

BUY (Maintain)

Venus Medtech (Hangzhou) Inc. (2500 HK)

First 5-yr follow-up results for VenusA and updated results for first retrievable TAVR in China

- **Data released for VenusA-Valve and VenusA-Plus during CIT 2020 Conference.** VenusA-Valve's pivotal trial released 5-year follow-up results. For all the enrolled 101 patients, mortality rate at 1-5 years after the TAVR procedures were 5.94%, 11.6%, 17.4%, 26.7%, 34.1%, respectively, indicating VenusA-Valve's good durability. In addition, comparing to 1-yr data, its 5-yr data showed only slight increase in stroke (5 vs 1), myocardial infarction (3 vs 2) and renal failure (3 vs 2). As for efficacy, mean and peak AVG continued to decrease to 9.08mmHg and 19.65mmHg, respectively, in 5 years. Meanwhile, subjects' effective orifice area increased to 1.62 cm² in 5 years. VenusA-Plus also updated its 30-day results, which are better than that of VenusA-Valve, making VenusA-Plus a promising second generation TAVR candidate in China.
- **PowerX and Vitae are potential next-generation TAVR products.** In CIT 2020 Conference, the Company disclosed two new TAVR products under development: post-release self-expanding valve PowerX system and new balloon-expandable valve Vitae system. Both PowerX and Vitae are preloaded dry valve systems, which are expected to significantly improve the anti-calcification performance and duration life of the valve by eliminating the traditional valvular treatment with glutaraldehyde while saving the loading time of during procedures. We expect PowerX to start clinical trials in 2H20E.
- **China TAVR market has large growth potential despite of fierce competition.** Frost & Sullivan forecasts China TAVR market to grow at a 65.0% CAGR from US\$28.7mn in 2018 to US\$956.6mn in 2025E. Although four TAVR products have been approved in China, including an international player (SAPIEN 3 from Edwards), the penetration of TAVR procedures was very low in China. With more players entering into the market, the penetration will improve fast thanks to wide market education. As the first approved TAVR in China, VenusA-Valve has significant first mover advantage. A comprehensive and diversified product pipelines covering four major heart valves (TAVR, TPVR, TMVR and TTVR) as well as ancillary products also enhance the Company's leadership in China.
- **Temporary impact from COVID-19 pandemic.** There were delays in TAVR procedures during COVID-19 outbreak while sales are gradually recovering from March. We forecast 2,200 unit sales of VenusA-Valve in FY20E and 6,000 unit sales in FY21E, driven by expanding hospital channel coverage.
- **Maintain BUY new TP of HK\$98.2.** Considering the improving penetration of TAVR procedures and fast recovery sales of the Company, we expect total revenue to grow 48%/ 175%/ 63% YoY in FY20E/21E/22E and estimate VenusA-Valve sales unit to be 1,550/ 2,200/ 6,000 in FY20E/21E/22E. We lifted our DCF-based TP from HK\$52.0 to HK\$98.2 to reflect potential contribution from PowerX and Vitae (WACC: 9.1%, terminal growth rate: 4.0%).

Earnings Summary

(YE 31 Dec)	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue (RMB mn)	115	233	344	946	1544
YoY growth (%)	535	102	48	175	63
Net income (RMB mn)	(300)	(381)	(0)	299	515
EPS (RMB)	N/A	(1.22)	(0.00)	0.74	1.27
EPS YoY growth (%)	N/A	N/A	N/A	N/A	72
Consensus EPS (RMB)	N/A	N/A	0.25	1.39	2.27
P/E (x)	N/A	N/A	N/A	102	59
P/B (x)	N/A	8	10	9	8
ROE (%)	(64)	(13)	(0)	9	13
Net gearing (%)	Net cash	Net cash	Net cash	Net cash	Net cash

Source: Company data, Bloomberg, CMBIS estimates

Target Price	HK\$98.2
(Previous TP	HK\$52.0)
Up/Downside	+16.2%
Current Price	HK\$84.5

China Healthcare Sector

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Mkt. Cap. (HK\$ mn)	34,178
Avg. 3mths t/o (HK\$ mn)	57.65
52W High/Low (HK\$)	84.65/35.20
Total Issued Shares (mn)	183

Source: Bloomberg

Shareholding Structure

Management	25.93%
Employee	3.48%
Pre-IPO investors	48.27%
H-share free float	22.33%

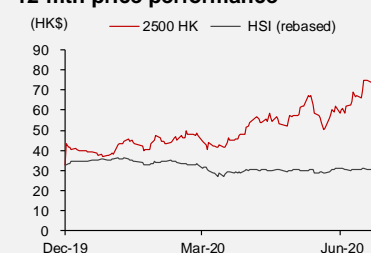
Source: HKEx, Bloomberg

Share performance

	Absolute	Relative
1-mth	39.8%	34.0%
3-mth	76.6%	61.7%
6-mth	128.1%	155.7%

Source: Bloomberg

12-mth price performance



Source: Bloomberg

Auditor: Ernst & Young

Relative Reports:

1. Inline results; Moderate impact from COVID-19 – 29 Mar 2020
2. First mover in the rapid-growing transcatheter valve market – 19 Feb 2020

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VenusA-Valve: First TAVR with 5-year follow-up results in China

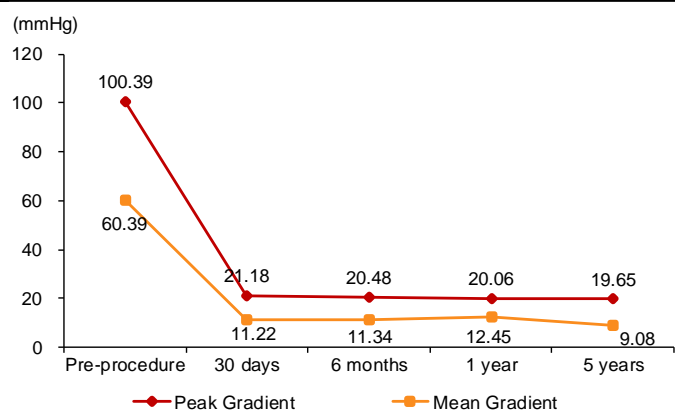
The pivotal trial for VenusA-Valve is a multi-center, single arm, open-label trial (n=101, STS \geq 4%, NYHA \geq II) in China. The trial started enrolment in Sep 2012, and finished enrolment in Feb 2015. All enrolled patients have completed a 5-year follow-up, and some patients have 7-year follow-up. The long-term follow-up results demonstrated VenusA-Valve's good long-term durability.

Figure 1: Updated Clinical data of VenueA-Valve in CIT 2020 Conference

(N=101)	VenusA-Valve		
	30-Day	1-year	5-year
Age (mean)		75.86	
STS score (mean)		6.68	
Death	5 (5.0%)	6 (6.0%)	29 (34.1%)
Cardiogenic death	3 (3.0%)	4 (4.0%)	9 (10.6%)
Non-Cardiogenic death	2 (2.0%)	2 (2.0%)	20 (23.5%)
Myocardial infarction	2 (2.0%)	2 (2.0%)	3 (3.5%)
Stroke	1 (1.0%)	1 (1.0%)	5 (5.9%)
Major stroke	1 (1.0%)	1 (1.0%)	N/A
Permanent pacemaker implantation	19 (18.8%)	19 (18.8%)	N/A
Cardiovascular surgery	3 (3.0%)	3 (3.0%)	N/A
Major vascular complications	6 (5.9%)	6 (5.9%)	N/A
Renal failure	2 (2.0%)	2 (2.0%)	3 (3.5%)

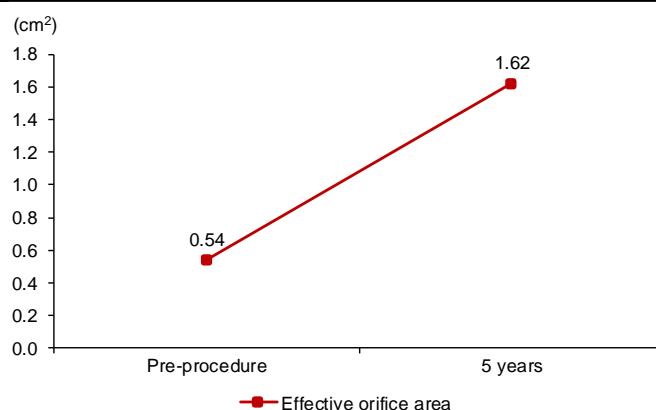
Source: Company data, CIT 2020 Online, CMBIS; Note: N/A represents not applicable or undisclosed.

Figure 2: Changes in the subjects' mean and peak aortic valve pressure gradient (AVG)



Source: Company data, CIT 2020 Online, CMBIS

Figure 3: Change in the subjects' effective orifice area (EOA)



Source: Company data, CIT 2020 Online, CMBIS

VenusA-Plus: Updated results for first retrievable TAVR in China

VenusA-Plus is a potential second generation TAVR candidate in China. It shares the same PAV and CLS with VenusA-Valve, while features an upgraded DCS with the option to retrieve for more accurate placement.

An updated 30-day results of VenusA-Plus were released in CIT 2020 Conference, which exhibited superior safety data than VenusA-Valve, in terms of mortality, stroke, myocardial infarction, permanent pacemaker implantation and cardiovascular surgery.

Figure 4: Safety endpoint of VenusA-Plus compared to VenusA-Valve

	VenusA-Plus (30 days)	VenusA-Valve (30 days)
Patients numbers	62	101
All-cause Mortality	3 (4.8%)	5 (5.0%)
Myocardial Infarction	0 (0.0%)	2 (2.0%)
Stroke (Disabling)	1 (1.6%)	1 (1.0%)
Permanent Pacemaker Implantation	6 (9.6%)	19 (18.8%)
Cardiovascular Surgery	0 (0.0%)	3 (3.0%)
Comprehensive endpoint event incidence	16.13%	27.7%














Source: Company data, CMBIS

Figure 5: Change in subjects' NYHA functional classification

	Pre-procedure	30 days
Number of subjects	62	
Age (mean)	76.4	
STS score (mean)	6.49	
Level I	0.0%	15.3%
Level II	19.4%	64.4%
Level III	48.4%	20.3%
Level IV	32.3%	0.0%

Source: Company data, CMBIS

Figure 6: Major TAVR products worldwide

Company	Edwards Lifesciences				Medtronic			Boston Scientific		Abbott	Venus Medtech	Jiecheng Medical	MicroPort	
Product	SAPIEN	SAPIEN XT	SAPIEN 3	Centera	Core Valve	Evolut R	Evolut Pro	Lotus Edge	ACURATE neo	Portico	VenusA-Valve	J-Valve	VitaFlow	
														
FDA Approval	2011	2014	2015	/	2014	2015	2017	2019	/	/	/	/	/	
CE Mark	2007	2010	2014	2018	2011	2014	2017	2016	2014	2012	/	/	/	
NMPA Approval	/	/	/	/	/	/	/	/	/	/	2017	2017	2019	
Expanding Mechanism	BE	BE	BE	SE	SE	SE	SE	ME	SE	SE	SE	SE	SE	
Pericardium Material	BP	BP	BP	BP	PP	PP	PP	BP	PP	PP	PP	PP	BP	
Vascular Approach	TF/TA	TF/TA	TF/TA	TF	TF	TF	TF	TF	TF/TA	TF	TF	TA	TF	
Anti-PVL Design	-	-	+	-	+	+	+	+	+	+	+	+	+	
Retrievability	-	-	+	+	-	+	+	+	-	+	-	-	-	
Price per unit to patient	N/A	~USD32,000			N/A	~US\$30,000			N/A		~RMB250,000	~RMB290,000	~RMB180,000	
Market share (2018)	67.1% in US				32.9% in US				N/A		79.3% in China		20.7% in China	

Source: Companies, CMBIS; Note: BE=Balloon-expanding; SE=Self-expanding; ME=Mechanically-expanding; BP=Bovine Pericardium; PP=Porcine Pericardium; TF=Transfemoral (经股动脉); TA=Transapical (经心尖)

Figure 7: CMBIS earnings revisions

(RMB mn)	New			Old			Diff (%)		
	FY20E	FY21E	FY22E	FY20E	FY21E	FY22E	FY20E	FY21E	FY22E
Revenue	344	946	1,544	386	882	1,398	-10.7%	7.3%	10.4%
Gross profit	296	823	1,359	332	767	1,230	-10.7%	7.3%	10.4%
Operating profit	9	324	616	25	301	555	-63.8%	7.9%	10.9%
Net profit	0	299	515	16	277	464	-101.6%	8.1%	11.1%
EPS (RMB)	0.00	0.74	1.27	0.04	0.68	1.15	-101.6%	8.1%	11.1%
Gross margin	86.00%	87.00%	88.00%	86.00%	87.00%	88.00%	0.00ppt	-0.00 ppt	0.00 ppt
Operating margin	2.65%	34.30%	39.89%	6.53%	34.12%	39.73%	-3.89 ppt	+0.18 ppt	+0.16 ppt
Net Margin	-0.08%	31.65%	33.39%	4.10%	31.41%	33.20%	-4.18 ppt	+0.24 ppt	+0.19 ppt

Source: Company data, CMBIS estimates

Figure 8: CMBIS estimates vs consensus

(RMB mn)	CMBI			Consensus			Diff (%)		
	FY20E	FY21E	FY22E	FY20E	FY21E	FY22E	FY20E	FY21E	FY22E
Revenue	344	946	1,544	376	892	1,394	-8.4%	6.0%	10.8%
Gross profit	296	823	1,359	319	783	N/A	-7.3%	5.1%	N/A
Operating profit	9	324	616	-16	328	489	-157.4%	-1.0%	26.1%
Net profit	0	299	515	-30	274	N/A	-99.1%	9.2%	N/A
EPS (RMB)	0.00	0.74	1.27	0.25	1.39	2.27	-100.3%	-46.8%	-43.9%
Gross margin	86.00%	87.00%	88.00%	85.00%	87.80%	N/A	+1.00 ppt	-0.80 ppt	N/A
Operating margin	2.65%	34.30%	39.89%	-4.22%	36.74%	35.04%	+6.87 ppt	-2.44 ppt	+4.84 ppt
Net Margin	-0.08%	31.65%	33.39%	-7.85%	30.72%	N/A	+7.77 ppt	+0.93 ppt	N/A

Source: Company data, CMBIS estimates

Financial Statements

Income statement

YE 31 Dec (RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue	115	233	344	946	1544
VenusA-Valve	114	232	303	760	1232
VenusP-Valve	0	0	14	90	118
TriGUARD3	0	0	26	90	185
V8 and TAV8	2	1	2	5	8
Cost of sales	(16)	(39)	(48)	(123)	(185)
Gross profit	99	195	296	823	1359
Other income	13	15	20	19	20
Selling & distribution expenses	(67)	(125)	(110)	(284)	(432)
Administrative expenses	(105)	(201)	(100)	(95)	(139)
R&D expenses	(224)	(198)	(52)	(95)	(147)
Other gains and losses	(11)	(45)	(45)	(45)	(45)
Operating profit	(295)	(357)	9	324	616
Net of impairment losses	(2)	(2)	(2)	(2)	(2)
Net finance costs	(3)	(22)	(7)	(7)	(7)
Pre-tax profit	(300)	(382)	(0)	315	606
Income tax	(1)	1	0	(16)	(91)
Minority interests	0	0	0	0	0
Net profit to shareholders	(300)	(381)	(0)	299	515

Cash flow summary

YE 31 Dec (RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Profit before tax	(300)	(382)	(0)	315	606
Depreciation and amortization	10	29	27	27	27
Change in working capital	(102)	(77)	(18)	(350)	(342)
Others	240	127	7	(9)	(84)
Net income tax paid	0	(5)	0	(16)	(91)
Net cash from operating	(151)	(303)	16	(17)	207
Capex	(27)	(25)	(50)	(50)	(80)
Acquisition of subsidiaries	0	(193)	(6)	(6)	(280)
Purchases of equity investments	0	0	0	0	0
Net purchases of financial assets	13	13	0	0	0
Others	(181)	173	(274)	6	280
Net cash from investing	(194)	(31)	(330)	(50)	(80)
Net proceeds from shares issued	445	2,833	0	0	0
Bank borrowing	19	(233)	0	0	0
Loans to related parties	0	0	0	0	0
Others	(11)	(23)	(7)	(7)	(7)
Net cash from financing	453	2,577	(7)	(7)	(7)
FX changes	(2)	5	0	0	0
Net change in cash	108	2,243	(321)	(74)	120
Cash at the beginning	59	165	2,413	2,092	2,019
Cash at the end	165	2,413	2,092	2,019	2,139

Balance sheet

YE 31 Dec (RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Non-current assets	744	764	1,067	1,090	1,143
PP&E	47	60	102	144	216
Goodwill	472	480	480	480	480
Other intangible assets	191	185	446	427	408
Deferred tax assets	3	3	3	3	3
Equity investments at fair value	29	30	30	30	30
Prepayments, other receivables and other assets	2	7	7	7	7
Current assets	291	2,904	2,601	2,880	3,344
Inventories	17	25	25	65	98
Trade receivables	81	162	179	492	804
Prepayments, other receivables and other assets	28	303	303	303	303
Cash and cash equivalents	166	2,414	2,093	2,019	2,139
Others	0	0	0	0	0
Current liabilities	496	568	569	571	573
Trade payables	1	1	2	4	6
Lease liabilities	6	9	9	9	9
Other payables and accruals	381	397	397	397	397
Due to a related party	1	1	1	1	1
Bank borrowing	80	120	120	120	120
Others	28	41	41	41	41
Non-current liabilities	68	55	55	55	55
Lease liabilities	15	17	17	17	17
Deferred tax liabilities	39	37	37	37	37
Others	14	0	0	0	0
Total net assets	470	3,046	3,045	3,345	3,860
Minority interest	9	9	9	9	9
Shareholders' equity	462	3,037	3,037	3,336	3,852

Key ratios

YE 31 Dec	FY18A	FY19A	FY20E	FY21E	FY22E
Sales mix (%)					
VenusA-Valve	99	99	88	80	80
VenusP-Valve	0	0	4	10	8
TriGUARD3	0	0	8	9	12
V8 and TAV8	1	1	0	1	1
Total	100	100	100	100	100
Profit & loss ratios (%)					
Gross margin	86	83	86	87	88
EBITDA margin	(232)	(142)	10	37	42
Pre-tax margin	(164)	(164)	(0)	33	39
Net margin	(261)	(163)	(0)	32	33
Effective tax rate	(0)	0	0	5	15
Balance sheet ratios					
Current ratio (x)	1	5	5	5	6
Trade receivables turnover	156	187	187	187	187
Trade payables turnover	30	11	11	11	11
Net debt to total equity	Net	Net	Net	Net	Net
Returns (%)					
ROE	(64)	(13)	(0)	9	13
ROA	(29)	(10)	(0)	8	11
Per share data					
EPS (RMB)	N/A	(1.22)	(0.00)	0.74	1.27
DPS (RMB)	N/A	0.00	0.00	0.00	0.00
BVPS (RMB)	N/A	9.79	7.53	8.27	9.54

Source: Company data, CMBIS estimates

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