BYD (002594 CH)

Momentum to maintain with NEV sales

BYD announced that total auto sales volume achieved 48K units in Oct, an increase of 16.1% YoY. Among these, NEPV achieved 22K units, an increase of 83.1% YoY/ 18.5% MoM. The Company announced its 4Q20E earnings guidance with a bottom-line range of RMB 4.2bn-4.6bn in 2021E. We believe BYD will benefit most from recent improving sentiment on NEV, from both sales volume and market sentiment perspective. We raised our bottom-line forecast by 24% to RMB 5.2bn in 2020E to reflect a higher ASP and GPM on auto segment. **Reiterate BUY rating and raise TP to RMB223.8.**

- **BYD continues rapid growth in NEV segment in Oct.** BYD sold 47K units (ICE+NEV) of auto in Oct, an increase of 16.1%YoY. Its NEV business remains on the high growth path with a total sales volume of 23K units, an increase of 84.7% YoY. Among these, NEPV achieved 22K units (+83.1% YoY) whereas NECV achieved 1.2K units (+123.2% YoY). We believe that the total delivery of model Han is in line with our expectations, with a total volume of 7,545 units in Oct. We expect that the sales volume of Han will continue to rise MoM within the year as the production of the blade battery is ramping up. In terms of ICE, sales reached 25K units in Oct, down 14.2% YoY/up 9.9% MoM.
- **3Q20 achieved RMB1.75bn, an increase 1363% YoY, in line with the Company's earnings preview.** Among them, BYD Electronics (285 HK, BUY) contributed approximately RMB1.22mn while other segments contributed RMB527mn. We believe that a series of new models, underpinned by production ramp-up of blade battery, will support the sales performance in the short term. We expect BYD will achieve total NEPV sales of 45K units in Nov & Dec, an increase of 112%YoY. We expect DM4.0 (expected rollout in 1Q21E) and new BEV platform (expected rollout in 2021 Shanghai Auto Show) will further boost its NEV sales in 2021E.
- **Higher ASP and GPM raise the 2021E bottom-line forecast.** We expect that strong sales of model Han among its NEPV will increase to 20% in NEV sales mixbased on our new calculation. Therefore, aggregate ASP for the NEPV segment increased by 9% to RMB187Kin 2020. In the meanwhile, we believe that BYD will continue to utilize its cost control advantage, driving its improvement in GPM of auto segment. We therefore raised our 2021E earnings forecast by 30% to RMB6.88mn.

Earnings Summary

(YE 31 Dec)	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue (RMB mn)	130,055	127,739	156,971	208,657	272,410
YoY growth (%)	22.79%	-1.78%	22.88%	32.93%	30.55%
Net income (RMB mn)	2,780	1,614	5,210	6,884	10,606
EPS (RMB)	0.93	0.50	1.81	2.43	3.79
YoY growth (%)	-34%	-47%	265%	34%	56%
Consensus EPS(RMB)	N/A	N/A	1.05	1.20	1.65
P/E (x)	198.39	371.70	101.95	76.17	48.76
P/B (x)	9.14	8.88	8.06	7.20	6.16
Yield (%)	0.12%	0.03%	0.11%	0.15%	0.22%
ROE (%)	5.05%	2.88%	8.73%	10.38%	13.96%
Net gearing (%)	64%	79%	86%	78%	72%

Source: Company data, Bloomberg, CMBIS estimates

BUY (Maintain)

Target Price	**RMB223.8**
(Previous TP	RMB155.7)
Up/Downside	**+21.1%**
Current Price	**RMB184.8**

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Stock Data

Mkt Cap (HK$ mn)	490,762
Avg 3 mths t/o (HK$ mn)	4,085.03
52-week high/low	184.83/42.49
Total Issued Shares (mn)	915(H) 1,813(A)

Source: Bloomberg

Shareholding Structure

Wang Chuanfu	18.83%
Lv Xiangyang	8.77%
Bershire Hathaway Energy	8.25%

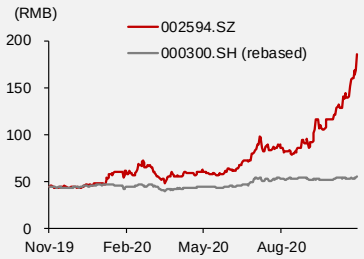
Source: Company announcement

Share Performance

	Absolute	Relative
1-mth	59.0%	49.3%
3-mth	109.8%	105.2%
6-mth	208.5%	147.1%

Source: Bloomberg

12-mth Price Performance



Source: Wind

Auditor: Ernst & Young

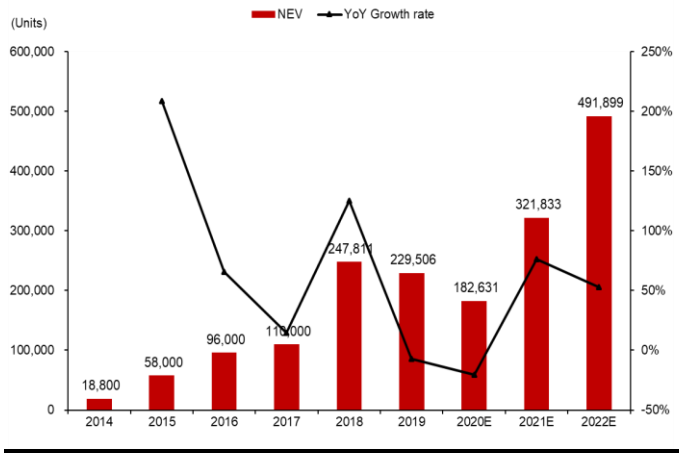
Related Report

1. "BYD (002594 CH) – Upside remains as bottom-line revised up" – 15 Oct 2020
2. "BYD (002594 CH) - A shining monthly delivery of model "Han" – 8 Sep 2020
3. "BYD (002594 CH) – Hidden giant in the cave" – 23 Jul 2020

- **Sentiment-driven re-rating on the NEV segment.** BYD's share price performed well exceed our expectation, while fundamentals were largely on track with our projection. We think BYD's re-rating was mainly sentimentally driven on an optimistic outlook for the NEV segment. Based on our SOTP framework, we believe the market is currently pricing the NEV segment at a 5.5x FY21E P/S ratio. After peers' recent share price rally, we believe BYD's NEV valuation is significantly lower than the peer's average of 10.1x FY21E P/S. Based on FY21E NEV sales projection of RMB62.8bn, we expect 1) **bull case share price to trade up 8.9x P/S at RMB263**, in line with Tesla (TSLA US, NR)'s valuation in a thrilling market sentiment; 2) **bear case share price to trade down to 3x P/S at RMB145.7**; and 3) **base case valuation of 7x P/S at RMB223.8,** matching with peers valuation growth with 30% discount. Our valuation revision reflects changes only on the NEV segment, and we think other catalysts such as power batteries gaining external shipment could boost valuation further. **Our TP for BYD is revised up by 43.7% to RMB223.8, maintain BUY.**

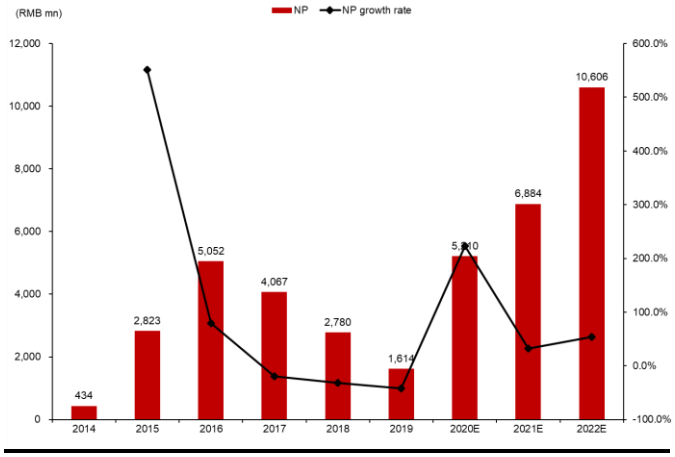
Focus chart

Figure 1: NEV Sales volume forecast: BYD



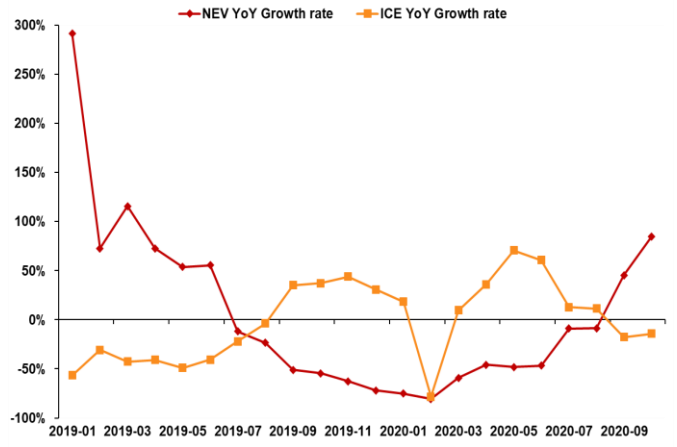
Source: Company data, CMBIS estimates

Figure 2: Bottom-line forecast



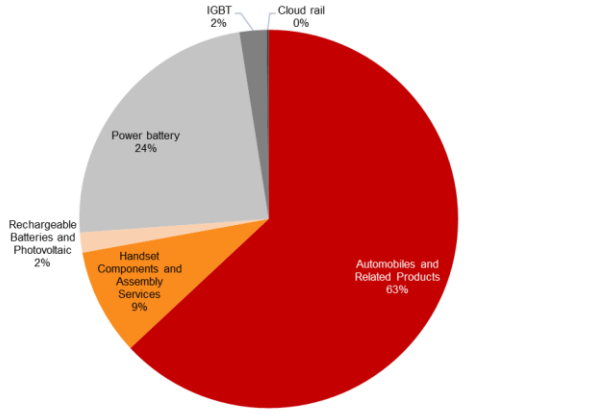
Source: Company data, CMBIS estimates

Figure 3: Monthly sales review: by NEV/ICE



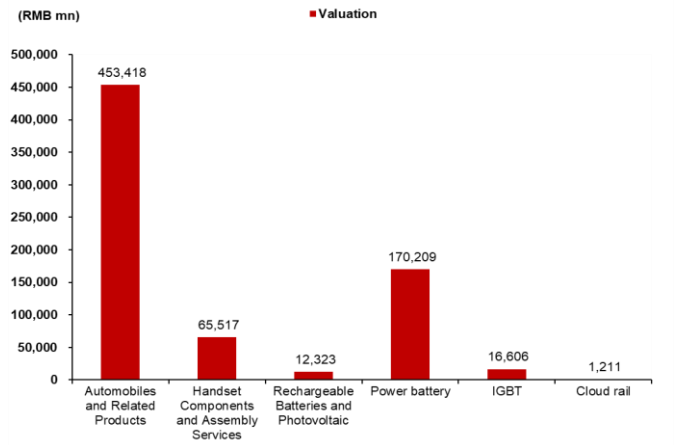
Source: Company data

Figure 4: Valuation proportion in 2021E



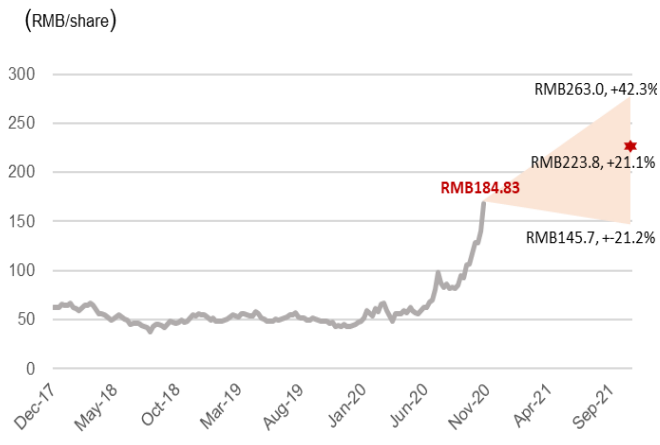
Source: Company data

Figure 5: Valuation by segment in 2021E



Source: Company data, CMBIS estimates

Figure 6: Risk-Reward



Source: Company data, CMBIS estimates

Earnings Revision

Figure 7: Earnings revision

(RMB mn)	New		Old		Change (%)	
	FY20E	FY21E	FY20E	FY21E	FY20E	FY21E
Revenue	156,971	208,657	156,971	201,032	0%	4%
Gross profit	28,095	36,039	26,647	32,923	5%	9%
Operating profit	7,383	10,097	5,911	7,704	25%	31%
Net profit	5,210	6,884	4,218	5,287	24%	30%
EPS (RMB)	1.81	2.43	1.45	1.84	25%	32%
GPM	17.90%	17.27%	16.98%	16.38%	0.9 ppt	0.9 ppt
OPM	4.70%	4.84%	3.77%	3.83%	0.9 ppt	1.0 ppt
NPM	3.32%	3.30%	2.69%	2.63%	0.6 ppt	0.7 ppt

Source: CMBIS estimates

Figure 8: CMBIS estimates vs consensus

(RMB mn)	CMBIS		Consensus		Diff (%)	
	FY20E	FY21E	FY20E	FY21E	FY20E	FY21E
Revenue	156,971	208,657	148,041	175,338	6%	19%
Gross profit	28,095	36,039	23,981	27,177	17%	33%
Operating profit	7,383	10,097	8,991	10,170	-18%	-1%
Net profit	5,210	6,884	3,939	4,226	32%	63%
EPS (RMB)	1.81	2.43	1.44	1.65	26%	47%
GPM	17.90%	17.27%	16.20%	15.50%	1.7 ppt	1.8 ppt
OPM	4.70%	4.84%	6.07%	5.80%	-1.4 ppt	-1.0 ppt
NPM	3.32%	3.30%	2.66%	2.41%	0.7 ppt	0.9 ppt

Source: Bloomberg, CMBIS estimates

Figure 9: Revenue breakdown

(RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Automobiles and Related Products	**76,007**	**63,266**	**62,154**	**90,849**	**122,661**
…YoY	*34%*	*-17%*	*-2%*	*46%*	*35%*
Handset Components and Assembly Services	**42,230**	**53,380**	**81,565**	**101,466**	**117,092**
…YoY	*4%*	*26%*	*53%*	*24%*	*15%*
Rechargeable Batteries and Photovoltaic	**8,950**	**10,506**	**12,607**	**14,498**	**16,238**
…YoY	*2%*	*17%*	*20%*	*15%*	*12%*
Other business	**2,868**	**587**	**646**	**807**	**969**
…YoY	*5524%*	*-80%*	*10%*	*25%*	*20%*
Total Explicit revenue	**130,055**	**127,739**	**156,971**	**207,620**	**256,959**
…YoY	*23%*	*-2%*	*23%*	*32%*	*24%*
Power battery				**667**	**14,647**
…YoY					*2096%*
IGBT				**369**	**803**
…YoY					*118%*
Total	**130,055**	**127,739**	**156,971**	**208,657**	**272,410**
…YoY	***23%***	***-2%***	***23%***	***33%***	***31%***

Source: Company data, CMBIS estimates

Figure 10: P&L breakdown

(RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue	**130,055**	**127,739**	**156,971**	**208,657**	**272,410**
…YoY	*22.79%*	*-1.78%*	*22.88%*	*32.93%*	*30.55%*
Cost of sales	(108,725)	(106,924)	(128,876)	(172,617)	(225,595)
Gross profit	**21,330**	**20,814**	**28,095**	**36,039**	**46,815**
GPM (%)	*16.40%*	*16.29%*	*17.90%*	*17.27%*	*17.19%*
…YoY	*5.91%*	*-2.42%*	*34.98%*	*28.28%*	*29.90%*
Selling Exp	(4,729)	(4,346)	(5,180)	(7,094)	(9,534)
…% of rev	*-3.64%*	*-3.40%*	*-3.30%*	*-3.40%*	*-3.50%*
Admin Exp	(4,989)	(5,629)	(6,279)	(7,929)	(8,990)
…% of rev	*-3.84%*	*-4.41%*	*-4.00%*	*-3.80%*	*-3.30%*
Operating profit	**4,241**	**2,312**	**7,383**	**10,097**	**15,301**
OPM (%)	*3.26%*	*1.81%*	*4.70%*	*4.84%*	*5.62%*
…YoY	*-21.62%*	*-45.48%*	*219.30%*	*36.76%*	*51.54%*
Net profit	**2,780**	**1,614**	**5,210**	**6,884**	**10,606**
NPM (%)	*2.14%*	*1.26%*	*3.32%*	*3.30%*	*3.89%*
…YoY	*-31.64%*	*-41.93%*	*222.70%*	*32.13%*	*54.07%*

Source: Company data, CMBIS estimates

Figure 11: Valuation comparison vs major NEV players

NEV Company	Ticker	Major model	NEV Sales in China Jul	Aug	Sep	Oct	10M20	Market Cap (US$, mn)	2021E Sales est. (US$, mn)	P/S multiple FY21E
Tesla	TSLA US Equity	Model 3	11,014	11,811	11,329	NA	79,908	399,047	45,043	8.9
Nio	NIO US	ES6, EC6, ES8	3,533	3,965	4,708	5,055	26,375	51,368	4,037	12.7
Li Auto	LI US	ONE	2,445	2,711	3,504	3,692	18,160	21,168	2,523	8.4
XPENG	XPEV US	G3, P7	2,451	2,649	3,478	3,040	14,077	20,124	1,967	10.2
WM Motor	N/A	EX5, EX6	2,036	2,057	2,107	3,003	35,920	N/A	N/A	N/A
BYD's NEV segment*	1211 HK/ 002594 CH	Han**	1,200	4,000	5,612	7,545	18,362	51,797	7,969	6.5
		Other EVs	13,900	11,283	14,269	15,672	39,452			

Source: Company data, Bloomberg, CMBIS estimates

Note: *BYD NEV segment's market cap and sales estimates are estimated by CMBIS;
**BYD Han's sales data is based on BYD's disclosure through its official Weibo;

Financial Summary

Income statement

YE 31 Dec (RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Revenue	**130,055**	**127,739**	**156,971**	**208,657**	**272,410**
Cost of sales	(108,725)	(106,924)	(128,876)	(172,617)	(225,595)
Gross profit	**21,330**	**20,814**	**28,095**	**36,039**	**46,815**
Taxes and levies	(2,146)	(1,561)	(1,884)	(2,504)	(3,269)
S&D exp	(4,729)	(4,346)	(5,180)	(7,094)	(9,534)
R&D exp	(3,760)	(4,141)	(4,521)	(5,988)	(7,764)
Admin exp	(4,989)	(5,629)	(6,279)	(7,929)	(8,990)
Finance costs	(2,997)	(3,014)	(3,635)	(4,162)	(4,029)
Impairment losses	(1,020)	(636)	(791)	(1,043)	(1,364)
Other income	2,328	1,724	2,259	3,185	3,918
Investment income	248	(809)	(549)	(313)	(272)
GL from changes in FV	(5)	10	(56)	4	(38)
GL on disposal	(19)	(100)	(76)	(97)	(172)
Operating profit/(loss)	**4,241**	**2,312**	**7,383**	**10,097**	**15,301**
Non-operating income	230	226	471	417	490
Non-operating expense	(86)	(107)	(118)	(157)	(217)
Profit before income tax	**4,385**	**2,431**	**7,736**	**10,358**	**15,575**
Income tax expense	(829)	(312)	(1,142)	(1,644)	(2,150)
Profit for the year	**3,556**	**2,119**	**6,595**	**8,713**	**13,425**
Non-controlling interests	776	504	1,385	1,830	2,819
NP	**2,780**	**1,614**	**5,210**	**6,884**	**10,606**

Cash flow

YE 31 Dec (RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Net income	**2,780**	**1,614**	**5,210**	**6,884**	**10,606**
D&A	9,995	9,933	10,035	12,193	14,571
Change in working capital	(291)	3,233	4,475	7,802	(315)
Others	(543)	6,427	-	-	-
Net cash from operating	**12,523**	**14,741**	**11,912**	**12,919**	**27,641**
Capex & investments	(6,076)	(12,040)	(12,992)	(13,608)	(14,961)
Associated companies	(496)	(499)	(406)	(447)	(491)
Others	(7,659)	(8,342)	(4,520)	(5,529)	(5,858)
Net cash from investing	**(14,231)**	**(20,881)**	**(17,919)**	**(19,584)**	**(21,310)**
Equity raised	-	-	-	-	-
Change of Debts	5,076	10,535	13,572	13,628	2,414
Dividend paid	(557)	(164)	(521)	(688)	(1,061)
Others	(603)	(3,761)	7,202	7,361	10,010
Net cash from financing	**3,917**	**6,610**	**8,682**	**8,032**	**(3,955)**
Net change in cash	**2,209**	**470**	**2,675**	**1,368**	**2,376**
Cash at the beginning	9,903	13,052	12,650	15,325	16,693
Others	941	(872)	-	-	-
Cash at the end	**13,052**	**12,650**	**15,325**	**16,693**	**19,069**
Less: pledged cash	-	-	-	-	-

Balance sheet

YE 31 Dec (RMB mn)	FY18A	FY19A	FY20E	FY21E	FY22E
Non-current assets	**79,361**	**88,675**	**102,159**	**116,354**	**131,224**
Fixed asset	43,679	49,443	58,001	66,220	74,742
Intangible assets	11,314	12,650	14,840	16,943	19,123
Interest in joint	3,561	4,060	4,466	4,913	5,404
Other non-current assets	20,807	22,521	24,852	28,278	31,956
Current assets	**115,211**	**106,967**	**127,203**	**160,394**	**190,954**
Cash	13,052	12,650	15,325	16,693	19,069
Account receivable	49,284	43,934	52,324	67,309	77,831
Inventory	26,330	25,572	31,281	41,099	50,132
Other current assets	26,545	24,811	28,274	35,294	43,922
Current liabilities	**116,569**	**108,029**	**131,067**	**167,393**	**196,203**
Borrowings	37,789	40,332	50,310	62,614	62,925
Account payables	46,283	36,168	42,959	55,683	70,498
Other payables	13,568	11,217	13,532	18,125	23,687
Tax payables	18,930	20,311	24,266	30,971	39,091
Non-current liabilities	**17,308**	**25,011**	**29,606**	**32,288**	**36,058**
Borrowings	13,924	21,916	25,511	26,834	28,937
Deferred income tax	66	103	91	132	172
Provisions	-	-	-	-	-
Others	3,317	2,992	4,004	5,322	6,949
Total equity	**60,694**	**62,601**	**68,689**	**77,067**	**89,918**
Minority Interest	**5,496**	**5,839**	**6,102**	**7,005**	**8,080**
Shareholders' equity	**55,198**	**56,762**	**62,587**	**70,062**	**81,837**

Key ratios

YE 31 Dec	FY18A	FY19A	FY20E	FY21E	FY22E
Sales mix (%)					
Automobiles	58%	50%	40%	44%	45%
Handset Components	32%	42%	52%	49%	43%
Rechargeable Batteries	7%	8%	8%	7%	6%
Other business	2%	0%	0%	0%	0%
Power battery	0%	0%	0%	0%	5%
IGBT	0%	0%	0%	0%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
P&L ratios (%)					
Gross profit margin	16%	16%	18%	17%	17%
Pre-tax margin	3%	2%	5%	5%	6%
Net margin	3%	2%	4%	4%	5%
Effective tax rate	19%	13%	15%	16%	14%
Balance sheet ratios					
Current ratio (x)	0.99	0.99	0.97	0.96	0.97
Quick ratio (x)	0.59	0.59	0.57	0.54	0.53
Cash ratio (x)	0.11	0.12	0.12	0.10	0.10
Debtors turnover days	138	126	122	118	104
Total debt / total equity	221%	213%	234%	259%	258%
Net debt / equity ratio	64%	79%	86%	78%	72%
Returns (%)					
ROE	5%	3%	9%	10%	14%
ROA	4%	3%	5%	6%	7%
Per share					
EPS (RMB)	0.93	0.50	1.81	2.43	3.79
DPS (RMB)	0.20	0.06	0.19	0.25	0.39
BVPS (RMB)	20.23	20.81	22.94	25.68	30.00

Source: Company data, CMBIS estimates
Note: *All numbers are based on A share financial statement

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NOT RATED	: Stock is not rated by CMBIS
OUTPERFORM	: Industry expected to outperform the relevant broad market benchmark over next 12 months
MARKET-PERFORM	: Industry expected to perform in-line with the relevant broad market benchmark over next 12 months
UNDERPERFORM	: Industry expected to underperform the relevant broad market benchmark over next 12 months

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