

Ekso Bionics

Growing interest in non-medical applications

Ekso showed continued strength in Q4 both in medical applications and in Engineering services. 18 units were placed in the period, bringing the total number of units in use to 110 with 17m steps taken. Encouragingly, management also reports strong interest in Ekso's non-powered exoskeleton for industrial applications. We have lowered our forecast ASP from \$120k to \$110k to be consistent with the implied ASP over FY14, which has reduced our FY15 and FY16 revenue forecasts by 10% and 12% respectively, but we remain optimistic about the outlook. The opportunity in non-medical applications in particular does not appear to be fully priced in. FDA clearance, continued unit sales growth and further development of non-medical devices are key catalysts.

Year end	Revenue (\$m)	Non-GAAP Earnings (\$m)	Non-GAAP EPS (\$)	Non-GAAP P/E (x)	EV/S (x)
12/13	3.3	(12.1)	(0.59)	N/A	11.8
12/14	5.3	(16.0)	(0.20)	N/A	23.6
12/15e	8.2	(13.8)	(0.14)	N/A	20.7
12/16e	12.5	(12.2)	(0.12)	N/A	13.6

Note: *PBT and EPS are normalised, excluding intangible amortisation, exceptional items and share-based payments.

Renting model could accelerate unit sales growth

One of the reasons for the lower-than-forecast implied ASP is the increase in the number of units that are rented. Management reports that some hospitals prefer to be able to rent devices rather than purchase and it could be a method to accelerate growth. A rental model would increase the working capital requirement for Ekso, but the potential for accelerated unit sales could help it achieve a strong foothold in the medical device market and boost long-term earnings potential.

Big-picture remains highly attractive

Although we have lowered our revenue forecasts and increased our operating loss forecasts from \$11.4m to \$15.2m in FY15 and \$9.4m to \$13.7m in FY16, we remain optimistic about the long-term outlook. We are encouraged by Ekso's work on phase two of the TALOS project, on the DARPA Warrior Web contract with Google Dynamics and the unpowered supportive exoskeleton that is being demonstrated to a number of global industrial companies. The financial structure of the business will continue to evolve but at this stage in the business development, the key metrics for investors should be units in use, steps walked and development agreements signed.

Valuation: Significant upside from other applications

Our changes to forecasts do not substantially change our DCF valuation sensitivity analysis, which we see as the key valuation tool. The updated table in Exhibit 4 suggests peak unit sales of 7,053 are now required to justify the share price, compared to 5,292 in our [last update note](#). This represents a small proportion of the possible addressable market if Ekso can be successful in both medical and non-medical applications.

Q4 and FY14 results

Tech hardware & equipment

21 April 2015

Price **US\$1.93**
Market cap **US\$197m**

Net cash (\$m) at 31 December 2014	25.2
Shares in issue	101.3m
Free float	39%
Code	EKSO
Primary exchange	OTC QB
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	55.6	42.3	(27.2)
Rel (local)	56.2	37.0	(35.3)
52-week high/low	US\$3.50	US\$0.76	

Business description

Ekso Bionics is a pioneer in the field of human robotic exoskeletons that augment mobility, strength and endurance. It is a development-stage company based in Richmond, California.

Next event

Q115 results	May 2015
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Business update

Ekso has continued its strong progress and has had a number of important developments over the last quarter, including the submission of a 510(k) and the start of a nine-centre, 70-patient Pan-European study on the general outcomes of using the Ekso GT and the reduction in secondary complications. Engineering services also showed continued strength, with Ekso being awarded a second-phase grant for the TALOS (Tactical Assault Light Operator Suit) project by the US Special Operations Command to help develop an 'Iron Man' suit for the US army. Management also reports strong interest for an unpowered supportive exoskeleton for industrial applications. 17m steps have now been taken with an Ekso GT, which is important because it reflects the expertise and experience Ekso is now building and can be used as a case study for potential new customers. The warrant exercise was also completed as indicated in our [February note](#), so the balance sheet is significantly simplified and one of the substantial barriers to a primary listing is now removed.

Review of results and changes to estimates

Units sales in line with forecast, but ASP slightly lower

64 Ekso units were shipped in the year – 2.5x the number of units shipped in 2013. Medical device revenue increased by 94% y-o-y as a result. Engineering services also increased strongly in the quarter (78% y-o-y) primarily thanks to the extension of the TALOS project. Gross margins improved from 9.4% in FY13 to 30% in FY14, largely due to a one-off charge in FY13 for retrofitting old Ekso units. Although there was a strong increase in unit sales, Q4 revenue was slightly below our forecasts at \$918k vs our estimate of \$1,115k. This is partially due to nine units being rented and a lower than forecast average selling price. Given the \$1.3m increase in revenue and 53 devices sold with revenue recognised over 12 quarters, the implied ASP (excluding distributor discounting) is c \$110k compared to our forecast of \$120k. This assumes that the fully amortised sales (ie, those made prior to 12 quarters ago) are immaterial. Management is also reporting an increase in interest in the rental of units and suggest that some hospitals may prefer to operate on this basis than purchasing a device because the purchasing decisions for operating expenses are more straightforward than for capital expenditure. An increase in rental units may not have a substantial effect on revenue given the 36-month amortisation policy, but it would have a much more significant effect on cash flow since cash is received upfront under the current model and only monthly/annually with a rental model. This would put cash flows under strain in the short term but could accelerate growth and allow Ekso to build a foothold in the market and gain an advantage over its peers.

Operating costs up 69% y-o-y

Total operating costs have grown 69% from \$10.9m in FY13 (\$2.6m in Q413) to \$18.4m (\$5.4m in Q414). This is a result of growth in the labour force across all areas but primarily sales and marketing. There is also additional cost from Ekso now being public. Exhibit 1 shows a summary of Q4 and FY14 performance compared to the prior period.

Exhibit 1: Summary of results vs comparatives

	Q413	Q414	Delta	Delta (%)	FY13	FY14	Delta	Delta (%)
Medical devices	473	918	445	94%	1,612	2,924	1,312	81%
Engineering services	315	562	247	78%	1,690	2,403	713	42%
Revenue	788	1,480	692	88%	3,302	5,327	2,025	61%
Cost of medical devices	686	637	(49)	(7%)	1,461	2,048	587	40%
Cost of engineering services	235	288	53	22%	1,254	1,720	466	37%
Total cost of revenue	921	926	5	1%	2,715	3,768	1,053	39%
Gross profit	(133)	554	687	(516%)	587	1,559	972	166%
Total operating expenses	2,623	5,413	1,422	36%	10,881	18,353	7,472	69%
Loss from operations	(2,756)	(4,859)	(1,435)	42%	(10,294)	(16,794)	(6,500)	63%

Source: Ekso Bionics

Balance sheet and cash flow

Ekso has a strong balance sheet following the warrant exercise (see [February Update note](#)), with \$25.2m of cash and cash equivalents at 31 December 2014 and cash being used over the 12-months at a rate of \$1.2m a month. We forecast this cash to be sufficient for ongoing operations until the end of FY16, although this is dependent on expenditures remaining broadly in line with the current structure and assumes upfront sales rather than a rental model.

Exhibit 2: Actuals vs forecasts

	2014e	2014	Delta	Delta %	Q4e	Q4a	Delta	Delta %
Medical devices	3,122	2,924	(198)	(6%)	1,115	918	(198)	(18%)
Engineering services	2,341	2,403	62	3%	500	562	62	12%
Total revenue	5,463	5,327	(136)	(2%)	1,616	1,480	(136)	(8%)
Cost of medical devices	2,135	2,048	(87)	(4%)	724	638	(87)	(12%)
Cost of engineering services	1,757	1,720	(37)	(2%)	324	288	(37)	(11%)
Total cost of revenue	3,892	3,768	(124)	(3%)	1,049	926	(123)	(12%)
Gross profit	1,571	1,559	(12)	(1%)	566	554	(12)	(2%)
Total operating expenses	16,930	18,353	1,423	8%	3,990	5,413	1,422	36%
Loss from operations	(15,359)	(16,794)	(1,435)	9%	(3,424)	(4,859)	(1,435)	42%

Source: Edison Investment Research

Changes to estimates

We have kept our unit sales forecasts unchanged but lowered the ASP to be in line with the \$110k implied by the last two quarters' sales figures. We have also slowed the improvement in gross margins due to the actual gross margins of 31% being slightly lower than our forecast of 35%. We are still optimistic that manufacturing costs can come down and margins can improve towards 55% even if ASP comes down, so have left our long-term margin assumptions unchanged. Our forecasts for engineering services remain unchanged due to their unpredictable nature, but there is potential for them to be exceeded. We have also increased our operating cost forecasts for FY15 and FY16 by 20% to reflect the higher cost base and general growth in operating activities.

Exhibit 3: Changes to estimates

US\$000s	2015e (old)	2015e (New)	Delta	Delta (%)	2016e(old)	2016e(new)	Delta	Delta (%)
Medical device units	98	98	0	0%	146	146	0	0%
Medical device ASP (\$000s)	120	110	(10)	(8%)	120	110	(10)	(17%)
Revenue (\$000s)								
Medical devices	6,194	5,231	(964)	(16%)	10,203	8,531	(1,672)	(16%)
Engineering services	3,000	3,000	0	0%	4,000	4,000	0	0%
Total revenue	9,194	8,231	(964)	(10%)	14,203	12,531	(1,672)	(12%)
Cost of medical devices	3,035	2,700	(335)	(11%)	4,591	3,839	(752)	(16%)
Cost of engineering services	1,950	1,950	0	0%	2,600	2,600	0	0%
Total cost of revenue	4,985	4,650	(335)	(7%)	7,191	6,439	(752)	(10%)
Gross profit	4,209	3,580	(628)	(15%)	7,012	6,092	(920)	(13%)
Total operating expenses	15,647	18,702	3,055	20%	16,388	19,627	3,239	20%
Loss from operations	(11,438)	(15,122)	(3,684)	32%	(9,377)	(13,535)	(4,159)	44%
Medical gross margin	51%	48%			55%	55%		
Engineering gross margin	35%	36%			35%	35%		

Source: Edison Investment Research

Valuation

Our changes to forecasts do not substantially change our DCF valuation sensitivity table, which we see as the key valuation tool. The updated table in Exhibit 4 shows that for the updated forecasts and updated share price (\$1.93), our DCF model now suggests peak unit sales of 7,053 are now required compared to 5,292 in our last update note. In the context of a market size of tens or hundreds of thousands of units, this is an immaterial increase and there remains substantial upside if Ekso is successful in its expansion into other applications outside healthcare. Our DCF assumes a WACC of 15% and terminal growth of 3%.

Exhibit 4: DCF sensitivity to annual unit sales and rate of uptake

		Annual unit sales					
		2,500	7,053	10,000	20,000	40,000	80,000
Year of market maturity	2020	1.04	3.46	5.00	10.10	20.23	40.40
	2025	0.20	1.93	2.93	6.16	12.46	24.91
	2030	N/A	0.92	1.67	3.89	8.02	16.08
	2035	N/A	0.11	0.78	2.50	5.38	10.84
	2040	N/A	N/A	0.11	1.59	3.76	7.63
	2045	N/A	N/A	N/A	0.95	2.73	5.60
	2050	N/A	N/A	N/A	0.47	2.03	4.26

Source: Edison Investment Research. Note: Market maturity is defined as 80% of TAM unit sales. Note: Green cells are higher than current share price. Cell values are DCF per share valuation in US dollars.

Exhibit 5 shows a peer comparison table. Sales is the only meaningful measure at this stage. Estimated sales for Ekso in FY15 is assuming revenue is recognised in full, upfront unlike now where it is amortised over 36 months. It is trading at a premium to ReWalk and Rex but this could be justified because of Ekso's plan to target multiple markets and there have a larger market opportunity. In our view the market is at too early a stage for peer comparison to be really useful for a detailed valuation and therefore we believe the DCF sensitivity analysis should provide the most insight.

Exhibit 5: Peer comparison

\$m	Currency	Share price	Market Cap (US\$)	Units in use	Net cash	FY13 revenue	FY14 revenue	FY13 operating income	FY14 Operating income	Est 2015 CY sales	EV	EV/Sales (x)
Ekso Bionics	USD	1.93	196	110	25.2	3.3	5.3	(10.3)	(16.8)	8.2	170.3	20.8
ReWalk	USD	12.87	152	99	43.5	1.6	4.0	(8.7)	(19.9)	16.0	108.6	6.8
CYBERDYNE	JPY	3,260.00	1,709	104	36.3	3.8	3.3	(5.7)	(10.9)	6.8	1,673.1	258.0
Rex Bionics	GBP	66.00	14	14	7.3	0.0	0.0	(0.5)	N/A	1.5	6.5	4.5

Source: Edison Investment Research, Bloomberg

Exhibit 6: Financial summary

	\$000s	2012	2013	2014	2015e	2016e
31-December		US GAAP	US GAAP	US GAAP	US GAAP	US GAAP
PROFIT & LOSS						
Revenue		2,706	3,302	5,327	8,231	12,531
Cost of Sales		(2,336)	(2,715)	(3,768)	(4,650)	(6,439)
Gross Profit		370	587	1,559	3,580	6,092
EBITDA		(14,241)	(10,294)	(14,786)	(13,114)	(11,527)
Operating Profit (before amort. and non-opn.)		(14,241)	(10,294)	(15,490)	(13,915)	(13,818)
Intangible Amortization		0	0	0	0	0
Non-operating costs		0	0	0	0	0
Share based payments		0	0	(1,304)	(1,304)	(1,304)
Operating Profit		(14,241)	(10,294)	(16,794)	(15,122)	(13,535)
Exceptionals/other			128	(16,540)	0	0
Net Interest		(725)	(1,722)	(435)	0	0
Profit Before Tax (non-GAAP)		(15,058)	(12,074)	(15,980)	(13,818)	(12,231)
Profit Before Tax (GAAP)		(15,041)	(11,888)	(33,769)	(15,122)	(13,535)
Tax		0	0	0	0	0
Profit After Tax (non-GAAP)		(15,058)	(12,074)	(15,980)	(13,818)	(12,231)
Profit After Tax (GAAP)		(15,041)	(11,888)	(33,769)	(15,122)	(13,535)
Average Number of Shares Outstanding (m)		5,000.0	20.6	78.3	101.0	101.3
EPS - basic, non-GAAP (\$)		(0.3)	(0.59)	(0.20)	(0.14)	(0.12)
EPS - diluted, non-GAAP (\$)		(0.0)	(0.59)	(0.20)	(0.14)	(0.12)
EPS - GAAP (\$)		(0.3)	(0.58)	(0.43)	(0.15)	(0.13)
Dividend per share (\$)		0.0	0.0	0.0	0.0	0.0
Gross Margin (%)		13.7	17.8	29.3	43.5	48.6
EBITDA Margin (%)		N/A	N/A	N/A	N/A	N/A
Operating Margin (before amort. and non-opn.) (%)		N/A	N/A	N/A	N/A	N/A
BALANCE SHEET						
Fixed Assets		2,422	4,400	6,125	9,343	13,066
Intangible Assets		0	0	0	0	0
Plant, property and equipment		1,665	1,575	2,102	3,096	4,100
Other long term assets		757	2,825	4,023	6,247	8,966
Current Assets		3,786	2,183	27,361	17,957	12,368
Inventory		615	725	622	1,554	2,097
Accounts receivable		887	653	1,549	1,286	1,731
Cash		1,739	805	25,190	15,116	8,540
Other		545	0	0	0	0
Current Liabilities		(9,488)	(6,127)	(8,131)	(16,814)	(27,179)
Other short term liabilities		(7,832)	(6,127)	(8,131)	(13,815)	(20,181)
Short term debt		(1,656)	0	0	(2,999)	(6,998)
Long Term Liabilities		(5,133)	(9,506)	(1,514)	(1,514)	(1,514)
Long term debt		(2,510)	0	0	0	0
Other long term liabilities		(2,623)	(9,506)	(1,514)	(1,514)	(1,514)
Net Assets		(8,413)	(9,050)	23,841	8,972	(3,259)
CASH FLOW						
Operating Cash Flow		(12,702)	(9,064)	(16,035)	(11,364)	(8,868)
Net Interest		39	0	(435)	0	0
Tax		0	0	0	0	0
Capex		(865)	(379)	(1,529)	(1,708)	(1,708)
Acquisitions/divestitures		0	0	0	0	0
Financing		14,709	8,509	44,931	0	0
Dividends		0	0	0	0	0
Net Cash Flow		1,181	(934)	26,932	(13,072)	(10,576)
Opening net debt/(cash)		3,608	(1,739)	(805)	(25,190)	(12,117)
Capitalized leases		0	0	0	0	0
Other		0	0	(2,548)	0	0
Closing net debt/(cash)		(1,739)	(805)	(25,189)	(12,117)	(1,542)

Source: Edison Investment Research, Ekso Bionics

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