

Baidu (BIDU US)

Takeaway from field trip

We took an Apollo field trip and hosted a group meeting with Baidu. Our key takeaways are as follows: 1) recovery of ads business in 2Q23 is on track aided by the recovery of offline activities, and management remains upbeat on achieving better than GDP growth for ads business in 2023; 2) management believes Ernie Bot has achieved early-mover advantage and noted the Company is well prepared for monetization once received regulatory approval for large scale use; 3) regarding robotaxi, fully driverless ride hailing services are currently available in three cities, and management expects monetization to be more materialize with more license approvals and cost optimization in the coming years. Reiterate BUY with SOTP-based target price of US\$199.4. Key catalysts include: 1) better than expected recovery of advertising business; 2) kick in of monetization for Ernie Bot; and 3) sooner and greater than expected revenue contribution from Apollo Self Driving (ASD).

- Recovery of ads business on track.** Baidu has sizable proportion of ads revenue generated from offline verticals, and management noted a continuous recovery trend for advertising business in April and May with the recovery of offline activities. Management highlighted the 4% YoY MAU growth for Baidu App in 1Q23 and noted that the combined search volume for mobile and PC are rising continuously. Regarding growth outlook for ads business, management reiterated its target to achieve better than GDP growth in 2023, aided by: 1) recovery in offline activities; 2) increase in the proportion of video content in search results, which bears higher eCPM than that of graphic and text content; and 3) increase in traffic volume and continuously enhancing user experience. We forecast Baidu's core search and feed ads revenue to grow 15.7/10.0% YoY in 2Q23/2023E.
- Autonomous driving: material revenue contribution on the way.** Regarding Robotaxi, Baidu has received permits to operate ride-hailing services with no driver or safety operator in the vehicles in three cities: Beijing, Wuhan, and Chongqing. In Yizhuang Beijing, currently 10 Apollo vehicles have received license to conduct fully driverless operations. Apollo Go has provided 660,000 rides in 1Q23 and 2.0mn rides over the past four quarters ended 1Q23. Management expects cost optimization to drive larger scale monetization in the coming years, which could be aided by: 1) more driverless vehicle to receive approvals to conduct business operation; 2) launch of Apollo RT6 vehicle, which is set to be mass-produced at a cost of RMB0.25mn per unit, a 50% cost saving compared to RT5. For ASD, total projected accumulative sales of ASD reached RMB11.4bn in 3Q22, and management expects meaningful revenue contribution to kick in in 2024.
- Profitability of cloud business could sustain.** Management expects profitability of cloud business to be sustainable, given that the turnaround from loss to profitability was mainly driven by: 1) phasing out of low quality projects; and 2) building standardized AI solutions for key use cases.

Earnings Summary

(YE 31 Dec)	FY21A	FY22A	FY23E	FY24E	FY25E
Revenue (RMB mn)	124,493	123,675	139,284	150,956	167,381
YoY growth (%)	16.3	(0.7)	12.6	8.4	10.9
Adjusted net profit (RMB mn)	18,830.0	20,680.0	24,358.5	27,049.3	31,453.3
EPS (Adjusted) (RMB)	53.53	58.90	68.69	75.52	86.94
Consensus EPS (RMB)	53.53	58.93	63.87	75.21	112.08
P/E (x)	42.3	40.1	17.7	16.9	14.4
ROE (%)	5.1	3.4	7.9	7.5	8.0

Source: Company data, Bloomberg, CMBIGM estimates

BUY (Maintain)

Target Price **US\$199.40**
 Up/Downside **45.1%**
 Current Price **US\$137.45**

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Stock Data

Mkt Cap (US\$ mn)	48,262.1
Avg 3 mths t/o (US\$ mn)	378.5
52w High/Low (US\$)	160.22/76.57
Total Issued Shares (mn)	351.1

Source: FactSet

Shareholding Structure

Robin Yanhong Li	16.5%
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Source: HKEx

Share Performance

	Absolute	Relative
1-mth	11.3%	3.0%
3-mth	-8.1%	-18.9%
6-mth	17.1%	-2.5%

Source: FactSet

12-mth Price Performance



Source: FactSet

- **Ernie Bot has accumulated early-mover advantage.** Management believes Baidu's advantages in developing generative AI and large language model lie in: 1) vast amount of high-quality data accumulated from its search business; and 2) full stack AI capabilities with four layered architectures, which could help reduce cost and improve efficiency in both training and inferencing process. Currently, management has not baked in any revenue contribution expectation from Ernie Bot, but management highlighted wide acceptance on business customers, and noted monetization could kick in after the services obtained regulatory approvals regarding large-scale use. As of 9 May 2023, the number of ecosystem partners that joined Ernie Bot's internal testing has surpassed 300.

SOTP valuation of US\$199.4 per ADS

Our SOTP based target price is US\$199.4, which comprises, per ADS:

- 1) US\$65.0 for Baidu Core (main business, excluding Apollo and Baidu Cloud, mainly including the core search and feed ads business), based on unchanged 7.0x 2023E non-GAAP PE. The lift in valuation is mainly due to a lift in non-GAAP net income forecast.
- 2) US\$22.8 for Apollo ASD, based on 2.0x 2030E revenue, and discounted back using a 13.0% WACC.
- 3) US\$40.3 for Baidu Cloud, based on unchanged 4.8x 2023E PS, which is in line with the target multiple that we are giving to its Chinese cloud peers;
- 4) US\$58.4 net cash;
- 5) US\$12.9 for iQIYI and other investments, with a 30% holding discount.

Figure 1: Baidu: SOTP valuation

Segment	NOPAT (US\$m)	Valuation method/multiple	Valuation (RMBmn)	Valuation (US\$m)	Baidu's stake	Valuation of Baidu's stake (US\$m)	USD/ADS	Valuation as % of total (%)
Core business and cash								
1) Baidu core (ex-Apollo and Cloud)	3,295	7.0x 2023E PE	159,706	23,062	100.0	23,062	65.0	32.6
2) Apollo ASD			55,926	8,076	100.0	8,076	22.8	11.4
3) Baidu Cloud (ex-ASD)		4.8x 2023E PS	98,985	14,294	100.0	14,294	40.3	20.2
4) Net cash			143,431	20,712	100.0	20,712	58.4	29.3
Valuation of core business and cash						66,144	186.5	93.5
iQIYI and strategic investment								
1) iQIYI		Market value	39,552	5,711	51.5	2,941	8.3	
2) Trip.com group		Market value	158,951	22,953	10.8	2,479	7.0	
3) Uxin		Market value	492	71	9.1	6	0.0	
4) HAND Enterprise Solutions		Market value	9,698	1,400	5.3	74	0.2	
5) Kuaishou		Market value	201,518	29,100	3.1	904	2.5	
6) Yusys Technologies		Market value	15,260	2,204	5.1	113	0.3	
Valuation of iQIYI and investments						6,517	18.4	
Valuation of iQIYI and investment (with 30% holding discount)						4,562	12.9	
Total Baidu valuation (US\$m)						70,706		6.5

Number of ADS outstanding (mn)	355
Valuation per ADS (US\$)	199.4

Source: Company data, CMBIGM estimates

Note: American depositary share (ADS); iQIYI (IQ US); Trip.com Group (TCOM US); Uxin (UXIN US); HAND Enterprise solution (300170 SH); Kuaishou (1024 HK); Yusys Technologies (300674 SH).

Our target price translates into 20.1/18.3x 2023/2024E PE on a non-GAAP basis, or 14.2/12.9x if excluding net cash. Our previous target price of US\$196.3 translated into 21.5x 2023E PE.

Financial Summary

INCOME STATEMENT	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec (RMB mn)						
Revenue	107,074	124,493	123,675	139,284	150,956	167,381
Cost of goods sold	(55,158)	(64,314)	(63,935)	(70,267)	(75,255)	(81,989)
Gross profit	51,916	60,179	59,740	69,017	75,701	85,391
Operating expenses	(37,576)	(49,661)	(43,829)	(48,059)	(50,636)	(55,512)
SG&A expense	(18,063)	(24,723)	(20,514)	(24,235)	(25,059)	(27,283)
R&D expense	(19,513)	(24,938)	(23,315)	(23,823)	(25,577)	(28,229)
Operating profit	14,340	10,518	15,911	20,958	25,065	29,880
Share of (losses)/profits of associates/JV	(2,248)	(932)	(1,910)	(1,001)	(633)	(261)
Adjusted EBITDA	27,504	24,914	29,663	34,350	38,974	44,663
Net Interest income/(expense)	2,255	2,130	3,332	4,355	3,127	3,408
Foreign exchange gain/loss	(660)	100	(1,484)	(106)	(85)	(68)
Other income/expense	9,403	(1,038)	(5,737)	1,638	1,654	1,671
Pre-tax profit	23,090	10,778	10,112	25,844	29,129	34,630
Income tax	(4,064)	(3,187)	(2,578)	(5,514)	(7,179)	(8,383)
After tax profit	19,026	7,591	7,534	20,330	21,949	26,247
Minority interest	(3,446)	(2,635)	(25)	916	1,416	1,825
Net profit	22,472	10,226	7,559	19,413	20,534	24,421
Adjusted net profit	22,020	18,830	20,680	24,359	27,049	31,453
BALANCE SHEET						
YE 31 Dec (RMB mn)						
Current assets	183,342	213,315	212,850	238,002	267,815	302,744
Cash & equivalents	35,782	36,850	53,156	78,152	105,798	137,736
Restricted cash	758	10,821	11,330	11,330	11,330	11,330
Account receivables	8,668	9,981	11,733	10,303	11,167	12,382
Other current assets	138,134	155,663	136,631	138,217	139,520	141,296
Non-current assets	149,366	166,719	178,123	176,864	179,512	182,228
PP&E	17,508	23,027	23,973	28,017	32,018	36,109
Intangibles	8,457	8,947	8,095	2,792	1,439	64
Goodwill	22,248	22,605	22,477	22,477	22,477	22,477
Other non-current assets	101,153	112,140	123,578	123,578	123,578	123,578
Total assets	332,708	380,034	390,973	414,866	447,327	484,972
Current liabilities	68,385	74,488	79,630	86,401	89,191	91,676
Short-term borrowings	3,016	4,168	5,343	5,343	5,343	5,343
Account payables	36,716	41,384	38,014	43,121	44,666	45,399
Other current liabilities	28,653	28,936	36,273	37,937	39,182	40,934
Non-current liabilities	72,480	81,594	73,538	64,998	63,921	63,427
Long-term borrowings	0	12,629	13,722	0	0	0
Bond payables	60,335	55,772	49,461	54,643	53,566	53,072
Obligations under finance leases	4,693	5,569	4,810	4,810	4,810	4,810
Deferred income	97	129	159	159	159	159
Other non-current liabilities	7,355	7,495	5,386	5,386	5,386	5,386
Total liabilities	140,865	156,082	153,168	151,399	153,113	155,103
Share capital	0	0	0	0	0	0
Capital surplus	47,213	47,548	47,748	47,948	48,148	48,348
Retained earnings	135,483	163,911	175,730	201,192	231,740	267,194
Other reserves	3,102	7,148	8,393	8,393	8,393	8,393
Total shareholders equity	185,798	218,607	231,871	257,533	288,281	323,935
Minority interest	6,045	5,345	5,934	5,934	5,934	5,934
Total equity and liabilities	332,708	380,034	390,973	414,866	447,327	484,972

CASH FLOW	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec (RMB mn)						
Operating						
Profit before taxation	23,090	10,778	10,112	25,844	29,129	34,630
Depreciation & amortization	18,180	16,438	14,725	5,700	5,742	5,654
Tax paid	(4,064)	(3,187)	(2,578)	(5,514)	(7,179)	(8,383)
Change in working capital	(18,207)	(18,691)	(16,758)	6,615	624	(507)
Others	5,201	14,784	20,669	7,129	7,371	7,981
Net cash from operations	24,200	20,122	26,170	39,775	35,687	39,374
Investing						
Capital expenditure	(5,084)	(10,896)	(8,286)	(8,286)	(8,286)	(8,286)
Acquisition of subsidiaries/ investments	(2,396)	(247)	(14)	0	0	0
Net proceeds from disposal of short-term investments	(486)	0	0	0	0	0
Others	(19,586)	(20,301)	4,356	(130)	(104)	(84)
Net cash from investing	(27,552)	(31,444)	(3,944)	(8,416)	(8,390)	(8,370)
Financing						
Net borrowings	12,390	8,840	(6,813)	(13,722)	0	0
Share repurchases	(13,054)	(7,581)	(1,925)	0	0	0
Others	6,329	22,137	2,348	6,609	351	933
Net cash from financing	5,665	23,396	(6,390)	(7,113)	351	933
Net change in cash						
Cash at the beginning of the year	34,439	36,540	47,671	65,236	89,482	117,128
Exchange difference	(212)	(943)	1,729	0	0	0
Cash at the end of the year	36,540	47,671	65,236	89,482	117,128	149,066
GROWTH	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec						
Revenue	(0.3%)	16.3%	(0.7%)	12.6%	8.4%	10.9%
Gross profit	16.5%	15.9%	(0.7%)	15.5%	9.7%	12.8%
Operating profit	127.4%	(26.7%)	51.3%	31.7%	19.6%	19.2%
Net profit	992.5%	(54.5%)	(26.1%)	156.8%	5.8%	18.9%
Adj. net profit	21.1%	(14.5%)	9.8%	17.8%	11.0%	16.3%
PROFITABILITY	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec						
Gross profit margin	48.5%	48.3%	48.3%	49.6%	50.1%	51.0%
Operating margin	13.4%	8.4%	12.9%	15.0%	16.6%	17.9%
Adj. net profit margin	20.6%	15.1%	16.7%	17.5%	17.9%	18.8%
Return on equity (ROE)	12.8%	5.1%	3.4%	7.9%	7.5%	8.0%
GEARING/LIQUIDITY/ACTIVITIES	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec						
Net debt to equity (x)	(0.5)	(0.5)	(0.5)	(0.6)	(0.6)	(0.6)
Current ratio (x)	2.7	2.9	2.7	2.8	3.0	3.3
Receivable turnover days	27.0	27.0	31.6	28.5	25.6	25.3
Payable turnover days	226.5	218.6	223.5	207.8	210.0	197.7
VALUATION	2020A	2021A	2022A	2023E	2024E	2025E
YE 31 Dec						
P/E	13.1	42.3	40.1	17.7	16.9	14.4
P/E (diluted)	13.2	43.2	40.5	17.9	17.1	14.5
P/B	1.6	2.0	1.3	1.3	1.2	1.1
P/CFPS	15.5	47.9	17.1	11.0	12.8	11.4

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

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