Cardiol Therapeutics Inc.

Canada, USA, Germany / Biotechnology
Nasdaq, US; TSX, Canada; FSE, Germany
Bloomberg: CRDL US
ISIN: CA14161Y2006

CardiolRx™ Phase II results in recurrent pericarditis (RP)

RATING	**BUY**
PRICE TARGET	**USD 8.50**
Return Potential	260.2%
Risk Rating	High

GREAT EFFICACY AND TOLERABILITY ARE WINNING COMBO IN RP

Cardiol Therapeutics (Cardiol) yesterday announced excellent topline data for its phase II open-label pilot US study (MAvERIC-Pilot) of the lead drug candidate CardiolRx™ for the treatment of recurrent pericarditis (RP) in 27 patients. CardiolRx™'s efficacy on two key endpoints is very similar in magnitude of improvement to that demonstrated in phase II/III trials by the immunosuppressive biologic therapy rilonacept (Arcalyst®), which is FDA-approved and currently used as a third-line treatment of RP. Critically however, CardiolRx™'s tolerability and side effect profile is expected to be much more favourable than rilonacept which has risks typical of immunosuppressants, i.e. serious infection. Subject to approval, we therefore expect CardiolRx™ to be used as a second-line therapy in RP. In 2023 rilonacept generated USD233m of sales in its third year since FDA approval. Given its efficacy, tolerability and side effect profile, we believe CardiolRx™ has the potential to substantially exceed this figure. We have updated our sum-of-the-parts valuation model to reflect the progress made and the potential expansion into the EU market, resulting in a higher price target of USD8.50 (€7.80), previously: USD3.60 (€3.30). We reiterate our Buy recommendation.

CardiolRx™ reduced pain severity by 64%, normalised inflammation The primary endpoint of the study was patient-reported pericarditis pain using an 11-point numeric rating scale (NRS) at 8 weeks. The NRS is widely used in clinical settings to assess pain severity using a 0–10 scale (0= no pain and 10= the worst pain imaginable). The patients treated with CardiolRx™ showed a mean reduction of 3.7 points, from 5.8 at baseline (range of 4 to 10) to 2.1 (range of 0 to 6) at 8 weeks. CardiolRx™ also normalised inflammation, as measured by C-reactive protein (CRP), in 80% of patients who took part in the study whose CRP was elevated at the start of the study (a secondary endpoint). The drug therefore substantially impacted a key clinical biomarker associated with the disease and used to determine a clinical response or an active RP flare. (p.t.o.)

FINANCIAL HISTORY & PROJECTIONS

	2020	2021	2022	2023E	2024E	2025E
Revenue (CAD m)	0.0	0.1	0.0	0.0	0.0	0.0
Y-o-y growth	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EBIT (CAD m)	-20.7	-38.7	-41.3	-27.0	-24.0	-19.0
EBIT margin	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net income (CAD m)	-20.6	-31.6	-30.9	-25.0	-23.6	-18.9
EPS (diluted) (CAD)	-0.69	-0.73	-0.49	-0.39	-0.35	-0.26
DPS (CAD)	0.00	0.00	0.00	0.00	0.00	0.00
FCF (CADm)	-9.2	-23.6	-27.3	-21.5	-19.1	-15.1
Net gearing	-105.7%	-110.0%	-113.9%	-118.0%	-138.7%	-157.6%
Liquid assets (CAD m)	14.0	83.9	59.5	37.9	18.8	13.6

RISKS

Risks include, but are not limited to development, regulatory, competition and financial risks.

COMPANY PROFILE

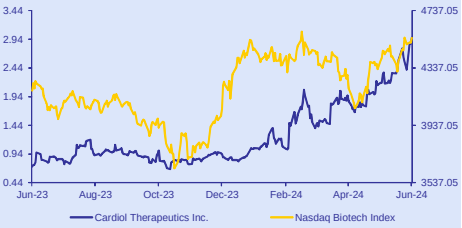
Founded in 2017, Cardiol Therapeutics Inc is a Canadian biotech company focused on the research and development of new drugs to treat heart diseases. The lead drug candidate, CardiolRx™ (cannabidiol) oral solution, is undergoing a US phase II mutli-centre open-label pilot study in 25 patients with recurrent pericarditis and a multi-national phase II study in 100 patients with acute myocarditis.

MARKET DATA

As of 13 Jun 2024	
Closing Price	USD 2.36
Shares outstanding	64.10m
Market Capitalisation	USD 151.27m
52-week Range	USD 0.67 / 2.97
Avg. Volume (12 Months)	298,207

Multiples	2022	2023E	2024E
P/E	n.a.	n.a.	n.a.
EV/Sales	0.0	0.0	0.0
EV/EBIT	n.a.	n.a.	n.a.
Div. Yield	0.0%	0.0%	0.0%

STOCK OVERVIEW



COMPANY DATA

As of 31 Mar 2024	
Liquid Assets	CAD 28.57m
Current Assets	CAD 30.64m
Intangible Assets	CAD 0.19m
Total Assets	CAD 31.13m
Current Liabilities	CAD 10.92m
Shareholders' Equity	CAD 20.06m

SHAREHOLDERS

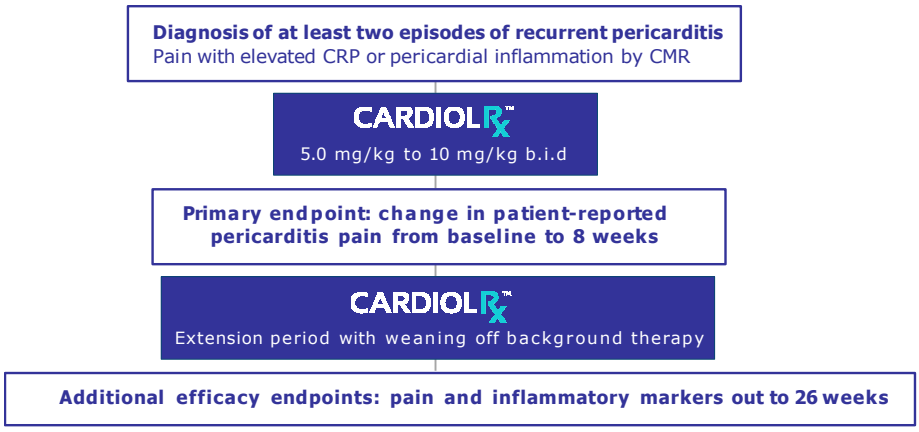
MMCAP International Inc	5.2%
Management and Directors	4.4%
Advisorshares Investments LLC	1.7%
Mirae Asset Global Investments Co Ltd	1.7%
Freefloat & others	86.9%

Analyst: Christian Orquera, Tel. +49 (0)30 - 80 93 96 90

Following these strong results, we expect Cardiol to receive the green light from the FDA in Q3 to begin the phase III trials in Q4. We also expect the company to conduct an international phase III study (US and EU) to address the European market, where rilonacept is not approved.

US phase II pilot trial assessing the efficacy and safety of CardiolRx™'s BID administration in 27 RP patients The study protocol, designed with the active participation of pericardial disease opinion leaders, entailed a US, open-label, multi-centre phase II pilot trial to assess the efficacy, safety and tolerability of CardiolRx™ in patients with RP. The study took place in eight major specialised centres, including the Cleveland Clinic (Allan Klein, MD), Mayo Clinic and the Massachusetts General Hospital. The patients began the first 8 weeks of treatment starting with a 10-day period of dose escalation that began at 5.0 mg/kg twice-a-day (BID) and increased to 10 mg/kg BID, or maximum tolerated dose and continued through the remainder of the 8 week treatment period. The patients are now undergoing an 18-week extension treatment period with progressive weaning off concomitant background therapy, including corticosteroids, while remaining on CardiolRx™, to investigate CardiolRx™'s activity as a stand-alone drug. The primary efficacy endpoint is the change from baseline over 8 weeks in patient-reported pericarditis pain intensity using an 11-point numeric rating scale, the NRS. Secondary endpoints include changes in circulating levels of C-reactive protein (a relevant clinical marker of inflammation) at 8 and 26 weeks and in the NRS pain score after 26 weeks of treatment.

Figure 1: Overview of the phase II MAvERIC-Pilot RP study design



Source: First Berlin Equity Research, Cardiol Therapeutics Inc

The primary endpoint: CardiolRx™ achieved a substantial reduction in pericarditis pain measured with the NRS, which is comparable to rilonacept The patients treated with CardiolRx™ achieved a mean reduction of 3.7 points from 5.8 at baseline (range of 4 to 10) to 2.1 (range of 0 to 6) at 8 weeks. Importantly, CardiolRx™'s performance is very similar to that of the immunosuppressive biologic therapy rilonacept (Arcalyst®) in its phase II pilot and phase III trials, which is FDA-approved and is used as a third-line treatment of RP. We give an overview of these results in table 1 overleaf.

Table 1: Patient-reported pericarditis pain: CardiolRx™ versus rilonacept

n=27	Baseline	Week 8	Difference±	rilonacept	Mean Difference±
Mean	5.8	2.1	-3.7	Phase II (n=9)	-3.8 (EoTPδ)
Range	4.0 - 10.0	0.0 - 6.0		Phase III (n=82)	-3.9 (Week 8)
				Baseline NRS scores for both Phase II and Phase III trials was 4.5	

*numerical rating scale (NRS) is a validated 11-point instrument used to assess patient-reported pericarditis pain. Zero represents "no pain at all" whereas the upper limit of 10 represents "the worst pain ever possible".
± Negative value indicates an improvement in CRP.
δ End of Treatment Period (~Week 6/8)
Rilonacept trial references:
* Klein AL, Lin D, Cremer PC, *et al*. Efficacy and safety of rilonacept for recurrent pericarditis: results from a phase II clinical trial. *Heart.* Published online November 23, 2020. doi:10.1136/heartjnl-2020-317928
* Klein AL, Imazio M, Cremer P, *et al*. Phase 3 trial of Interleukin-1 Trap Rilonacept in Recurrent Pericarditis. *N Engl J Med.* 2021; 384 (1):31-412.doi:10.1056/NEJMoa2027892

Source: First Berlin Equity Research, Cardiol Therapeutics Inc, Allan Klein et al, 2021- phase II & phase III studies

Secondary endpoint of inflammation, as measured by CRP at 8 weeks, also showed positive results CardiolRx™ also led to a normalisation of inflammation, as measured by C-reactive protein (CRP) in 80% of patients who took part in the study whose CRP was elevated at baseline. Importantly, 89% of patients have continued into the 18-week extension phase of the study which demonstrates CardiolRx™ is well-tolerated and that they are satisfied with the pain relief achieved. We give an overview of the CRP results compared to rilonacept in table 2 below.

Table 2: C-reactive protein: CardiolRx™ versus rilonacept

	Baseline	Week 8	Difference§	rilonacept	Mean Difference
Mean	5.71	0.31	-5.39	Phase II	-4.24 (EoTP)
				Phase III (n=82)	-3.48 (Week 6)
				Baseline CRP values: Phase II = 4.62, Phase III = 3.7	

§ Negative value indicates an improvement in CRP.
Rilonacept trial references:
* Klein AL, Lin D, Cremer PC, *et al*. Efficacy and safety of rilonacept for recurrent pericarditis: results from a phase II clinical trial. *Heart.* Published online November 23, 2020. doi:10.1136/heartjnl-2020-317928
* Klein AL, Imazio M, Cremer P, *et al*. Phase 3 trial of Interleukin-1 Trap Rilonacept in Recurrent Pericarditis. *N Engl J Med.* 2021; 384 (1):31-412.doi:10.1056/NEJMoa2027892

Source: First Berlin Equity Research, Cardiol Therapeutics Inc, Allan Klein et al, 2021- phase II & phase III studies

We believe that CardiolRx™ could be used as second-line therapy The mainstay of pericarditis treatment in the US and Europe is the administration of non-steroidal anti-inflammatory drugs (NSAIDs) such as aspirin or ibuprofen to relieve pain and inflammation. In addition, the drug colchicine is also recommended as adjuvant therapy to ameliorate the initial episode (i.e. reduces symptoms by ~50% at 72 hours) and is associated with ~50% lower recurrence rates at 18 months when it is administered together with NSAIDs. Colchicine is a drug extracted from the colchicum autumnale plant, one of the most ancient anti-inflammatory medications still used nowadays. Its primary mechanism of action relies on the inhibition of tubulin polymerization and inflammasomes (source: Emazio *et al*., 2015; Bouabdallaoui *et al*., 2020).

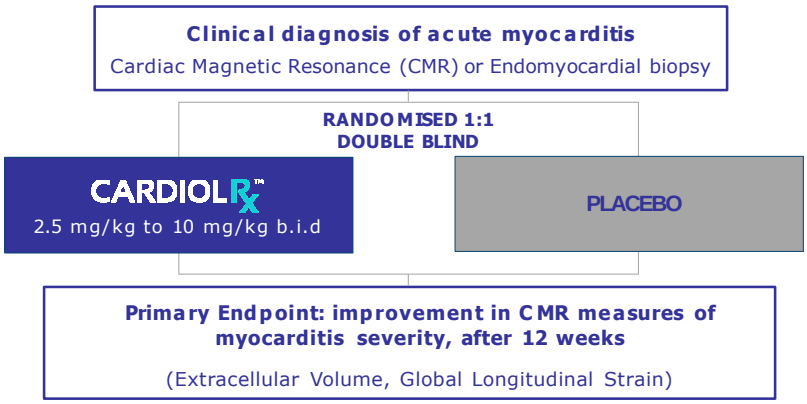
Corticosteroids are the second-line therapy for patients who do not respond, are intolerant or have contraindications to NSAIDs and colchicine. Corticosteroids typically provide rapid relief of symptoms in the treatment of acute and recurrent pericarditis. However, corticosteroids tend to favour the chronic evolution of the disease, promote drug dependence, and potentially lead to steroid-related side effects such as weight gain and muscle loss. They have been associated with an increased risk of recurrence (RR = 2.89 times the risk of having the recurrence when compared with the untreated group), with a dose-dependent effect. In the COPE trial, steroid use was an independent risk factor for recurrence (sources: Shabetai *et al*., 2005, Imazio *et al*., 2005 and 2008). Therefore, we see a high probability that, subject to approval, CardiolRx™ with its attractive efficacy and safety profile, will be used as a second-line therapy. The immunosuppressant rilonacept, which binds to and neutralises the pro-inflammatory cytokines IL-1β and IL-1α, which has been approved and commercialised for RP since April 2021, is used as a third-line therapy and has only seen moderate adoption (USD233m revenue in 2023), due in part to its cost, method of administration (injection), and safety profile as an immunosuppressant (serious risk of infection).

CardiolRx™ is replicating the registration pathway of rilonacept (Arcalyst®), which maximises chances of success and lowers the development/registration risk The Chairman of MavERIC-Pilot is Dr Allan L. Klein, MD, Director of the Centre of Pericardial Diseases and Professor of Medicine, Heart and Vascular Institute, at the Cleveland Clinic. Importantly, Dr Klein was the lead investigator in the pivotal trial of the rilonacept (Arcalyst®) injection, the first and only FDA-approved therapy to treat recurrent pericarditis. He is a pericarditis expert who knows how to successfully design and run a trial to meet the FDA's registration requirements. Cardiol's registration pathway is the same as that of Kiniksa Pharmaceuticals, which first conducted a pilot open-label study in 25 patients followed by the phase III pivotal placebo-controlled RHAPSODY study in 82 patients. Based on the data shown above, the FDA allowed the company to initiate the phase III study in January 2019. The company completed the phase III study in November 2020 and received FDA approval for the drug in March 2021.

International phase III study could start in Q4 2024 – we anticipate a potential drug approval and market launch in H2 2026 Based on the positive results achieved in the pilot phase II US study in RP, we expect that the company will expand the scope of the study to Europe, where rilonacept is not approved in RP. According to the European Medicines Agency, pericarditis affects approximately 2.5 in 10k people in the European Union (EU), equating to ~130k people. Recurrent pericarditis affects ~30% (15-50%) of people with acute pericarditis, or ~40k people, so this is an attractive market to capture. We expect the ramp up for a phase III study to commence in Q4 2024 and deliver results by H2 2026. Considering the FDA orphan drug designation obtained recently, we believe there is a strong likelihood of a fast-track designation. We project a potential drug approval in the US in H2 2026. Assuming a successful phase III trial and approval of the drug candidate, we expect CardiolRx™ to achieve peak sales of >USD 700m in the US and Europe five years after market launch.

Proof of concept multi-national phase II study in 100 acute myocarditis (AM) patients on track to complete in Q4 2024 and report results shortly thereafter Cardiol is conducting a phase II proof of concept study (named ARCHER) to investigate the safety, tolerability and efficacy of CardiolRx™ in 100 AM patients at major cardiac centres in North America, Europe, and Israel. The company is enrolling faster than planned and is on track to potentially report results in as early as the end of 2024.

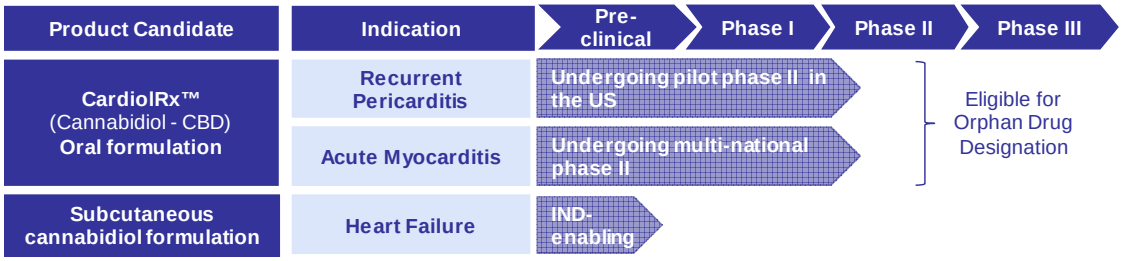
Figure 2: CardiolRx™ phase II *ARCHER* acute myocarditis study design



Source: First Berlin Equity Research, Cardiol Therapeutics Inc

CARDIOL'S R&D PIPELINE

Figure 3: Snapshot of the R&D pipeline focusing on cardiac diseases



Source: First Berlin Equity Research, Cardiol Therapeutics Inc

VALUATION MODEL

Buy rating confirmed at higher price target Following the positive results of the phase II RP study, and in particular the evidence that the drug can treat inflammation which is the underlying cause of RP and AM, we believe that the chances of pipeline development success have increased. We have adjusted the risk factors in our SOTP valuation model accordingly, resulting in a 10% increase in the probability of development success (RP from 71% to 81% and AM from 38% to 48%) and a one percentage point reduction in WACC to 16% (previously: 17%). We have also included CardiolRx™'s EU programme in the RP indication in our sum-of-the-parts valuation model. These adjustments result in a higher fair value for Cardiol of USD653m or USD8.50 p/s (previously: USD3.60). We believe our valuation is supported by MyoKardia's market capitalisation of ~USD 400m in 2015-2016, when the company's pipeline was at a similar stage of development as that of Cardiol Therapeutics prior to the completion of the phase II trial. Following the publication of the results of MyoKardia's phase II trial of mavacamten (Camzyos®) in hypertrophic cardiomyopathy (HCM) in 2017, the company's valuation rose to over USD1.5bn. MyoKardia, acquired in 2020 by Bristol-Myers Squibb, was a US-based biomedical company developing small molecule drugs for patients with genetic heart diseases. Based on the excellent topline phase II data reported yesterday, we see our positive assessment of CardiolRx™'s prospects in RP as confirmed. We reiterate our Buy recommendation on Cardiol.

Table 3: "Sum-of-the-parts" valuation model

Compound	Project[1)]	Present Value		Patient Pop (K)	Treatment Cost (USD)	Market Size (USDM)	Market Share (%)	Peak Sales (USDM)	PACME Margin[2)] (%)	Discount Factor (%)	Market Exclusivity[3)] (years)	Time to Market (years)
CardiolRx™	RP - US	USD	325.8M	40K	52,000	2,080.0M	18%	474.3M	30%	16.0%	7	3
CardiolRx™	RP - EU	USD	176.5M	72K	€18,000	1,296.0M	18%	284.4M	30%	16.0%	7	3
CardiolRx™	AM - US	USD	125.4M	54K	52,000	2,808.0M	18%	652.1M	20%	16.0%	7	5
CardiolRx™	AM - EU	USD	47.3M	72K	18,000	1,296.0M	18%	322.9M	20%	16.0%	7	5
PACME PV		USD	675.1M			7,480.0M		1,733.7M				
Costs PV[4)]		USD	65.7M									
NPV		USD	609.4M									
Milestones PV		USD	0.0M									
Net cash (proforma)		USD	43.9M									
Fair Value		USD	653.3M									
Share Count (proforma)		76,830K										
Price Target		USD	8.50									
Price Target		EUR	7.80	(based on EUR-USD exchange rate of 1.09)								

1) A project typically refers to a specific indication or, where necessary or relevant, a combination between indication and geographic market

2) PACME (Profit After Costs and Marketing Expenses) reflects the company's profit share on future revenues. This share may be derived in the form of royalties (outsourced marketing/manufacturing) or operating EBITDA margin (in-house model), or some mix of both (depending on the specific parameters of partnership agreements)

3) Remaining market exclusivity after the point of approval

4) Includes company-level R&D, G&A, Financing Costs and CapEx; COGS and S&M are factored into the PACME margin for each project

INCOME STATEMENT

All figures in CAD '000	2020	2021	2022	2023E	2024E	2025E
Revenue	**0**	**79**	**0**	**0**	**0**	**0**
Cost of goods sold	0	0	0	0	0	0
Gross profit	0	79	0	0	0	0
General & Administrative	-10,088	-27,873	-22,374	-16,000	-14,000	-11,000
Research & Development	-10,603	-10,870	-18,962	-11,000	-10,000	-8,000
Total operating expenses (OPEX)	**-20,690**	**-38,744**	**-41,336**	**-27,000**	**-24,000**	**-19,000**
Operating income (EBIT)	**-20,690**	**-38,664**	**-41,336**	**-27,000**	**-24,000**	**-19,000**
Net financial result	42	1,998	4,000	2,000	450	150
Non-operating income/expenses	7	5,029	6,406	0	0	0
Pre-tax income (EBT)	**-20,641**	**-31,638**	**-30,931**	**-25,000**	**-23,550**	**-18,850**
Income taxes	0	0	0	0	0	0
Net income / loss	**-20,641**	**-31,638**	**-30,931**	**-25,000**	**-23,550**	**-18,850**
Diluted EPS (CAD)	**-0.69**	**-0.73**	**-0.49**	**-0.39**	**-0.35**	**-0.26**
Ratios						
EBIT Margin on Revenue	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EBITDA Margin on Revenue	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net Margin on Revenue	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Expenses as % of OPEX						
Sales & Marketing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
General & Administrative	48.8%	71.9%	54.1%	59.3%	58.3%	57.9%
Research & Development	51.2%	28.1%	45.9%	40.7%	41.7%	42.1%
Y-Y Growth						
Revenue	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Operating income	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net income/ loss	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

BALANCE SHEET

All figures in CAD '000	2020	2021	2022	2023E	2024E	2025E
Assets						
Current Assets, Total	**14,950**	**87,140**	**61,438**	**39,302**	**20,049**	**14,692**
Cash and cash equivalents	14,025	83,899	59,470	37,935	18,782	13,619
Accounts receivables	220	407	480	460	450	420
Inventories	18	0	0	0	0	0
Other current assets	687	2,834	1,488	908	817	653
Non-Current Assets, Total	**943**	**736**	**591**	**437**	**311**	**220**
Property plant and equipment	479	356	296	227	185	179
Intangible assets	464	379	295	210	126	41
Total Assets	**15,893**	**87,876**	**62,029**	**39,740**	**20,359**	**14,912**
Shareholders' Equity & Debt						
Current Liabilities, Total	**2,518**	**11,565**	**9,805**	**7,572**	**6,800**	**6,262**
Accounts payable	2,466	4,859	9,334	7,100	6,745	6,205
Derivative liabilities	0	6,661	420	420	0	0
Other current liabilities	52	45	50	52	55	57
Longterm Liabilities, Total	**105**	**73**	**22**	**18**	**14**	**11**
Other liabilities	105	73	22	18	14	11
Shareholders Equity	**13,270**	**76,238**	**52,202**	**32,150**	**13,546**	**8,639**
Total Consolidated Equity and Debt	**15,893**	**87,876**	**62,029**	**39,740**	**20,359**	**14,912**
Ratios						
Current ratio (x)	5.94	7.53	6.27	5.19	2.95	2.35
Quick ratio (x)	5.93	7.53	6.27	5.19	2.95	2.35
Net gearing	-105.7%	-110.0%	-113.9%	-118.0%	-138.7%	-157.6%
Book value per share (€)	0.44	1.76	0.84	0.50	0.20	0.12
Net debt	-14,025	-83,899	-59,470	-37,935	-18,782	-13,619
Equity ratio	83.5%	86.8%	84.2%	80.9%	66.5%	57.9%

CASH FLOW STATEMENT

All figures in CAD '000	2020	2021	2022	2023E	2024E	2025E
Net income	**-20,641**	**-31,638**	**-30,931**	**-25,000**	**-23,550**	**-18,850**
Interest, net	-42	-1,998	-4,000	-2,000	-450	-150
Tax provision	0	0	0	0	0	0
Non-operating items	-7	-5,029	-6,406	0	0	0
EBIT	**-20,690**	**-38,664**	**-41,336**	**-27,000**	**-24,000**	**-19,000**
Depreciation and amortisation	230	220	220	213	207	201
EBITDA	**-20,461**	**-38,444**	**-41,116**	**-26,787**	**-23,793**	**-18,799**
Derivative liability	0	-4,916	-6,241	0	-420	0
Share & warrant based payments	2,910	12,694	6,894	4,000	4,000	3,000
Changes in working capital	8,316	77	5,748	-1,632	-252	-344
Cash interest net	42	1,998	4,000	2,000	450	150
Other adjustments	63	5,052	3,495	1,000	1,000	1,000
Operating cash flow	**-9,129**	**-23,540**	**-27,220**	**-21,419**	**-19,015**	**-14,993**
CapEx	-41	-13	-75	-60	-80	-110
Free cash flow	**-9,170**	**-23,553**	**-27,295**	**-21,479**	**-19,095**	**-15,103**
Other investments	0	0	0	0	0	0
Cash flow from investing	**-41**	**-13**	**-75**	**-60**	**-80**	**-110**
Debt Financing, net	0	0	0	0	0	0
Equity Financing, net	16,345	93,489	0	0	0	10,000
Other financiing activities	-50	2,785	-54	-56	-58	-60
Cash flow from financing	**16,295**	**93,438**	**-54**	**-56**	**-58**	**9,940**
Net cash flows	**7,125**	**69,885**	**-27,349**	**-21,535**	**-19,153**	**-5,163**
Cash, start of the year	6,956	14,025	83,899	59,470	37,935	18,782
Impact of exchange rates on cash	-56	-11	2,920	0	0	0
Cash, end of the year	**14,025**	**83,899**	**59,470**	**37,935**	**18,782**	**13,619**

Y-Y Growth						
Operating Cashflow	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Free cashflow	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

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PRICE TARGET DATES

Unless otherwise indicated, current prices refer to the closing prices of the previous trading day.

AGREEMENT WITH THE ANALYSED COMPANY AND MAINTENANCE OF OBJECTIVITY

The present financial analysis is based on the author's own knowledge and research. The author prepared this study without any direct or indirect influence exerted on the part of the analysed company. Parts of the financial analysis were possibly provided to the analysed company prior to publication in order to avoid inaccuracies in the representation of facts. However, no substantial changes were made at the request of the analysed company following any such provision.

ASSET VALUATION SYSTEM

First Berlin's system for asset valuation is divided into an asset recommendation and a risk assessment.

ASSET RECOMMENDATION

The recommendations determined in accordance with the share price trend anticipated by First Berlin in the respectively indicated investment period are as follows:

Category		1	2
Current market capitalisation (in €)		0 - 2 billion	> 2 billion
Strong Buy[1]	An expected favourable price trend of:	> 50%	> 30%
Buy	An expected favourable price trend of:	> 25%	> 15%
Add	An expected favourable price trend of:	0% to 25%	0% to 15%
Reduce	An expected negative price trend of:	0% to -15%	0% to -10%
Sell	An expected negative price trend of:	< -15%	< -10%

[1] The expected price trend is in combination with sizable confidence in the quality and forecast security of management.

Our recommendation system places each company into one of two market capitalisation categories. Category 1 companies have a market capitalisation of €0 – €2 billion, and Category 2 companies have a market capitalisation of > €2 billion. The expected return thresholds underlying our recommendation system are lower for Category 2 companies than for Category 1 companies. This reflects the generally lower level of risk associated with higher market capitalisation companies.

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The First Berlin categories for risk assessment are low, average, high and speculative. They are determined by ten factors: Corporate governance, quality of earnings, management strength, balance sheet and financial risk, competitive position, standard of financial disclosure, regulatory and political uncertainty, strength of brandname, market capitalisation and free float. These risk factors are incorporated into the First Berlin valuation models and are thus included in the target prices. First Berlin customers may request the models.

RECOMMENDATION & PRICE TARGET HISTORY

Report No.:	Date of publication	Previous day closing price	Recommendation	Price target
Initial Report	11 April 2023	USD0.51	Buy	USD3.60
2	24 May 2023	USD0.68	Buy	USD3.60
3	30 August 2023	USD0.98	Buy	USD3.60
4	19 January 2024	USD1.06	Buy	USD3.60
5	27 February 2024	USD1.76	Buy	USD3.60
6	Today	USD2.36	Buy	USD8.50

INVESTMENT HORIZON

Unless otherwise stated in the financial analysis, the ratings refer to an investment period of twelve months.

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At the time of publication of this financial analysis it is not certain whether, when and on what occasion an update will be provided. In general First Berlin strives to review the financial analysis for its topicality and, if required, to update it in a very timely manner in connection with the reporting obligations of the analysed company or on the occasion of ad hoc notifications.

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Legally required information regarding

- **key sources of information in the preparation of this research report**
- **valuation methods and principles**
- **sensitivity of valuation parameters**

can be accessed through the following internet link: https://firstberlin.com/disclaimer-english-link/

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