



Amaero International Ltd

Readied for operational performance

Amaero International Ltd (ASX:3DA) is a global specialist in metal additive manufacturing for the defence, aerospace and tooling sectors. The company has delivered Q4 cash receipts of \$0.14m and an operating cash loss of \$2.2m which was better than our forecast loss for the quarter. The company also completed an ~\$11m (US\$7.6m) placement in the quarter, at nil discount to its last traded price, from US institutional investors led by US growth investor Pegasus Growth Capital Fund. Amaero is a company in transition with its titanium powder facility approved by the Environmental Protection Authority and now scheduled for completion in Q2 CY2023. The delay in the completion of the plant has been caused by tightness in the domestic commercial construction industry, global supply chain issues and delays in receiving regulatory approvals. We have adjusted our forecasts to reflect the delay in the timing of commissioning, largely impacting our FY23 forecasts. Our base case valuation has also now incorporated a higher risk-free-rate, to reflect the increase in the 10-year Treasury rate. We have applied 3.5% (up from 2.0%) across the board for our valuations. We continue to see upside in our valuation from the expanded plan to 5X and potentially 10X production from the titanium alloy powder facility as well as Amaero's ambitions to take its Fletcher tooling contract to global expansion and build an additive manufacturing facility in the Middle East. Our upside case on these opportunities is \$4.39/share.

Business model

Amaero generates revenues from several sources including: the design and prototyping of additive manufacturing solutions on a cost-plus basis; from contract manufacturing and tooling on a price-per-unit basis; from the sale of proprietary metal 3D printers and equipment, and 3D printing metal powders, on a cost-plus mark-up basis; from post-sales support and maintenance service fees; and from the rights to commercialise patented proprietary alloys developed by Monash University on a price-per-unit basis. Amaero has the North American commercialisation rights to a range of 3D printing machines, including the world's largest laser powder bed machine, as well as the powder preparation machines and powder handling and recovery devices. The company owns fully accredited manufacturing facilities in Melbourne, Adelaide and El Segundo, California.

A quarter of laying the groundwork

Amaero has reported Q4 cash receipts of \$0.14m, which was down on Q3 FY22 and the pcp. The operating cash loss for the quarter was \$2.199m with a bit of a tick up in product and manufacturing costs associated with fulfilling purchase orders for BAE Systems Australia and the CSIRO and with additional staff as the company gears up to install its titanium powder facility in Notting Hill in Victoria. The company ended the quarter with \$11.12m in cash, having completed an \$11m placement in Q4, which will be sufficient for five more quarters during which time Amaero expects to finalise the completion and commissioning of its powder facility. Construction of the facility is now anticipated to be completed in Q2 CY2023. We have adjusted our forecasts to reflect the timing change for the facility to become operational and this has impacted our FY23 forecasts. We will anticipate that Amaero will be cash generating in FY23, with profitability delayed now until H1 FY24.

Base-case DCF valuation is \$0.60/share, upside case is \$4.39

Our base-case DCF valuation is \$0.60/share. This incorporates the first stage of the titanium powder facility and current contracts with Fletcher, Boeing and Gilmour Space Technology but not the Middle East 3D printing centre, the larger Fletcher opportunity or the plan to 5X and potentially 10X the titanium powder plant. Our upside case on these opportunities take our valuation up to \$4.39/share or \$1.375b.

Y/E	Sales revenues	Gross profit	EBITDA	NPAT	EPS (c)	EV/Sales (x)
06/21e	0.5	0.9	(4.8)	(6.2)	(3.3)	nm
06/22f	1.3	0.9	(7.0)	(7.9)	(3.8)	23.9
06/23f	27.6	8.1	(2.5)	(3.6)	(1.5)	1.5
06/24f	73.2	33.3	21.8	20.1	4.8	0.4

Source: Company data for historicals; RaaS estimates for FY22f, FY23f and FY24f

Additive Manufacturing

4th August 2022



Share Performance (12 months)



Upside Case

- Six of the top-10 defence companies are clients
- Partnered with the world's foremost additive manufacturing R&D team at Monash Uni
- Strong board and advisory board with links into the decision makers in US and EMEA defence

Downside Case

- Competing with multinational 3D printing manufacturers with big balance sheets
- Further capital raises may result in dilution
- Still early stage with no guarantee that strategy will translate into earnings success

Catalysts

- Australian titanium powder plant is commissioned
- Fletcher tooling opportunity presents globally
- Decision on 3D printing centre in Middle East
- Board agrees to 5x expand titanium powder plant

Board of Directors & Management

David Hanna Non-Executive Chairman
Stuart Douglas Executive Director
Kathryn Presser Non-Executive Director
Hank Holland Non-Executive Director
Barrie Finnin Chief Executive Officer

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Key Points From Q4 FY22 Result

Amaero reported Q4 FY22 cash receipts of \$0.14m which was below our forecast. The operating cash loss for the quarter was \$2.199m, also below our expectations due to costs being lower than expected. Amaero saw an uptick in product and manufacturing costs in the quarter (\$0.54m compared with \$0.43m in Q3 FY22 and \$0.1m in Q4 FY21) due to purchase orders received from BAE Systems and CSIRO in the quarter. BAE Systems commissioned a titanium alloy casing and plug and CSIRO ordered burner designs and an updated static mixer.

During the quarter, the manufacture of the titanium gas atomiser production plant for the titanium powder facility was completed on time and budget and has subsequently been cold and hot tested by the engineering manufacturer. The company noted that the plant is operating as expected and is delivering the anticipated high-value yield. The plant will now be prepared for shipping to Australia.

The company also noted in its release, as previously advised in earlier in July, that the construction of the titanium powder facility was delayed due to a combination in the tightness of the domestic commercial construction market, global supply chain issues and delays in receiving regulatory approvals. The facility received approval from the EPA in July. Amaero now anticipates the facility will be built and operational in Q2 CY2023. Previously it was anticipated that commissioning would take place by September with production to commence in December 2022.

Earnings Adjustments

We have adjusted our FY23 and FY24 forecasts to reflect the construction and commissioning delays at the titanium powder facility. Our forecasts now anticipate commissioning in Q3 FY23 with the plant fully operational from FY24. The delay has also pushed out our expectation for profitability into FY24.

Exhibit 2: FY23 and FY24 earnings adjustments (in A\$m unless otherwise stated)								
Year ending June 30	FY23 old	FY23 new	FY24 old	FY24 new				
Sales revenue	39.0	27.6	75.4	73.2				
Total revenue	15.2	8.1	35.4	33.3				
EBITDA	4.6	(2.5)	24.0	21.8				
NPAT	3.3	(3.6)	22.0	20.1				
EPS	1.2	(1.5)	6.9	4.8				
Source: RaaS estimates								

The Impact Of A 5x Titanium Powder Facility On Valuation

Amaero has previously highlighted that it would look to increase the titanium powder facility's capacity five-fold within a year of production commencing. We revisit the 5X scenario based on the new delayed start for commissioning.

In our 5X scenario we use the following parameters:

- A Ti64 price of US\$205/kilo;
- A higher production and cost base from H1 CY2024; and
- Expectation of full capacity at the end of CY2026.

This derives a base-case valuation of \$465m or \$1.92/share based on the same valuation parameters used in our current base-case valuation.

A 10X scenario (or a 1,500 tpa facility), which we dimension from FY27, would result in a significant uplift in our base-case valuation to \$3.15/share as we set out in the following exhibit.



Exhibit 2: Valuation, revenue and EBITDA impact of 5x and 10x increase in titanium alloy
powder facility on our current base-case forecasts and valuation

	Current	5x	10x
DCF valuation \$m	144	465	986
DCF valuation per share	\$0.60	\$1.92	\$3.15
Revenue FY23	27.6	27.6	75.8
EBITDA FY23	(2.5)	(6.0)	2.0
Revenue FY30	184.0	347.3	613.3
EBITDA FY30	54.1	145.2	307.2
CAGR in revenue %	20.9%	28.8%	23.2%

Source: RaaS estimates and analysis

As we have discussed in previous reports, our model dimensions, but currently does not include in our forecasts or valuation, two other significant opportunities being contemplated by Amaero:

- A \$108m additive manufacturing facility in the Middle East which Amaero is negotiating to build and operate on behalf of a sovereign authority. This would result in Amaero receiving ongoing management fees for the project; and
- An extension of the Fletcher tooling opportunity to the global market for manufacturing Pink BattsTM. Amaero has developed a more cost-effective, stronger tool which could be adopted by all manufacturers of Pink BattsTM.

These two projects together with the 10x opportunity potentially take our valuation to \$4.39/share.

DCF Valuation

In our view, given the early-stage nature of Amaero's business, the discounted cashflow methodology is the most appropriate method for valuing the company. We derive a weighted average cost of capital (WACC) of 14.9% (beta 1.8, terminal growth rate 2.2%) and this gives us a base-case valuation of \$170.1m or \$0.70/share on the new share count of 241.9m. We use an equity risk premium of 6.5% and risk-free rate of 3.5% (previously 2.0%) to reflect the increase in the 10-year Australian Treasury bond rate.

On a fully diluted basis, assuming all options attached to the share issue and the convertible note converts to shares, the valuation is \$0.51/share.

Exhibit 4: DCF valuation (in A\$m unless otherwise stated)							
Parameters							
14.9%							
1.8							
6.5%							
3.5%							
2.2%							
61.9							
71.3							
133.2							
(11.1)							
144.4							
241.9							
\$0.60							



Amaero International Ltd						Share price (3 August 202	22)				A\$	0.17
Profit and Loss (A\$m)						Interim (A\$m)	H121A	H221A	H122F	H222F	H123F	H223F
Y/E 30 June	FY20A	FY21A	FY22F	FY23F	FY24F							
						Sales Revenue	0.1	0.4	0.2	1.0	9.3	18.
Sales Revenue	0.1	0.5	1.3	27.6	73.2	EBITDA Adj	(1.9)	(2.9)	(3.0)	(4.0)	(3.8)	1.3
Total Revenue	0.3	1.3	2.0	27.6	73.2	EBIT Adj'	(2.5)	(3.5)	(3.5)	(4.4)	(4.3)	0.
Gross Profit	0.2	0.9	0.9	8.1	33.3	NPAT (Adj)	(2.6)	(3.6)	(3.6)	(4.4)	(4.2)	0.
EBITDA Adj	(4.3)	(4.8)	(7.0)	(2.5)		Minorities		-	-	-	-	-
Depn	(0.5)	(1.1)	(0.9)	(1.1)		NPAT (reported)	(2.8)	(4.2)	(3.5)	(4.4)	(4.2)	0.
Amort	0.0	0.0	0.0	0.0		EPS (Adj)	(1.59)	(1.69)	(1.76)	(2.07)	(1.75)	0.2
EBIT Adj	(4.8)	(6.0)	(7.8)	(3.6)		EPS (reported)	(1.59)	(2.11)	(1.73)	(1.82)	(1.75)	0.2
Interest	(0.2)	(0.2)	(0.1)	0.1		Dividend (cps)	-	-	-	-	-	-
Tax	0.0	0.0	0.0	0.0	0.0	Imputation	-	-	-	-	-	-
Minorities	0.0	0.0	0.0	0.0	0.0	Operating cash flow	(2.8)	(2.1)	(4.4)	(3.6)	(3.6)	1.
Equity accounted assoc	0.0	(0.0)	0.0	0.0	0.0	Free Cash flow	(2.4)	(1.8)	(2.4)	(2.4)	0.4	5.
NPAT pre significant items	(4.9)	(6.2)	(7.9)	(3.6)	20.1	Divisions	H121A	H221A	H122F	H222F	H123F	H223
Significant items	(0.8)	(8.0)	0.0	0.0	0.0	Sales and service revenue	0.1	0.4	0.2	1.0	9.3	18.
NPAT (reported)	(5.8)	(7.0)	(7.9)	(3.6)	20.1	R&D grants	0.6	0.2	0.8	0.0	0.0	0.
Cash flow (A\$m)						Total Revenue	0.7	0.6	1.0	1.0	9.3	18.
Y/E 30 June	FY20A	FY21A	FY22F	FY23F	FY24F	COGS	0.1	0.3	0.4	0.8	7.9	11.
EBITDA	(4.3)	(4.8)	(7.0)	(2.5)	21.8	Gross Profit	0.6	0.3	0.6	0.2	1.4	6.
Interest	(0.2)	(0.2)	0.0	0.1	0.0	R&D costs	(0.8)	(1.0)	(1.2)	(1.2)	(1.2)	(1.3
Tax	0.0	0.0	0.0	0.0	0.0	Employment	(0.6)	(0.7)	(0.8)	(1.3)	(1.8)	(1.9
Working capital changes	0.2	0.2	(1.1)	0.2	1.2	General & Admin costs	(0.7)	(1.4)	(1.0)	(1.1)	(1.3)	(1.4
Operating cash flow	(4.2)	(4.9)	(8.1)	(2.2)	23.0	Other costs	(0.4)	(0.2)	(0.6)	(0.7)	(0.8)	(0.9
Mtce capex	0.0	0.0	0.0	0.0	0.0							
Free cash flow	(4.2)	(4.9)	(8.1)	(2.2)	23.0	EBITDA	(1.9)	(2.9)	(3.0)	(4.0)	(3.8)	1.
Growth capex	(3.9)	(0.7)	(3.3)	(8.0)	(8.0)							
Acquisitions/Disposals	0.0	0.0	0.0	0.0		Margins, Leverage, Returns	3	FY20A	FY21A	FY22F	FY23F	FY24
Other	0.0	0.0	(0.0)	0.0	0.0	EBITDA		nm	nm	(555.3%)	(9.2%)	29.8%
Cash flow pre financing	(8.1)	(5.6)	(11.3)	(10.2)	15.0	EBIT		nm	nm	(625.2%)	(13.1%)	27.4%
Equity	13.5	13.8	11.0	0.0	0.0	NPAT pre significant items		nm	nm	(630.9%)	(12.9%)	27.5%
Debt	(0.2)	(0.2)	0.0	0.0	0.0	Net Debt (Cash)		4.0	11.5	11.1	0.9	15.
Dividends paid	0.0	0.0	0.0	0.0	0.0	Net debt/EBITDA (x)	(x)	n/a	n/a	n/a	n/a	0.
Net cash flow for year	5.2	8.1	(0.4)	(10.2)	15.0	ND/ND+Equity (%)	(%)	(96.3%)	(303.3%)	(181.8%)	(6.7%)	(87.7%
Balance sheet (A\$m)						EBIT interest cover (x)	(x)	n/a	n/a	n/a	n/a	- 0.0
Y/E 30 June	FY20A	FY21A	FY22F	FY23F	FY24F			(71.7%)	(37.9%)	(38.1%)	(16.3%)	57.9%
Cash	4.0	11.5	11.1	0.9		ROE		(133.2%)	(59.6%)	(48.7%)	(22.7%)	83.6%
Accounts receivable	0.1	0.2	0.4	3.7		ROIC		(199.1%)	(240.4%)	(580.9%)	(448.4%)	569.9%
Inventory	0.5	0.8	0.4	0.9		NTA (per share)		0.05	0.08	0.07	0.05	0.13
Other current assets	0.1	0.1	0.4	0.4		Working capital		(0.1)	(0.1)	(1.0)	(1.2)	(2.4
Total current assets	4.8	12.5	12.3	5.9		WC/Sales (%)		(121.6%)	(23.3%)	(79.6%)	(4.4%)	(3.3%
PPE	7.4	6.1	9.2	16.1		Revenue growth		nm	332.4%	148.7%	2102.9%	165.2%
Intangibles and Goodwill	0.0	0.0	0.0	0.0		EBIT growth pa		n/a	n/a	n/a	n/a	(653.5%
Investments	0.0	0.3	0.4	0.4		Pricing		FY20A		FY22F	FY23F	FY24I
Deferred tax asset	0.0	0.0	0.0	0.0			(m)	175	203	242	255	255
Other non current assets	0.2	0.2	0.2	0.2		Weighted Av Dil Shares	(m)	143	145	212	245	255
Total non current assets	7.6	6.6	9.7	16.6	22.8			/	(2 -)			
Total Assets	12.4	19.1	22.0	22.5		EPS Reported	cps	(4.0)				4.
Accounts payable	0.8	1.1	1.8	5.8		EPS Normalised/Diluted	cps	(3.5)				
Short term debt	0.0	0.0	0.0	0.0		EPS growth (norm/dil)		n/a	n/a	n/a	n/a	(427.5%
Tax payable	0.0	0.0	0.0	0.0		DPS	cps	-	-			
Other current liabilities	0.4	0.4	0.5	0.4		DPS Growth		n/a				n/
Total current liabilities	1.2	1.5	2.3	6.3		Dividend yield		0.0%	0.0%	0.0%	0.0%	0.0%
Long term debt	0.0	0.0	0.0	0.0		Dividend imputation		0				
Other non current liabs	2.9	2.5	2.4	2.4		PE (x)		- 00.0	-	- 00.0	-	3.5
Total long term liabilities	2.9	2.5	2.4	2.4		PE market		23.3				
Total Liabilities	4.1	3.9	4.7	8.7		Premium/(discount)		nm	nm	nm	nm	nm
Net Assets	8.2	15.2	17.3	14.0	34.1	EV/EBITDA		nm (0.40)	nm	nm	nm	nm
01 11 1	44.6	07.0	00 =	00 =		FCF/Share	cps	(2.42)	(2.41)		(0.88)	9.0
Share capital	14.0	27.2	38.7	38.7		Price/FCF share		(7.0)	(7.1)			1.9
A	/r ^\											
Accumulated profits/losses	(5.9)	(12.9)	(21.8)	(25.3)	. ,	Free Cash flow Yield		(14.2%)	(14.2%)	(19.6%)	(5.2%)	53.17
Accumulated profits/losses Reserves Minorities	(5.9) 0.0 0.0	(12.9) 0.9 0.0	0.4 0.0	0.6 0.0	(5.2) 0.6 0.0			(14.2%)	(14.2%)	(19.6%)	(5.2%)	53.1%

Source: Company data for historicals, RaaS estimates



FINANCIAL SERVICES GUIDE

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of

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Effective Date: 6th May 2021



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