

ENERGY ABSOLUTE (EA TB)

On the brink of a brisk EV growth

From power to EV growth engine

After a period of sustainable net profit in the range of THB5-6b in 2018-2021, driven by its core renewable power plants of 664MW (278MW solar and 386MW wind farms), we believe EA is now poised for a new S-curve growth from its Electric Vehicle (EV) and battery ventures. We project EA's net profit growth of 16.1% 3-year CAGR in 2022-25E, catalyzed by the strong demands for commercial EVs, government's subsidy and tax supports, and the carbon reduction trend that would highly favor EVs to replace the oil-based vehicle.

Growth from EV santa is coming

Starting in 2023, we project EA's net profit structure to greatly change from power-driven to EV-driven portfolio, with net profit portion from EV-related ventures (EV production, EV sales, battery) to rise from 9% in 2022 to 67% by 2025E. The EV net profit is expected to springboard from a mere THB0.7b in 2022 to THB7.9b in 2025, backed by the higher sales volumes of both EV and battery businesses.

From E-bus to E-truck in 2Q23 onwards

While the revenue from sales of EVs (THB4.0b) and battery (THB1.37b) were small in 1Q23 due to the lower-than-expected number of 790 EVs delivered, EA is now poised to deliver over 1,000 EVs per quarter in 2Q23 onward, comprising 1,715 E-bus for BYD (BYD TB, not rated) and 1,500-2,000 E-truck and E-bus from many orders of private enterprises, based on management's guidance.

Booming demands for EVs under upcoming government

Under the coming government led by Khaokai party, EV demand will be further boosted by the government policy of changing buses nationwide from the internal combustion engine (ICE) vehicle to EVs. This, along with demands from carbon reduction and greener growth policy of private enterprises and the cost saving of EVs compared to ICE vehicle, is likely to be a sustainable demand growth for EA's EV-related ventures in 2023-25E, based on our estimate.

Initiated with a BUY and a TP of THB84

We initiated coverage of EA with a BUY and a SoTP-based target price of THB84. EA is our top pick in Thai power sector given 1) its strong and visible net profit growth outlook in 2023-25; 2) upsides from EVs and battery for exports; 3) attractive valuation, trading at 20-23x forward P/E for 2023-25, deep discounts to its historical average of 30-50x and its EV peers' average of 30-45x.

Financial Summary

Year ending Dec	2020	2021	2022	2023E	2024E	2025E
Revenue (THB m)	17,080	20,174	25,355	33,829	38,128	44,293
Net profit (THB m)	5,205	6,100	7,604	10,778	11,299	11,885
Core net profit (THB m)	5,155	5,983	5,530	10,778	11,299	11,885
Net profit growth (%)		17.2	24.7	41.7	4.8	5.2
Core net profit growth (%)		16.1	(7.6)	94.9	4.8	5.2
EPS (THB/share)	1.40	1.64	2.04	2.89	3.03	3.19
Core EPS (THB/share)	1.38	1.60	1.48	2.89	3.03	3.19
DPS (THB/share)	0.30	0.30	0.30	0.33	0.31	0.33
P/E (x)	35.30	58.70	47.58	21.02	20.05	19.07
P/BV (x)	6.61	11.02	9.29	4.66	3.86	3.27
Dividend yield (%)	0.61	0.31	0.31	0.54	0.51	0.54
ROE (%)	20.15	19.84	15.48	24.63	21.07	18.56

Source: Company data, BYD Research

BUY

Target Price 2023E (THB)	84.00
Share Price (THB)	60.75
Upside	38%

Share Data

Reuters / Bloomberg	EA.BK / EA TB
Market	SET
Sector	ENERG
Market Cap (THB m)	226,597.50
Par (THB)	0.1
Free Float	39.89%
Dividend Policy	>30%

Share Price Performance (%)

	1M	3M	6M	YTD
Stock	(10.33)	(20.59)	(37.53)	(37.37)
Market	(9.88)	(15.44)	(32.32)	(31.31)
12M High/Low (THB)				99.75 / 60.75



Major Shareholders (%)

SPBL Holding company limited	25.10
UBS AG Singapore branch	24.63
Thai NVDR Company Limited	9.47

Company Profile

The Company currently operates 4 major businesses, which can be attributed to 1.) Biodiesel Business 2.) Renewable Power Plant Business- Wind Power Plant- Solar Power Plant 3.) Electric Vehicle and Energy Storage System- Battery development, manufacturing, and distribution business- Electric charging station service business (For electric vehicles) - Electric Vehicle Business 4.) Other Businesses - Battery Electric Vehicle and Electronic Products Testing Center- Research and Development

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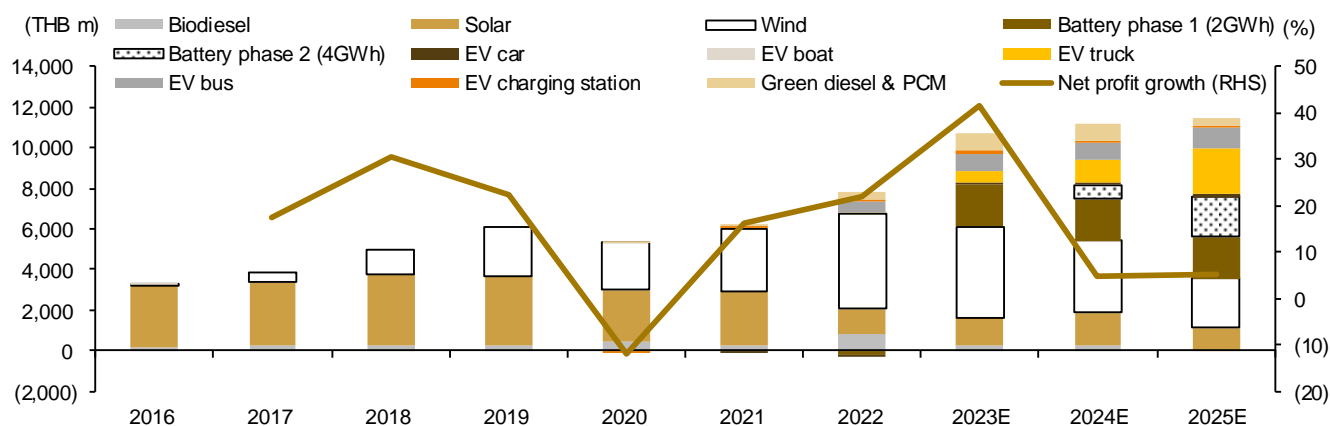
Towards greener growth roadmap

Growth from EV santa is coming

Starting in 2023, we project EA's net profit structure to greatly change from power-driven to EV-driven portfolio, with net profit portion from EV-related ventures (EV production, EV sales, battery) to rise from 9% in 2022 to 67% by 2025E. The EV net profit is expected to springboard from a mere THB0.7b in 2022 to THB7.9b in 2025, backed by the higher sales volumes of both EV and battery businesses.

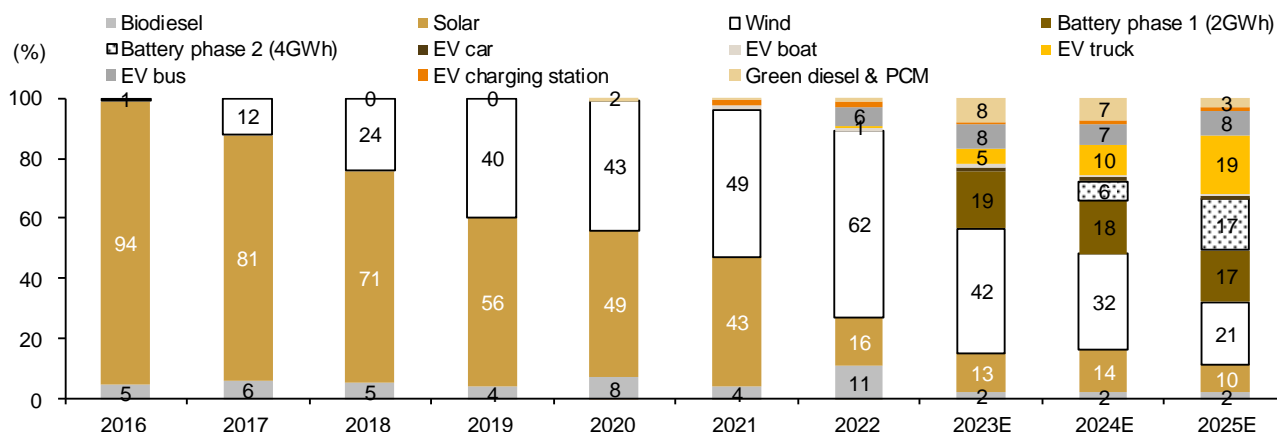
In 2022, EA had delivered only 1,160 E-bus in 2H22 due to the impacts of Covid-19 pandemic in 1H22 and the inability of its major customer to accept the delivery of E-bus as a result of the bottleneck of regulator to approve the vehicle registration for EVs, according to management.

Figure 1: Net profit breakdown by business



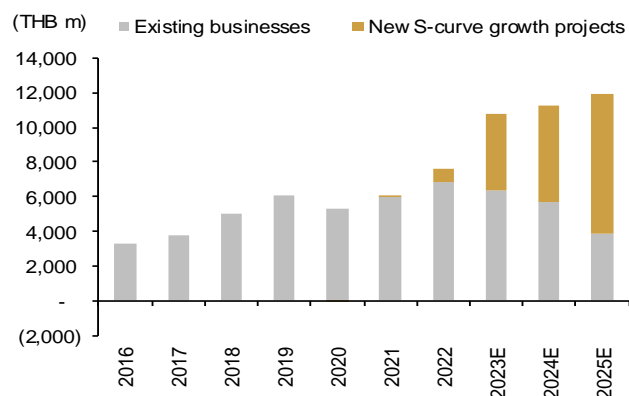
Source: Company Data, BYD Research

Figure 2: Net profit breakdown by business (%)



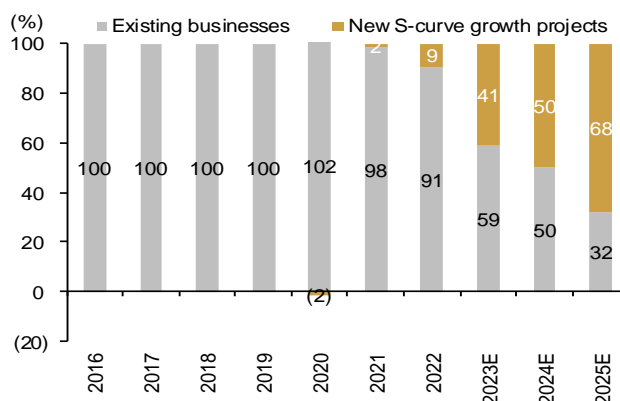
Source: Company Data, BYD Research

Figure 3: Earning breakdown by existing and new S-curve



Source: Company Data, BYD Research

Figure 4: Earnings breakdown by existing and new S-curve (%)



Source: Company Data, BYD Research

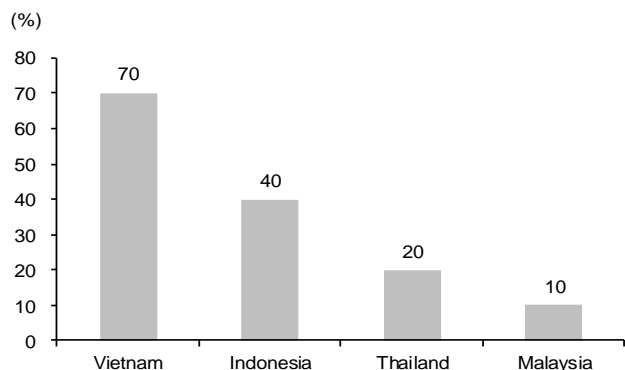
From E-bus to E-truck in 2Q23 onwards

While the revenue from sales of EVs (THB4.0b) and battery (THB1.37b) were small in 1Q23 due to the lower-than-expected number of 790 EVs delivered, EA is now poised to deliver over 1,000 EVs per quarter in 2Q23 onward, comprising 1,715 E-bus for BYD (BYD TB, not rated) and 1,500-2,000 E-truck and E-bus from many orders of private enterprises, based on management's guidance.

In the next three quarters (2Q23-4Q23) EA, via its 40%-owned JV NEX (NEX TB, not rated), EA is expected to deliver over 3,000 E-bus and E-truck to a number of customers. While the main customer remains BYD with a total 3,155 E-bus to be delivered by 4Q23 (960 E-buses delivered in 2022, 480 in 1Q23), EA and NEX expect to deliver over 500 E-trucks as pilot test lot for a host of leading companies in several industries, including transportation, sugar, food & beverage, rubber, and logistics.

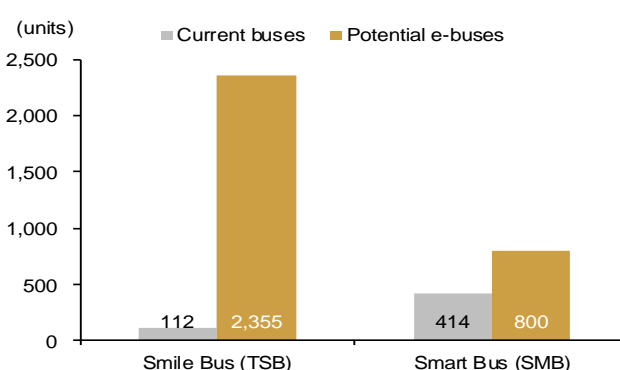
In addition, EA has already secured over 500 E-bus orders from customers in Vietnam (300), Indonesia (110), Japan (50), and Malaysia (130) as pilot test for the performance of EA's E-buses. If the test lots are satisfied, EA expects customers to order much larger number of E-buses to replace their ICE buses, both in public and private sectors. According to management, the potential orders could be up to 10,000-20,000 E-buses within 2-3 years for EA to export its E-bus.

Figure 5: Earning breakdown by existing and new S-curve



Source: NEX; Malaysian Automotive Association (MAA)

Figure 6: Earnings breakdown by existing and new S-curve (%)



Source: NEX, BYD Research

14 EV investment companies in Thailand. According to Thailand’s Board of Investment (BOI), 14 carmakers have submitted investments in EVs, including Japanese (3), China (6), US (1), Taiwan (1), and Germany (1). Many Chinese EV producers, including Great Wall Motors (GWM), BYD, Changan, GAC, and DFSK. A total investment of THB125.5b will be invested in 2022-24 to build production plants for EVs and most producers will start to deliver their domestically produced EVs in 2024 onwards to compensate for the imported EVs that they have gained tax benefits in 2022-23.

According to PTT, only BYD will have its own in-house battery manufacturing plants. Hence other EV producers still seek locally produced battery for their EVs in order to comply with Thai government “local content” law that requires at least 40% of local content in each EV. We believe EA stands as the best and the readiest company for the locally produced battery to support the new EVs produced in Thailand as EA is still the only producer of battery to be commercially available in Thailand as of May-23, according to BOI.

Up to 18GWh of battery demand for EVs produced in Thailand by 2025. We estimate that over 0.7m EVs will be produced from 14 BOI-supported production plants by 2025, effectively translating to 18GWh of battery assuming that each EV will deploy 25KWh battery size. As a result, we think our assumption of 6GWh battery capacity of EA’s second phase will have a low demand risk.

Figure 7: EV producers with investment plans in Thailand as of 28 April 2023



Source: Krungthepthraj

Booming demands for EVs under upcoming government

Under the coming government led by Khaokai party, EV demand will be further boosted by the government policy of changing buses nationwide from the internal combustion engine (ICE) vehicle to EVs. This, along with demands from carbon reduction and greener growth policy of private enterprises and the cost saving of EVs compared to ICE vehicle, is likely to be a sustainable demand growth for EA’s EV-related ventures in 2023-25E, based on our estimate.

Figure 8: MFP’s election campaign sign for E-bus



Figure 9: MFP’s key policy



Source: Move Forward party

Source: PPTVHD36.com, BYD Research

During the election campaign of Move Forward party (MFP), the leading party winning over 152 seats of house representatives out of 400 seats on Thailand’s recent election vote. While the MFP has successfully joined hands with other 7 parties to sign a Mutual of Understanding to form a coalition government led by MFP, we think if MFP-led cooperation eventually materializes to form a government, MFP’s policy to propose the “Future Public Bus bill” (FPB) aimed at reducing the air pollution in Bangkok and metropolitan area, based on MFP.

Up to 6,228 demand for BMTA's buses

Under FPB, all current 6,228 ICE-based public buses owned and operated by Bangkok Mass Transit Authority (BMTA), mostly aging, will be replaced by E-bus within seven years in order to effectively reduce the PM2.5, dust particles with a diameter of 2.5 micrometers or less, a standard set by Thai government.

An air pollutant has become a grave concern for Thai people's health in the past few years. As a sole local manufacturer of the commercial E-bus in Thailand as of 2023E with its own in-house produced battery, EA should be positioned well to capture this demands for E-bus from the government policy, in our view.

Figure 10: Air pollution (PM 2.5) in Bangkok



Source: [Thai Health](#)

Figure 11: EA's E-bus (blue) vs BMTA's ICE bus



Source: [Manage Online](#)

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Figure 12: SoTP target price

Cost of equity assumptions (%)		Cost of debt assumptions (%)	
Risk free rate	2.3	Pretax cost of debt	4.1
Market risk premium	8.5	Marginal tax rate	20.0
Stock beta	0.40		
DCF assumptions			
Cost of equity, Ke	5.7	Net cost of debt, Kd	3.1
Weight applied	25.0	Weight applied	75.0
WACC (%)	3.7		
SOP valuation estimate	THB m	THB/share	Valuation methodology
Biodiesel	4,592	1.2	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Solar			
Lop buri	1,367	0.4	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Nakornsawun	12,548	3.4	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Lumpang	20,499	5.5	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Pisanuloak	20,415	5.5	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Total solar	54,830	14.7	
Wind			
Southern (COD 2017)			
Had Gunghun 1	5,506	1.5	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Had Gunghun 2	6,686	1.8	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Had Gunghun 3	6,766	1.8	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Had Gunghun 4	7,780	2.1	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Total wind farm Southern	26,739	7.2	
Northeastern (COD 2018)			
Hanuman 1	10,123	2.7	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Hanuman 5	10,775	2.9	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Hanuman 8	11,830	3.2	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Hanuman 9	11,042	3.0	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Hanuman 10	21,079	5.7	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
Total wind farm Northeastern	64,849	17.4	
Battery phase 1 (2GWh)	30,091	8.1	DCF with WACC 2%, Risk free rate 5.3%, Risk premium 8.5%
Battery phase 2 (4GWh)	89,868	24.1	DCF with WACC 2%, Risk free rate 5.3%, Risk premium 8.5%
EV car (MPA SPA1, 4Q22E)	2,358	0.6	FY23E P/E at 15x
EV charging station (2020)	1,166	0.3	DCF with WACC 3.7%, Risk free rate 2.3%, Risk premium 8.5%
EV boat	1,219	0.3	FY23E P/E at 15x
EV bus	51,315	13.8	FY23E P/E at 24x
EV truck	13,536	3.6	FY23E P/E at 24x
Total EV and battery	189,552	50.8	
Green diesel & PCM	12,654	3.4	FY23E P/E at 15x
Net debt	(42,813)	(11.5)	FY23E
Minorities	2,740	0.7	
Residual ordinary equity	313,142	84.0	

Source: Company Data, BYD Research

Balance sheet (THB m)						
Year ending Dec	2020	2021	2022	2023E	2024E	2025E
Current assets						
Cash & ST investment	2,951	2,927	3,211	5,002	7,644	10,567
Account receivable	2,750	3,690	6,330	9,851	13,819	18,430
Inventories	833	1,483	5,516	7,391	8,851	11,626
Others	855	3,549	7,471	9,967	11,234	13,051
Non-current assets						
Net fixed assets	55,857	58,421	54,221	55,647	56,593	57,539
Others	15,238	15,406	26,616	26,616	26,616	26,616
Total Assets	78,484	85,476	103,364	114,474	124,758	137,828
Current liabilities						
Account payable	373	358	4,801	6,432	7,703	10,118
ST borrowing	7,983	7,200	18,128	18,128	18,128	18,128
Others	5,209	5,118	3,546	4,732	5,333	6,195
Long-term liabilities						
Long-term debts	31,090	33,777	31,417	29,687	27,652	26,326
Others	4,203	3,921	4,168	4,168	4,168	4,168
Total liabilities	48,857	50,375	62,060	63,146	62,983	64,935
Pai-up capital	373	373	373	373	373	373
Retained earnings	24,186	29,167	35,653	45,312	55,385	66,120
Others	3,252	2,961	2,903	2,903	2,903	2,903
Minority interest	1,815	2,601	2,375	2,740	3,114	3,497
Shareholders' equity	29,627	35,102	41,304	51,328	61,774	72,893

Key ratios						
Year ending Dec	2020	2021	2022	2023E	2024E	2025E
Growth (%YoY)						
Sales	14.7	18.1	25.7	33.4	12.7	16.2
Operating profit	(9.2)	4.8	(4.5)	70.6	(0.3)	(7.5)
EBITDA	(3.3)	3.1	(14.6)	69.2	3.3	(5.9)
Net profit	(14.4)	17.2	24.7	41.7	4.8	5.2
Core net profit	(12.7)	16.1	(7.6)	94.9	4.8	5.2
EPS	(14.4)	17.2	24.7	41.7	4.8	5.2
Core EPS	(12.7)	16.1	(7.6)	94.9	4.8	5.2
Profitability (%)						
Gross margin	45.7	41.0	31.4	37.9	34.1	27.7
Operation margin	38.2	33.9	25.8	32.9	29.1	23.2
EBITDA margin	53.9	47.1	32.0	40.6	37.2	30.1
Net margin	30.5	30.2	30.0	31.9	29.6	26.8
ROE	20.1	19.8	15.5	24.6	21.1	18.6
ROA	8.5	6.8	5.4	10.0	9.5	8.1
Stability						
Interest bearing debt/equity (x)	131.9	116.7	120.0	93.2	74.1	61.0
Net debt/equity (x)	1.2	1.1	1.1	0.8	0.6	0.5
Interest coverage (x)	4.0	4.8	3.2	7.3	7.6	7.3
Interest & ST debt coverage (x)	0.7	0.8	0.2	0.6	0.6	0.5
Cash flow interest coverage (x)	0.2	0.1	0.1	0.2	0.2	0.2
Current ratio (x)	0.5	0.9	0.9	1.1	1.3	1.6
Quick ratio (x)	0.4	0.5	0.4	0.5	0.7	0.8
Net debt (THB m)	36,122	38,050	46,335	42,813	38,136	33,887
Activity						
Asset turnover (X)	0.2	0.2	0.3	0.3	0.3	0.3
Days receivables	57.9	58.3	72.1	87.3	113.3	132.9
Days inventory	31.3	35.5	73.4	112.2	118.0	116.7
Days payable	12.9	11.2	54.1	97.7	102.7	101.5
Cash cycle days	76.2	82.6	91.4	101.8	128.6	148.0

Profit & loss (THB m)						
Year ending Dec	2020	2021	2022	2023E	2024E	2025E
Revenue	17,080	20,174	25,355	33,829	38,128	44,293
Cost of goods sold	(9,271)	(11,893)	(17,394)	(20,992)	(25,110)	(32,026)
Gross profit	7,808	8,280	7,961	12,837	13,018	12,266
Operating expenses	(1,278)	(1,437)	(1,427)	(1,691)	(1,906)	(1,993)
Operating profit	6,530	6,843	6,534	11,145	11,112	10,273
EBIT	6,480	6,726	4,460	11,145	11,112	10,273
Depreciation	(2,730)	(2,768)	(3,648)	(2,574)	(3,054)	(3,054)
EBITDA	9,211	9,494	8,107	13,720	14,166	13,328
Non-operating income	188	398	2,193	250	250	326
Other incomes	120	384	2,192	250	250	250
Other non-op income	68	13	0	0	0	76
Non-operating expense	(1,627)	(1,322)	(1,392)	(1,519)	(1,461)	(1,408)
Interest expense	(1,637)	(1,388)	(1,413)	(1,519)	(1,461)	(1,408)
Other non-op expense	10	66	21	0	0	0
Equity income/(loss)	(61)	14	218	1,419	1,906	3,236
Pre-tax Profit	5,029	5,933	7,552	11,295	11,806	12,427
Extraordinary items						
Current taxation	18	(3)	(145)	(153)	(134)	(158)
Minorities	157	171	198	(364)	(374)	(384)
Net Profit	5,205	6,100	7,604	10,778	11,299	11,885
Core net profit	1,593	0	0	0	0	0
EPS (Bt)	1.40	1.64	2.04	2.89	3.03	3.19
Core EPS (Bt)	1.38	1.60	1.48	2.89	3.03	3.19

Cash flow (THB m)						
Year ending Dec	2020	2021	2022	2023E	2024E	2025E
Operating cash flow	11,919	4,492	3,746	9,695	11,435	12,251
Net profit	5,205	6,100	7,604	10,778	11,299	11,885
Depre. & amortization	2,730	2,768	3,648	2,574	3,054	3,054
Change in working capital	4,045	(4,390)	(7,723)	(5,076)	(4,824)	(5,925)
Others	(61)	14	218	1,419	1,906	3,236
Investment cash flow	(16,192)	(6,127)	(18,203)	(2,581)	(2,095)	(764)
Net CAPEX	(7,216)	(5,332)	(7,085)	(4,000)	(4,500)	(4,500)
Change in LT investment	(7,546)	(711)	(3,942)	1,419	1,906	3,236
Change in other assets	(1,429)	(84)	(7,177)	0	500	500
Free cash flow	(4,273)	(1,635)	(14,457)	7,114	9,341	11,486
Financing cash flow	(2,805)	1,611	14,741	(5,324)	(6,698)	(8,564)
Change in share capital	0	0	0	0	0	0
Net change in debt	(2,873)	1,904	8,569	(1,731)	(2,035)	(1,326)
Dividend paid	(746)	(746)	(746)	(1,119)	(1,226)	(1,150)
Others	814	453	6,918	(2,474)	(3,437)	(6,088)
Net cash flow	(7,078)	(24)	284	1,791	2,643	2,922
Per share (THB)						
EPS	1.40	1.64	2.04	2.89	3.03	3.19
Core EPS	1.38	1.60	1.48	2.89	3.03	3.19
CFPS	2.09	2.33	2.96	3.68	3.95	4.11
BVPS	7.46	8.71	10.44	13.03	15.73	18.60
Sales/share	4.58	5.41	6.80	9.07	10.22	11.87
EBITDA/share	2.47	2.55	2.17	3.68	3.80	3.57
DPS	0.30	0.30	0.30	0.33	0.31	0.33
Valuation						
P/E (x)	35.30	58.70	47.58	21.02	20.05	19.07
P/BV (x)	6.61	11.02	9.29	4.66	3.86	3.27
Dividend yield (%)	0.61	0.31	0.31	0.54	0.51	0.54
Dividend payout ratio (%)	21.50	18.34	14.72	11.37	10.18	10.30

Source: SET, BYD Research

GENERAL DISCLAIMER

Analyst Certification

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RECOMMENDATION STRUCTURE

Stock Recommendations

Stock ratings are based on absolute upside or downside, which we define as (target price* - current price) / current price.

- BUY:** Expected return of 10% or more over the next 12 months.
HOLD: Expected return between -10% and 10% over the next 12 months.
SELL: Expected return of -10% or worse over the next 12 months.

Unless otherwise specified, these recommendations are set with a 12-month horizon. Thus, it is possible that future price volatility may cause

temporary mismatch between upside/downside for a stock based on market price and the formal recommendation.

* In most cases, the target price will equal the analyst's assessment of the current fair value of the stock. However, if the analyst doesn't think the market will reassess the stock over the specified time horizon due to a lack of events or catalysts, then the target price may differ from fair value. In most cases, therefore, our recommendation is an assessment of the mismatch between current market price and our assessment of current fair value.

Sector Recommendations

- Overweight:** The industry is expected to outperform the relevant primary market index over the next 12 months.
Neutral: The industry is expected to perform in line with the relevant primary market index over the next 12 months.
Underweight: The industry is expected to underperform the relevant primary market index over the next 12 months.

Country (Strategy) Recommendations

Overweight: Over the next 12 months, the analyst expects the market to score positively on two or more of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Neutral: Over the next 12 months, the analyst expects the market to score positively on one of the criteria used to determine market

recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Underweight: Over the next 12 months, the analyst does not expect the market to score positively on any of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Corporate Governance Report Rating (CG Score) (As of 27 October 2022)



AAV	BAFS	CHEWA	EA	GULF	KGI	MOONG	PLANB	S&J	SIRI	TACC	TPBI	WACOAL
ADVANC	BAM	CHO	EASTW	GUNKUL	KKP	MSC	PLANET	SAAM	SIS	TASCO	TGM	WAVE
AF	BANPU	CIMBT	ECF	HANA	KSL	MST	PLAT	SABINA	SITHAI	TCAP	TRC	WHA
AH	BAY	CK	ECL	HARN	KTB	MTC	PORT	SAMART	SMPC	TEAMG	TRUE	WHAUP
AIRA	BBIK	CKP	EE	HENG	KTC	MVP	PPS	SAMTEL	SNC	TFMAMA	TSC	WICE
AJ	BBL	CM	EGCO	HMPRO	LALIN	NCL	PR9	SAT	SONIC	THANA	TSR	WINNER
AKP	BCP	CNT	EPG	ICC	LANNA	NEP	PREB	SC	SORKON	THANI	TSTE	XPG
AKR	BCPG	COLOR	ETC	ICHI	LHFG	NER	PRG	SCB	SPALI	THCOM	TSTH	ZEN
ALLA	BDMS	COM7	ETE	III	LIT	NKI	PRM	SCC	SPI	THG	TTA	
ALT	BEM	COMAN	FN	ILINK	LOXLEY	NOBLE	PSH	SCCC	SPRC	THIP	TTB	
AMA	BEYOND	COTTO	FNS	ILM	LPN	NSI	PSL	SCG	SPVI	THRE	TTCL	
AMARIN	BGC	CPALL	FPI	IND	LRH	NVD	PTG	SCGP	SSC	THREL	TTW	
AMATA	BGRIM	CPF	FPT	INTUCH	LST	NYT	PTT	SCM	SSSC	TIPCO	TU	
AMATAV	BIZ	CPI	FSMART	IP	MACO	OISHI	PTTEP	SCN	SST	TISCO	TVDH	
ANAN	BKI	CPN	FVC	IRC	MAJOR	OR	PTTGC	SDC	STA	TK	TVI	
AOT	BOL	CRC	GC	IRPC	MAKRO	ORI	PYLON	SEAFCO	STEC	TKN	TVO	
AP	BPP	CSS	GEL	ITEL	MALEE	OSP	Q-CON	SEAOIL	STGT	TKS	TWPC	
APURE	BRR	DDD	GFPT	IVL	MBK	OTO	QH	SE-ED	STI	TKT	UAC	
ARIP	BTS	DELTA	GGC	JTS	MC	PAP	QTC	SELIC	SUN	TMILL	UBIS	
ASP	BTW	DEMCO	GLAND	JWD	MCOT	PCSGH	RABBIT	SENA	SUSCO	TMT	UPOIC	
ASW	BWG	DOHOME	GLOBAL	K	METCO	PDG	RATCH	SENAJ	SUTHA	TNDT	UV	
AUCT	CENDEL	DRT	GPI	KBANK	MFEC	PDJ	RBF	SGF	SVI	TNITY	VCOM	
AWC	CFRESH	DTAC	GPSC	KCE	MINT	PG	RS	SHR	SYMC	TOA	VGI	
AYUD	CGH	DUSIT	GRAMMY	KEX	MONO	PHOL	S	SICT	SYNTEC	TOP	VIH	



2S	ASIAN	CHAYO	EASON	IMH	KWC	NETBAY	PPP	SABUY	SMD	TCMC	TQR	WORK
7UP	ASIMAR	CHG	EFORL	INET	KWM	NEX	PPPM	SAK	SMIT	TFG	TRITN	WP
ABM	ASK	CHOTI	ERW	INGRS	L&E	NINE	PRAPAT	SALEE	SMT	TFI	TRT	XO
ACE	ASN	CHOW	ESSO	INSET	LDC	NNCL	PRECHA	SAMCO	SNNP	TFM	TRU	YUASA
ACG	ATP30	CI	ESTAR	INSURE	LEO	NOVA	PRIME	SANKO	SNP	TGH	TRV	ZIGA
ADB	B	CIG	FE	IRCP	LH	NPX	PRIN	SAPPE	SO	TIDLOR	TSE	
ADD	BA	CITY	FLOYD	IT	LHK	NRF	PRINC	SAWAD	SPA	TIGER	TVT	
AEONTS	BC	CIVIL	FORTH	ITD	M	NTV	PROEN	SCAP	SPC	TIPH	TWP	
AGE	BCH	CMC	FSS	J	MATCH	NUSA	PROS	SCI	SPCG	TITLE	UBE	
AHC	BE8	CPL	FTE	JAS	MBAX	NWR	PROUD	SCP	SR	TM	UEC	
AIE	BEH	CPW	GBX	JCK	MEGA	OCC	PSG	SE	SRICHA	TMC	UKEM	
AIT	BH	CRANE	GCAP	JCHK	META	OGC	PSTC	SECURE	SSF	TMD	UMI	
ALUCON	BIG	CRD	GENCO	JMT	MFC	ONEE	PT	SFLEX	SSP	TMI	UOBKH	
AMANAH	BIC	CSC	GJS	JR	MGT	PACO	PTC	SFP	STANLY	TNL	UP	
AMR	BJCHI	CSP	GTB	KBS	MICRO	PATO	QLT	SFT	STC	TNP	UPF	
APCO	BLA	CV	GYT	KCAR	MILL	PB	RCL	SGP	STPI	TNR	UTP	
APCS	BR	CWT	HEMP	KGEN	MITSI	PICO	RICHY	SIAM	SUC	TOG	VIBHA	
AQUA	BRI	DCC	HPT	KIAT	MK	PIMO	RJH	SINGER	SVOA	TPA	VL	
ARIN	BROOK	DHOUSE	HTC	KISS	MODERN	PIN	ROJINA	SKE	SVT	TPAC	VPO	
ARROW	BSM	DITTO	HUMAN	KK	MTI	PJW	RPC	SKN	SWC	TPCS	VRANDA	
AS	BYD	DMT	HYDRO	KOOL	NATION	PL	RT	SKR	SVNEX	TPIPL	WGE	
ASAP	CBG	DOD	ICN	KTIS	NCAP	PLE	RWI	SKY	TAE	TPIPP	WIK	
ASEFA	CEN	DPAINT	IFS	KUMWEL	NCH	PM	S11	SLP	TAKUNI	TPLAS	WIN	
ASIA	CHARAN	DV8	IIG	KUN	NDR	PMTA	SA	SMART	TCC	TPS	WINMED	



A	CPT	KASET	PPM	THMUJ
AS	CSR	KCM	PRAKIT	TKC
AI	CTW	KWI	PTECH	TNH
ALL	D	KYE	PTL	TNPC
ALPHAX	DCON	LEE	RAM	TOPP
AMC	EKH	LPH	ROCK	TPCH
APP	EMC	MATI	RP	TPOLY
AQ	EP	M-CHAI	RPH	TRUBB
AU	EVER	MCS	RSP	TTI
B52	F&D	MDX	SIMAT	TYCN
BEAUTY	FMT	MENA	SISB	UMS
BGT	GIFT	MID	SK	UNIQ
BLAND	GLOCON	MORE	SOLAR	UPA
BM	GLORY	MPIC	SPACK	UREKA
BROCK	GREEN	MUD	SPG	VARO
BSBM	GSC	NC	SQ	W
BTNC	HL	NEWS	STARK	WFX
CAZ	HTECH	NFC	STECH	WPH
CCP	IHL	NSL	SUPER	YGG
CGD	INOX	NV	TC	
CMAN	JAK	PAF	TCCC	
CMO	JMART	PEACE	T CJ	
CMR	JSP	PF	TEAM	
CPANEL	JUBILE	PK	THE	

Corporate Governance Report (CGR)

The disclosure of survey results of the Thai Institute of Directors Association (IOD) regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The IOD survey is based on the information of a company listed on the Stock Exchange of Thailand and Market for Alternative Investment (MAI) public and able to be accessed by a general public investor. The result, therefore, is from the perspective of third party. It is not an evaluation of operation and is not based on inside information.

The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey result may be changed after that date. Beyond Securities Public Company Limited does not confirm nor certify the accuracy of such survey result.

Score of Range	Number of Logo	Description
90-100	★★★★★	Excellent
80-89	★★★★	Very Good
70-79	★★★	Good
60-69	★★	Satisfactory
50-59	★	Pass
Below 50	No logo given	N/A

Anti-Corruption Progress Indicator (As of 7 July 2022)

CAE Certification

2S	BCH	COM7	FPT	INET	LPN	NSI	PROS	SCG	SSSC
7UP	BCP	COTTO	FSMART	INSURE	LRH	NWR	PSH	SCGP	SST
ADVANC	BCPG	CPALL	FSS	INTUCH	M	OCC	PSL	SCM	STA
AF	BE8	CPF	FTE	IRC	MAJOR	OGC	PSTC	SCN	STGT
AI	BEC	CPI	GBX	IRPC	MAKRO	ORI	PT	SEAOIL	STOWER
AIE	BEYOND	CPL	GC	ITEL	MALEE	PAP	PTG	SE-ED	SUSCO
AIRA	BGC	CPN	GCAP	IVL	MATCH	PATO	PTT	SELIC	SVI
AJ	BGRIM	CRC	GEL	JKN	MBAX	PB	PTTEP	SENA	SYMC
AKP	BKI	CSC	GFPT	JR	MBK	PCSGH	PTTGC	SGP	SYNTEC
AMA	BLA	DCC	GGC	K	MC	PDG	PYLON	SINGER	TAE
AMANAH	BPP	DELTA	GJS	KASET	MCOT	PDJ	Q-CON	SIRI	TAKUNI
AMATA	BROOK	DEMCO	GPI	KBANK	META	PG	QH	SITHAI	TASCO
AMATAV	BRR	DIMET	GPSC	KBS	MFC	PHOL	QLT	SKR	TCAP
AP	BSBM	DRT	GSTEEL	KCAR	MFEC	PK	QTC	SMIT	TCMC
APCS	BTS	DTAC	GULF	KCE	MILL	PL	RABBIT	SMK	TFG
AS	BWG	DUSIT	GUNKUL	KGEN	MINT	PLANB	RATCH	SMP	TFI
ASIAN	CEN	EA	HANA	KGI	MONO	PLANET	RML	SNC	TFMAMA
ASK	CENTEL	EASTW	HARN	KKP	MOONG	PLAT	RWI	SNP	TGH
ASP	CFRESH	EGCO	HEMP	KSL	MSC	PM	S&J	SORKON	THANI
AWC	CGH	EP	HENG	KTB	MST	PPP	SAAM	SPACK	THCOM
AYUD	CHEWA	EPG	HMPRO	KTC	MTC	PPPM	SABINA	SPALI	THIP
B	CHOTI	ERW	HTC	KWI	MTI	PPS	SAPPE	SPC	THRE
BAFS	CHOW	ESTAR	ICC	L&E	NEP	PR9	SAT	SPI	THREL
BAM	CIG	ETE	ICHI	LANNA	NINE	PREB	SC	SPRC	TIDLOR
BANPU	CIMBT	FE	IFS	LH	NKI	PRG	SCB	SRICHA	TIPCO
BAY	CM	FNS	III	LHFG	NOBLE	PRINC	SCC	SSF	TISCO
BBL	CMC	FPI	ILINK	LHK	NOK	PRM	SCCC	SSP	TKS

Announced to joint CAE

AH	CHG	DHOUSE	EVER	J	KUMWEL	NRF	RS	SUPER	TQM
ALT	CI	DOHOME	FLOYD	JMART	LDC	NUSA	SAK	SVT	TRT
APCO	CPR	ECF	GLOBAL	JMT	MEGA	OR	SIS	TKN	TSI
ASW	CPW	EKH	ILM	JTS	NCAP	PIMO	SSS	TMD	VARO
B52	DDD	ETC	INOX	KEX	NOVA	PLE	STECH	TMI	VCOM

Anti-Corruption Progress Indicator

The disclosure of the Anti – Corruption Progress indicators of a listed company on the Stock Exchange of Thailand, which is assessed by the relevant institution as disclosed by the Office of the Securities and Exchange Commission, is made to comply with the policy and sustainable development plan for the listed companies. The relevant institution made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of a third party. It is not an assessment of operation and is not based in any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, Beyond Securities Public Company Limited neither confirm, verifies, nor certifies the accuracy and completeness of the assessment result.