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Recbio (2179 HK)

Superior immunogenicity on ReCOV vs. Pfizer's mRNA vaccine

Recbio announced positive results in the Phase II study of its COVID vaccine ReCOV which compared the immunogenicity and safety to Pfizer's mRNA vaccine, COMIRNATY®, as a booster vaccination. The head-to-head trial enrolled 600 subjects with basic immunization of two doses of inactive vaccines in the Philippines and the results were upon 14 days post-booster.

- **Statistical superiority in immunogenicity vs. COMIRNATY® against both prototype strains and Omicron strains.** In live neutralization assays against prototype strains, the seroconversion rate (SCR) neutralizing antibody strain of the ReCOV group and COMIRNATY® group was 96.0% vs. 91.0%, P value=0.039. The GMT in the ReCOV group was significantly higher than that in the mRNA vaccine group (7,781.8 vs. 5,605.3, P value<0.001). Neutralizing antibody level induced by ReCOV increased by 25.1 times compared with the baseline, which was higher than that of the mRNA vaccine (15.7 times). In live neutralization assays against Omicron BA.2 and BA.5, the GMTs in the ReCOV group (5687 and 4387.4, respectively) were both significantly higher than that in the mRNA vaccine group (3997.2 and 3100.6, respectively) (P value<0.001). The superior immunogenicity was shown in both adults and elderly sub-groups.
- **Excellent cross-neutralization effect.** In the previous study, the neutralizing antibody titer was lower by 7.0 against BA.2 and 21.0 against BA.4/5 two weeks after homologous booster vaccination of Pfizer's mRNA vaccines (Link). However, the neutralizing antibodies induced by ReCOV against BA.2 and BA.5 were only 1.37 and 1.77 times lower than that against prototype strains, indicating ReCOV's broad neutralization.
- **Good safety profile.** As of the data analysis date, no SAE and TEAE leading to early discontinuation were reported. The majority of TEAEs were grade 1 to grade 2 in severity and recovered in a short time. Most common solicited systemic TEAEs included headache, fever and myalgia. The incidence of TEAE was similar in the adult and elderly sub-groups, which supported ReCOV to be used for the elderly as officials calling on the elderly to get basic and first/second doses of booster vaccinated.
- **IND application approved by FDA of the Philippines for REC610.** Recbio has received approval to conduct Phase I trial of its recombinant shingles vaccine, REC610, in the Philippines, evaluating the safety and immunogenicity of REC610 vs. GSK Shingrix®. Additionally, Recbio expanded the vaccine's indication to adult aged 40 and above, compared to Shingrix® which indicated for adults aged 50 and older.
- **Maintain BUY.** We expect Recbio to receive EUA/ BLA for ReCOV in 2023E and submit BLA of REC610 to the NMPA in 2024E. We revised our TP to HK$38.86 (WACC: 11.2%, terminal growth rate: 2.5%).

Earnings Summary

(YE 31 Dec)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue (RMB mn)	0	0	0	146	487
YoY growth (%)	na	na	na	na	234.3
Net profit (RMB mn)	(179)	(658)	(668)	(741)	(726)
EPS (Reported) (RMB cents)	na	na	(138.30)	(153.46)	(150.27)
R&D expenses (RMB)	(131)	(473)	(500)	(500)	(500)
Admin expenses (RMB mn)	(18)	(143)	(180)	(198)	(218)
CAPEX (RMB mn)	(138)	(238)	(300)	(300)	(250)

Source: Company data, Bloomberg, CMBIGM estimates

BUY (Maintain)

Target Price	**HK$38.86**
(Previous TP	HK$38.77)
Up/Downside	**72.33%**
Current Price	**HK$22.55**

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Stock Data

Mkt Cap (HK$ mn)	10,891
Avg 3 mths t/o (HK$ mn)	4.84
52w High/Low (HK$)	28.30/ 17.72
Total Issued Shares (mn)	94

Source: Bloomberg

Shareholding Structure

Management	17.3%
Legend Capital	10.0%

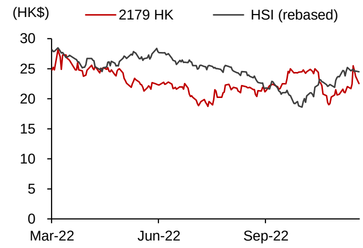
Source: HKEx

Share Performance

	Absolute	Relative
1-mth	14.2%	5.6%
3-mth	8.4%	4.6%
6-mth	11.5%	20.8%

Source: Bloomberg

12-mth Price Performance



Source: Bloomberg

Related report:

1. Recbio Technology (2179 HK) – Smooth progress of core pipeline products – 29 Aug 2022

Figure 1: CMBIGM earnings revisions

(RMB mn)	New			Old			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	0	146	487	62	1,745	1,446	N/A	-91.6%	-66.3%
Gross profit	0	29	112	40	1,151	969	N/A	-97.5%	-88.4%
Operating profit	-664	-712	-652	-781	-210	-200	N/A	N/A	N/A
Net profit	-668	-741	-726	-785	-239	-266	N/A	N/A	N/A
EPS (RMB cents)	-1.38	-1.53	-2	-1.63	-0.49	-1	N/A	N/A	N/A
Gross margin	N/A	20.00%	23.00%	64.52%	65.96%	67.01%	N/A	-45.96 ppt	-44.01 ppt

Source: Company data, CMBIGM estimates

Figure 2: CMBIGM estimates vs consensus

(RMB mn)	CMBIGM			Consensus			Diff (%)		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
Revenue	0	146	487	131	1,754	1,577	N/A	-91.7%	-69.1%
Gross Profit	0	29	112	82	1,343	1213	N/A	-97.8%	-90.8%
Operating Profit	-664	-712	-652	-781	124	160	N/A	N/A	N/A
Net profit	-668	-741	-726	-744	111	127	N/A	N/A	N/A
EPS (RMB cents)	-1	-2	-2	-1.52	0.41	0.46	N/A	N/A	N/A
Gross Margin	N/A	20.00%	23.00%	62.50%	76.57%	76.90%	N/A	-56.6 ppt	-53.9 ppt

Source: Company data, CMBIGM estimates

Valuation

Figure 3: Risk-adjusted DCF valuation

DCF Valuation (in Rmb mn)	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E
EBIT	-679	-724	-661	-599	281	1,415	2,298	3,123	3,761	4,310	4,783	5,331	5,427	5,399
Tax rate	0.0%	0.0%	0.0%	0.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
EBIT*(1-tax rate)	-679	-724	-661	-599	238	1,203	1,953	2,655	3,197	3,664	4,066	4,532	4,613	4,589
+ D&A	29	38	45	52	57	61	62	63	65	66	67	68	69	70
- Change in working capital	-108	-71	-160	-130	-538	-1,427	-1,177	-964	-771	-705	-653	-757	-132	38
- Capex	-300	-300	-250	-250	-200	-200	-100	-100	-100	-100	-100	-100	-100	-100
FCFF	**-1,058**	**-1,057**	**-1,026**	**-928**	**-443**	**-363**	**738**	**1,654**	**2,391**	**2,924**	**3,379**	**3,742**	**4,450**	**4,597**
Terminal value														**53,984**

Terminal growth rate	**2.5%**
WACC	**11.2%**
Cost of Equity	14.0%
Cost of Debt	5.6%
Equity Beta	1.10
Risk Free Rate	3.0%
Market Risk Premium	10.0%
Target Debt to Asset ratio	30.0%
Effective Corporate Tax Rate	15.0%

Terminal value	12,169
Total PV	15,787
Net debt	-729
Minority interest	-0
Equity value （RMB mn)	**16,516**
Equity value （HK$ mn)	483
No. of shares outstanding (mn)	34.20
DCF per share (HK$)	**38.86**

Source: CMBIGM estimates

Figure 4: Sensitivity analysis (HK$)

		WACC				
		10.2%	10.7%	11.2%	11.7%	12.2%
Terminal growth rate	3.5%	54.36	48.17	42.88	38.32	34.35
	3.0%	51.22	45.60	40.75	36.53	32.85
	2.5%	48.49	43.34	38.86	34.95	31.50
	2.0%	46.10	41.34	37.18	33.52	30.29
	1.5%	43.97	39.55	35.67	32.24	29.19

Source: CMBIGM estimates

Financial Summary

INCOME STATEMENT	2019A	2020A	2021A	2022E	2023E	2024E
YE 31 Dec (RMB mn)						
Revenue	**0**	**0**	**0**	**0**	**146**	**487**
Cost of goods sold	0	0	0	0	(117)	(375)
Gross profit	**0**	**0**	**0**	**0**	**29**	**112**
Selling expense	0	0	(3)	(4)	(60)	(60)
Admin expense	(12)	(18)	(143)	(180)	(198)	(218)
R&D expense	(63)	(131)	(473)	(500)	(500)	(500)
Others	(76)	(37)	(56)	(4)	(29)	(74)
Operating profit	**(62)**	**(142)**	**(601)**	**(664)**	**(712)**	**(652)**
Other income	13	10	28	20	17	14
Other expense	0	(3)	(10)	0	0	0
Pre-tax profit	**(138)**	**(179)**	**(658)**	**(668)**	**(741)**	**(726)**
Income tax	0	0	0	0	0	0
After tax profit	**(138)**	**(179)**	**(658)**	**(668)**	**(741)**	**(726)**
Minority interest	0	0	(0)	0	0	0
Net profit to shareholders	**(138)**	**(179)**	**(658)**	**(668)**	**(741)**	**(726)**

BALANCE SHEET	2019A	2020A	2021A	2022E	2023E	2024E
YE 31 Dec (RMB mn)						
Current assets	**311**	**709**	**1,295**	**894**	**974**	**1,028**
Cash & equivalents	57	356	1,183	806	732	441
Account receivables	0	0	0	0	60	200
Inventories	7	8	24	0	94	298
Prepayment	14	20	88	88	88	88
Financial assets at FVTPL	232	326	0	0	0	0
Non-current assets	**116**	**338**	**625**	**895**	**1,157**	**1,362**
PP&E	56	129	416	692	959	1,168
Intangibles	22	22	22	22	22	22
Goodwill	9	9	9	9	9	9
Other non-current assets	28	178	177	172	167	163
Total assets	**427**	**1,047**	**1,919**	**1,790**	**2,132**	**2,390**
Current liabilities	**18**	**57**	**139**	**8**	**91**	**275**
Account payables	2	2	17	0	58	185
Other current liabilities	16	55	122	8	33	90
Non-current liabilities	**728**	**1,998**	**107**	**107**	**1,107**	**1,907**
Long-term borrowings	0	0	50	50	1,050	1,850
Deferred income	0	18	32	32	32	32
Other non-current liabilities	728	1,980	24	24	24	24
Total liabilities	**746**	**2,056**	**246**	**114**	**1,198**	**2,182**
Share capital	0	0	448	448	448	448
Total shareholders equity	**(320)**	**(1,009)**	**1,673**	**1,675**	**934**	**208**
Minority interest	0	0	(0)	(0)	(0)	(0)
Total equity and liabilities	**427**	**1,047**	**1,919**	**1,790**	**2,132**	**2,390**

CASH FLOW	2019A	2020A	2021A	2022E	2023E	2024E
YE 31 Dec (RMB mn)						
Operating						
Profit before taxation	**(138)**	**(179)**	**(658)**	**(668)**	**(741)**	**(726)**
Depreciation & amortization	4	13	22	29	38	45
Tax paid	0	0	0	0	0	0
Change in working capital	(68)	64	(19)	(108)	(71)	(160)
Others	64	32	181	(11)	17	65
Net cash from operations	**(139)**	**(70)**	**(473)**	**(758)**	**(757)**	**(776)**
Investing						
Capital expenditure	(79)	(138)	(238)	(300)	(300)	(250)
Acquisition of subsidiaries/ investments	2	0	0	0	0	0
Others	(269)	(120)	307	15	12	9
Net cash from investing	**(346)**	**(259)**	**69**	**(285)**	**(288)**	**(241)**
Financing						
Dividend paid	0	0	0	0	0	0
Net borrowings	0	0	50	0	1,000	800
Proceeds from share issues	0	0	0	670	0	0
Others	490	680	1,179	(4)	(29)	(74)
Net cash from financing	**490**	**680**	**1,229**	**666**	**971**	**726**
Net change in cash						
Cash at the beginning of the year	1	7	356	1,183	806	732
Exchange difference	0	(3)	(8)	0	0	0
Cash at the end of the year	**7**	**356**	**1,173**	**806**	**732**	**441**
GROWTH	**2019A**	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
YE 31 Dec						
Revenue	na	na	na	na	na	234.3%
Gross profit	na	na	na	na	na	284.5%
PROFITABILITY	**2019A**	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
YE 31 Dec						
Gross profit margin	na	na	na	na	20.0%	23.0%
Operating margin	na	na	na	na	(488.5%)	(133.7%)
Return on equity (ROE)	na	na	(197.9%)	(39.9%)	(56.8%)	(127.1%)
GEARING/LIQUIDITY/ACTIVITIES	**2019A**	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
YE 31 Dec						
Current ratio (x)	17.5	12.3	9.3	113.7	10.7	3.7
Receivable turnover days	na	na	na	150.0	150.0	150.0
Inventory turnover days	na	na	na	300.0	295.0	290.0
Payable turnover days	na	na	na	180.0	180.0	180.0
VALUATION	**2019A**	**2020A**	**2021A**	**2022E**	**2023E**	**2024E**
YE 31 Dec						
Div yield (%)	na	na	na	0.0	0.0	0.0

Source: Company data, CMBIGM estimates. Note: The calculation of net cash includes financial assets.

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