

BUFFET OWNS **BYD AUTO** **SHOULD** **YOU?**

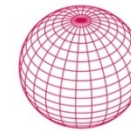


**What's interesting
about **BYD** is that
Warren Buffett owns
20% of its
outstanding H-shares**



Valuation Master Class

Is BYD the policy winner of China's 14th Five-Year Plan?



VALUATION MASTER CLASS



Sector: Cons. Disc.



*Berkshire backed automobile & electronics giant
with a market share of 28% in China's new energy
vehicle market*

Our estimate:

HKD342

(Upside 17%)

BUY



3 things to know about this company

- ★ EV rollout on track with massive gov't support
- ★ Smartphone segment continues to be a reliable revenue driver
- ★ Climbing up the value chain to stop margin erosion

Key statistics

Analyst consensus (39)

HKD365

(Upside 27%)

BUY

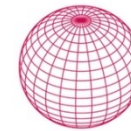
PE ratio (21A)

179x

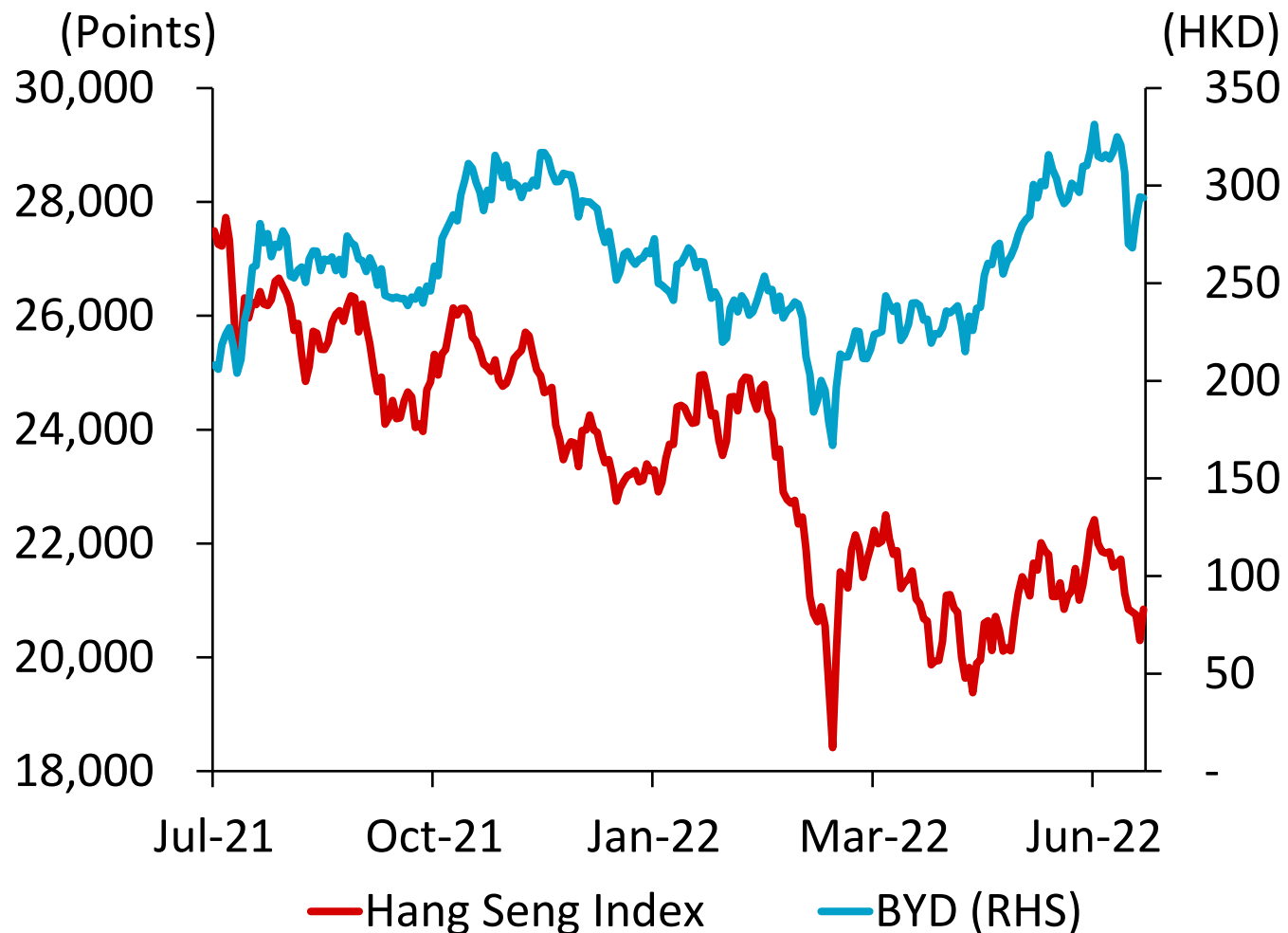
Dividend yield

1.1%

Massive outperformance compared to index

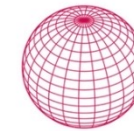


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- ★ Despite the gov't lockdown to combat the pandemic and supply chain disruptions from the Russian war, BYD managed to keep its goals on track
- ★ This is mainly attributable to strong gov't support
 - Subsidies for producers
 - Purchase tax exemptions for buyers
 - Support for construction of charging infrastructure

Why is EV so important for China?

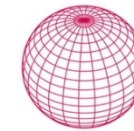


VALUATION MASTER CLASS

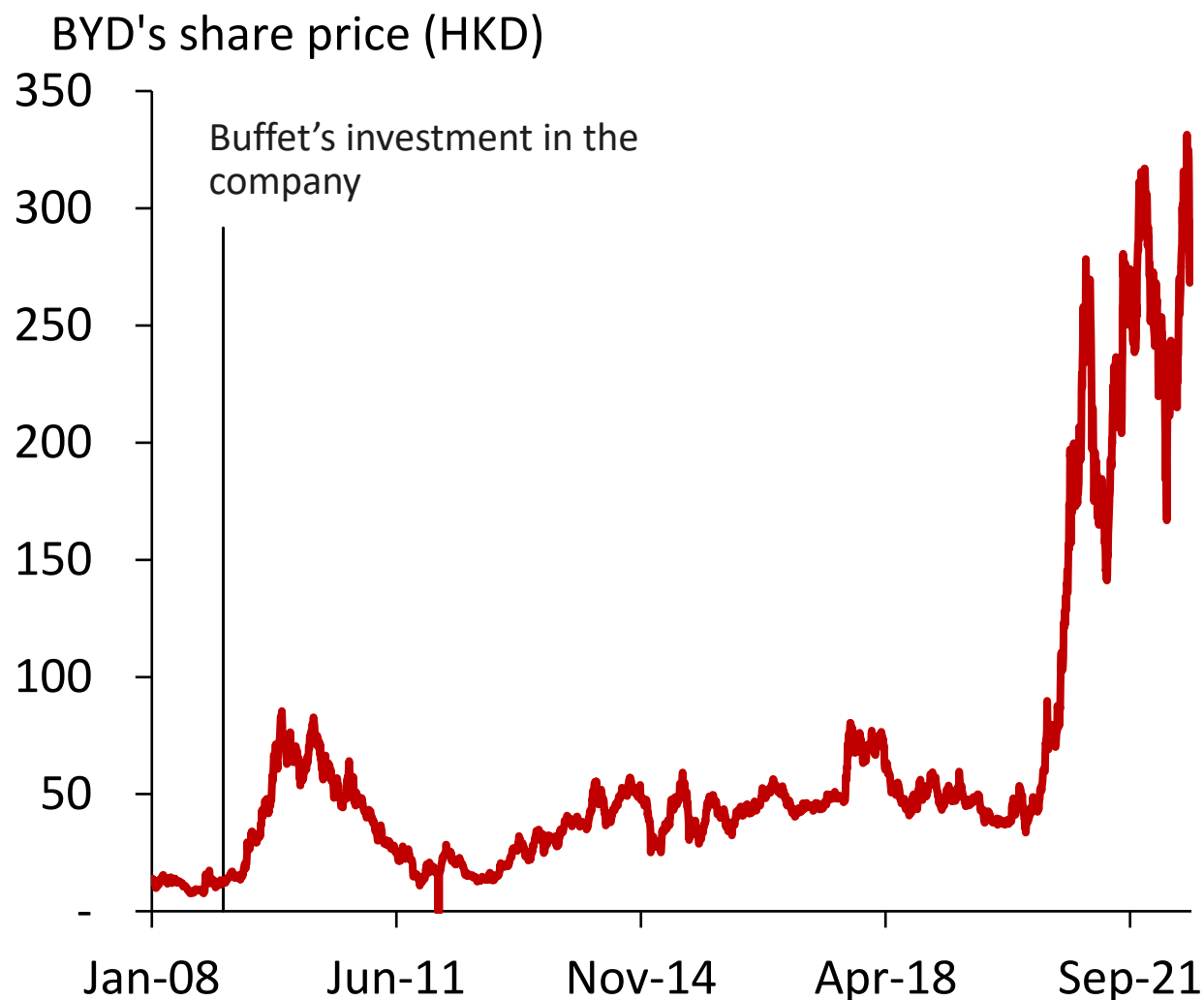
- ★ China is heavily dependent on oil imports
 - Oil consumption in 2021 stood at 15m barrels per day compared to only 4m production
 - Mass adoption of electric vehicles could help to reduce oil import in the long run
- ★ China wants to lead the technology race and dominate the EV industry



Quick fact about Warren Buffet's investment in BYD

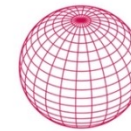


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- ★ Warren Buffet first invested in BYD back in 2008, purchasing 225m shares worth US\$230m
 - His stake is now worth US\$7.7bn
 - This is equivalent to a return of approximately 3,200%

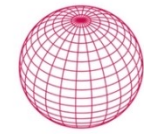
It was his friend Charlie Munger who convinced Buffett



VALUATION MASTER CLASS

- ★ Munger has long been known to have a bullish outlook on China
- ★ He believed that BYD is well positioned to lead China's EV transformation
 - **Munger had previously praised Wang Chuanfu, the founder of BYD, for being a combination of Thomas Edison and Jack Welch**





Sales

Story

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Value

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Risks



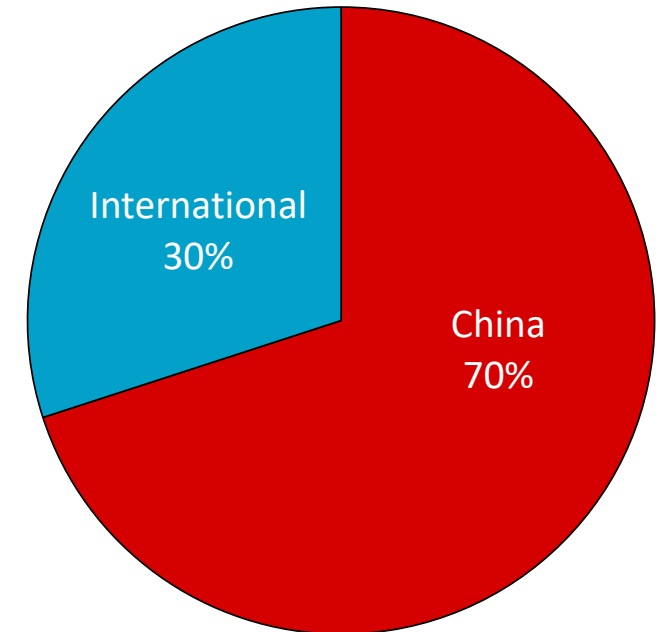
Automobiles (52%)

**Mobile handset components
(41%)**

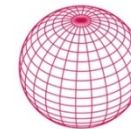


**Rechargeable batteries
& photovoltaic (7%)**

Breakdown by region



1 EV rollout on track with massive gov't support



Sales

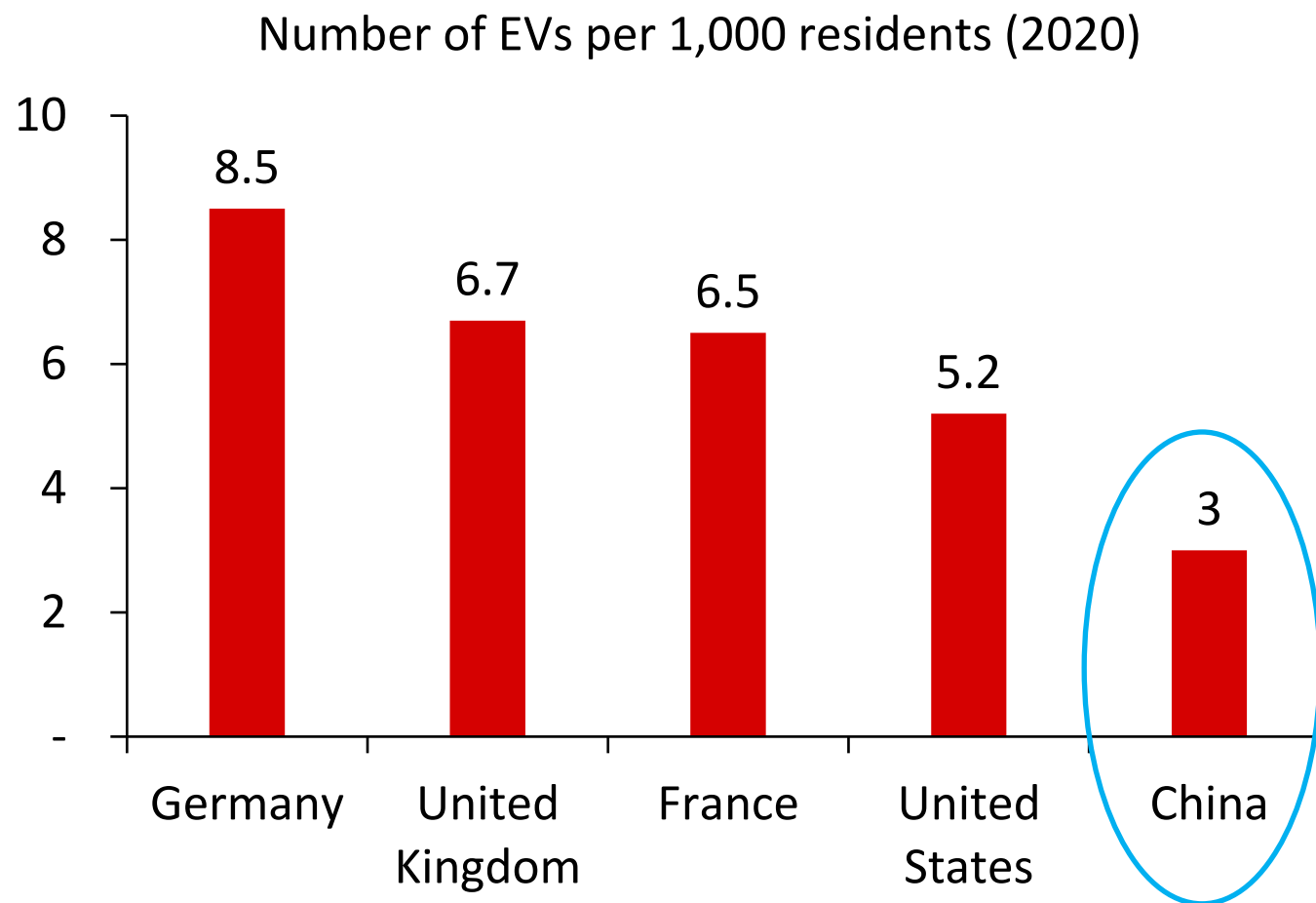
Story

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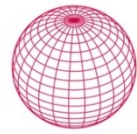
Value

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Risks



- ★ China trails behind large developed markets in terms of EV penetration
- ★ Lately, the Chinese gov't considered extending its purchase tax exemption for EV buyers
 - **The supportive policy is expected to lead to a convergence with the West of the EV penetration rate**



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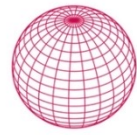
Value

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Risks

- ★ The Chinese gov't ambitious target lays the foundation for strong revenue growth
 - In 2021, EVs accounted for 13% of new cars sold in China
- ★ By 2030, China plans to ramp this number up to 40%
 - This means that the regulatory environment is helping BYD to realize its growth potential





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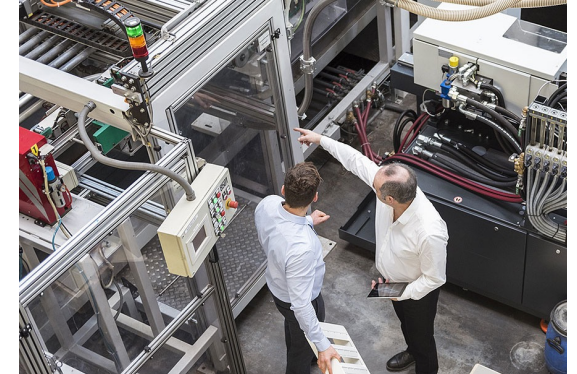
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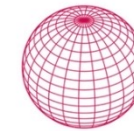
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Risks

- ★ Nowadays, BYD is most known for its vehicles
 - However, its mobile phone handset assembly segment doesn't trail far behind
- ★ Major clients of BYD include: Huawei, Apple, Samsung, Xiaomi and Vivo
 - As of 1H22, these brands collectively made up 80% of the global smartphone market



Emerging markets could constitute new engine of growth



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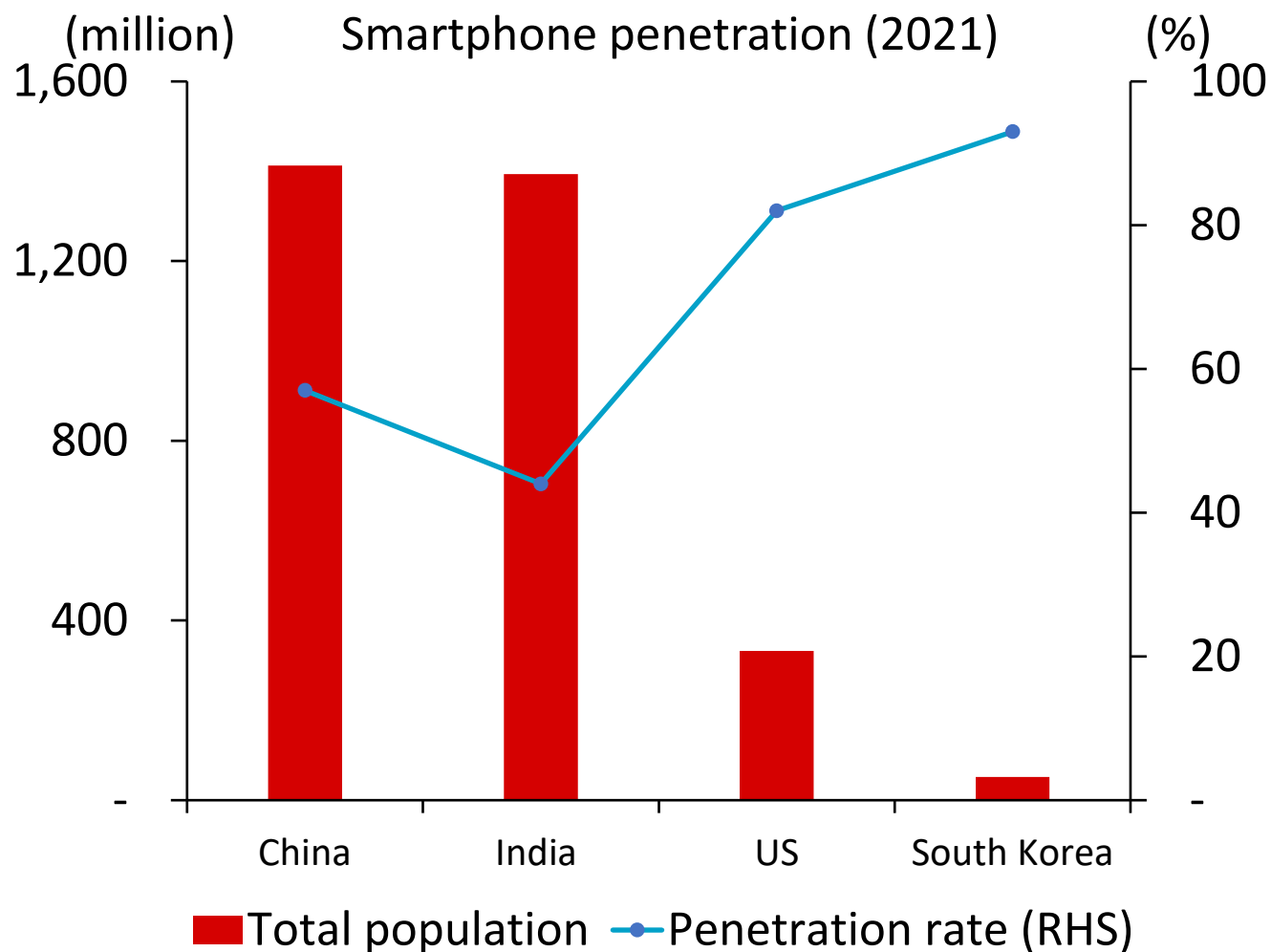
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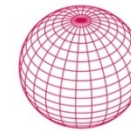
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Risks



- ★ Emerging markets like China and India have lower smartphone penetration rates than saturated developed markets
- ★ This means that there is still room to grow
 - By partnering with dominant smartphone players in India and China, this segment could continue to deliver double-digit growth

3 Climbing up the value chain to stop margin erosion



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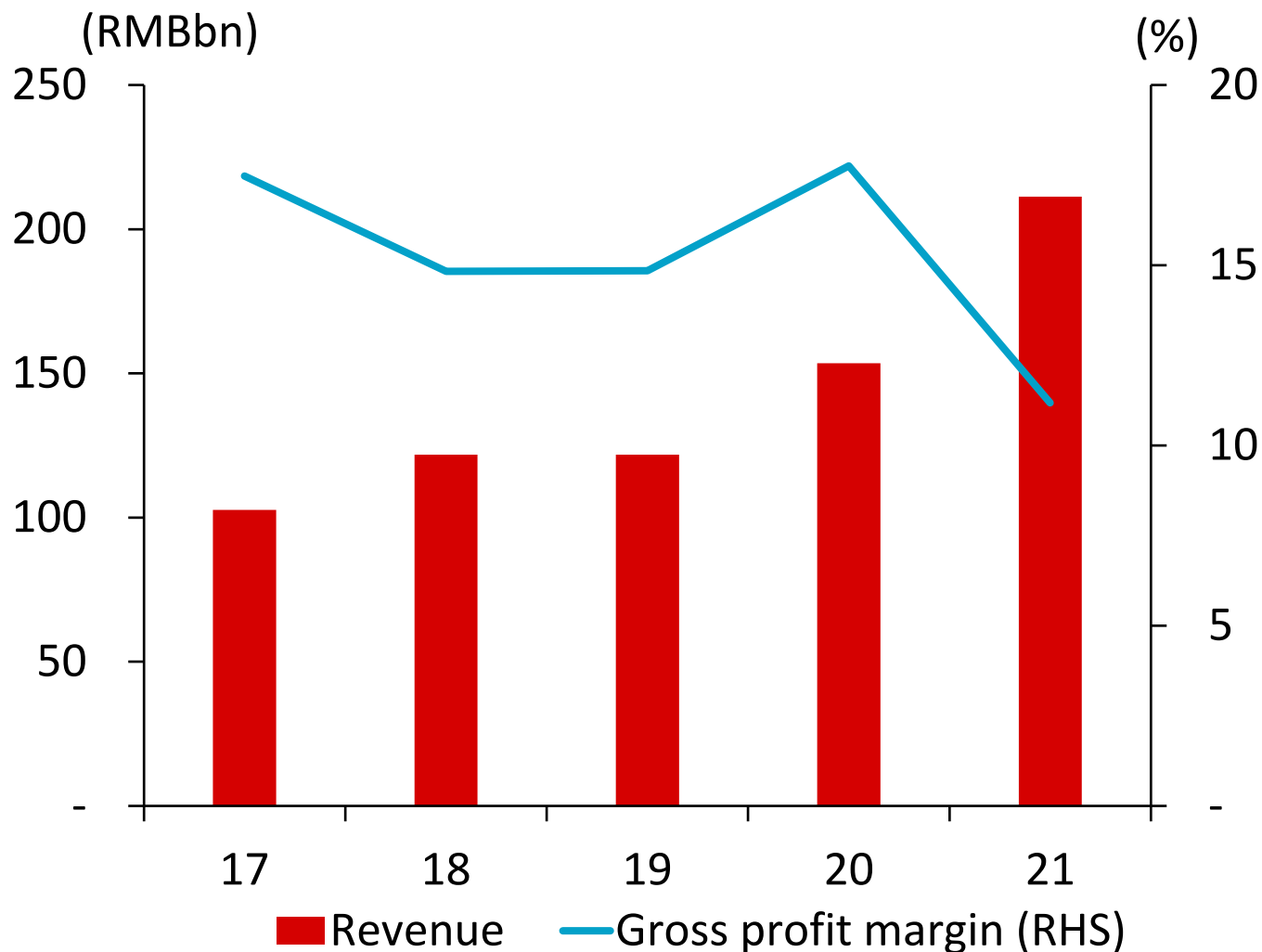
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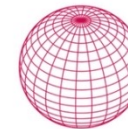
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Risks



- ★ BYD has surpassed Tesla in the number of new EV sold in 1H22
 - However, its margin trails behind Tesla
- ★ BYD intends to turnaround the negative trend by introducing more premium models that can be sold at a higher average selling price
 - Examples of BYD's premium models include: BYD Han, BYD Tang and BYD Qin



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Risks

Analyst consensus valuation

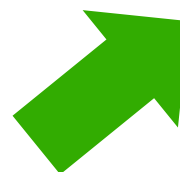
Recommendation	Apr-22	May-22	Jun-22	Current
Strong buy	10	10	10	11
Buy	12	12	13	13
Hold	3	3	2	2
Sell	-	-	-	-
Strong sell	1	1	1	1
Average score	1.8	1.8	1.8	1.8

Price target	Apr-22	May-22	Jun-22	Current
Median	324	315	347	363
Mean	328	327	344	365

Analyst consensus 3-year forecast

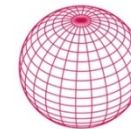
(%)	19	20	21	22E	23E	24E
Revenue growth	0.0	26.0	37.7	68.0	29.2	21.5
Gross margin	14.8	17.8	11.2	13.2	13.6	14.5
EBIT margin	5.1	7.0	2.8	3.6	4.0	4.4
Net margin	1.3	2.8	1.4	2.2	2.6	3.0

27
analysts



Upside: 27%

- ★ Most analysts have BUY or Strong BUY recommendations
- ★ Analysts predict company to maintain double-digit revenue growth
 - This is in line with our forecast due to support for new energy vehicles from the Chinese gov't



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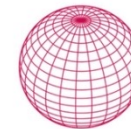
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Risks

(YE Dec, RMB m)	2020A	2021A	2022E	2023E
Revenue	153,469	211,300	348,645	435,806
Cost of goods & services	(126,226)	(187,667)	(299,835)	(374,793)
Gross profit	27,244	23,633	48,810	61,013
SG&A	(18,057)	(20,282)	(40,094)	(47,939)
Other operating (exp)/inc	1,519	2,627	3,940	5,910
EBIT	10,705	5,978	12,656	18,984
Interest expense (net)	(2,385)	(1,056)	(220)	400
Other non-operating inc/(exp)	(785)	(183)	(42)	(10)
Earnings before taxes (EBT)	7,535	4,739	12,394	19,375
Income tax	(869)	(551)	(1,487)	(2,325)
Earnings after taxes (EAT)	6,666	4,189	10,907	17,050
Equity income/Minority interest	(1,967)	(1,067)	(2,934)	(4,465)
Earnings from cont. operations	4,700	3,121	7,973	12,585
Forex/Exceptionals before tax	(466)	(76)	-	-
Net profit	4,234	3,045	7,973	12,585

- ★ Massive EV rollout in China and capturing upside in the smartphone business in emerging markets drives strong revenue growth



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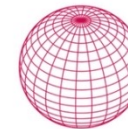
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Risks

(YE Dec, RMB m)	2020A	2021A	2022E	2023E
Cash & short-term investments	13,738	49,820	57,095	73,111
Accounts receivable	62,138	76,889	96,846	121,057
Inventories	31,396	43,355	54,137	67,671
Other current assets	4,332	(3,953)	3,486	4,358
Total current assets	111,605	166,110	211,565	266,197
Long-term investments	7,171	11,053	10,776	10,507
Net fixed assets	65,824	86,866	85,513	83,988
Intangible assets	10,108	10,050	10,050	10,050
Goodwill	66	66	66	66
Other long-term assets	6,244	21,635	31,371	45,488
Total assets	201,017	295,780	349,341	416,297

- ★ BYD has high level of working capital requirements, accounting for close to 50% of its total assets



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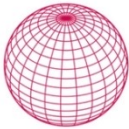
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Risks

(YE Dec, RMB m)	2020A	2021A	2022E	2023E
Overdrafts & short-term loans	27,813	23,188	8,060	7,980
Accounts payable	54,627	84,893	137,424	171,780
Other current liabilities	23,991	63,223	69,729	87,161
Total current liabilities	106,431	171,304	215,214	266,921
Long-term debt	24,469	12,205	12,091	11,970
Other long-term liabilities	5,663	8,027	8,107	8,188
Total liabilities	136,563	191,536	235,411	287,079
Minority interest	7,580	9,175	11,832	16,027
Paid-up capital - Common shares	22,746	58,978	58,978	58,978
Paid-up capital - Preferred shares	-	-	-	-
Retained earnings	33,718	36,338	43,366	54,460
Revaluation/Forex/Others	410	(247)	(247)	(247)
Total equity	56,874	95,070	102,098	113,191
Total liab & shareholders' equity	201,017	295,780	349,341	416,297

- ★ BYD's cash generation ability has been improving since 2020, making its financing less reliant on external debt



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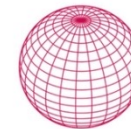
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Risks

(YE Dec)	2020A	2021A	2022E	2023E
General growth (YoY, %)				
Revenue	26.0	37.7	65.0	25.0
Assets	2.7	47.1	18.1	19.2
Gross profit	50.7	(13.3)	106.5	25.0
Operating profit	71.2	(44.2)	111.7	50.0
Attributable profit	162.3	(28.1)	161.8	57.8
EPS	162.3	(30.4)	153.6	57.8
Recurring EPS	189.4	(33.2)	149.7	57.8
Du Pont analysis (%)				
Net profit margin	2.8	1.4	2.3	2.9
Revenue per HK\$100 of assets	77.4	85.1	108.1	113.8
Assets/equity (x)	5.0	5.1	4.2	3.6
Return on equity	10.6	6.2	10.4	11.7
Others (%)				
Effective tax rate	12.3	11.8	12.0	12.0
Dividend payout ratio	9.3	9.3	11.8	11.9

★ In the past, BYD improved its efficiency and I expect the trend to continue



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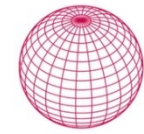
Risks

(YE Dec)	2020A	2021A	2022E	2023E
Internal liquidity (x)				
Current ratio	1.0	1.0	1.0	1.0
Quick, or acid test ratio	0.8	0.7	0.7	0.7
Working cap. mgmt (Days)				
Inventory conversion period	81	72	59	59
Receivables collection period	149	118	90	90
Days from raw mat to coll	230	190	148	149
Payables deferral period	134	134	133	149
Cash conversion cycle	97	56	15	(0)
Profitability ratios (%)				
Gross profit margin	17.8	11.2	14.0	14.0
EBIT margin	7.0	2.8	3.6	4.4
EBIT return on avg assets	5.4	2.4	3.9	5.0
Return on average assets	2.1	1.2	2.5	3.3
Financial risk (x)				
Liabilities-to-assets (%)	68.5	64.8	67.4	69.0
Debt-to-equity	1.1	0.7	0.2	0.2
Net debt-to-equity	0.8	(0.3)	(0.4)	(0.5)
Times-interest-earned	8.9	11.9	22.3	47.0
Effective interest rate (%)	4.0	3.9	4.4	3.7

★ BYD is not highly levered, and the company became a net cash in 2021

Stock Picking Checklist

Can this company be a ten bagger?



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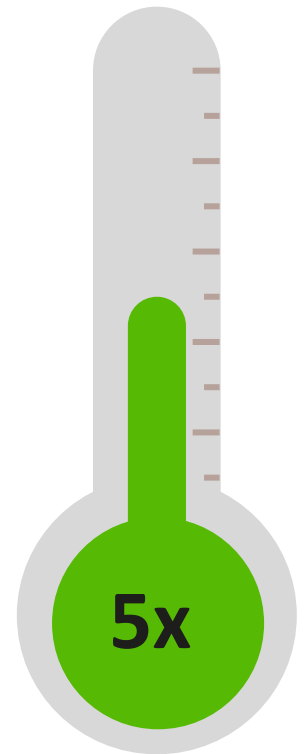
Ratios

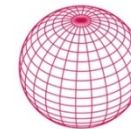
Value

Risks

Checklist	Potential	Comment
1. Management is committed to growth	Good	Over the past 9 years, revenue grew at a CAGR of 20%
2. Growth can hit double-digits	Good	Government support along with under penetration of EV to provide growth
3. Gross Margin can remain high	Good	Margin is below peer group but company increases efforts to expand margin over time
4. Earnings are predictable	Weak	High level of exceptional items
5. Efficient at deploying assets	Moderate	Asset turnover has been on an increasing trend but still below 100%
6. Cash Conversion cycle is low	Moderate	Cash conversion cycle is decreasing but still remains high
7. Cash Flow is consistently positive	Good	Operating CF is higher than its investing CF
8. Capital is readily available	Good	The company is net cash
9. Valuation is reasonable	Weak	Trades high on both PE and PB

10x Bagger Potential





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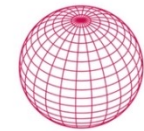
Value

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Risks

(YE Dec, RMB m)	2020A	2021A	2022E	2023E
EBIT	10,705	5,978	12,656	18,984
Est tax rate (%)	12	12	12	12
NOPAT	9,390	5,272	11,138	16,706
Add: Depre & amort	12,519	14,108	14,459	15,905
Less: CAPEX	(5,705)	(9,035)	(13,106)	(14,381)
Chg in A/R	2,843	(14,750)	(19,957)	(24,211)
Chg in inventory	(5,825)	(11,958)	(10,782)	(13,534)
Chg in oth curr assets	407	8,285	(7,440)	(872)
Chg in A/P	15,503	30,266	52,531	34,356
Chg in oth curr liabs	9,366	39,233	6,506	17,432
Less: Chg in working cap	22,295	51,075	20,858	13,171
Less: Chg in invest cap				
Free cash flow to firm	38,498	61,420	33,349	31,402

- ★ Increasing CAPEX necessary to lay foundation for massive growth



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Risks

Forecast assumptions

3-year average	Consensus	My assumptions
Revenue growth (CAGR)	38.2	38.7
Gross margin	13.8	14.0
EBIT margin	4.0	4.2
Net margin	2.6	2.7

My valuation method

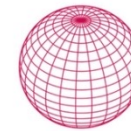
Market: Hong Kong

Market risk-free rate	1.7
Market equity risk premium	5.0
Market return	6.7
Company beta (x)	1.4
COE	8.7

Valuation Method:
FCFF

WACC	8.4
Terminal growth rate	3.0

- ★ My forecast is similar to consensus, as I expect the gross margin to expand
- ★ In the long run, I expect competition to rise
 - Therefore, I choose a terminal growth rate of 3%



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Ratios

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Bear
HKD307
(Upside 5%)

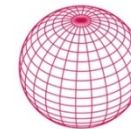


Base
HKD342
(Upside 17%)



Bull
HKD377
(Upside 28%)





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Risks

- ★ Increasing number of players in domestic market puts growth at risk
- ★ Sudden changes in gov't regulation that could be less favorable
- ★ Failure to keep up with technological changes

CONCLUSION

- China's ambition to lead EV race unlocks massive growth potential
- Strong smartphone segment delivers secured revenue
- Margin expansion could constitute catalyst for the share price

