

**Action Summary – 8 February 2024**

Analyst Theodore R. O'Neill

- On January 24, 2024, MLVIR reported preliminary full year 2023 results showing annual growth of 40% and positive adjusted EBITDA compared to a loss the year before. We develop and publish our estimates by the half year and this report primarily focuses on results for 2H23.
- The company reported preliminary 2H23 results of €2.37MM and an EPS loss of €0.04. We had been looking for revenue of €2.6MM and EPS of €0.01. There is no consensus. The €0.04 unfavorable variance was due to lower sales and lower gross profit margins, partially offset by lower personal expenses. We will have better data when the audited results are reported, but we believe the reduced gross profit is due to the mix of lower margin evolv revenue, partially offset by higher VRSaaS sales.
- **Penetrating new verticals.** The increasing adoption of user immersion technology in industries, such as education, industrial training, and healthcare, among others, is driving market growth. It is currently fueled by training for roles like engineers, pilots, and healthcare workers. On January 30, 2024, it announced it had signed a partnership agreement with GE21 Realidade Virtual to expand into the mining and geoscience verticals.
- **Adjusting our 2024 and 2025 estimates.** We have lowered our 2024 revenue and EPS estimates to €5.1MM and €0.04, respectively, from revenue of €6.95MM and EPS of €0.08. For 2025, we have lowered our revenue and EPS estimates to €6.2MM and €0.07 from €9.6MM and €0.15, respectively.
- **Attractive Valuation.** Based on our discounted future earnings model, the value of all future earnings stands at €10/share.
- Shares have been trading on the Euronext Access since April and expect to uplist to Euronext Growth.

2/7 price: €7.20	Market cap: €32.7 million	Multiple of book: 39x	Market Cap/2025 Sales: 5.1
Diluted shares outstanding: 4.5MM	Insider ownership: >80%	3-mo avg. daily trading volume: 400	Dividend/Yield: NA/NA

**GAAP estimates (EPS in EUR – Revenue in EUR thousands)**

Period	EPS	Revenue	Op Margin
1H22A	N/A	€1,484	
2H22A	N/A	€1,735	
FY22A	<u>N/A</u>	<u>€3,219</u>	<u>0.88%</u>
1H23A	€0.04	€2,148	
2H23P	(€0.04)	€2,373	
FY23P	<u>€0.01</u>	<u>€4,521</u>	<u>1.84%</u>
1H24E	€0.02	€2,400	
2H24E	€0.02	€2,700	
FY24E	<u>€0.04</u>	<u>€5,100</u>	<u>4.27%</u>
1H25E	€0.04	€2,900	
2H25E	€0.04	€3,300	
FY25E	<u>€0.07</u>	<u>€6,200</u>	<u>5.48%</u>

Numbers may not total due to rounding. See the full model at the end of this report.

**Cash balance (in EUR thousands)**

• 2022A	• €172
• 2023P	• €1,075
• 2024E	• €346
• 2025E	• €286

**Debt (in EUR thousands)**

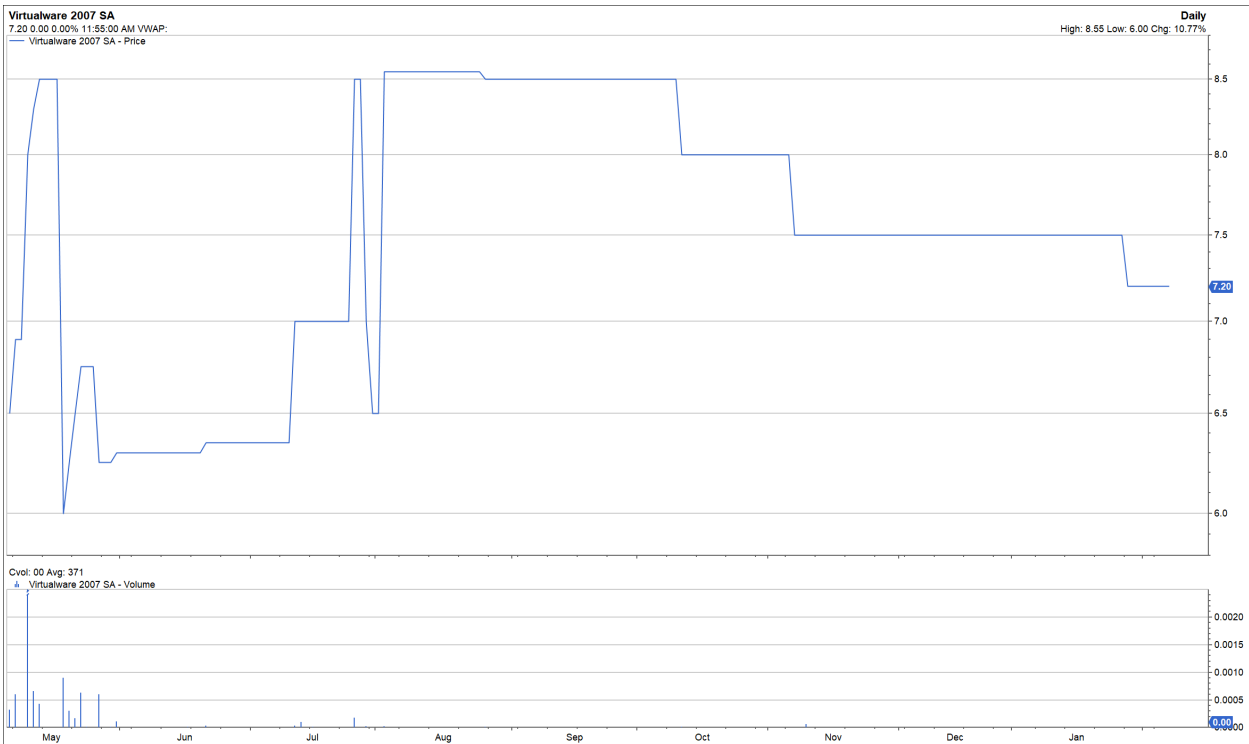
• 2022A	• €1,197
• 2023P	• €1,000
• 2024E	• €1,000
• 2025E	• €1,000

**Risks/Valuation**

- Risks: emerging technology, potentially competitive markets, regulatory risk, technological risk, foreign currency exchange risk
- Our €10 price target is derived from our discounted future earnings model.

**Company description:** Virtualware S.A. develops industrial virtual reality platforms for the nuclear, medical, educational, and defense industries in Spain and internationally. Founded in 2004, it has become the European leader in immersive technology for industrial use over time. Its flagship product, VIROO, offers VR as a Service, making Virtual Reality accessible to companies of all sizes and sectors. Additionally, Virtualware S.A. is involved in Evolv, a manufacturer of immersive tech-based medical rehabilitation devices.

Figure 1 – Virtualware – Eight Month Trading snapshot



Source: FactSet

## Quarterly Results

On January 24, 2024, MLVIR reported preliminary full year 2023 results. We develop and publish our estimates by the half year and the analysis in Figure 2 looks at results for 2H23.

The company reported preliminary 2H23 results of €2.37MM and an EPS loss of €0.04. We had been looking for revenue of €2.6MM and EPS of €0.01. There is no consensus. The €0.04 unfavorable variance was due to lower sales and lower gross profit margins, partially offset by lower personal expenses. We will have better data when the audited results are reported, but we believe the reduced gross profit is due to the mix of lower margin evolv revenue, partially offset by higher VRSaaS sales.

Figure 2 –Virtualware – 2H23 Variance Analysis (\$'000)

	<b>2023 H2E</b>	<b>2023 H2A</b>	<b>Better/(worse) than forecast</b>
Business Total Revenue	2,600,000	2,373,382	(226,618)
Changes in inventories of finished goods and WIP	100,000	(168,698)	(268,698)
Work carried out by the company for its assets	185,000	232,913	47,913
Costs of Goods Sold	(540,000)	(694,026)	(154,026)
<b>Gross Profit</b>	<b>2,345,000</b>	<b>1,743,571</b>	<b>(601,429)</b>
Other Operating Revenues	220,000	225,708	5,708
Personnel Expenses	(1,750,000)	(1,298,464)	451,536
Other Operating Expenses	(615,000)	(635,571)	(20,571)
Fixed Assets Depreciation and Amortization	(150,000)	(145,148)	4,852
Grants to non-financial assets and others allocation	20,000	21,605	1,605
Impairment gains/losses on disposal of NCA		(22,745)	(22,745)
Other Results		(27,252)	(27,252)
<b>Operating Income</b>	<b>70,000</b>	<b>(138,296)</b>	<b>(208,296)</b>
Financial revenues/(expenses)	(30,000)	(7,475)	22,525
Impairment gains/losses on disposal of financial instruments			
<b>Income Before Tax</b>	<b>40,000</b>	<b>(145,771)</b>	<b>(185,771)</b>
Income Tax		(15,000)	(15,000)
<b>Net Income</b>	<b>40,000</b>	<b>(160,771)</b>	<b>(200,771)</b>
<b>Number of shares</b>	4,542,000	4,542,000	
<b>EPS</b>	€ 0.01	(€ 0.04)	(€ 0.04)

Source: Company filings and Litchfield Hills Research LLC

## Valuation and Price Target

### Valuation Methodology

We believe MILVR is undervalued and we support that belief with two valuation techniques. To determine our price target, we use a discounted future earnings model, which we then compare its valuation relative to peers. The following valuation techniques are being used:

- 1) The discounted value of all future earnings was used for our price target (see Figure 3)
- 2) Valuation relative to peers (see Figure 4)

### Discounted Future Earnings – Basis for Price Target

Our 12-month price target of €10 is based on a discounted earnings model. For valuation purposes, we sum up all future earnings and discount them by 9%. We assume the company grows rapidly until 2029 before growth eventually slows to GDP. Our valuation model is shown in Figure 3 below. Note, this model understates future new products and growth through acquisitions and probably understates the tax benefits, but offsetting that, the earnings never have a down year. The implied share price is €9.63, which we round to €10.

Figure 3 - Virtualware - Price Target Calculation

Implied Value of Future Discounted Earnings: € 9.63		
Year 0 is 2023		
Year	Forecast EPS	Discounted EPS
0	€ 0.01	€ 0.01
1	€ 0.04	€ 0.04
2	€ 0.07	€ 0.06
3	€ 0.20	€ 0.15
4	€ 0.50	€ 0.35
5	€ 0.70	€ 0.45
Terminal Value		€ 8.56

Source: Litchfield Hills Research LLC

## Valuation Relative to Peers

Figure 4 is a summary of our MILVR peer comparison. The average Market Cap/Sales for 2024 is ~4.00x and ranges from a low of 0.48 to a high of 6.94x and we would argue the shares should trade at the high end of the range. At the current price, and if these multiples hold into 2025 (currently, there are almost no 2025 estimates for this group) its 2025 Market Cap to sales would be 5.25, which is below the 75<sup>th</sup> percentile. At our € 10.00 price target, its 2025 market cap to sales would be 7.32x and would define the high end of the range, but not by much. All of this broadly confirms our view that, along with our discounted earnings model, the shares are undervalued.

Figure 4 – Virtualware – Valuation of Peers

FactSet Ticker	Company Name	Closing Price USD	Market Cap USD \$MM	EV USD \$MM	LTM Sales USD \$MM	Market Cap / LTM Sales	2024 Consensus Market Cap / Sales
MTTR-US	Matterport, Inc. Class A	\$2.25	688	276	159	4.32	3.87
VUZI-US	Vuzix Corporation	\$1.66	105	68	14	7.53	6.94
KOPN-US	Kopin Corporation	\$2.31	264	236	44	6.01	5.58
TOBII-SE	Tobii AB	\$0.41	43	28	71	0.60	0.48
IMMR-US	Immersion Corporation	\$6.88	219	75	33	6.70	6.81
VRAR-US	Glimpse Group, Inc.	\$1.21	20	15	13	1.60	1.53
EXR-GB	Engage XR Holdings PLC	\$0.04	22	8	4	4.96	2.77
	Average					<b>4.53</b>	<b>4.00</b>
	High					7.53	6.94
	Low					0.60	0.48
	25th Percentile					1.60	1.53
	75th Percentile					6.35	6.19

Source: Litchfield Hills Research LLC and FactSet

## Financial Projections and Guidance

The company does not provide guidance. We have sought to make our estimates conservative, but it is hard to model a rapidly changing market as the company continues to execute its expansion plans into new markets and with new customers. We assume there will be some share growth though share compensation and we expect there will be demand for working capital as the company grows and we have factored that into our balance sheet and cash flow calculations.

Figure 5 – Virtualware – Income Statement EUR €

	H1A	H2A	FY2022A	H1A	H2 Preliminary	FY2023P	H1E	H2E	FY2024E	H1E	H2E	FY2025E
Business Total Revenue	1,484,378	1,734,997	3,219,375	2,148,018	2,373,382	4,521,400	2,400,000	2,700,000	5,100,000	2,900,000	3,300,000	6,200,000
Changes in inventories of finished goods and WIP	(28,243)	(151,089)	(179,332)	181,698	(168,698)	13,000	5,000	5,000	10,000	10,000	10,000	20,000
Work carried out by the company for its assets	313,984	324,922	638,906	241,174	232,913	474,087	225,000	225,000	450,000	275,000	275,000	550,000
Costs of Goods Sold	(422,299)	(346,243)	(768,542)	(452,601)	(694,026)	(1,146,627)	(888,000)	(999,000)	(1,887,000)	(1,044,000)	(1,188,000)	(2,232,000)
<b>Gross Profit</b>	<b>1,347,820</b>	<b>1,562,587</b>	<b>2,910,407</b>	<b>2,118,289</b>	<b>1,743,571</b>	<b>3,861,860</b>	<b>1,742,000</b>	<b>1,931,000</b>	<b>3,673,000</b>	<b>2,141,000</b>	<b>2,397,000</b>	<b>4,538,000</b>
<i>Unadjusted Gross Profit Margin %</i>	<i>75%</i>	<i>76%</i>	<i>75%</i>	<i>89%</i>	<i>67%</i>	<i>77%</i>	<i>66%</i>	<i>66%</i>	<i>66%</i>	<i>67%</i>	<i>67%</i>	<i>67%</i>
Other Operating Revenues	153,202	388,635	541,837	181,220	225,708	406,928	265,000	310,000	575,000	380,000	420,000	800,000
Personnel Expenses	(1,164,799)	(1,281,117)	(2,445,916)	(1,445,304)	(1,298,464)	(2,743,768)	(1,350,000)	(1,500,000)	(2,850,000)	(1,700,000)	(2,000,000)	(3,700,000)
Other Operating Expenses	(375,240)	(344,912)	(720,152)	(508,479)	(635,571)	(1,144,050)	(400,000)	(500,000)	(900,000)	(500,000)	(500,000)	(1,000,000)
Fixed Assets Depreciation and Amortization	(144,173)	(155,027)	(299,200)	(126,852)	(145,148)	(272,000)	(140,000)	(140,000)	(280,000)	(140,000)	(140,000)	(280,000)
Grants to non-financial assets and others allocation	59,533	-	59,533	21,605	21,605	43,210	-	-	-	-	-	-
Impairment gains/losses on disposal of NCA	-	-	-	(19,079)	(22,745)	(41,824)	-	-	-	-	-	-
Other Results	-	(18,324)	(18,324)	-	(27,252)	(27,252)	-	-	-	-	-	-
<b>Operating Income</b>	<b>(123,657)</b>	<b>151,842</b>	<b>28,185</b>	<b>221,400</b>	<b>(138,296)</b>	<b>83,104</b>	<b>117,000</b>	<b>101,000</b>	<b>218,000</b>	<b>181,000</b>	<b>177,000</b>	<b>358,000</b>
<i>Operating Margin %</i>	<i>-8.33%</i>	<i>8.75%</i>	<i>0.88%</i>	<i>10.31%</i>	<i>-5.83%</i>	<i>1.84%</i>	<i>4.88%</i>	<i>3.74%</i>	<i>4.27%</i>	<i>6.24%</i>	<i>5.36%</i>	<i>5.77%</i>
Financial revenues/(expenses)	(83,082)	(32,916)	(115,998)	(24,386)	(7,475)	(31,861)	(9,000)	(9,000)	(18,000)	(9,000)	(9,000)	(18,000)
<b>Income Before Tax</b>	<b>(206,739)</b>	<b>118,926</b>	<b>(87,813)</b>	<b>197,014</b>	<b>(145,771)</b>	<b>51,243</b>	<b>108,000</b>	<b>92,000</b>	<b>200,000</b>	<b>172,000</b>	<b>168,000</b>	<b>340,000</b>
Income Tax	-	525,933	525,933	-	(15,000)	(15,000)	-	-	-	-	-	-
<b>Net Income</b>	<b>(206,739)</b>	<b>644,859</b>	<b>438,120</b>	<b>197,014</b>	<b>(160,771)</b>	<b>36,243</b>	<b>108,000</b>	<b>92,000</b>	<b>200,000</b>	<b>172,000</b>	<b>168,000</b>	<b>340,000</b>
<i>Net Margin %</i>	<i>-13.93%</i>	<i>37.17%</i>	<i>13.61%</i>	<i>9.17%</i>	<i>-6.77%</i>	<i>0.80%</i>	<i>4.50%</i>	<i>3.41%</i>	<i>3.92%</i>	<i>5.93%</i>	<i>5.09%</i>	<i>5.48%</i>
EPS	(€ 0.05)	€ 0.14	€ 0.10	€ 0.04	(0.04)	€ 0.01	€ 0.02	€ 0.02	€ 0.04	€ 0.04	€ 0.04	€ 0.07
Number of shares	4,542,000	4,542,000	4,542,000	4,542,000	4,542,000	4,542,000	4,600,000	4,700,000	4,700,000	4,800,000	4,800,000	4,800,000

Source: Company reports and Litchfield Hills Research LLC

Figure 6 – Virtualware – Balance Sheet EUR €

	<b>FY2021A</b>	<b>FY2022A</b>	<b>FY2023P</b>	<b>FY2024E</b>	<b>FY2025E</b>
Cash and Equivalents	502,144	172,164	1,075,950	345,950	285,950
Accruals	2,578	1,815	2,000	2,000	2,000
Short-term financial investments	283,434	398,726	400,000	400,000	400,000
Short-term investments in group companies and associat	21,610	-	-	-	-
Account Receivables and others	2,757,026	1,203,148	1,200,000	1,300,000	1,500,000
Inventories	210,241	136,780	150,000	150,000	150,000
<b>Current Assets</b>	<b>3,777,033</b>	<b>1,912,633</b>	<b>2,827,950</b>	<b>2,197,950</b>	<b>2,237,950</b>
Assets by deferred tax	1,592,634	2,120,730	1,900,000	1,600,000	870,000
Long-term financial investments	130,867	64,367	60,000	60,000	60,000
Long-term investments in group companies and associat	-	35,297	35,297	35,297	35,297
Property, plant and equipment	89,014	92,621	92,621	92,621	92,621
Intangible Assets	989,234	1,410,187	1,500,000	1,600,000	2,000,000
<b>Non-Current Assets</b>	<b>2,801,749</b>	<b>3,723,202</b>	<b>2,557,918</b>	<b>3,387,918</b>	<b>4,087,918</b>
<b>Total Assets</b>	<b>6,578,782</b>	<b>5,635,835</b>	<b>5,385,868</b>	<b>5,585,868</b>	<b>6,325,868</b>
Short Term Accruals		508,181	500,000	500,000	500,000
Account Payables and others	2,850,411	1,392,269	1,400,000	1,400,000	1,400,000
Short Term Debt	1,502,618	1,040,207	1,000,000	1,000,000	1,000,000
<b>Current Liabilities</b>	<b>4,353,029</b>	<b>2,940,657</b>	<b>2,900,000</b>	<b>2,900,000</b>	<b>3,300,000</b>
Long Term Accruals		664,201	650,000	650,000	650,000
Liabilities by deferred tax	16,645	8,639	-	-	-
Long Term Debt	1,720,704	1,196,719	1,000,000	1,000,000	1,000,000
<b>Non Current Liabilities</b>	<b>1,737,349</b>	<b>1,869,559</b>	<b>1,650,000</b>	<b>1,650,000</b>	<b>1,650,000</b>
Share Capital	409,402	799,625	835,868	1,035,868	1,375,868
Capital	158,970	158,970	158,970	158,970	158,970
Reserves and Retained earnings	250,432	640,655	676,898	876,898	1,216,898
Grants, donations and legacies received	67,254	35,227	-	-	-
External partners	11,748	(9,233)	-	-	-
Dividend Distributed -					
<b>Equity</b>	<b>488,404</b>	<b>825,619</b>	<b>835,868</b>	<b>1,035,868</b>	<b>1,375,868</b>
<b>Total Equity And Liabilities</b>	<b>6,578,782</b>	<b>5,635,835</b>	<b>5,385,868</b>	<b>5,585,868</b>	<b>6,325,868</b>

Source: Company reports and Litchfield Hills Research LLC

Figure 7 – Virtualware – Cash Flow EUR €

	<u>FY2022A</u>	<u>FY2023P</u>	<u>FY2024E</u>	<u>FY2025E</u>
Net income/(loss)	438,120	36,243	200,000	340,000
Accruals	763	(185)	-	-
Short-term financial investments	(115,292)	(1,274)	-	-
Short-term investments in group companies and associat	21,610	-	-	-
Account Receivables and others	1,553,878	3,148	(100,000)	(100,000)
Inventories	73,461	(13,220)	-	-
Assets by deferred tax	(528,096)	1,250,730	(730,000)	(300,000)
Long-term financial investments	66,500	4,367	-	-
Long-term investments in group companies and associat	(35,297)	-	-	-
Property, plant and equipment	(3,607)	-	-	-
Intangible Assets	(420,953)	(89,813)	(100,000)	(400,000)
Short Term Accruals	508,181	(8,181)	-	200,000
Account Payables and others	(1,458,142)	7,731	-	200,000
Short Term Debt	(462,411)	(40,207)	-	-
Long Term Accruals	664,201	(14,201)	-	-
Liabilities by deferred tax	(8,006)	(8,639)	-	-
Long Term Debt	(523,985)	(196,719)	-	-
Capital	-	-	-	-
Reserves	(47,897)	-	-	-
Grants, donations and legacies received	(32,027)	(35,227)	-	-
External partners	(20,981)	9,233	-	-
Dividend Distributed -	-	-	-	-
<b>Total Cash Flow</b>	<b>(329,980)</b>	<b>903,786</b>	<b>(730,000)</b>	<b>(60,000)</b>

Source: Litchfield Hills Research LLC

**Disclosures:**

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