the candidate. In addition, no data on efficacy will be available until a possible Phase 2 study is sufficiently advanced in patient follow-up, which we estimate will be in 2027. We estimate that commercialization could start in 2032 after the extensive Phase 3 study and the processing of the marketing authorization application. In the longer term, extending the indications to other neurodegenerative diseases, such as Alzheimer's disease, may bring new opportunities for the company.

#### Risk-adjusted DCF modeling suggests that the stock is attractively priced considering the risks

Our risk-adjusted forecasts consider the significant risk of failure in drug development, which we estimate is almost 90%. We expect royalty-based revenue to start in 2032 and peak in the late 2030s. Our DCF model suggests a value of EUR 2.2 per share indicating the attractive pricing of the stock. The value of the share may also materialize through a partnership agreement or a bid. The investment profile is characterized by a high return potential with a low probability and a high probability of loss of capital.

#### Recommendation

Accumulate (previous )

**EUR 2.20** (previous EUR)

**Share price:** 1.63



#### **Key figures**

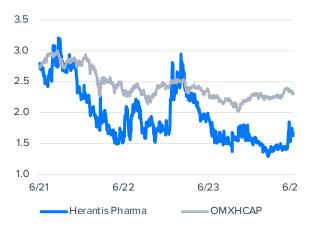
	2023	<b>2024</b> e	<b>2025</b> e	2026e
Revenue	0,0	0,0	0,0	0,0
EBIT adj.	0,2	-4,9	-5,2	-5,6
Net income	0,3	-4,9	-5,2	-5,6
EPS (adj.)	0,01	-0,24	-0,22	-0,23

Source: Inderes

#### Guidance

Herantis does not provide any guidance.

#### **Share price**



Source: Millistream Market Data AB



#### Value drivers

- There is a great need for new drugs in Parkinson's disease that affect the progression of the disease.
- There are potentially millions of drug users in wealthy Western countries.
- If the drug proves safe and effective, we feel that the achievable pricing is attractive.
- In terms of its operating mechanism, HER-096 could also be suitable for treating other neurodegenerative diseases such as Alzheimer's disease and ALS.
- The initial clinical study results are promising for the further development of HER-096
- There are limited credible competitors in the industry's product development pipeline



#### **Risk factors**

- The risk of failure in development is very high due to the early development phase.
- The research program is still at an early stage, so Herantis needs substantial funding for drug development.
- A licensing agreement may not be reached or its terms may be unsatisfactory.
- Drugs that may enter the market before HER-096 could raise the threshold for market entry.
- The increase in the number of shares and the dilution of their value through share issues.

Valuation	<b>2024</b> e	<b>2025</b> e	<b>2026</b> e
Share price	1.63	1.63	1.63
Number of shares, millions	20.2	23.9	23.9
Market cap	33	33	33
EV	33	33	39
P/E (adj.)	neg.	neg.	neg.
P/E	neg.	neg.	neg.
P/FCF	neg.	neg.	neg.
P/B	53.8	78.4	neg.
P/S	>100	>100	>100
EV/Sales	>100	>100	>100
EV/EBITDA	neg.	neg.	neg.
EV/EBIT (adj.)	neg.	neg.	neg.
Payout ratio (%)	0.0 %	0.0 %	0.0 %
Dividend yield-%	0.0 %	0.0 %	0.0 %
Source: Indores			

# **Contents**

Company description	5-10
Risk profile of the business model	11-15
Investment profile	16-17
Industry and competitive field	18-20
Strategy	21
Financial position	22-28
Estimates	23-28
Valuation and recommendation	29-3
Disclaimer	36

#### Herantis in brief

Herantis is a drug development company that focuses on neurodegenerative diseases. The company currently has one early-stage Phase 1 drug development product HER-096, designed to slow down or prevent Parkinson's disease. The need and market size of new treatments for Parkinson's disease are significant and there are currently no drugs on the market that affect the progression of the disease.

#### 2008

Herantis' predecessor, Hermo Pharma is founded.

#### 2014

Herantis is established when Hermo Pharma merges with Laurantis Pharma. Herantis is listed that same year.

#### **HER-096** drug candidate

HER-096 is a drug candidate based on the CDNF protein for the treatment of neurodegenerative diseases. Herantis is currently developing the candidate in a Phase 1 clinical trial for Parkinson's disease.

#### 5.6 BNUSD<sup>1</sup> (2024)

Estimate of the size of the target market

#### ~4%1 (CAGR 2023-2030)

Estimate of target market growth

#### 10

Personnel at the end of 2023

#### **Herantis' history**

- 2008: Herantis roots stem from Hermo Pharma, a company founded by researchers at the University of Helsinki
- 2014: Herantis was established after Hermo Pharma merged with Laurantis Pharma.
- 2014: In addition to Parkinson's disease, Herantis initially focused on the treatment of dry eye syndrome (Laurantis) and lymphaedema (Laurantis).
- 2015: The results of the Phase 2 eye drop study do not support further development.
- 2018: Launch of the xCDNF development project, which serves as the basis for HER-096. The aim of the project is to develop a drug candidate based on CDNF protein that passes through the blood-brain barrier.
- 2020: CDNF is shown to be safe in Parkinson's disease in a Phase 1/2 study

#### Focus on HER-096

- 2021: Herantis decided to discontinue the development of gene therapy for lymphaedema (lymfactin) based on the results of the Phase 2 study.
- 2021: The company prioritizes other CDNF dispensing routes instead of direct administration to the brain.
- 2021: Herantis selects the HER-096 candidate for further development in Parkinson's disease based on the results of the xCDNF program.
- 2022: In preclinical models of Parkinson's disease, HER-096 has similar properties to the CDNF protein.
- 2022: Herantis abandons the development of new CDNF dispensing routes and focuses fully on HER-096 development.
- The benefits of HER-096 include that it can effectively pass the blood-brain barrier, longer patent protection and lower manufacturing costs

#### The present

- 2023: The clinical development of HER-096 begins with a Phase 1a dose and safety study
- The results are published in late 2023. The study meets primary and secondary endpoints.
- HER-096 passes the blood-brain barrier in healthy volunteers. The candidate is also safe and welltolerated.
- 2023: Term sheet signed with EIC Fund, the investment arm of the EIC. Herantis' is eligible for up to 15 MEUR in direct equity investments..
- 2023: Directed issue of 4.5 MEUR in December. Sufficient cash resources until Q2'25 (Inderes' estimate).
- 2024: HER-096 clinical Phase 1b will start during H2'24 (Inderes' estimate). The study investigates safety and tolerability in Parkinson's patients and healthy volunteers.

Source: Herantis/ Inderes

1) Mordor Intelligence

# Company description 1/5

# Herantis develops solutions for neurodegenerative diseases

Herantis Pharma is a Finnish pharmaceutical development company focusing on neurodegenerative diseases. Herantis is currently moving into Phase 1b clinical development with its drug candidate, HER-096. The company is developing this candidate as a therapy to stop the progression of Parkinson's disease, for which there is currently no disease-modifying treatment. Herantis' predecessor. Hermo Pharma, was founded in 2008. Herantis was established in 2014 when Hermo Pharma merged with Laurantis Pharma. The company was also listed on Nasdag First North in the same year. The company has had several development projects in its history, but today Herantis focuses on neurodegenerative diseases, especially HER-096 for Parkinson's disease.

HER-096 is designed to be administered subcutaneously every week, from where it passes through the blood-brain barrier to the central nervous system, where the primary target site is located: the interbrain substantia nigra. The candidate is designed to normalize the protein metabolism of cells in the interbrain. Preclinical studies also show that the candidate reduces inflammation and forming of protein deposits that affect the progression of Parkinson's disease. The aim is to normalize the activity of nerve cells in the midbrain and prevent degeneration and cell death, especially of dopamine-producing neurons. The progressive degeneration and death of dopamine-producing cells is a key factor in the progression of Parkinson's disease.

HER-096 is in clinical Phase 1. So far, the drug candidate has been administered to a small number of healthy volunteers. Studies have provided information on the appropriate dosage of the drug, the behavior of the drug in the body and the evidence of its passage to the central nervous system through the blood-brain barrier. Next, the drug is planned to be administered to patients with Parkinson's disease in clinical Phase 1b, which we estimate will begin during H2'24. The actual preliminary (Phase 2) and broader efficacy studies (Phase 3) will follow later if the Phase 1 results support further development.

In addition to Parkinson's disease, the company is exploring possibilities to initiate preclinical studies (cell and animal models) for the treatment of other neurodegenerative diseases such as Alzheimer's disease and amyotrophic lateral sclerosis (ALS). At the time of writing (6/2024), no concrete information is yet available on the launch of these projects.

The market for drug treatment of Parkinson's disease is estimated to be around 5.6 BNUSD in 2024<sup>1</sup>. Thanks to the large number of patients and in the absence of disease-modifying drugs, Herantis' market potential is very significant. The clinical trial program is still in an early stage, and we estimate that commercialization will be possible in 2032.

As typical for drug development, the risk profile of the investment is high. The efficacy in humans and the possible side effects of long-term use are not yet known.

#### Herantis in a nutshell

	Herantis Pharma is formed in the merger of Hermo Pharma and Laurantis in 2014					
Company	The pharmaceutical company focuses on developing a treatment for neurodegenerative diseases - especially Parkinson's disease					
Clinical trial	HER-096 is a drug candidate designed based on the CDNF protein to prevent or slow the progression of Parkinson's disease					
program	Phase of the clinical program <sup>2</sup> Phase 1 a completed; Phase 1b will start H2'24 (pending regulatory approval).					
	All primary and secondary <b>endpoints were met</b>					
Key results of Phase 1a in healthy	HER-096 was <b>safe and well tolerated</b> as a single subcutaneous dose					
volunteers	HER-096 passed the blood-brain barrier					
Possible future projects	Herantis is exploring the possibility to expand HER-096 research to <b>other neurodegenerative diseases</b> .					
\$\frac{\frac{1}{2}}{2}}\$ Financing	Cash equivalents of 6.5 MEUR (end of 2023) Cash resources last until Q2'25 (Inderes' estimate)					

- Mordor Intelligence.
- 2) At the time of writing 6/2024

Source: Herantis/Inderes

# Company description 2/5

In addition to the positive clinical trial results, the introduction of the candidate to the market requires significant funding. Arranging the funding and its impact on the number of outstanding shares include uncertainties. However, Herantis can also fund its clinical program by partnering with a larger pharmaceutical company, which the company has stated it is aiming for before Phase 2.

# HER-096 was developed based on CDNF, a protein that protects the brain

The development of HER-096 is based on the Cerebral Dopamine Neurotropic Factor (CDNF) discovered at the University of Helsinki. CDNF is a protein found in the human bloodstream and brain that maintains the normal function of neurons and helps them stay alive. In preclinical studies, CDNF restores degenerative neurons to normal function and prevents their death in disease models<sup>1</sup>. Herantis studied CDNF administered directly to the central nervous system (brain) in a Phase 1/2 clinical trial in 2017-19. The CDNF itself was safe and well tolerated in the study. There were preliminary indications of efficacy in an individual patient, but no strong conclusions on efficacy can be drawn from the study. However, we believe that the development of CDNF into a drug was not continued at least partially due to the dispensing route that required a dispensing implant in the cranium. Therefore, due to the costly and invasive nature, the drug candidate had no potential for treating large patient populations.

However, Herantis has used the active area of CDNF as a model and designed HER-096 to replicate the therapeutic effects of CDNF.

As a molecule, HER-096 is a so-called peptidomimetic, i.e. a small protein-like molecule. It is, on the one hand, designed to mimic the therapeutic properties of CDNF and, on the other hand, (partly due to its small size) to pass the blood-brain barrier. This latter feature allows the drug to be administered subcutaneously from where it is absorbed into the bloodstream and reaches the central nervous system at the desired target in the interbrain substantia nigra.

# HER-096 has been developed to protect neurons that produce dopamine

Parkinson's disease is a progressive and incurable neurodegenerative disease. The basic symptoms of the disease include motor symptoms such as tremors and muscle stiffness. Currently, the disease is treated with drugs that relieve symptoms and increase dopamine levels in the brain, but they do not affect the progression of the disease. The exact cause of Parkinson's disease is unknown, but symptoms are explained by the death of dopamineproducing cells in the midbrain. As a result of cell death, the amount of dopamine decreases, leading to symptoms and the disease progressing. The disease is based on protein deposits that aggregate in the midbrain, which interfere with normal brain function, formed by alpha-synuclein proteins that attach to each other. The aggregates maintain an inflammatory state in the midbrain. The disease is also associated with abnormal protein metabolism and abnormal protein folding.

# HER-096 is based on the active site of the CDNF protein



Image: Herantis

#### Factors behind Parkinson's disease

2. Toxic alphasynuclein aggregates

1. Endoplasmic reticulum (ER) stress

3. Activated glia cells produce neurotransmitters that maintain inflammation

4. Decreased dopamine secretion

Post-synaptic neuron that responds to dopamine levels

#### Resulting in motion disturbances

Image: Herantis, Inderes

# Company description 3/5

According to Herantis, the operating mechanism of HER-096 is based on three components: 1) normalization of protein metabolism by regulating the so-called UPR1pathway; 2) reducing inflammation, and 3) inhibiting the binding of alpha-synuclein proteins, which inhibits the formation of protein aggregates that are typical of Parkinson's disease and interfere with normal brain function.

Mechanism 1: Unfolded protein response (UPR) is a cell response to stress situations where cell protein production is not working properly (ER stress). HER-096 thus promotes normal protein metabolism (proteostasis), which in turn normalizes cell function and reduces the stress experienced by cells. Prolonged stress increases susceptibility to cell death. In an animal model, HER-096 has been shown to inhibit the death of stress-affected dopamine-producing cells, which maintains normal levels of dopamine in the substantia nigra.

**Mechanism 2:** Preclinical studies have shown that CDNF binds to alpha-synuclein proteins, thereby preventing them from attaching to each other and formation of larger protein aggregates. Thus, the protein aggregates do not interfere with normal brain function. Similar effects inhibiting aggregation have been observed in HER-096 and they are likely to be mediated through the normalization of protein metabolism.

**Mechanism 3:** Anti-inflammatory. In Parkinson's disease, glia cells in the vicinity of dopamine-producing cells become active and produce chemical mediators. These mediators maintain an

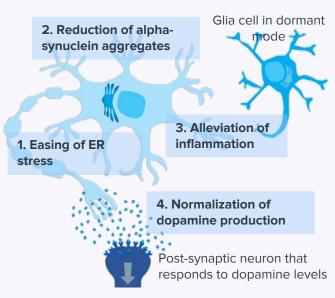
inflammation, which predisposes the surrounding cells to cell death and interferes with the normal function of the tissue.

These operating mechanisms are likely to be interdependent and together promote the normalization of dopamine production (4). For example, protein metabolism disorders can lead to improperly folded alpha-synuclein proteins, aggregation of which causes inflammation. However, as said, the exact root causes of the disease are not yet known.

# HER-096 is designed for long-term use to stop the progression of Parkinson's disease

Thanks to its operation mechanism, HER-096 is designed to normalize brain tissue function and protect dopamine-producing neurons from cell death. Nerve tissue degeneration and cell death gradually over a long period of time. Parkinson's disease is typically diagnosed at the onset of symptoms when a significant number of dopamine-producing cells have already been lost. However, the disease typically continues to progress for several years. HER-096 has been designed to be administered for years to slow down or prevent the progression of the disease. There is no experience with long-term safety and tolerability in humans due to the early stage of clinical development.

#### The effects of HER-096 on the interbrain



Relief from motion disturbances

Source: Herantis, Inderes

# Company description 4/5

HER-096 is administered subcutaneously, which means that the absorption of the medicine will not cause problems as could be the case with oral administration. Exposure of the drug to gastrointestinal Ph changes and potentially drugdegrading metabolic enzymes in the digestive tract and so-called first-cycle metabolism are also avoided. We believe subcutaneous administration is also possible as self-administered treatment by the patient or their relative. This is an obvious advantage and brings potential for widespread use of the drug.

#### Clinical trial results - Phase 1a

Herantis started the Phase 1 study of the HER-096 clinical program (Clinicaltrials.gov) in April 2023, when the first healthy volunteer received the first dose of HER-096. The commissioned study was carried out by Clinical Research Service Turku CRST Oy. The results of the study were published in October 2023. The Phase 1a study was double-blind and placebo-controlled, i.e. the set-up was of high-quality and it produced reliable data. In the study, healthy volunteers received increasing doses of HER-096 as a single subcutaneous dose. In the first part, healthy men aged 20-45 years (48) were given the medicine and in the second part men and women aged over 50 (12) were given the medicine.

The primary endpoint of the study was the safety and tolerability of a single subcutaneous dose. This endpoint was met as only mild injection site-related side effects occurred in the study. These are not necessarily related to the drug itself but to the injection as adverse reactions at the injection site were also observed in the placebo group.

According to the company, HER-096 was absorbed in line with the expectations from preclinical studies. Peak plasma concentration was reached 0.7-2.1 hours after dosing. The half-life in plasma of HER-096 was approximately 2 hours in young subjects and 2.5 hours in older subjects.

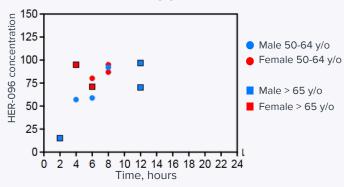
The drug concentration measured in the cerebrospinal fluid indicates the proportion of the drug that has passed the blood-brain barrier. Passing the blood-brain barrier is necessary for the drug to reach the desired target in the midbrain. The results showed that HER-096 reached a concentration of 50-100 ng/ml in the cerebrospinal fluid 4-12 hours after the 200 mg dose was administered. Mirrored with preclinical results, the concentration achieved is, according to the company, at the pharmacological level. This means that in terms of concentration, a response to treatment should also be possible in humans. Due to the structure of the study, cerebrospinal fluid measurements were made at five different time points. Due to the small number of data points, conclusions could not yet be drawn on all important variables. For example, the rate of drug removal from the cerebrospinal fluid was not yet determined in this study. However, the concentration of the drug was still at the pharmacological level at the 12-hour time point, which we find to be a preliminary positive signal and a good result.

#### HER-096 Phase 1a study

Structure of the study	A randomized, double-blind Phase 1a study to evaluate the safety, tolerability and pharmacokinetics of HER-096.					
1st part	48 young men (20-45 y/o) received a single subcutaneous dose (10, 30, 60, 120, 200 or 300 mg) or a placebo.					
2nd part 12 test subjects who were women and men (6x 50-64 y/o and 6x 65-75 y/o) received a single dose of 200 mg.						
Primary endpoint	Safety (adverse effects related to treatment).					
Secondary endpoint	Pharmacokinetic profile of HER-096 (i.e. drug absorption, distribution, metabolism and secretion)					

Source: Herantis, Inderes

# Concentration of HER-096 in the cerebrospinal fluid



Source: Herantis, Inderes

# Company description 5/5

All primary and secondary endpoints were met in the study. Thus, the results clearly supported moving to the next stage 1b, which means that in addition to healthy volunteers, repeated subcutaneous doses will be administered to patients with Parkinson's disease.

Herantis has applied for regulatory authorization for stage 1b. According to our estimates, the study could start already during H2'24. If the results still support further product development, we believe that Herantis could start a Phase 2 study in 2026, which would provide preliminary evidence of the efficacy and safety of longer-term dosing. Successful commercialization still requires an extensive phase 3 study and regulatory approval.

#### Production of HER-096 is outsourced and scalable

HER-096 is a so-called peptidomimetic and, like a protein, consists of polypeptides. HER-096 can be synthetically produced, making production relatively scalable and inexpensive compared to production in living cells, which is how large proteins like monoclonal antibodies are typically produced. Herantis has outsourced the production of HER-096 to the Swiss company Bachem AG, which specializes in the production of peptides (i.e. polypeptides).

Production is carried out by so-called solid-phase peptide synthesis. In our view, the technology is well-known and tested, so the risk related to manufacturing technology is, in our opinion, very small. We believe that the cost of production is around EUR 50-100 per gram and is quite low compared to the price of the final product and compared to biological drugs produced using other

methods. We believe there are many global manufacturers, so Herantis is not significantly dependent on Bachem in the long term. In the short and medium term, delivery problems could, for example, cause delays and costs for Herantis. However, we consider the probability of production problems low.

According to Herantis, the current production batches are about 1,000 grams. Based on Phase 1a, the appropriate single dose appears to be 200 mg, so approximately 5000 single doses can be obtained from one batch. The current production volume is therefore easily sufficient for the Phase 1b study. We estimate that the current scale may also be sufficient for the implementation of the Phase 2 study, although this depends on the size class and schedule of the study. We estimate that scaling production for Phase 3 and commercialization will take time and generate costs. However, we estimate that the costs associated with scaling using this method will remain relatively moderate.

#### Solid phase peptide synthesis system



Image: Bachem AG

# **Business model 1/5**

# High risk drug development company with large potential

As a drug development company, Herantis has no revenue yet. Due to the nature of the industry, it takes up to over a decade to develop candidates and it requires considerable frontloading investments to ensure the safety and efficacy of the candidate in large clinical trials. Herantis' previous projects have in history been funded through several equity funding rounds. Investors should also be prepared for funding rounds in the future, even though the company aims to fund the research program from Phase 2 onwards through a partnership agreement. Herantis' internal expertise focuses on medicine, drug development and finance. Carrying out clinical trials and drug production has been outsourced, which is a rather typical operating model for drug development companies to enable cost flexibility.

Drug development involves binary risk due to the nature of the industry. If the efficacy and/or safety profile of a drug candidate in the development pipeline does not prove to be better than for existing drugs the drug development will stop and the project is highly probable to be written down. On the other hand, if drug development is successful, the return potential is considerable. In other words, it is likely that the capital is either partially or totally lost or the capital is recovered several times over.

If the developed drug has a sufficient efficacy and safety profile, doctors and hospitals have a strong

incentive to buy the drug for their patients, especially in affluent Western countries. Drugs are typically highly patent-protected and provide companies with sales of up to billions of euros and high margins. Composition of matter patent filed in Dec 2019 (WO2021123050A1). Not granted in any territory yet.

# Drug candidate development requires considerable frontloaded resources

Herantis' business model relies on patient studies, which are typically divided into three phases (table on right). In the early development phase the safety and efficacy profile of the drug is not known and entry to the market is most unlikely. With favorable results, the company can move to the next phase of the research, which increases the likelihood of market entry, as well as information on the safety and efficacy of the candidate. Increasing information and higher probability of success increase the value of the candidate as the probability of future cash flows materializing increases. Correspondingly, if the research results are unfavorable, the value of the drug candidate may fall dramatically. The candidate may still be useful, e.g., for another indication (e.g. another neurodegenerative disease), but in practice failed development will often lead to abolishing the development of the candidate.

Geographically, the most attractive market is the US, where the prices achieved for drugs are higher and the market is uniform.

#### **Drug development phases**

Early Clinical trials Commercialization research **Subjects Duration** Cost Basic research and 2-4 years ~10-20 MEUR drua development Preclinical phase - animal 1 year ~5 MEUR testing Phase 1 -Safety and 1-2 years Dozens ~2-5 MEUR dosing Phase 2\* safety and Dozens -2-3 years ~10-15 MEUR hundreds preliminary efficacy Phase 3 extensive Hundreds -~20-50 2-3 years thousands **MEUR** safety and efficacy Marketing ~0.01-0.1 1 year **MEUR** authorization\* Postmarketing The safety and efficacy of the drug is monitored authorization throughout its sales. The authority may require possible further research. research and

monitoring

Source: Davis FS, Biotech Forecasting & Valuation, 2016. / Inderes

<sup>\*</sup> In certain cases, conditional marketing authorization may be granted before completion of Phase III studies 11

# **Business model 2/5**

# Financing solutions at the core of the business model

The success of the financing arrangements is essential to promote drug development. We believe that the company's options for financing research are advance and milestone payments related to development and licensing agreements, debt financing and share issues. We estimate that the key source of financing in the future will be a development and commercialization agreement with a larger pharmaceutical company. Herantis has announced that it is seeking such an agreement to fund the clinical research program before Phase 2 starts.

According to our estimate, the implementation of HER-096's planned Phase 2 clinical development programstill requires roughly 40-50 MEUR. Most of the funding is still unsecured. So far, Herantis has received a grant of 2.5 MEUR from the European Innovation Council (EIC) for 2023-2025. According to the financial statements, 1.4 MEUR of the grant had been received in 2023. In June 2024, the company announced that it would receive the next installment of the grant, i.e. a milestone payment of 0.75 MEUR. In our view, the funding is intended for preparing the Phase 2 study. Herantis has also signed a letter of intent with the EIC Fund, which allows Herantis to receive up to 15 MEUR in direct capital injections. We estimate that this amount could cover a significant part of the Phase 2 study.

#### Sales and profitability potential is considerable

Regulatory authorities can grant marketing authorization to a drug if the development company is able to prove adequate safety and efficacy relative to the severity of the disease to be treated and alternative drugs or treatments. After obtaining marketing authorization, the drug is marketed and sold to hospitals and doctors who choose the drug they consider best for their patients. We believe the decision particularly in the Western countries is influenced by the safety and efficacy profile of the drug. In less prosperous countries, the price of the drug is a more important factor.

If drug development progresses favorably, the most likely scenario is that Herantis signs a licensing agreement with a larger pharmaceutical company. The purpose of the agreement is to share research risk, costs and potential future returns with a larger partner. In addition, through cooperation, Herantis would gain access to a global sales and distribution network that it does not have itself. We do not consider building their own network a realistic option for a company of Herantis' size that focuses on drug development. In cooperation agreements, the drug developer typically receives a pre-payment, a royalty payment of about 10-20 % of sales and possible milestone payments, depending on the progress of research and sales. The total value of the contracts varies greatly and could amount to several billions of euros for a promising drug.

# Key options for commercialization and financing

Commercialization Financina **Benefits** Disadvantages Suitability Giving up No investment Very suitable Licensing part of or new and realistic capabilities potential agreement required revenues Requires a Commercia-No sharing of global sales and Not realistic lization on revenues marketing their own organization Selling the **Immediate** Loss of future Suitable and company or realization of growth a drug realistic potential opportunities candidate Advance No dilution of Giving up part of Verv suitable payments of the share potential and realistic licensing capital revenues agreement No need for Share capital is Suitable and Share issue repayment of diluted realistic capital No dilution of Relatively Limited Debt the share high interest suitability and financing realistic capital costs

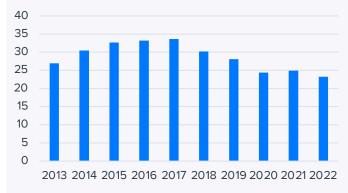
# **Business model 3/5**

The licensing model does not require significant investments from the company, so license income can be expected to be almost pure profit. After a possible marketing authorization, the company's profitability potential is very promising. Another alternative for cash flow materialization is an acquisition where most likely one of the major global pharmaceutical companies would acquire HER-096 to complement its own drug portfolio. We estimate that large pharmaceutical companies are constantly looking for smaller promising acquisitions and licensing agreements when they seek growth and replace successful drugs that lose product protection.

In the mature phase, biotechnology companies are typically very profitable. The companies in the Bloomberg Global Mature Biotech Index have shown a median EBIT margin of 29.2% over the past 10 years. This highlights the high return potential when market entry is successful.

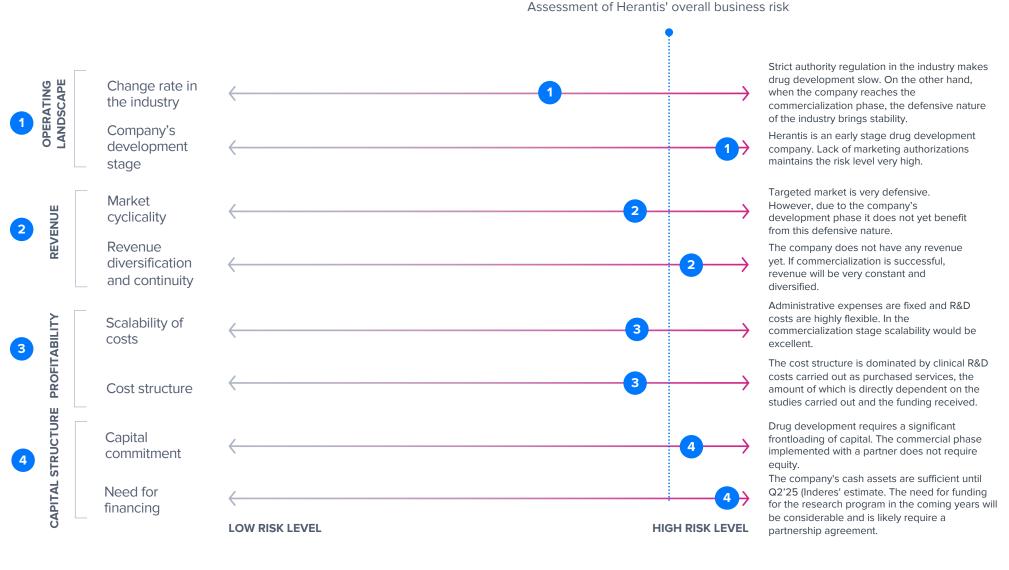
Another alternative to cash flow generation is an acquisition scenario where a major global biotechnology or pharmaceutical company would acquire HER-096 to complement its own product portfolio. Such acquisitions have decreased in number and value since 2022, but simultaneously large players have the need and resources to supplement their product pipelines with new drug candidates and treatments. We, therefore, expect the current slowdown in acquisitions is temporary.

EBIT-% of large biotechnology companies



Source: Bloomberg Global Mature Biotech / Inderes

# Business model 4/5 – risk profile



# Business model 5/5 — SWOT



- A unique operating mechanism with no direct competitor.
- The initial clinical study results are promising for the further development of HER-096.
- There are limited credible competitors in the industry's product development pipeline.
- Light and efficient organization structure.
- The current production capacity of HER-096 should already be sufficient to carry out the Phase 2 study. We see no significant obstacles in scaling production to commercial size.



#### **Opportunities**

- There is a great need for new drugs in Parkinson's disease that affect the progression of the disease.
- There are potentially millions of drug users in wealthy Western countries.
- If the drug proves safe and effective, we feel that the achievable pricing is attractive.
- In terms of its operating mechanism, HER-096 could also be suitable for treating other neurodegenerative diseases such as Alzheimer's disease and ALS.



- The risk of failure in development is very high due to the early development phase.
- The research program is still at an early stage, so Herantis needs substantial funding for drug development.
- The funding environment for biotechnology is currently challenging.
- The potential side effects of long-term use of HER-096 are not yet known.
- Data on the efficacy of the candidate will be available in 2-3 years at the earliest.





**Threats** 

- The efficacy or safety profile of HER-096 may prove inadequate, which is likely to result in capital loss.
- A licensing agreement may not be reached or its terms may be unsatisfactory.
- Drugs that may enter the market before HER-096 could raise the threshold for market entry.
- The increase in the number of shares and the dilution of their value through share issues.

# **Investment profile 1/2**

# An investment object with great opportunities and risks

As a drug development company, Herantis is profiled as a company that focuses on neurodegenerative diseases, with a particular focus on the HER-096 candidate for Parkinson's disease. There is a great need for disease-modifying drugs in the industry. The number of patients requiring drugs is big and increasing, e.g., due to the aging population. In terms of the development stage, the company can be considered an early-stage drug development company as HER-096 is halfway through clinical Phase 1. The transition to Phase 2 could, according to our estimates, take place in 2026 and commercialization in 2032.

As an investment object, Herantis has binary features meaning that if drug development is successful, profits can be significant, but failures can lead to permanent loss of invested capital. We consider the company one of the riskiest listed Finnish companies. Repeated share issues may also dilute the share of old shareholders in the company. The high risk is counterbalanced by the possibility of high returns. If drug development and market entry succeed optimally, HER-096's annual sales could be counted in hundreds of millions, even billions. Herantis would probably receive very high-margin licensing income and milestone payments on these sales based on a commercialization agreement. Herantis has announced that it seeks a partnership agreement before Phase 2.

Herantis' risk profile may gradually change. If, e.g., studies support the efficacy and safety of the candidate, the probability of obtaining marketing

authorization rises and the risk level decreases correspondingly. Undesirable results in turn lead to an opposite effect on the risk/reward ratio. In these types of risk changes, the share's value may change significantly in a short period of time.

We feel the stock is suitable for investors with high risk tolerance as part of a well-diversified portfolio. We recommend that investors who are interested in the sector diversify their investment into several companies in the sector so that the binary risk can be spread out in practice with an unchanged expected return. An investor should be prepared to contribute to further financing of the company, e.g., through share issues, or alternatively accept a proportional dilution of their holding as the total number of shares increases.

#### Positive value drivers and opportunities

In the short term, we consider positive results in Phase 1a to be positive stock drivers. We believe that this phase can be completed with current financing although this is not certain. If successful, Phase 1b would ensure the correct dosage of HER-096 and passing of the blood-brain barrier in healthy volunteers and Parkinson's disease patients. Further assurance of short-term safety and tolerability can also be obtained. If these things were confirmed, we estimate that the risk profile of the stock would decrease, which could be reflected as higher share pricing. Successful financing solutions, such as cooperation agreements with large pharmaceutical companies could also be a positive driver.

In the longer term, value creation depends heavily on the results of efficacy and safety studies.

#### Risks and threats

The company's short-term risks include failure to conclude a cooperation agreement, which would likely result in an equity-based financing round. The stock could be significantly diluted if the issue was carried out at a low stock valuation level. The terms of any agreement could also be disappointing to shareholders.

Unfavorable study results may also be negative drivers. We consider the progression of the development program to Phase 2 to be fairly likely based on the average probabilities of drug development (see the Forecasts section) and the results achieved so far from Phase 1a. However, progress from Phase 2 to Phase 3 is relatively unlikely. This is due to the cost of Phase 3, which requires good safety and efficacy data from previous phases to justify the investment. Historically, drug development usually stops at Phase 2.

In the longer term, risks include safety or efficacy deficiencies that emerge after the marketing authorization has been granted, which may result in the marketing authorization being revoked. Especially in drugs with early marketing authorization, only some receive final marketing authorization. However, for drugs that have undergone a normal development process, cancellation of marketing authorization is quite rare.

# **Investment profile 2/2**



- 2. High need for new drugs and strong growth outlook of the industry creates high market potential
- Focus on Parkinson's disease and HER-096 candidate
- 4. Potential for high returns, but also of permanent loss of capital
- 5. Drug candidates' entry to market is uncertain and takes time even when successful

#### **Potential**



- There is a great need for disease-modifying drugs for Parkinson's disease
- The target market is estimated to grow to 6.6 BNUSD by 2029.
- · Very defensive sector
- Possibility of a globally sold drug with a significant number of patients.
- Potential can also materialize through a cooperation agreement or acquisition

#### **Risks**



- Drug development requires substantial front-loaded investments
- Failed drug development is likely to result in permanent loss of invested capital
- Success depends on the safety and efficacy of drug candidates, which may prove insufficient in studies
- If market entry is successful, the market share, sales price and royalties involve uncertainties
- Financing conditions are challenging at the moment

# Industry and competitive field 1/3

# Parkinson's disease affects a large number of patients<sup>1</sup>

Parkinson's disease is a common disease that develops slowly over the years. Its symptoms can be treated with drugs that increase the amount of dopamine in the brain, but there are currently no disease-modifying treatments available. There is therefore a great need for treatments that address the root causes of the disease.

Parkinson's disease is a common neurodegenerative disorder, the incidence of which increases with age. It is estimated that 1% of people aged over 60 suffer from the disease and it is somewhat more prevalent in men than in women. In the most commercially important market in the US, around 1 million people suffer from Parkinson's disease. Approximately 90,000 new cases are diagnosed each year. By 2030, it is estimated that there will be 1.2 million people in the US and around 10 million worldwide suffering from the disease<sup>1</sup>. In terms of patient numbers, this is a very significant disease. The increase in the number of patients is mainly caused by the increase in the average age of the population, which is strongly correlated with the incidence of Parkinson's disease. In Finland, there are 16,000 patients under medical treatment<sup>2</sup>.

The total cost of the disease is estimated to be 52 BNUSD per year in the US, consisting largely of lost working years and high social and healthcare costs.

#### **Drug treatment of Parkinson's disease**

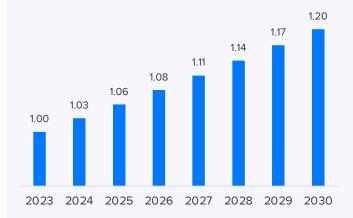
There are currently several symptomatic treatments in use with different mechanisms. The most effective drug is levodopa, which increases dopamine in the brain. Early-stage patients are typically treated with dopamine agonists that increase the brain's own dopamine production. Less widely used alternatives include MAO-B inhibitors used in the early stages and apomorphine for severe symptoms.

The global drug market for Parkinson's disease was around 5.6 BNUSD in 2024<sup>3</sup>. The market is projected to grow by 3.6% per year until 2029, when the market size is estimated to be 6.6 BNUSD.

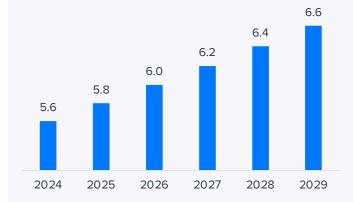
Patent protections for current drugs have mostly expired, and, e.g., the most widely used drug levodopa has been in use for over 50 years. We believe the share of the existing drugs of the market is based on an increase in the number of patients and a rise in prices due to inflation. We estimate that faster market growth than this relies heavily on the entry of new drugs into the market, whose patent protection would mean faster market growth with higher prices.

The cost of current drug treatment in the US is about USD 2,500 per patient per year. However, we estimate that the price of potential new disease-modifying drugs would be significantly higher. For example, a reference price range can be outlined from the pricing of Leqembin®, a new disease-modifying drug for Alzheimer's disease, which, according to Eisai, that markets the drug has a list price of around USD 26,500 per patient per year.

# Number of patients on main markets (US), millions



#### Market size, BNUSD<sup>2</sup>



- 1) https://www.parkinson.org/understanding-parkinsons/statistics
- 2) https://www.terveyskirjasto.fi/dlk000553
- 3) https://www.mordorintelligence.com/industry-reports/parkinsons disease-drugs-market

# Industry and competitive field 2/3

#### Success of Alzheimer's medication should also bring tailwind to drug development for Parkinson's disease

An important step forward in the treatment of neurodegenerative diseases has been Legembi® (lecanemab) for the treatment of Alzheimer's disease. As far as we know, Legembi® is the first commercialized disease-modifying drug for neurodegenerative diseases. The drug, developed by Swedish BioArctic and commercialized with Eisai & Biogen, was received marketing authorization in the US in summer 2023. Eisai aims for some 360 MUSD in sales in 2024. Growth is particularly expected from the new subcutaneous formulation. We believe the commercialization of Legembi® has been a pioneer in the field and has shown that it is possible to affect disease progression of neurodegenerative diseases in humans. This progress can help smooth the development and funding of new drug candidates like HER-096. Eli Lilly's donanemab that works with a similar mechanism also appears to be close to commercialization for Alzheimer's disease.

# Competing drug candidates in the global product development pipeline

According to an industry review published in summer 2023, there were 139 clinical trials ongoing for Parkinson's disease. Of these, 63 (45%) were studies of disease-modifying treatments and the rest were related to symptomatic treatments. There were 52 disease-modifying candidates, some of which had several ongoing studies at the same time.

The study pipeline is clearly focused on early and intermediate phases of drug development, with 39.7% of the disease-modifying studies in clinical Phase 1 and 51.8% in Phase 2. Only 9.5% (6) of the candidates were in the final clinical phase, indicating that not many projects have moved forward from Phase 2. The reasons may be related to safety, efficacy or commercial considerations.

The candidates in the development pipeline have varying operating mechanisms. The mechanisms and the number of candidates associated with them are shown in the table on the next page. HER-096's clinical program had not yet begun when the data for the review was collected. Thus Herantis' candidated was not included in the analysis. In this competitive field, we believe HER-096 ranks among neurotrophic factors on the one hand and among candidates affecting alpha-synuclein on the other, based on its operating mechanism.

Phase 3 contains only six disease-modifying candidates, two of which are based on affecting alpha-synuclein. In addition, there is one candidate for each operating mechanism: antioxidant, GLP1-R agonist, LRRK2 inhibitor, and a candidate affecting microbiome. According to our information, the Phase 3 study of the other alpha-synuclein affecting candidate has been discontinued. The results of Annovis Bio's buntanetab candidate's Phase 3 are expected during 2024. Buntanetab affects protein production, thereby preventing the formation of harmful alpha-synuclein aggregates.

#### Market trends and growth drivers



There are about 10 million Parkinson's patients worldwide



New drugs that may be approved can significantly increase the market



The aging of the population increases the prevalence of Parkinson's disease



With better treatments, patients live longer with Parkinson's disease

Source: Parkinson.org, Inderes

1) https://www.parkinson.org/understanding-parkinsons/statistics

# Industry and competitive field 3/3

We estimate that among the Phase 3 candidates the alpha-synuclein inhibitor, GLP1-R agonist and LRRK inhibitor are commercially viable competitors for Herantis. In conclusion, there are currently very few potential competing drug candidates in the late development phase. Naturally, candidates will eventually progress from the earlier phases of the development pipeline to Phase 3.

Interesting peers for Herantis are also candidates that replicate the effects of neurotrophic factors. According to the report, there are 2 studies related to these factors in Phase 1 and 1 in Phase 2.

There has also been interest in the industry in prasinezumab, an antibody that attaches to alphasynuclein aggregates. The candidate has been in Phase 2 clinical trials where it preliminarily seems to have limited efficacy, particularly in patients with rapid disease development (source). However, the potential market entry of the candidate requires a large randomized Phase 3 study, so commercialization is still very uncertain, especially since the Phase 2 efficacy display was not unequivocally strong. Blascamesin (ANAVEX2-73) has also shown promising results in the treatment of Parkinson's disease in a Phase 2 study.

#### HER-096's position in the research pipeline

HER-096 is still an early development stage candidate, so it is likely that a relatively large number of competing candidates will enter Phase 3 before HER-096 This may lead to a situation where one or more competing drugs are commercialized before the research program for HER-096 is completed. However, we believe there is room for several safe and functional Parkinson's drugs on the market. Different drugs may also be better suited to different patient groups. However, access to the market for competing drugs may raise the bar of commercialization, so that HER-096 must demonstrate greater safety and/or efficacy than competitors to enter the market.

#### **Disease-modifying candidates**

Operating mechanism	Number of candidates	In Phase 3
<b>A</b> nti-inflammatory	2	-
Antioxidant	3	1
Cell therapy	6	-
Others	7	-
Energy metabolism	2	-
Glucocerebrosidase inhibitors	2	-
GLP1-R agonists	5	1
Kinase inhibitors	4	-
LRK2 inhibitors	3	1
Affecting the microbiome	5	1
Neurotrophic factors	3	-
Alpha synuclein binding	10	2
Total	52	6

Source: Journal of Parkinsons Disease; Inderes

# **Strategy**

#### Market size and trends

#### **Target market**

Market for drug treatment of 5.6 BNUSD Parkinson's disease, 2024

**Growth rate**, 2024-2030 CAGR **3.6**%

#### Market trends and growth drivers



There are about 10 million Parkinson's patients worldwide



New drugs that may be approved can significantly increase the market



The aging of the population increases the prevalence of Parkinson's disease



With better treatments, patients live longer with Parkinson's disease

#### **Strategy**



Herantis creates value in preclinical and early clinical development of treatment for neurodegenerative diseases



Herantis aims to find a development partner for the clinical development and commercialization of the HER-096 drug candidate

# Inderes' comment on the strategy

Herantis' strategy relies on preclinical research and early clinical drug development in neurodegenerative diseases. The company has announced that it will seek a partner to finance the drug development from Phase 2.

The strategy limits capital needs, as the partnership agreement would make it possible to finance the expensive Phase 2 and 3 studies.

Herantis has said that HER-096 can also be suitable for the treatment of ALS and Alzheimer's disease. The strategy may indicate an attempt to activate research into these new indications in the near future. At the moment, however, all stakes are in Parkinson's disease.

# Key elements of strategy implementation

#### Near future, 1-2 years

- Success in financing solutions is essential for implementing the planned research program
- The partnership will become topical quite soon, as we estimate that the previous Phase 1b should be completed in H2'25.
- Building research capacity for Phase 2
- A strategic decision to invest in other neurodegenerative diseases

#### Next 5 years

- Signing a partnership agreement to finance future phases
- Completion of Phase 2 and initial demonstration of efficacy
- Preparation and start of Phase 3.
- Launch of a clinical program in new indications such as ALS and Alzherimer's disease.
- Introducing potential new drug candidates to the clinical program.

Source: Inderes, Precedence Research

# **Financial position**

#### Past development

As typical in the industry, Herantis' result has been negative throughout the company's existence due to its business model and frontloaded research investments. The result for 2023 was exceptionally positive, due to Business Finland's decision not to collect the capital of the loans. The loan relates to the previous CDNF development program.

In addition to neurodegenerative diseases, the company has previously worked in two other drug development areas, but these projects have been discontinued due to unfavorable research results. Herantis' operations have mainly been financed by share issues

The company has received additional funding through public subsidies. The most recent of these is the 2.5 MEUR research grant from the European Innovation Council's EIC fund for 2023-2025. So far, 1.4 MEUR has been withdrawn from the grant and in June 2024 Herantis received a decision on the next 0.75 MEUR installment of the grant being granted. The agreement also includes an option for a capital injection of 15 MEUR.

#### The cost structure is light

Of Herantis' expenses, personnel costs have been 2.6 MEUR at most in recent years but decreased to 1.7 MEUR in 2023. At the end of 2023, the company only had 10 employees, and the company has reduced its number of employees. Thus, the company works quite efficiently, although it is difficult to assess whether additional recruitment would be useful from the outside.

Other operating expenses consist mainly of R&D costs and have fluctuated significantly each year due to the fluctuations in outsourced research costs and purchased services. R&D expenditure in 2023 was 2.7 MEUR and 5.0 MEUR in 2022. We believe the drop is caused by the fact that the company had only one Phase 1 clinical trial. In previous years, costs have been boosted by overlapping studies, which as Phase 2 studies have also been more expensive to carry out.

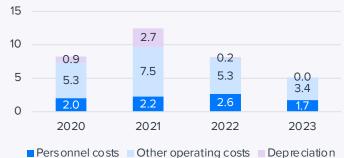
#### Cash flow is based on financing

Herantis' operating cash flow has been in line with the result. Cash flow has been negative due to the lack of revenue. The negative cash flow decreased clearly in 2023 compared to previous years, for the same reasons as the company's costs decreased. The cash position has been balanced with financial arrangements, with share issues being the most important. The latest issue of 4.5 MEUR was carried out in late 2023. Investments are of marginal importance in the changes of company cash flow.

#### **Financial position**

The assets side of Herantis' balance sheet includes 6.5 MEUR in cash assets, which we estimate is sufficient until Q2'25. We believe that the funding will make it possible to achieve top-line results from Phase 1b, which helps the company when negotiating further financing. The company has 4.7 MEUR in equity and 2.0 MEUR in liabilities, which in practice are entirely interest-free.

# Operating costs of the business, MEUR



#### Operating cash flow, MEUR



#### Balance sheet at the end of 2023, 6.7 MEUR



# **Estimates 1/4**

# The estimates are based on the development of HER-096 for Parkinson's disease

A key driver of our estimates is the commercialization of HER-096 for Parkinson's disease. Herantis has also announced the possibility of expanding HER-096 research into other neurodegenerative diseases. However, these require additional funding and would start in the preclinical phase if realized. The launch of a clinical development program for these projects is therefore still uncertain, so we do not include them in our forecasts at this stage.

# Success of drug development involves a significant binary risk

The uncertainties and risks associated with Herantis' future forecasts can be divided into two categories 1) risks associated with the success of drug development and 2) other business risks.

The risk associated with the success of drug development is binary by nature, i.e. the development either succeeds or fails. Successful development and market entry can mean very significant cash flows for the investor. On the other hand, unfavorable research results may result in the project being terminated, so the value of the drug candidate may reset to zero. An example of success in neurodegenerative diseases is Leqembi®, a recently commercialized Alzheimer's drug by Swedish BioArctic. An example of a closed project is Herantis' Lymfactin, where development was discontinued after Phase 2.

We assess the likelihood of success by mirroring the characteristics of the company's drug candidate and its development stage with research literature<sup>1</sup> that

describes the average success rates of drug development. The average probability of passing Phase 1 in neurology has historically been around 60%, Phase 2 around 33 % and Phase 3 around 57 %. Som 88% of applications have passed the post Phase 3 regulatory assessment and finally reached the market. In addition to these figures, the probabilities are shaped by many variables. These include, e.g., whether the drug is biological or micromolecule, and whether the research has biomarkers available to select patients.

We have slightly raised the probability of HER-096 Phase 1 success compared to the historical probability. The lift is based on the current data of HER-096's good tolerability and the ability of the candidate to pass the blood-brain barrier. This contributes to reducing the risk associated with the development of the candidate and we believe it increases the likelihood of success. Otherwise, we rely on historical probabilities.

#### Revenue

The detailed reasoning for our revenue forecasts is given in the table on page 26. Our revenue modeling is based on the number of patients with Parkinson's disease, the expected market share and sales price of the drug, and the amount of license fees. In terms of patient numbers, our modeling is based on the prevalence of Parkinson's disease on the main market in the US<sup>2</sup> and the secondary markets in EU-28 countries<sup>3</sup>, the UK<sup>3</sup> and Japan<sup>4</sup>. There are currently approximately 1, 1.2 and 0.3 million patients in these markets respectively.

# Probability of timing of HER-096's development success

	Phase 1	Phase 2	Phase 3	Marketing authorization application	Market entry
Probability of success	65 %	33 %	57 %	88 %	11 %
Schedule				USA: 2031; Others: 2032	,

Source: Inderes

# Number of patients, top sales of the drug, and Herantis' royalty rate in 2039

Indication	Potential number of patients	Top sales, MEUR	Royalty rate
Parkinson's disease	~3,600,000	~6,400	15 %

- 1) Davis FS, Biotech Forecasting & Valuation, 2016. / Inderes
- 2) Parkinson.org
- 3) The Lancet
- 4) Parkinson's Disease

# Estimates 2/4

We expect a 3% increase in the number of patients per year until 2030 based on the growth forecast for the US patient population. From then on, our assumption is 2% a year. We use the prevalence of Parkinson's disease to estimate patient numbers, as HER-096 is expected to be used for several years, so all patients with the disease are among the potential users.

Potential patients for HER-096 treatment among all Parkinson's patients is expected to be 50%. The drug is likely to be more suitable for certain subgroups of Parkinson's disease, but there is no visibility for this yet. Some patients stop using the drug due to, e.g., experienced side effects. We assume this proportion to be 5% of patients.

In our estimates, HER-096's market share will gradually grow and reach peak sales six years after the start of sales. This is in line with the average sales development for drugs. In the US, we expect sales to start in 2032 and elsewhere in the world in 2033. We assume that Herantis will prioritize the US market, because the prices achievable there are higher and entering a large unified market is more straightforward than, e.g., in Europe. The FDA's clear and quick processes also support starting commercialization in the US. Sales will decline rapidly after the expiration of the patents we expect from 2039. Herantis patents were filed in 2019, but they are still pending. We assume that patents will be valid for 20 years from the date of application (source FDA). We believe that Herantis also has the possibility to extend patent protection.

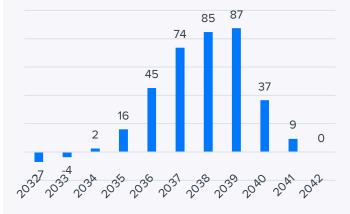
At this stage, the pricing of the drug is subject to significant uncertainty. Final pricing depends, e.g., on how effective the drug ultimately turns out to be. This information will, however, only be available with possible Phase 3 results. We expect the sale price of the drug to be EUR 20,000 per patient per year in the US. Our estimate is based on the pricing of Leqembin®, a recently commercialized Alzheimer's disease drug which according to Eisai is USD 26,500 per year. In other parts of the world, drug prices are typically significantly lower than in the US, so our estimate for the rest of the world is EUR 10,000 per patient per year. We expect drug prices to rise by 2% a year.

Herantis has announced that it seeks to partner with a larger pharmaceutical company to develop HER-096 from Phase 2 onwards. Such agreements typically include an advance payment to finance research costs, milestone payments based on the progress of development and commercialization, and sales-related royalty payments.

In our forecasts, Herantis' revenue is generated through royalty payments from 2032 onwards. We expect the international partner to handle sales, marketing and distribution while Herantis receives a percentage-based royalty payment and possible milestone payments for drug development and sales progress.

# Revenue estimates, MEUR 2500 2000 1500 1000 500 Revenue, other countries Revenue, US Revenue, risk-adjusted Source: Inderes





# Estimates 3/4

We expect royalty payments to be 15% of revenue. Our assessment is somewhat conservative due to Herantis' goal of partnering already at a fairly early stage of drug development. As data on effectiveness and safety are still scarce, the achievable contractual terms may not be the best. We have not included milestone payments in our forecasts, as their materialization, amount and timing vary significantly

We assume that Herantis will succeed in concluding a development and commercialization agreement and that the signing and other fees of the agreement will be sufficient to cover the development costs of Phases 2 and 3. However, in our forecasts, Phase 2 will not start until 2026, so we expect the company to need some 5 MEUR in equity bridge financing before the Phase 2 study. Therefore, we model a share issue of 5 MEUR for 2025, where we use an assumed issue price of EUR 1.3 per share. This corresponds to a discount of about 20% compared to the price at the time of writing this report.

#### **Probability of success**

Due to the early stage of drug development, the likelihood of market entry is still low. We estimate that the probability is about 11%. The likelihood can be expected to increase if research results support further development of the drug. The current low percentage is explained, e.g., by the fact that the safety of HER-096 is not yet known in patients with Parkinson's disease, in a larger patient population and in long-term use of the drug. Evidence of the drug's efficacy in humans is also completely missing

at this stage and can be expected in Phases 2 and 3. However, the risk has been slightly dismantled by evidence of acute tolerability and preliminary positive data on the drug passing the blood-brain barrier to the central nervous system.

#### Revenue and profitability

In our forecasts, revenue starts to accumulate in 2032 after the Phase 3 study and the processing of the marketing authorization application. Sales will peak in 2039 before the expiry of key patents and will decline rapidly thereafter. As revenue grows, the result quickly turns profitable due to the company's light cost and organizational structure.

In terms of costs, we expect Herantis to continue with a light organizational structure. We expect personnel costs to increase by 8% per year due to moderate recruitment and wage inflation. We expect the same growth rate in other operating costs as well.

# **Estimates 4/4**

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
HER-096, US													
Prevalence of Parkinson's disease	1,201,025	1,225,045	1,249,546	1,274,537	1,300,028	1,326,028	1,352,549	1,379,600	1,407,192	1,435,336	1,464,043	1,493,323	1,523,190
Suitable patients, %	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Potential patients	600,512	612,523	624,773	637,269	650,014	663,014	676,275	689,800	703,596	717,668	732,021	746,662	746,662
Market share, %	0.0 %	0.0 %	1.0 %	2.0 %	4.0 %	8.0 %	16.0 %	20.0 %	20.0 %	20.0 %	10.0 %	5.0 %	2.5 %
Patients that stop using the drug, %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %
Price/year/patient, MEUR	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Royalty share, %	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Revenue	0	0	21	43	90	188	391	509	529	551	286	149	74
Probability of market entry	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Revenue, risk-adjusted	0	0	2	5	10	20	42	55	57	59	31	16	8
HER-096, other markets													
Prevalence of Parkinson's disease	1,791,078	1,826,900	1,863,438	1,900,707	1,938,721	1,977,495	2,017,045	2,057,386	2,098,534	2,140,505	2,183,315	2,226,981	2,271,521
Suitable patients, %	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Potential patients	895,539	913,450	931,719	950,353	969,360	988,748	1,008,523	1,028,693	1,049,267	1,070,252	1,091,657	1,113,490	1,113,490
Market share, %	0.0 %	0.0 %	0.0 %	1.0 %	2.0 %	4.0 %	8.0 %	16.0 %	20.0 %	20.0 %	10.0 %	5.0 %	2.5 %
Patients that stop using the drug, %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %	5.0 %
Price/year/patient, MEUR	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Royalty share, %	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Revenue	0	0	0	16	34	70	146	303	395	411	214	111	57
Probability of market entry	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Revenue, risk-adjusted	0	0	0	2	4	8	16	33	42	44	23	12	6
Top sales, US	0	0	139	289	602	1253	2607	3391	3528	3670	1909	993	497
Top sales, other countries	0	0	0	108	225	467	972	2023	2631	2737	1424	741	378
Total risk-adjusted revenues	0.0	0.0	2.2	6.4	13.3	27.8	57.8	87.4	99.4	103.4	53.8	28.0	14.1
US	0.0	0.0	2.2	4.7	9.7	20.2	42.1	54.7	56.9	59.2	30.8	16.0	8.0
Other countries	0.0	0.0	0.0	1.7	3.6	7.5	15.7	32.6	42.5	44.2	23.0	12.0	6.1

# **Income statement**

Income statement	H1'22	H2'22	2022	H1'23	H2'23	2023	H1'24e	H2'24e	<b>2024</b> e	<b>2025</b> e	<b>2026</b> e	<b>2027</b> e
Revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA	-4.4	-3.6	-8.1	-2.4	2.6	0.2	-2.4	-2.5	-4.9	-5.2	-5.6	-5.9
Depreciation	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT (excl. NRI)	-4.4	-3.6	-8.0	-2.4	2.6	0.2	-2.4	-2.5	-4.9	-5.2	-5.6	-5.9
EBIT	-4.4	-3.6	-8.0	-2.4	2.6	0.2	-2.4	-2.5	-4.9	-5.2	-5.6	-5.9
Share of profits in assoc. compan.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net financial items	-1.3	0.0	-1.3	0.6	-0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
PTP	-5.7	-3.7	-9.3	-1.8	2.1	0.3	-2.4	-2.5	-4.9	-5.2	-5.6	-5.9
Taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net earnings	-5.7	-3.7	-9.3	-1.8	2.1	0.3	-2.4	-2.5	-4.9	-5.2	-5.6	-5.9
Net earnings	-5.7	-3.7	-9.3	-1.8	2.1	0.3	-2.4	-2.5	-4.9	-5.2	-5.6	-5.9
EPS (adj.)	-0.33	-0.22	-0.55	-0.09	0.10	0.01	-0.12	-0.12	-0.24	-0.22	-0.23	-0.25
EPS (rep.)	-0.33	-0.22	-0.55	-0.09	0.10	0.01	-0.12	-0.12	-0.24	-0.22	-0.23	-0.25

# **Balance sheet**

Assets	2022	2023	2024e	<b>2025</b> e	<b>2026</b> e
Non-current assets	0.0	0.0	0.0	0.0	0.0
Goodwill	0.0	0.0	0.0	0.0	0.0
Intangible assets	0.0	0.0	0.0	0.0	0.0
Tangible assets	0.0	0.0	0.0	0.0	0.0
Associated companies	0.0	0.0	0.0	0.0	0.0
Other investments	0.0	0.0	0.0	0.0	0.0
Other non-current assets	0.0	0.0	0.0	0.0	0.0
Deferred tax assets	0.0	0.0	0.0	0.0	0.0
Current assets	6.2	6.7	2.8	2.8	0.3
Inventories	0.0	0.0	0.0	0.0	0.0
Other current assets	0.0	0.0	0.0	0.0	0.0
Receivables	0.2	0.3	0.3	0.3	0.3
Cash and equivalents	6.0	6.5	2.5	2.5	0.0
Balance sheet total	6.2	6.7	2.8	2.8	0.3

Liabilities & equity	2022	2023	2024e	2025e	<b>2026</b> e
Equity	-0.1	4.7	0.6	0.4	-5.1
Share capital	0.1	0.1	0.1	0.1	0.1
Retained earnings	-75.4	-75.1	-80.0	-85.2	-90.7
Hybrid bonds	0.0	0.0	0.0	0.0	0.0
Revaluation reserve	0.0	0.0	0.0	0.0	0.0
Other equity	75.2	79.7	80.5	85.5	85.5
Minorities	0.0	0.0	0.0	0.0	0.0
Non-current liabilities	4.4	0.0	0.0	0.0	0.0
Deferred tax liabilities	0.0	0.0	0.0	0.0	0.0
Provisions	0.0	0.0	0.0	0.0	0.0
Interest bearing debt	4.4	0.0	0.0	0.0	0.0
Convertibles	0.0	0.0	0.0	0.0	0.0
Other long term liabilities	0.0	0.0	0.0	0.0	0.0
Current liabilities	1.9	2.0	2.1	2.3	5.4
Interest bearing debt	0.2	0.0	2.1	2.3	5.4
Payables	1.8	2.0	0.0	0.0	0.0
Other current liabilities	0.0	0.0	0.0	0.0	0.0
Balance sheet total	6.2	6.8	2.8	2.8	0.3

# Valuation and recommendation 1/3

# We initiate coverage with a positive recommendation

We initiate coverage of Herantis with an Accumulate recommendation and a target price of EUR 2.2. Our risk-adjusted valuation is based on the DCF model that determines the present value of future free cash flows. In addition to free cash flow based on royalty payments, Herantis' value can also materialize through a commercialization agreement or an M&A transaction. Since it is practically impossible to predict the timing and value of such transactions, we have not included such scenarios in our valuation model. However, we expect Herantis to reach a partnership agreement in line with its objectives. Such an agreement would cover the R&D costs of clinical Phases 2 and 3 from 2026 onwards. We consider such a cooperation agreement or becoming an acquisition target a positive option for investors in Herantis. We also assume a share issue of 5 MEUR. which will serve as bridge financing during preparation for Phase 2. The impact of the modeled share issue on the number of shares is moderate.

Our risk-adjusted forecasts and the valuation based on them are based on probabilities between two strongly divergent scenarios. In our optimistic scenario, drug development is successful, leading to high cash flows in the late 2030s. Discounted to present value these cash flows would justify a share price that is several times higher than the current level. On the other hand, in our pessimistic scenario, clinical research results would not support further development, leading to the rejection of the project and possibly a move to new indications and/or

candidates. In our view, this scenario would lead to a permanent loss of capital, diluting financing rounds and a strong depreciation of the share value.

Herantis' long-term value creation and share price development depend on the success of the clinical program and final commercialization, including possible licensing agreements. In the short to medium term, we believe that the share price fluctuates in line with news on research results. We also expect the market sentiment to have a strong impact on the share price. The company's ability to find shareholder-friendly financing solutions remains an important theme for the future development of the share value.

We note that due to the nature of the industry and Herantis' business model, our assessment and valuation based on these estimates contain significant uncertainties. These uncertainties stem from the numerous assumptions made regarding the market and R&D and commercial successes achieved by Herantis. Therefore, our target price, expressed as a precise figure, should be interpreted in a wide range. Due to these uncertainties typical for biotechnology companies, we expect the share price to be highly volatile and correlate with the general market sentiment. The share price can have a direct effect on the value of the company, as it contributes to determining the price of equity financing and thus, affects the development of the value per share through dilution of the share capital.

#### Valuation scenarios

		$\bigcirc$	$\otimes$
	Optimistic <sup>1</sup>	Estimates <sup>21-2</sup>	Pessimistic <sup>3</sup>
Success of drug development	Market entry	According to Inderes' estimates	Development fails
Likelihood	Unlikely	~11 %	Significant
EBIT 2039e Risk adjusted	^1 billion MEUR	~90 MEUR	Neg.
Share value in EUR (DCF)	~20	~2.2	~0

- Commercialization is successful in Parkinson's disease. Herantis can still pursue new indications through further research.
- Commercialization is successful with the probabilities and conditions described in this report
- 3) In the scenario, shortcoming appear in the safety or efficacy of HER-096 which lead to the candidate being abandoned

# Valuation and recommendation 2/3

Despite the uncertainties, we believe that the current share price represents a favorable risk/reward ratio that supports a positive recommendation. Due to the binary risk associated with the stock, we believe that a limited allocation to drug development companies is justified for most investors to limit risks and diversify investments into several drug development companies.

# Risk-adjusted cash-flow model indicates an upside in the share

Our discounted cash flow (DCF) model produces a present value of EUR 2.2 per share, which refers to the share's upside potential. We expect a new round of financing to take place at the beginning of 2025 based on Herantis' cash position and our cash flow forecasts. In case of a new share issue, the increase in the number of shares may limit the upside by weakening the share-specific indicators. However, the size of the share issue we expect is only around 5 MEUR, so we feel this risk is limited for the time being. A possible cooperation agreement with a larger pharmaceutical company may potentially create significant value for shareholders.

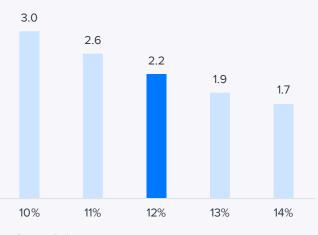
We model growing income, which will culminate in 2039, after which we expect income to fall when patent protection expires. Our modeling extends to 2042, after which we expect sales and earnings to fall to zero. Herantis has the opportunity to create new business in other neurodegenerative diseases and new drug candidates to be developed. We do not include these options in our estimates at this stage, however.

Herantis' cash flows are strongly negative during the clinical trial period in 2024-2031. Cash flows that bring value to the share are generated in 2032-2039. The expected cash flows are discounted using a weighted average cost of capital (WACC) of 12%. This is in line with around 11-12% that is typically used in the industry. In general, the estimated WACC describes the business risk of introducing a new drug to the market. It reflects uncertainties related to, e.g., the future price level of the drug, the future market share, etc. The R&D risk is considered in our estimates before discounting. If the R&D risk is not included in the estimates, the WACC should be over 20%, which is in line with industry practices. We reiterate that there are significant uncertainties regarding the realization of cash flows. Therefore, the DCF model is sensitive to the assumptions used. In other words, a change in assumptions significantly affects the share value of the model.

# Values of implemented cooperation agreements provide a view of the valuation in the positive scenario

Comparison with existing cooperation agreements gives an indication of the potential value of Herantis if the company entered into an agreement with a larger partner. We point out that the agreements that have been concluded are aimed at drug candidates in which the industrial buyer has seen special potential.

# Share price sensitivty to WACC used in the DCF model



# Valuation and recommendation 3/3

This is therefore a selected group of the most potential candidates. In our opinion, no direct conclusions can be drawn on Herantis' fair value based on the value of the contracts.

A recent research review may provide references to agreements signed in 2005-2020 for historical drug candidates. Contract values include an advance payment and full milestone payments. The average price paid for Phase 1 candidate agreements is 354 MUSD. The average price for Phase II companies has been USD 683 million. In Europe, the value of agreements has been lower than in the US. We note that the slowdown in the financial markets after 2022 weakens comparability with recent history.

The majority of contracts concerned cancer drug candidates (30% of contracts). The second highest number of contracts were signed for drugs affecting the central nervous system (16%). Usually, the contract was signed with a Phase 2 company (33%).

We emphasize that singing this type of agreement requires strong interest from a global pharmaceutical giant and its likelihood, value and timing is very hard to predict. Therefore, the role of historical agreements is marginal in our valuation model.

#### Short-term drivers (1-2 years)

- 1 Results of Phase 1b
- Signing a cooperation agreement to finance Phase 2.

#### Medium-term drivers (3-5 years)

- 1) Start of Phase 2 and results
- Preparation of Phase 3 and securing funding
- Initiation of a clinical program for new indications

#### Long-term drivers (over 5 years)

- Results of Phase 3 and successful commercialization
- 2 Introduction of new drug candidates and indications into the clinical phase

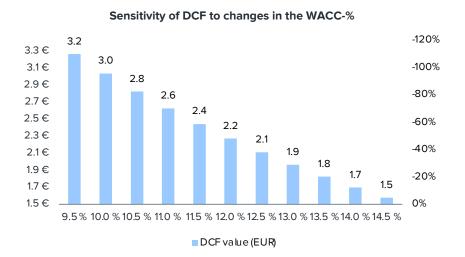
# Valuation table

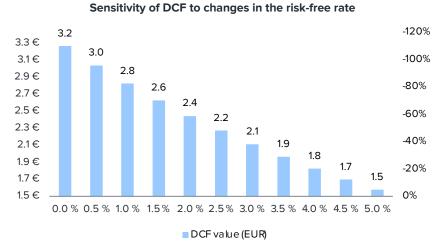
Valuation	2019	2020	2021	2022	2023	<b>2024</b> e	2025e	2026e	<b>2027</b> e
Share price		4.15	2.40	1.65	1.58	1.63	1.63	1.63	1.63
Number of shares, millions	0.00	9.76	11.1	16.9	20.2	20.2	23.9	23.9	23.9
Market cap		40	27	28	32	33	33	33	33
EV		34	26	26	25	33	33	38	44
P/E (adj.)		neg.	neg.	neg.	>100	neg.	neg.	neg.	neg.
P/E		neg.	neg.	neg.	>100	neg.	neg.	neg.	neg.
P/FCF		neg.	neg.	neg.	85.9	neg.	neg.	neg.	neg.
P/B		5.3	neg.	neg.	6.8	53.8	78.4	neg.	neg.
P/S	0.0	>100	>100	>100	>100	>100	>100	>100	>100
EV/Sales		>100	>100	>100	>100	>100	>100	>100	>100
EV/EBITDA		neg.	neg.	neg.	>100	neg.	neg.	neg.	neg.
EV/EBIT (adj.)		neg.	neg.	neg.	>100	neg.	neg.	neg.	neg.
Payout ratio (%)		0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Dividend yield-%		0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %

# **DCF** calculation

DCF model	2023	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	2024e	2035e	2036e	2037e	2038e	2039e	2040e	2041e	2042e	TERM
Revenue growth-%										NA	185.7 %	108.1 %	108.1 %	108.1 %	51.2 %	13.8 %	4.0 %	-48.0 %	-48.0 %	-49.6 %	-100.0 %
EBIT-%										-315.1 %	-56.9 %	18.6 %	57.7 %	78.1 %	84.3 %	85.1 %	84.6 %	67.9 %	33.4 %	0.0 %	0.0 %
EBIT (operating profit)	0.2	-4.9	-5.2	-5.6	-5.9	0.0	0.0	0.0	0.0	-7.1	-3.7	2.5	16.0	45.1	73.7	84.6	87.4	36.5	9.4	0.0	
+ Depreciation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
- Paid taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.7	-0.5	-3.2	-9.0	-14.7	-16.9	-17.5	-7.3	-1.9	0.0	
- Tax, financial expenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
+ Tax, financial income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
- Change in working capital	0.2	-2.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Operating cash flow	0.4	-6.8	-5.2	-5.6	-5.9	0.3	0.0	0.0	0.0	-5.7	-2.9	2.0	12.8	36.1	58.9	67.7	70.0	29.2	7.5	0.0	
+ Change in other long-term liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
- Gross CAPEX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Free operating cash flow	0.4	-6.8	-5.2	-5.6	-5.9	0.3	0.0	0.0	0.0	-5.7	-2.9	2.0	12.8	36.1	58.9	67.7	70.0	29.2	7.5	0.0	
+/- Other	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FCFF	0.4	-6.8	-0.2	-5.6	-5.9	0.3	0.0	0.0	0.0	-5.7	-2.9	2.0	12.8	36.1	58.9	67.7	70.0	29.2	7.5	0.0	0.0
Discounted FCFF		-6.4	-0.2	-4.2	-4.0	0.1	0.0	0.0	0.0	-2.2	-1.0	0.6	3.5	8.8	12.8	13.1	12.1	4.5	1.0	0.0	0.0
Sum of FCFF present value		38.6	45.1	45.2	49.4	53.4	53.3	53.3	53.3	53.3	55.4	56.4	55.8	52.3	43.6	30.8	17.7	5.6	1.0	0.0	0.0
Enterprise value DCF		38.6																			
- Interest bearing debt		-0.1									Cas	sh flow dis	tribution								
+ Cash and cash equivalents		6.5																			
-Minorities		0.0																			
-Dividend/capital return		0.0																			
Equity value DCF		45.1	_ 2	2024e-2028e		-38%															
Equity value DCF per share		2.2																			
WACC																					
Tax-% (WACC)		20.0 %	_ 2	2029e-2042e																138%	
Target debt ratio (D/(D+E)		0.0 %																			
Cost of debt		8.0 %																			
Equity Beta		1.78																			
Market risk premium		4.75%		TERM					09	%											
Liquidity premium		1.00%																			
Risk free interest rate		2.5 %																			
Cost of equity		12.0 %									2024e-202	8e ■ 202	9e-2042e	TERM							
Weighted average cost of capital (WACC)		12.0 %																			
Source: Inderes																					

# DCF sensitivity calculations and key assumptions in graphs





# Disclaimer and recommendation history

The information presented in Inderes reports is obtained from several different public sources that Inderes considers to be reliable. Inderes aims to use reliable and comprehensive information, but Inderes does not guarantee the accuracy of the presented information. Any opinions, estimates and forecasts represent the views of the authors. Inderes is not responsible for the content or accuracy of the presented information. Inderes and its employees are also not responsible for the financial outcomes of investment decisions made based on the reports or any direct or indirect damage caused by the use of the information. The information used in producing the reports may change quickly. Inderes makes no commitment to announcing any potential changes to the presented information and opinions.

The reports produced by Inderes are intended for informational use only. The reports should not be construed as offers or advice to buy, sell or subscribe investment products. Customers should also understand that past performance is not a guarantee of future results. When making investment decisions, customers must base their decisions on their own research and their estimates of the factors that influence the value of the investment and take into account their objectives and financial position and use advisors as necessary. Customers are responsible for their investment decisions and their financial outcomes.

Reports produced by Inderes may not be edited, copied or made available to others in their entirety, or in part, without Inderes' written consent. No part of this report, or the report as a whole, shall be transferred or shared in any form to the United States, Canada or Japan or the citizens of the aforementioned countries. The legislation of other countries may also lay down restrictions pertaining to the distribution of the information contained in this report. Any individuals who may be subject to such restrictions must take said restrictions into account.

Inderes issues target prices for the shares it follows. The recommendation methodology used by Inderes is based on the share's 12-month expected total shareholder return (including the share price and dividends) and takes into account Inderes' view of the risk associated with the expected returns. The recommendation policy consists of four tiers: Sell, Reduce, Accumulate and Buy. As a rule, Inderes' investment recommendations and target prices are reviewed at least 2–4 times per year in connection with the companies' interim reports, but the recommendations and target prices may also be changed at other times depending on the market conditions. The issued recommendations and target prices do not guarantee that the share price will develop in line with the estimate. Inderes primarily uses the following valuation methods in determining target prices and recommendations: Cash flow analysis (DCF), valuation multiples, peer group analysis and sum of parts analysis. The valuation methods and target price criteria used are always company-specific and they may vary significantly depending on the company and (or) industry.

Inderes' recommendation policy is based on the following distribution relative to the 12-month risk-adjusted expected total shareholder return.

Buy The 12-month risk-adjusted expected shareholder return of the share is very attractive

Accumulate The 12-month risk-adjusted expected shareholder return of the share is attractive

Reduce The 12-month risk-adjusted expected shareholder return of the share is weak

Sell The 12-month risk-adjusted expected shareholder return of the share is very weak

The assessment of the 12-month risk-adjusted expected total shareholder return based on the above-mentioned definitions is company-specific and subjective. Consequently, similar 12-month expected total shareholder returns between different shares may result in different recommendations, and the recommendations and 12-month expected total shareholder returns between different shares should not be compared with each other. The counterpart of the expected total shareholder return is Inderes' view of the risk taken by the investor, which varies considerably between companies and scenarios. Thus, a high expected total shareholder return does not necessarily lead to positive performance when the risks are exceptionally high and, correspondingly, a low expected total shareholder return does not necessarily lead to a negative recommendation if Inderes considers the risks to be moderate.

The analysts who produce Inderes' research and Inderes employees cannot have 1) shareholdings that exceed the threshold of significant financial gain or 2) shareholdings exceeding 1% in any company subject to Inderes' research activities. Inderes Oyj can only own shares in the target companies it follows to the extent shown in the company's model portfolio investing real funds. All of Inderes Oyj's shareholdings are presented in itemised form in the model portfolio. Inderes Oyj does not have other shareholdings in the target companies analysed. The remuneration of the analysts who produce the analysis are not directly or indirectly linked to the issued recommendation or views. Inderes Oyj does not have investment bank operations.

Inderes or its partners whose customer relationships may have a financial impact on Inderes may, in their business operations, seek assignments with various issuers with respect to services provided by Inderes or its partners. Thus, Inderes may be in a direct or indirect contractual relationship with an issuer that is the subject of research activities. Inderes and its partners may provide investor relations services to issuers. The aim of such services is to improve communication between the company and the capital markets. These services include the organisation of investor events, advisory services related to investor relations and the production of investor research reports.

More information about research disclaimers can be found at www.inderes.fi/research-disclaimer.

Inderes has made an agreement with the issuer and target of this report, which entails compiling a research report.

#### Recommendation history (>12 mo)

Date	Recommendation	Target	Share price				
6/19/2024	Accumulate	2.20 €	1.63 €				



# Inderes democratizes investor information by connecting investors and listed companies.

We help over 400 listed companies better serve investors. Our investor community is home to over 70,000 active members.

We build solutions for listed companies that enable frictionless and effective investor relations. For listed companies, we offer Commissioned Research, IR Events, AGMs, and IR Software.

Inderes is listed on the Nasdaq First North growth market and operates in Finland, Sweden, Norway, and Denmark.

#### **Inderes Oyj**

Itämerentori 2 FI-00180 Helsinki, Finland +358 10 219 4690

Award-winning research at inderes.fi







Juha Kinnunen 2012, 2016, 2017, 2018, 2019, 2020



Mikael Rautanen 2014, 2016, 2017, 2019



Sauli Vilén 2012, 2016, 2018, 2019, 2020



Antti Viljakainen 2014, 2015, 2016, 2018, 2019, 2020



Olli Koponen 2020



Joni Grönqvist 2019, 2020



Erkki Vesola 2018, 2020



Petri Gostowski 2020



Atte Riikola 2020

# Connecting investors and listed companies.