

BCPG BCPG TB

THAILAND / UTILITIES - RENEWABLES

BUY

UNCHANGED

From adder cut to capacity boost

- Raising investment in solar farms in Taiwan to offset upcoming adder expiration.
- Secured multiple new growth projects of approximately 999MW combined to fill earnings hiccups during 2022-24.
- BUY maintained with TP of THB17.

TARGET PRICE	THB17.00
CLOSE	THB11.80
UP/DOWNSIDE	+44.1%
PRIOR TP	THB17.00
CHANGE IN TP	UNCHANGED
TP vs CONSENSUS	+3.9%

KEY STOCK DATA

YE Dec (THB m)	2020	2021E	2022E	2023E
Revenue	4,231	4,637	5,440	4,693
Net profit	1,700	2,580	2,567	1,736
EPS (THB)	0.64	0.90	0.88	0.60
vs Consensus (%)	-	12.8	6.0	(1.3)
EBITDA	3,338	3,390	3,894	3,194
Core net profit	1,912	2,580	2,567	1,736
Core EPS (THB)	0.72	0.90	0.88	0.60
Chg. In EPS est. (%)	-	-	0.2	0.6
EPS growth (%)	(19.6)	24.4	(2.0)	(32.4)
Core P/E (x)	16.3	13.1	13.4	19.8
Dividend yield (%)	2.8	5.1	5.1	3.4
EV/EBITDA (x)	14.0	16.6	16.5	23.1
Price/book (x)	1.4	1.3	1.3	1.2
Net debt/Equity (%)	68.9	86.9	108.8	139.3
ROE (%)	10.1	10.7	9.7	6.3

Strengthening solar farm growth in Taiwan

On 28 January 2022, BCPG announced that it will raise its investment in solar farms in Taiwan from 170MW to 469MW with a total investment cost of NTD5.1b (THB6.1b). The solar farm projects will be staggeringly constructed in 2022-24 and commence commercial operation dates (COD) in 2022-25.

Taiwan's solar farms should timely fill the earnings gap

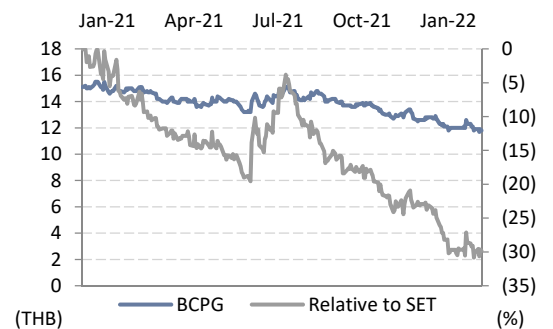
We see this as a strategically positive and critical move for BCPG, given that we project BCPG's net profit to sharply decline by a total of THB2b in 2022-24 as a result of the THB8/kWh adder expirations of its 118MW farms. Hence, the net profit addition from the expanded solar farm capacity in Taiwan should timely offset the earnings decline in 2022-24, potentially adding THB0.5b once the capacity of 469MW CODs by 2025. BCPG's solar farms in Taiwan will be built on former fish farm land, with an estimated investment cost of THB70m/MW, a feed-in-tariff of THB5.2-5.6/kWh, and a 20-year power purchase agreement with Taiwan Power Company, a state-owned enterprise managing electricity production and distribution in Taiwan.

Earnings gap is now close to being filled

To reduce the earnings hiccups in 2022-24 caused by the net profit drops from the expired adder-based tariffs of the 118MW solar farms in Thailand, BCPG has secured multiple new growth projects, including 270MW of equity capacity from the SWAN wind farms (COD in 2025) and a total of 114MW from two hydropower plants, Nam San 3A and 3B (operating), in Laos, four solar farms with a 75MW capacity in Japan (65MW COD in 2021-22), a 6MW wind farm in the Philippines, and 469MW solar farms in Taiwan.

From capital increase dilution to capacity growth addition

We maintain BUY and our SOTP-based TP of THB17. After its THB14.5b capital increase in 2020-22, BCPG has successfully secured a number of new growth projects that should not only compensate for the earnings plunge from the adder expirations in 2022-24 but also grow its net profit further even after the expirations of the highly lucrative 118MW solar farms in Thailand.



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	(2.5)	(11.9)	(23.9)
Relative to country (%)	(2.3)	(12.3)	(30.2)
Mkt cap (USD m)	1,028		
3m avg. daily turnover (USD m)	4.0		
Free float (%)	30		
Major shareholder	Bangchak Corporation Plc (70%)		
12m high/low (THB)	15.90/11.60		
Issued shares (m)	2,894.00		

Sources: Bloomberg consensus; FSSIA estimates



Suwat Sinsadok, CFA, FRM, ERP
 suwat.sin@fssia.com
 +66 2611 3558

Siriluck Pinthusoonthorn
 siriluck.pin@fssia.com
 +66 2611 3562

Investment thesis

Bangchak Power (BCPG), a subsidiary of Bangchak Corporation (BCP TB, BUY), is a low-risk renewable power operator with a proven track record in solar farm development and operations in high-growth renewable power markets, including Thailand and Japan. BCPG currently has two main business operations: 1) solar farms in Thailand and Japan; and 2) subsidiaries that are exploring opportunities in the biomass business. BCPG's venture into geothermal power plants in Indonesia and hydropower plants and wind farms in Laos have been successful, and these strategic moves should sustain its earnings post-2022 when earnings from its high-margin solar farms in Thailand should start declining substantially due to the expiration of its electricity tariff adders. BCPG's geothermal assets should: 1) bolster its earnings; and 2) allow it to capture future growth opportunities in Indonesia's fast-growing power industry, given the low-cost and renewable nature of geothermal power plants.

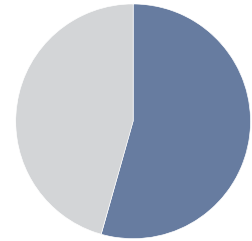
Company profile

BCPG is the flagship of the Bangchak Group, operating power plants at solar farms, wind farms and geothermal farms in Thailand, Indonesia and the Philippines, respectively.

www.bcpgroup.com

Principal activities (revenue, 2020)

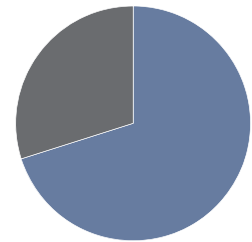
- Revenue from sale of electricity - 54.4 %
- Revenue from adder - 45.6 %



Source: BCPG

Major shareholders

- Bangchak Corporation Plc - 70.1 %
- Others - 29.9 %



Source: BCPG

Catalysts

Higher utilisation rates of power plants and rising demand for electricity in Thailand and China are key potential growth drivers.

Risks to our call

The downside risks to our SoTP-based TP include: 1) lower-than-expected demand for electricity in Thailand, the Philippines and Indonesia; and 2) government intervention by way of electricity tariff subsidies.

Event calendar

Date	Event
Feb 2022	4Q21/2021 results announcement

Key assumptions

	2021E	2022E	2023E
Dispatched power (GWh)	7,785	8,403	8,403
Capacity factor - wind farms (%)	38	38	38
Capacity factor - solar farms (%)	18	18	18
Capacity factor - geothermal (%)	93	94	95
Number of shares (m shares)	2,864	2,908	2,910

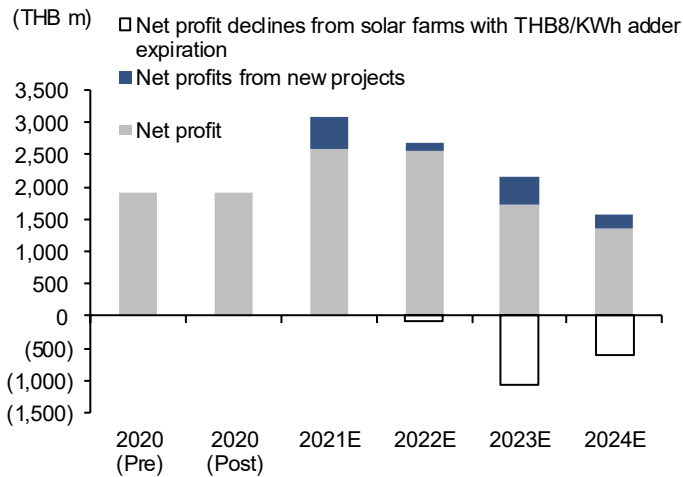
Source: FSSIA estimates

Earnings sensitivity

- For every 1% increase in gas price, we estimate 2021 earnings would decline 1.1%, and vice versa, all else being equal.
- For every 1% increase in interest expense, we estimate 2021 earnings would decline 1.5%, and vice versa, all else being equal.

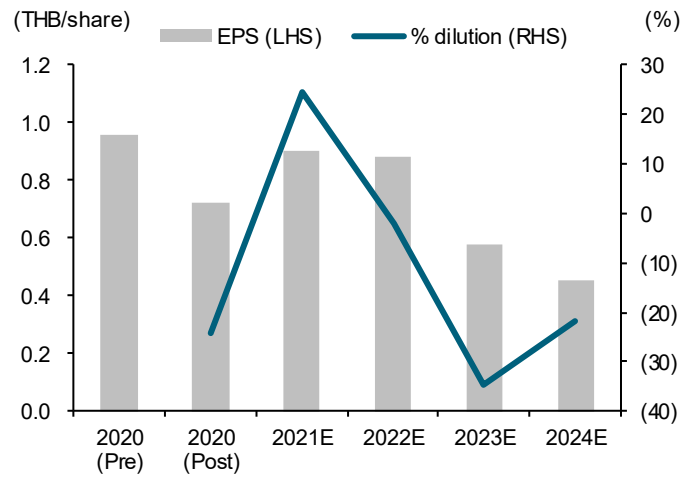
Source: FSSIA estimates

Exhibit 1: Net profit breakdown



Sources: BCPG; FSSIA estimates

Exhibit 2: EPS and % dilution



Sources: BCPG; FSSIA estimates

Exhibit 3: Project pipeline

Project	Location	Equity capacity (MW)	Net profit (THB m)	Value (THB/share)	COD
Nam San 3A & B	Laos	114	382	2.0	2021
Solar farm (Peony)	Thailand	20	112	0.2	2021
Wind farm (tariff hike)	Philippines	14	5	0.1	2021
Solar rooftop	Thailand	15	10	0.0	2021
Komagane	Japan	25	40	0.6	2022E
Yabuki	Japan	20	40	0.5	2022E
Chiba 1	Japan	20	18	0.6	2022E
Chiba 2	Japan	10	23	0.3	2022E
Wind farm (Monsoon)	Laos	228	410	5.7	2023E
Wind farm (Nabas)	Philippines	6	22	0.2	2023E
Geothermal Wayung #3	Indonesia	24	0	0.5	2024E
Geothermal (cost saving & tariff escalation)	Indonesia	158	230	2.2	2024E
Solar farms	Taiwan	469	510	4.0	2022-25E
Total		1,011	1,802	13.0	

Sources: BCPG; FSSIA estimates

Exhibit 4: SOTP valuation

Cost of equity assumptions	(%)	Cost of debt assumptions (%)	(%)
Risk-free rate	2.3	Pretax cost of debt	3.5
Market risk premium	8.5	Marginal tax rate	20.0
Stock beta	0.80		
Cost of equity, Ke	9.1	Net cost of debt, Kd	2.8
Weight applied	20.0	Weight applied	80.0
WACC (%)	4.1		

SOP valuation estimate	(THB m)	(THB/share)	Comments
Solar			
Thailand	14,125	4.9	WACC 4.1%, Risk-free rate 2.3%, Risk premium 8.5%, zero terminal growth
Japan	12,192	4.2	WACC 2%, Risk-free rate 1%, Risk premium 2%, zero terminal growth
Total solar	26,317	9.0	
Wind - Philippines	3,146	1.1	WACC 5.0%, Risk-free rate 4%, Risk premium 5.5%, zero terminal growth
Geothermal - Indonesia	28,730	9.9	WACC 5.0%, Risk-free rate 4%, Risk premium 5.5%, zero terminal growth
Hydro - Laos (Nam San 3A & B)	5,732	2.0	WACC 4.1%, Risk-free rate 2.3%, Risk premium 8.5%, zero terminal growth
Wind - Laos (Monsoon)	16,261	5.6	WACC 4.1%, Risk-free rate 2.3%, Risk premium 8.5%, zero terminal growth
Net debt	(30,564)	(10.5)	At end-2022E
Minorities	(112)	(0.0)	At end-2022E
Residual ordinary equity	49,510	17.0	

Sources: BCPG; FSSIA estimates

Financial Statements

BCPG

Profit and Loss (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Revenue	3,427	4,231	4,637	5,440	4,693
Cost of goods sold	(271)	(358)	(567)	(754)	(973)
Gross profit	3,155	3,873	4,070	4,685	3,720
Other operating income	14	11	16	24	37
Operating costs	(575)	(546)	(696)	(816)	(563)
Operating EBITDA	2,594	3,338	3,390	3,894	3,194
Depreciation	(690)	(1,078)	(757)	(1,030)	(913)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	1,904	2,260	2,634	2,864	2,281
Net financing costs	(466)	(586)	(541)	(794)	(1,087)
Associates	355	270	569	592	605
Recurring non-operating income	355	270	569	592	605
Non-recurring items	(96)	(212)	0	0	0
Profit before tax	1,697	1,732	2,662	2,662	1,799
Tax	8	(33)	(58)	(75)	(46)
Profit after tax	1,705	1,700	2,604	2,587	1,753
Minority interests	1	1	(23)	(19)	(16)
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
Reported net profit	1,706	1,700	2,580	2,567	1,736
Non-recurring items & goodwill (net)	96	212	0	0	0
Recurring net profit	1,801	1,912	2,580	2,567	1,736
Per share (THB)					
Recurring EPS *	0.90	0.72	0.90	0.88	0.60
Reported EPS	0.85	0.64	0.90	0.88	0.60
DPS	0.60	0.33	0.60	0.60	0.40
Diluted shares (used to calculate per share data)	1,999	2,640	2,864	2,908	2,908
Growth					
Revenue (%)	3.2	23.5	9.6	17.3	(13.7)
Operating EBITDA (%)	(22.7)	28.7	1.6	14.8	(18.0)
Operating EBIT (%)	(28.5)	18.7	16.5	8.7	(20.4)
Recurring EPS (%)	(18.9)	(19.6)	24.4	(2.0)	(32.4)
Reported EPS (%)	0.8	(24.5)	39.9	(2.0)	(32.4)
Operating performance					
Gross margin inc. depreciation (%)	71.9	66.1	71.4	67.2	59.8
Gross margin of key business (%)	71.9	66.1	71.4	67.2	59.8
Operating EBITDA margin (%)	75.7	78.9	73.1	71.6	68.0
Operating EBIT margin (%)	55.6	53.4	56.8	52.6	48.6
Net margin (%)	52.6	45.2	55.6	47.2	37.0
Effective tax rate (%)	-0.6	1.9	2.8	3.6	3.9
Dividend payout on recurring profit (%)	66.6	45.6	66.6	68.0	67.1
Interest cover (X)	4.8	4.3	5.9	4.4	2.7
Inventory days	-	-	-	-	-
Debtor days	73.9	80.2	120.9	149.3	227.0
Creditor days	1,053.9	577.0	-	-	-
Operating ROIC (%)	11.4	12.5	10.4	7.6	4.6
ROIC (%)	5.7	5.5	5.8	5.1	3.6
ROE (%)	11.8	10.1	10.7	9.7	6.3
ROA (%)	6.3	5.4	5.9	5.7	3.9
* Pre-exceptional, pre-goodwill and fully diluted					
Revenue by Division (THB m)					
Revenue from sale of electricity	1,437	2,301	2,765	3,624	2,932
Revenue from adder	1,990	1,930	1,872	1,816	1,761
Rendering of service					

Sources: BCPG; FSSIA estimates

Financial Statements

BCPG

Cash Flow (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Recurring net profit	1,801	1,912	2,580	2,567	1,736
Depreciation	690	1,078	757	1,030	913
Associates & minorities	355	270	569	592	605
Other non-cash items	-	-	-	-	-
Change in working capital	441	(881)	(590)	(656)	(724)
Cash flow from operations	3,287	2,379	3,316	3,533	2,530
Capex - maintenance	(690)	(1,078)	(757)	(1,030)	(913)
Capex - new investment	(730)	(992)	(9,243)	(8,970)	(9,087)
Net acquisitions & disposals	(123)	1,901	0	0	0
Other investments (net)	(5,073)	(3,613)	569	592	605
Cash flow from investing	(6,617)	(3,783)	(9,431)	(9,408)	(9,395)
Dividends paid	(1,199)	(871)	(1,308)	(1,732)	(1,164)
Equity finance	0	0	0	0	0
Debt finance	4,314	6,787	(2,435)	7,080	11,591
Other financing cash flows	(764)	5,182	671	(93)	(1,193)
Cash flow from financing	2,350	11,097	(3,072)	5,256	9,234
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	0	0	0	0	0
Movement in cash	(980)	9,693	(9,188)	(620)	2,369
Free cash flow to firm (FCFF)	(2,762.08)	(583.92)	(5,352.09)	(5,042.28)	(5,751.91)
Free cash flow to equity (FCFE)	219.65	10,564.49	(7,879.77)	1,111.61	3,532.03

Per share (THB)

FCFF per share	(0.95)	(0.20)	(1.85)	(1.74)	(1.99)
FCFE per share	0.08	3.65	(2.72)	0.38	1.22
Recurring cash flow per share	1.42	1.23	1.36	1.44	1.12

Balance Sheet (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Tangible fixed assets (gross)	16,643	18,313	28,313	38,313	48,313
Less: Accumulated depreciation	(2,967)	(3,645)	(4,402)	(5,432)	(6,345)
Tangible fixed assets (net)	13,676	14,668	23,911	32,881	41,968
Intangible fixed assets (net)	7,002	11,314	11,314	11,314	11,314
Long-term financial assets	-	-	-	-	-
Invest. in associates & subsidiaries	13,624	11,723	11,723	11,723	11,723
Cash & equivalents	1,445	11,138	1,951	1,331	3,700
A/C receivable	640	1,219	1,854	2,598	3,240
Inventories	0	0	0	0	0
Other current assets	367	135	148	174	150
Current assets	2,453	12,493	3,953	4,103	7,090
Other assets	382	1,022	1,022	1,022	1,022
Total assets	37,137	51,220	51,923	61,043	73,117
Common equity	15,506	22,480	25,538	27,445	28,018
Minorities etc.	49	69	92	112	128
Total shareholders' equity	15,555	22,549	25,630	27,557	28,146
Long term debt	16,026	23,219	20,439	27,140	38,313
Other long-term liabilities	568	1,405	1,405	1,405	1,405
Long-term liabilities	16,594	24,625	21,844	28,545	39,719
A/C payable	1,132	0	0	0	0
Short term debt	3,855	3,448	3,793	4,172	4,590
Other current liabilities	0	598	655	769	663
Current liabilities	4,987	4,046	4,448	4,941	5,253
Total liabilities and shareholders' equity	37,137	51,220	51,923	61,043	73,117
Net working capital	(124)	757	1,347	2,003	2,727
Invested capital	34,559	39,484	49,317	58,943	68,754

* Includes convertibles and preferred stock which is being treated as debt

Per share (THB)

Book value per share	7.76	8.51	8.92	9.44	9.63
Tangible book value per share	4.25	4.23	4.97	5.55	5.74

Financial strength

Net debt/equity (%)	118.5	68.9	86.9	108.8	139.3
Net debt/total assets (%)	49.6	30.3	42.9	49.1	53.6
Current ratio (x)	0.5	3.1	0.9	0.8	1.3
CF interest cover (x)	3.0	20.7	3.5	13.7	12.6

Valuation	2019	2020	2021E	2022E	2023E
Recurring P/E (x) *	13.1	16.3	13.1	13.4	19.8
Recurring P/E @ target price (x) *	18.9	23.5	18.9	19.3	28.5
Reported P/E (x)	13.8	18.3	13.1	13.4	19.8
Dividend yield (%)	5.1	2.8	5.1	5.1	3.4
Price/book (x)	1.5	1.4	1.3	1.3	1.2
Price/tangible book (x)	2.8	2.8	2.4	2.1	2.1
EV/EBITDA (x) **	16.2	14.0	16.6	16.5	23.1
EV/EBITDA @ target price (x) **	20.2	18.1	21.0	20.4	27.8
EV/invested capital (x)	1.2	1.2	1.1	1.1	1.1

* Pre-exceptional, pre-goodwill and fully diluted ** EBITDA includes associate income and recurring non-operating income

Sources: BCPG; FSSIA estimates

Corporate Governance report of Thai listed companies 2020

EXCELLENT LEVEL										
AAV	ADVANC	AF	AIRA	AKP	AKR	ALT	AMA	AMATA	AMATAV	ANAN
AOT	AP	ARIP	ARROW	ASP	BAFS	BANPU	BAY	BCP	BCPG	BDMS
BEC	BEM	BGRIM	BIZ	BKI	BLA	BOL	BPP	BRR	BTS	BWG
CENTEL	CFRESH	CHEWA	CHO	CIMBT	CK	CKP	CM	CNT	COL	COMAN
COTTO	CPALL	CPF	CPI	CPN	CSS	DELTA	DEMCO	DRT	DTAC	DTC
DV8	EA	EASTW	ECF	ECL	EGCO	EPG	ETE	FNS	FPI	FPT
FSMART	GBX	GC	GCAP	GEL	GFPT	GGC	GPSC	GRAMMY	GUNKUL	HANA
HARN	HMPRO	ICC	ICI	III	ILINK	INTUCH	IRPC	IVL	JKN	JSP
JWD	K	KBANK	KCE	KKP	KSL	KTB	KTC	LANNA	LH	LHFG
LIT	LPN	MAKRO	MALEE	MBK	MBKET	MC	MCOT	METCO	MFEC	MINT
MONO	MOONG	MSC	MTC	NCH	NCL	NEP	NKI	NOBLE	NSI	NVD
NYT	OISHI	ORI	OTO	PAP	PCSGH	PDJ	PG	PHOL	PLANB	PLANET
PLAT	PORT	PPS	PR9	PREB	PRG	PRM	PSH	PSL	PTG	PTT
PTTEP	PTTGC	PYLON	Q-CON	QH	QTC	RATCH	RS	S	S & J	SAAM
SABINA	SAMART	SAMTEL	SAT	SC	SCB	SCC	SCCC	SCG	SCN	SDC
SEAFCO	SEAOIL	SE-ED	SELIC	SENA	SIRI	SIS	SITHAI	SMK	SMPC	SNC
SONIC	SORKON	SPALI	SPI	SPRC	SPVI	SSSC	SST	STA	SUSCO	SUTHA
SVI	SYMC	SYNTEC	TACC	TASCO	TCAP	TFMAMA	THANA	THANI	THCOM	THG
THIP	THRE	THREL	TIP	TIPCO	TISCO	TK	TKT	TTB	TMILL	TNDT
TNL	TOA	TOP	TPBI	TQM	TRC	TRC	TSC	TSR	TSTE	TSTH
TTCL	TTW	TU	TVD	TVI	TVO	TWPC	U	UAC	UBIS	UV
VGI	VIH	WACOAL	WAVE	WHA	WHAUP	WICE	WINNER	TRUE		

VERY GOOD LEVEL										
2S	ABM	ACE	ACG	ADB	AEC	AEONTS	AGE	AH	AHC	AIT
ALLA	AMANAHA	AMARIN	APCO	APCS	APURE	AQUA	ASAP	ASEFA	ASIA	ASIAN
ASIMAR	ASK	ASN	ATP30	AUCT	AWC	AYUD	B	BA	BAM	BBL
BFIT	BGC	BJC	BJCHI	BROOK	BTW	CBG	CEN	CGH	CHARAN	CHAYO
CHG	CHOTI	CHOW	CI	CIG	CMC	COLOR	COM7	CPL	CRC	CRD
CSC	CSP	CWT	DCC	DCON	DDD	DOD	DOHOME	EASON	EE	ERW
ESTAR	FE	FLOYD	FN	FORTH	FSS	FTE	FVC	GENCO	GJS	GL
GLAND	GLOBAL	GLOCON	GPI	GULF	GYT	HPT	HTC	ICN	IFS	ILM
IMH	INET	INSURE	IRC	IRCP	IT	ITD	ITEL	J	JAS	JCK
JCKH	JMART	JMT	KBS	KCAR	KGI	KIAT	KOOL	KTIS	KWC	KWM
L&E	LALIN	LDC	LHK	LOXLEY	LPH	LRH	LST	M	MACO	MAJOR
MBAX	MEGA	META	MFC	MGT	MILL	MITSIB	MK	MODERN	MTI	MVP
NETBAY	NEX	NINE	NTV	NWR	OCC	OGC	OSP	PATO	PB	PDG
PDI	PICO	PIMO	PJW	PL	PM	PPP	PRIN	PRINC	PSTC	PT
QLT	RCL	RICHY	RML	RPC	RWI	S11	SALEE	SAMCO	SANKO	SAPPE
SAWAD	SCI	SCP	SE	SEG	SFP	SGF	SHR	SIAM	SINGER	SKE
SKR	SKY	SMIT	SMT	SNP	SPA	SPC	SPCG	SR	SRICHA	SSC
SSF	STANLY	STI	STPI	SUC	SUN	SYNEX	T	TAE	TAKUNI	TBSP
TCC	TCMC	TEAM	TEAMG	TFG	TIGER	TITLE	TKN	TKS	TM	TMC
TMD	TMI	TMT	TNITY	TNP	TNR	TOG	TPA	TPAC	TPCORP	TPOLY
TPS	TRITN	TRT	TRU	TSE	TVT	TWP	UEC	UMI	UOBKH	UP
UPF	UPOIC	UT	UTP	UWC	VL	VNT	VPO	WIJK	WP	XO
YUASA	ZEN	ZIGA	ZMICO							

GOOD LEVEL										
7UP	A	ABICO	AJ	ALL	ALUCON	AMC	APP	ARIN	AS	AU
B52	BC	BCH	BEAUTY	BGT	BH	BIG	BKD	BLAND	BM	BR
BROCK	BSBM	BSM	BTNC	CAZ	CCP	CGD	CITY	CMAN	CMO	CMR
CPT	CPW	CRANE	CSR	D	EKH	EP	ESSO	FMT	GIFT	GREEN
GSC	GTB	HTECH	HUMAN	IHL	INOX	INSET	IP	JTS	JUBILE	KASET
KCM	KKC	KUMWEL	KUN	KWG	KYE	LEE	MATCH	MATI	M-CHAI	MCS
MDX	MJD	MM	MORE	NC	NDR	NER	NFC	NNCL	NPK	NUSA
OCEAN	PAF	PF	PK	PLE	PMTA	POST	PPM	PRAKIT	PRECHA	PRIME
PROUD	PTL	RBF	RCI	RJH	ROJNA	RP	RPH	RSP	SF	SFLEX
SGP	SISB	SKN	SLP	SMART	SOLAR	SPG	SQ	SSP	STARK	STC
SUPER	SVOA	TC	TCCC	THMUI	TIW	TNH	TOPP	TPCH	TIPIP	TPLAS
TTI	TYCN	UKEM	UMS	VCOM	VRANDA	WIN	WORK	WPH		

Description

Score Range

Excellent

90-100

Very Good

80-89

Good

70-79

Disclaimer:

The disclosure of the 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 survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the Market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a 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 results may be changed after that date. FSS International Investment Advisory Company Limited does not confirm nor certify the accuracy of such survey results.

* CGR scoring should be considered with news regarding wrong doing of the company or director or executive of the company such unfair practice on securities trading, fraud, and corruption SEC imposed a civil sanction against insider trading of director and executive; ** delisted

Source: Thai Institute of Directors Association (IOD); FSSIA's compilation

Anti-corruption Progress Indicator 2020

CERTIFIED										
2S	ADVANC	AI	AIE	AIRA	AKP	AMA	AMANAHA	AP	AQUA	ARROW
ASK	ASP	AYUD	B	BAFS	BANPU	BAY	BBL	BCH	BCP	BCPG
BGC	BGRIM	BJCHI	BKI	BLA	BPP	BROOK	BRR	BSBM	BTS	BWG
CEN	CENTEL	CFRESH	CGH	CHEWA	CHOTI	CHOW	CIG	CIMBT	CM	CMC
COL	COM7	CPALL	CPF	CPI	CPN	CSC	DCC	DELTA	DEMCO	DIMET
DRT	DTAC	DTC	EASTW	ECL	EGCO	FE	FNS	FPI	FPT	FSS
FTE	GBX	GC	GCAP	GEL	GFPT	GGC	GJS	GPSC	GSTEEL	GUNKUL
HANA	HARN	HMPRO	HTC	ICC	ICHI	IFS	INET	INSURE	INTUCH	IRPC
ITEL	IVL	K	KASET	KBANK	KBS	KCAR	KCE	KGI	KKP	KSL
KTB	KTC	KWC	L&E	LANNA	LHFG	LHK	LPN	LRH	M	MAKRO
MALEE	MBAX	MBK	MBKET	MC	MCOT	MFC	MFEC	MINT	MONO	MOONG
MPG	MSC	MTC	MTI	NBC	NEP	NINE	NKI	NMG	NNCL	NSI
NWR	OCC	OCEAN	OGC	ORI	PAP	PATO	PB	PCSGH	PDG	PDI
PDJ	PE	PG	PHOL	PL	PLANB	PLANET	PLAT	PM	PPP	PPPM
PPS	PREB	PRG	PRINC	PRM	PSH	PSL	PSTC	PT	PTG	PTT
PTTEP	PTTGC	PYLON	Q-CON	QH	QLT	QTC	RATCH	RML	RWI	S & J
SABINA	SAT	SC	SCB	SCC	SCCC	SCG	SCN	SEAOIL	SE-ED	SELIC
SENA	SGP	SIRI	SITHAI	SMIT	SMK	SMPC	SNC	SNP	SORKON	SPACK
SPC	SPI	SPRC	SRICHA	SSF	SSSC	SST	STA	SUSCO	SVI	SYNTEC
TAE	TAKUNI	TASCO	TBSP	TCAP	TCMC	TFG	TFI	TFMAMA	THANI	THCOM
THIP	THRE	THREL	TIP	TIPCO	TISCO	TKT	TTB	TMD	TMILL	TMT
TNITY	TNL	TNP	TNR	TOG	TOP	TPA	TPCORP	TPP	TRU	TSC
TSTH	TTCL	TU	TVD	TVI	TVO	TWPC	U	UBIS	UEC	UKEM
UOBKH	UWC	VGI	VIH	VNT	WACOAL	WHA	WHAUP	WICE	WIJK	XO
ZEN	TRUE									

DECLARED										
7UP	ABICO	AF	ALT	AMARIN	AMATA	AMATAV	ANAN	APURE	B52	BKD
BM	BROCK	BUI	CHO	CI	COTTO	DDD	EA	EFORL	EP	ERW
ESTAR	ETE	EVER	FSMART	GPI	ILINK	IRC	J	JKN	JMART	JMT
JSP	JTS	KWG	LDC	MAJOR	META	NCL	NOBLE	NOK	PK	PLE
ROJNA	SAAM	SAPPE	SCI	SE	SHANG	SINGER	SKR	SPALI	SSP	STANLY
SUPER	SYNEX	THAI	TKS	TOPP	TRITN	TTA	UPF	UV	WIN	ZIGA

Level	
Certified	This level indicates practical participation with thoroughly examination in relation to the recommended procedures from the audit committee or the SEC's certified auditor, being a certified member of Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) or already passed examination to ensure independence from external parties.
Declared	This level indicates determination to participate in the Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC)

Disclaimer:

The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by Thaipat Institute, is made in order to comply with the policy and sustainable development plan for the listed companies of the Office of the Securities and Exchange Commission. Thaipat Institute 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 Thaipat Institute that is a third party. It is not an assessment of operation and is not based on 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, FSS International Investment Advisory Company Limited does not confirm, verify, or certify the accuracy and completeness of the assessment results.

Note: Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of June 24, 2019) are categorised into: 1) companies that have declared their intention to join CAC, and; 2) companies certified by CAC.

Source: The Securities and Exchange Commission, Thailand; * FSSIA's compilation

GENERAL DISCLAIMER

ANALYST(S) CERTIFICATION

Suwat Sinsadok, CFA, FRM, ERP FSS International Investment Advisory Securities Co., Ltd

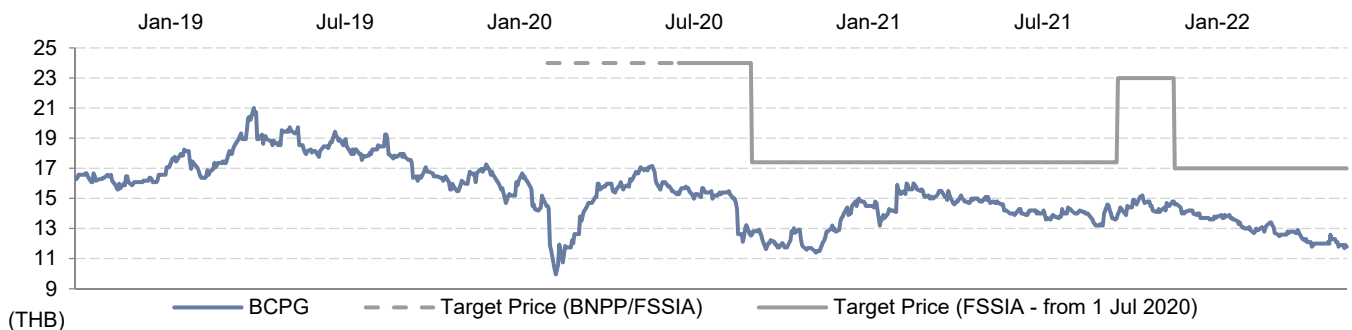
The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s) was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed herein.

This report has been prepared by FSS International Investment Advisory Company Limited (FSSIA). The information herein has been obtained from sources believed to be reliable and accurate; however FSS makes no representation as to the accuracy and completeness of such information. Information and opinions expressed herein are subject to change without notice. FSS has no intention to solicit investors to buy or sell any security in this report. In addition, FSS does not guarantee returns nor price of the securities described in the report nor accept any liability for any loss or damage of any kind arising out of the use of such information or opinions in this report. Investors should study this report carefully in making investment decisions. All rights are reserved.

This report may not be reproduced, distributed or published by any person in any manner for any purpose without permission of FSSIA. Investment in securities has risks. Investors are advised to consider carefully before making investment decisions.

History of change in investment rating and/or target price

BCPG (BCPG TB)



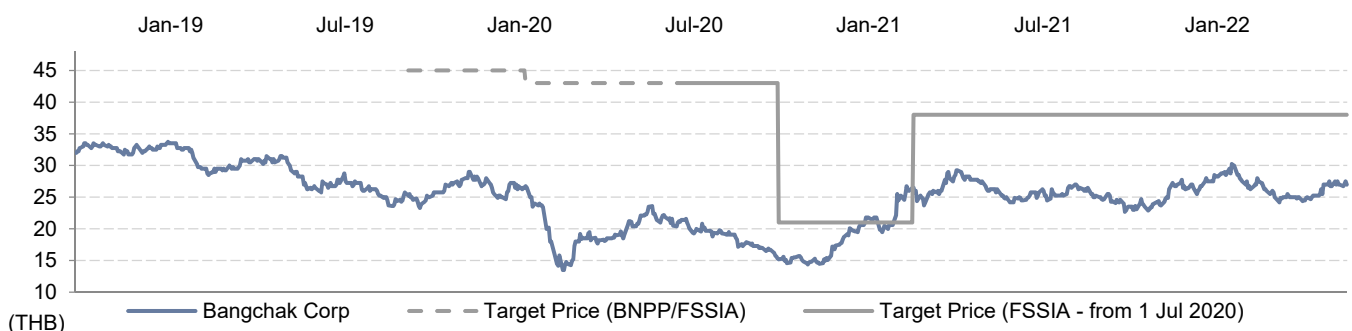
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
10-Mar-2020	BUY	24.00	13-Jul-2021	BUY	23.00	-	-	-
01-Sep-2020	BUY	17.40	31-Aug-2021	BUY	17.00	-	-	-

Suwat Sinsadok, CFA, FRM, ERP started covering this stock from 12-May-2020

Price and TP are in local currency

Source: FSSIA estimates

Bangchak Corp (BCP TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
08-Nov-2019	BUY	45.00	24-Sep-2020	BUY	21.00	-	-	-
20-Feb-2020	BUY	43.00	18-Jan-2021	BUY	38.00	-	-	-

Suwat Sinsadok, CFA, FRM, ERP started covering this stock from 08-Nov-2019

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
BCPG	BCPG TB	THB 11.80	BUY	The downside risks to our SoTP-based TP include: 1) lower-than-expected demand for electricity in Thailand, the Philippines and Indonesia; and 2) government intervention by way of electricity tariff subsidies.
Bangchak Corp	BCP TB	THB 27.00	BUY	The downside risks to our SoTP-based TP include: 1) lower-than-expected demand for petroleum products; 2) higher crude premiums; and 3) unplanned shutdowns of the company's refinery plants.

Source: FSSIA estimates

Additional Disclosures

Target price history, stock price charts, valuation and risk details, and equity rating histories applicable to each company rated in this report is available in our most recently published reports. You can contact the analyst named on the front of this note or your representative at Finansia Syrus Securities Public Company Limited

FSSIA may incorporate the recommendations and target prices of companies currently covered by FSS Research into equity research reports, denoted by an 'FSS' before the recommendation. FSS Research is part of Finansia Syrus Securities Public Company Limited, which is the parent company of FSSIA.

All share prices are as at market close on 27-Jan-2022 unless otherwise stated.

RECOMMENDATION STRUCTURE**Stock ratings**

Stock ratings are based on absolute upside or downside, which we define as $(\text{target price}^* - \text{current price}) / \text{current price}$.

BUY (B). The upside is 10% or more.

HOLD (H). The upside or downside is less than 10%.

REDUCE (R). The downside is 10% or more.

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

Industry Recommendations

Overweight. The analyst expects the fundamental conditions of the sector to be positive over the next 12 months.

Neutral. The analyst expects the fundamental conditions of the sector to be maintained over the next 12 months.

Underweight. The analyst expects the fundamental conditions of the sector to be negative over the next 12 months.

Country (Strategy) Recommendations

Overweight (O). 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 (N). 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 (U). 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.