

29 NOVEMBER 2021

Thailand Energy - Coal

Time to catch a coal

29% coal price rise from the bottom reflects a tight coal industry balance

After a more comprising COP26 agreement, which is not legally binding, was amended at the request of India and China – both among the world's biggest burners of coal – the Newcastle coal price index (NCT) has continued to rise from its bottom of USD139/t on 2 Nov-21 to USD185/t on 25 Nov-21, a 29.5% rise within less than a month. We believe the coal price rebound reflects the continued tight demand-supply balance of the global coal industry ahead of the upcoming seasonally high demand for coal for heating in the Northern Hemisphere in Nov-21 to Mar-22.

COP26 and China's coal price cap impacts are less severe than expected

Although the coal price, represented by NCT, had plunged by over 50% at one point and 33% from its peak of USD271/t on 5 Nov-21 to USD185/t on 25 Nov-21, caused by the impact of the COP26 pact and China's coal price cap policy, we think NCT is likely to remain high in the range of USD150-190/t in Nov-21 to Mar-22 before starting to decline toward USD120/t by mid-2022. The key supporting factors for our more sustainable coal price level of USD120/t include 1) the strong demand for coal for power generation, particularly for China and India as both countries remain the world's two largest coal consumers; and 2) the structural decline in the coal supply as a result of a lack of funding, mine closures to reduce carbon emissions following COP26, and China's dual policy of lower emissions and self-sustained energy and fossil-related derivatives production.

China has moved to gas for its upcoming winter demand

After successfully ramping up coal production from 11.3mt per day (mtpd) to 11.9mtpd in Nov-21, the National Development and Reform Commission (NDRC) declared with confidence that China will not face a power crunch again this winter. China has now ramped up its gas production to 1b cubic metres per day (cmpd), up 11% y-y, underscoring its efforts to ensure industrial power supplies and residential heating as the peak winter season demand is coming. While China has shored up its gas supply ahead of winter every year, for this winter (Nov-21 to Mar-22), China has raised the gas production rate much earlier as global gas prices have surged and demand has jumped.

Strong earnings growth for Banpu on USD150-190/t coal prices

We maintain our BUY call on Banpu and our SOTP-based target price of THB16.9. We believe the market still underestimates Banpu's 2022-23 earnings growth potential, driven by its key growth engines – high and sustainable prices of coal and gas into 2022 and solid power earnings – reflected in its share price collapse by 29% from its recent peak.



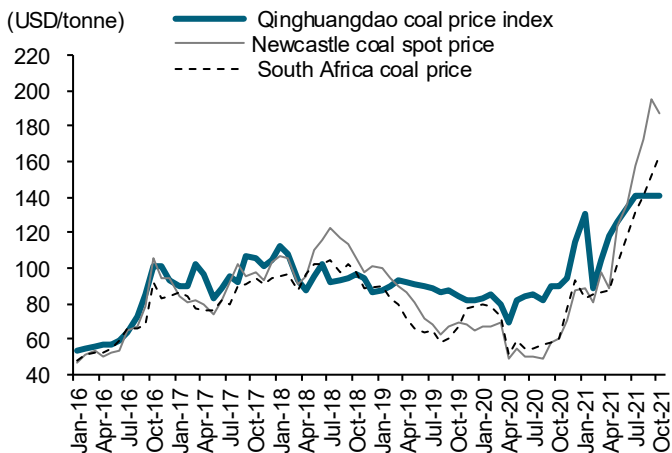
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Resurrection of coal price uptrend?

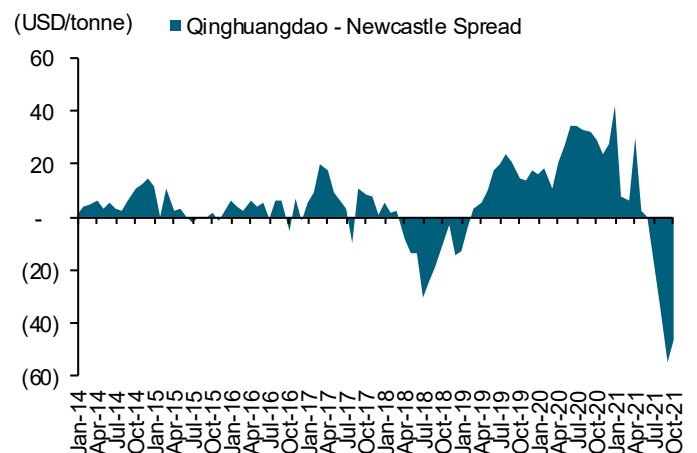
After a more comprising COP26 agreement, which is not legally binding, was amended at the request of India and China – both among the world’s biggest burners of coal – the NCT price has continued to rise from its bottom of USD139/t on 2 Nov-21 to USD185/t on 25 Nov-21, a 29.5% rise within less than a month. We believe the coal price rebound reflects the continued tight demand-supply balance of the global coal industry ahead of the upcoming seasonally high demand for coal for heating in the Northern Hemisphere in Nov-21 to Mar-22.

Exhibit 1: Benchmark coal prices (Qinghuangdao (QHD) vs NCT)



Source: Bloomberg

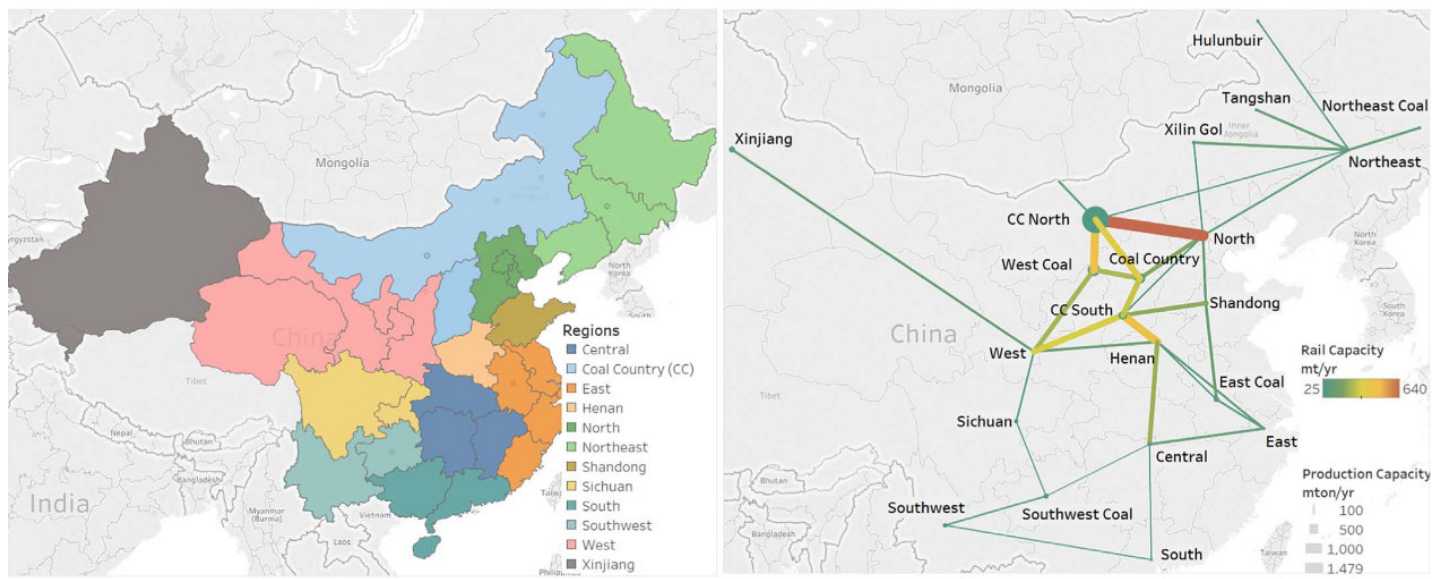
Exhibit 2: Coal price gap between QHD and NCT



Source: Bloomberg

After successfully ramping up coal production from 11.3mtpd to 11.9mtpd in Nov-21, the NDRC declared with confidence that China will not face a power crunch again this winter. It now has a sufficient coal inventory at its power plants for over one week, up from only one day of inventory at the end of Sep-21, to serve the higher demand for coal used in coal-fired power plants for residential heating.

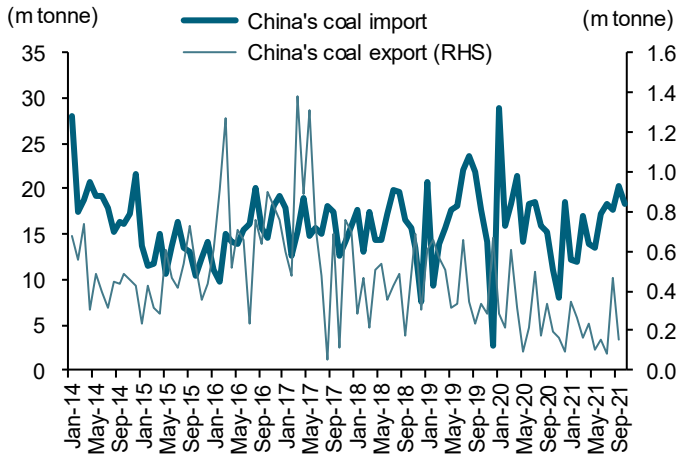
Exhibit 3: China’s coal production sites and railway infrastructure



Source: ScienceDirect

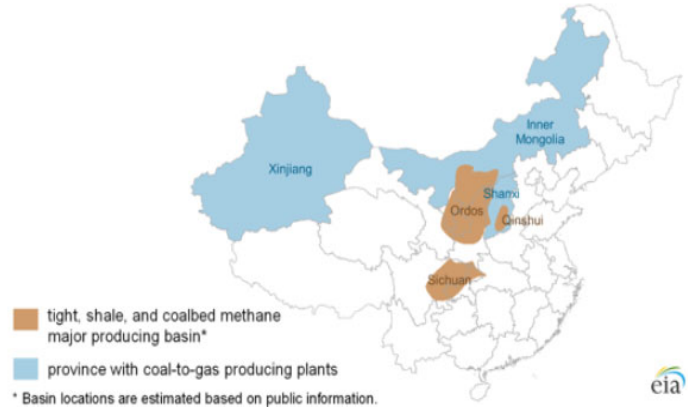
China raised its coal imports slightly to 21mt in Oct-21 to restock the coal supply and increase the inventory at its power plants. In addition, China's demand for coal is also to serve its coal-to-methane and coal-to-olefins productions that are located mostly in northwest Xinjiang province and northeast Inner Mongolia where the coal production is concentrated, along with the two other provinces of Shan Xi and Shaanxi.

Exhibit 4: China's coal imports and exports



Source: Bloomberg

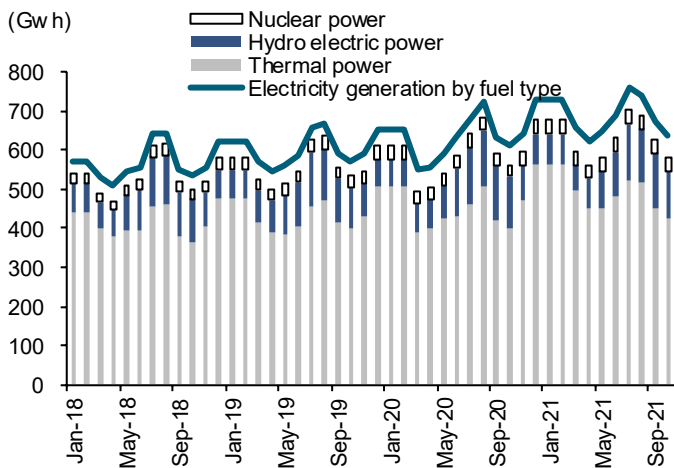
Exhibit 5: China's tight gas, shale gas, coalbed methane, and synthetic gas producing areas



Source: Energy Information Administration (EIA)

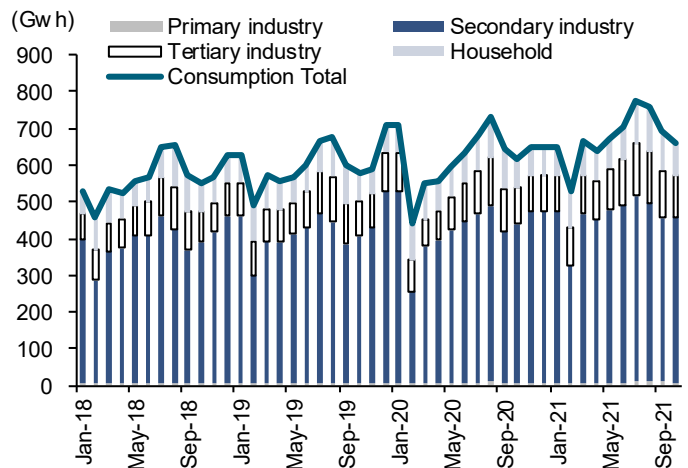
China has now ramped up its gas production to 1b cmpd, up 11% y-y, underscoring its efforts to ensure industrial power supplies and residential heating as the peak winter season demand is coming. While China has shored up its gas supply ahead of winter every year, for this winter (Nov-21 to Mar-22), China has raised the gas production rate much earlier as global gas prices have surged and demand has jumped.

Exhibit 6: China electricity supply breakdown



Source: Bloomberg

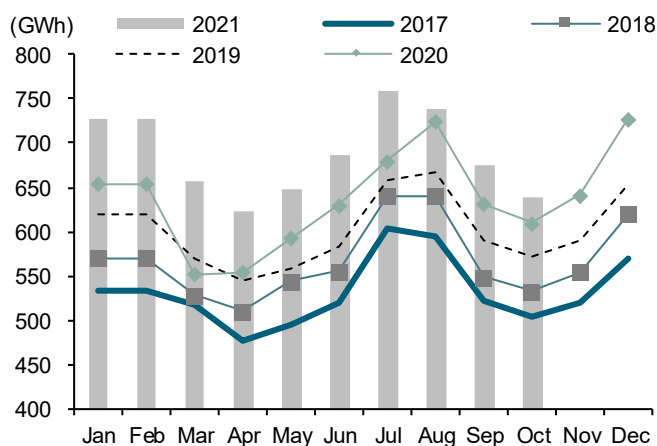
Exhibit 7: China electricity demand breakdown



Source: Bloomberg

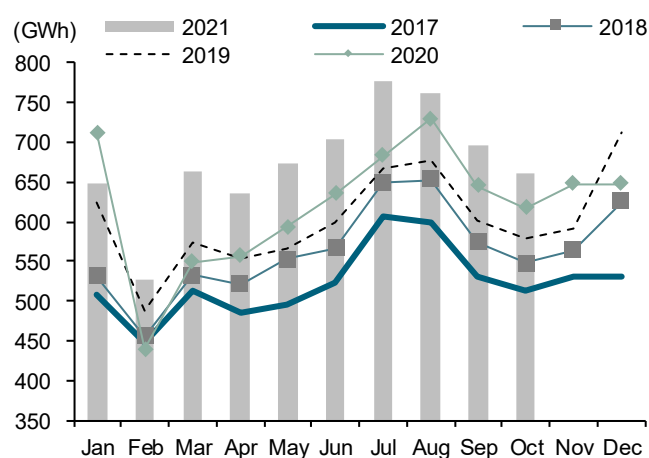
In the past 10 months, China's electricity demand has grown y-y every month, surpassing the pre-Covid levels seen in 2018-19 and 2020, indicating that China is now back on track to grow its economic activities as the Covid-19 pandemic gradually dissipates.

Exhibit 8: China electricity supply



Source: Bloomberg

Exhibit 9: China electricity demand

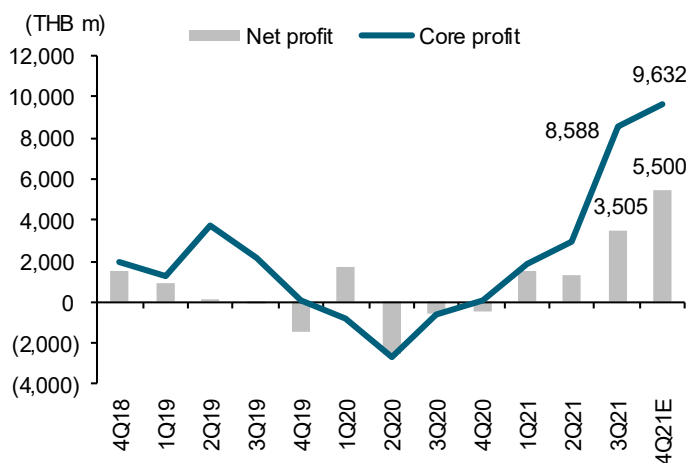


Source: Bloomberg

THB5b-7b net profit for Banpu likely in 4Q21 and 1Q22

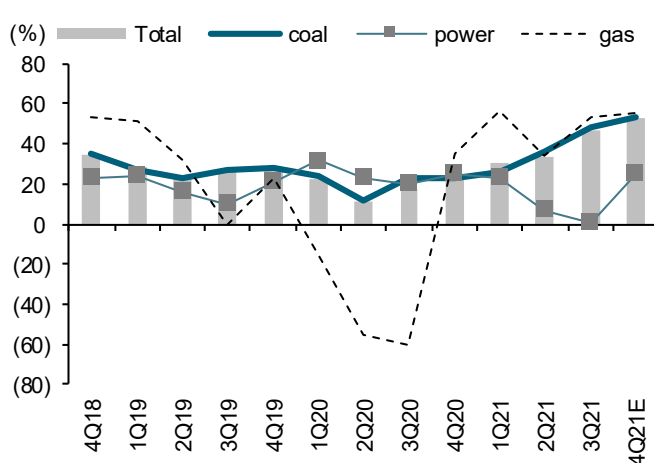
While Banpu's coal gross margin, particularly for its coal sales volume of 23mtpa in Indonesia, has enjoyed a significant rise in average selling price (ASP) since 2Q21, the gross margin for its coal sales has increased at a much lower degree than the increase in the NCT price due mainly to a large hedging loss that has offset the margin gain from the coal price rise.

Exhibit 10: Net profit and core net profit



Sources: Banpu; FSSIA estimates

Exhibit 11: Banpu's gross margin by business unit

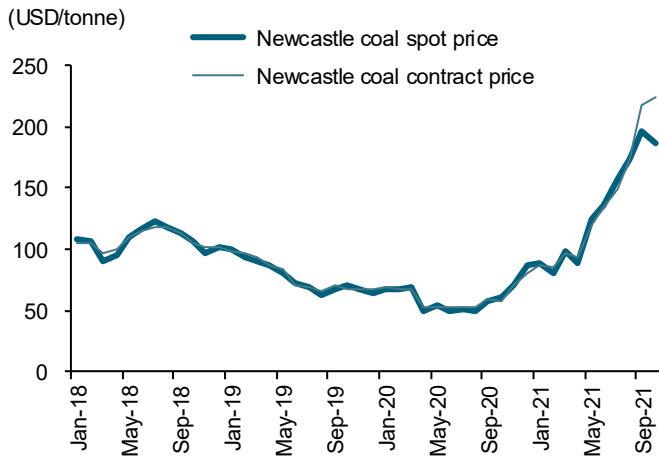


Sources: Banpu; FSSIA estimates

Our analysis indicates that Banpu incurred a hedging loss of USD45m in 2Q21, based on 1.1mt of unwound hedging coal volume, and USD102m in 3Q21 (2.1mt), largely offsetting the net profit of USD256m in 3Q21. This resulted in the disappointing 3Q21 reported net profit of only THB3.5b as the hedging loss effectively wiped out the strong coal operating net profits in 3Q21.

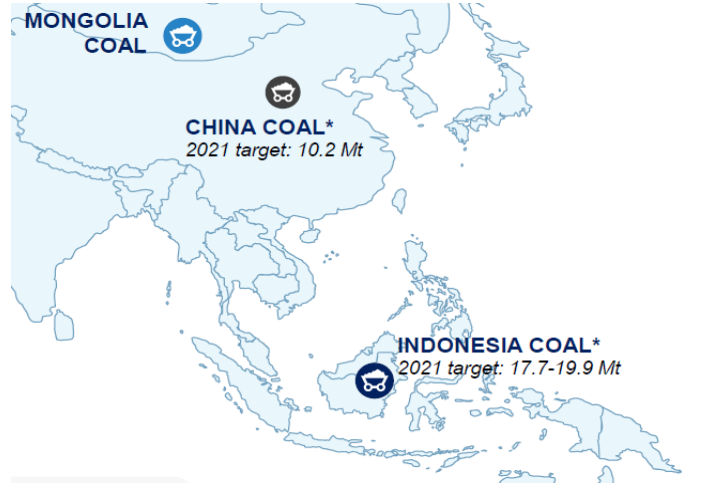
However, given our sustained high NCT coal price projection at above USD150/t in 4Q21 and over USD100/t at least until 2Q22, we expect Banpu's coal earnings to significantly jump in 4Q21-2Q22 to over THB5b per quarter. We estimate the hedging loss to significantly shrink to USD40m in 4Q21 (0.7mt) and decline to less than USD30m in subsequent quarters in 1Q-2Q22 as the outstanding hedging coal volume should decline from over 1mt per quarter in 2Q-3Q21 to below 0.5mt per quarter in 1H22.

Exhibit 12: Newcastle coal spot price vs contract price



Source: Bloomberg

Exhibit 13: Banpu's coal mining operations in China and Indonesia



Source: BANPU

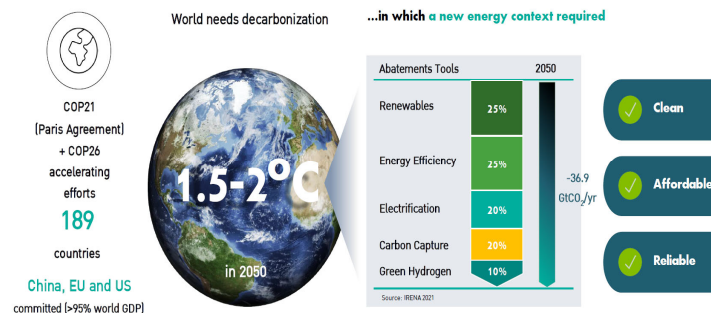
Will COP26 agreement be enforced, effectively cutting coal consumption?

COP26 agreement. On 15 Nov-21, during the summit meeting of the UN Climate Change Conference (COP26), aimed to reduce the worst impacts of climate change, a new global agreement – the Glasgow Climate Pact – was reached by 197 countries.

Although not legally binding, the COP26 pact will set the global agenda on climate change for the next decade to limit global warming to within 1.5C. However, the COP26 pact would likely only limit global warming to 2.4C, according to the Energy Information Administration (EIA).

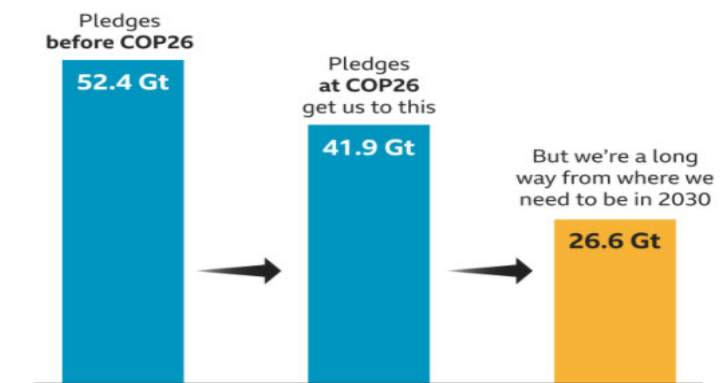
However, at the last minute, China and India only agreed to the commitment to reduce carbon emissions while insisting on “phasing down” rather than “phasing out” coal-fired power plants and coal consumption – the key sources of global carbon emissions. This could result in a weaker commitment by China and India to cut their coal consumptions in the next decade, in our view.

Exhibit 14: COP26 agreement



Sources: International Monetary Fund (IMF); World Economic Forum; EIA; International Organisation for Migration

Exhibit 15: Carbon emission cuts needed to limit global warming to 1.5C



Source: Energy Transitions Commission

Impact of COP26 on coal consumption and price. For the first time at a COP conference, there was an explicit plan to reduce coal consumption, which is responsible for 40% of the world's annual CO2 emissions.

Under the COP26 agreement, we believe the tightening global carbon emissions policy agreed upon by 197 countries, including Thailand, China, the US, and India, will lead to cuts in coal-fired power capacity in the long term in order to achieve the 1.5C temperature reduction globally.

Exhibit 16: Wind farms



Source: [Energy Transitions Commission](#)

Exhibit 17: Solar farms



Source: [Energy Transitions Commission](#)

However, in the short to medium term for the next five years, we doubt that significant cuts in coal-fired power generating capacity will be made by many countries, particularly China and India, as both countries still rely on over 50% of their power generating capacity from coal-fired capacity.

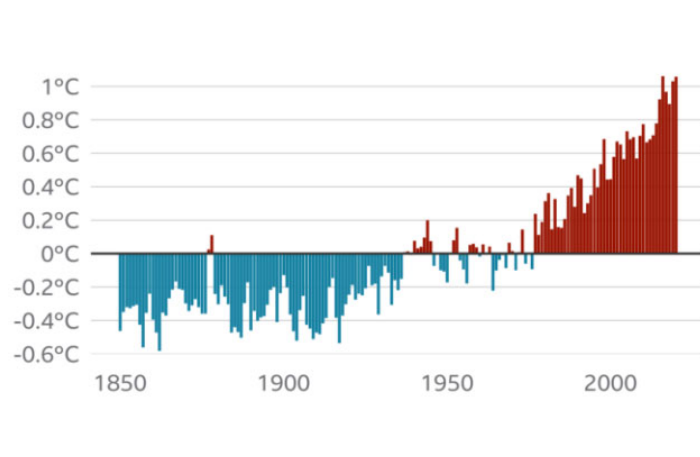
We think it is less likely that both China and India will be able to shun away from coal to other energy sources as quickly as within five years, given that it takes over 2-3 years to build gas-fired and hydropower plants, and renewable energy sources like solar and wind farms are still unreliable without cost-effective batteries used for energy storage systems (ESS).

The key takeaways from the COP26 climate summit to limit global warming to 1.5C includes seven key ways to tackle climate change.

- **Keep fossil fuels in the ground.** This essentially prohibits coal mining and using fossil fuels such as oil, gas, and coal that release carbon dioxide into the atmosphere when burnt for energy. Australia, the world's leading coal exporter, has declined to sign a deal at the COP26 summit aimed at phasing out coal consumption.
- **Curb methane emissions,** mainly from "flaring" – the burning of natural gas during the oil extraction process. At COP26, nearly 100 countries agreed to cut methane emissions in a deal led by the US and EU, which aims to limit methane emissions by 30% from 2020 levels within 2030.
- **Higher renewable power.** The process called decarbonization, switching from fossil-based coal, gas, and oil for power generation to renewable energy, is critical for the reduction of carbon emissions. This is where ESS can play a significant role in stabilising the power generated from solar and wind farms by storing the excess power in ESS and releasing it when needed.
- **Reduce coal consumption,** which accounts for 40% of global CO2 emissions. However, China and India are still reluctant to fully commit to the coal consumption cuts and only agreed to a weaker commitment to "phase down", not "phase out" coal consumption.

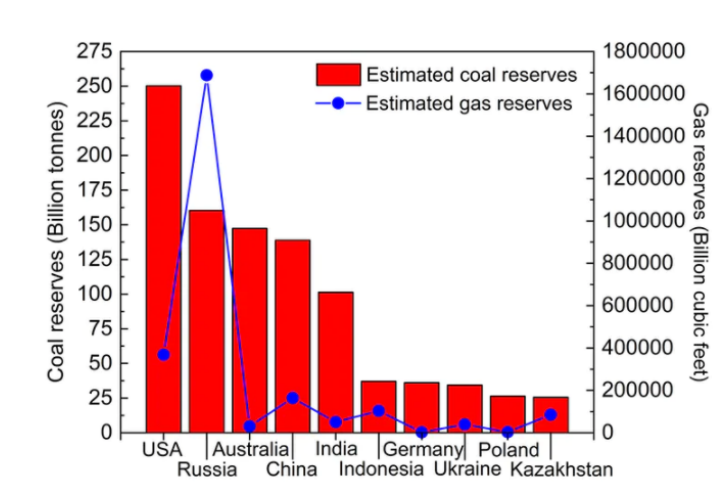
- **Phase out or abandon petroleum fuel consumption** and replace internal combustion engine vehicles with EVs. The idea remains highly challenging to achieve. Switching from the current internal combustion engine (ICE) vehicles using the refined oil products of diesel, gasoline, jet, and fuel oil, to EVs that predominantly use power generated from renewable and ESS sources will be key.
- **Plant more trees.** Leaders from over 100 countries, with about 85% of the world's forests, promised to curb deforestation and plant more trees by 2030 to expand forest growth, the best method of soaking up carbon from the atmosphere.
- **Remove greenhouse gases from the air.** The emerging technologies that artificially remove CO2 from the atmosphere, called "carbon capture utilisation and storage" (CCUS) technology is becoming more prevalent worldwide.
- **Provide financial aid to poorer countries.** Many coal-dependent countries are facing severe energy and power shortages that could affect the poor. The agreement pledged to significantly increase financial support to help poorer countries cope with the impact of climate change and make the switch to clean energy. The prospective amount was raised to USD1tr by 2025 for developed countries to help poorer countries, up from the USD100b pledged by 2020, which was missed.

Exhibit 18: Annual mean land and ocean temperature above or below average, 1850 to 2020



Note: Average calculated from 1951 to 1980
Source: University of California, Berkley

Exhibit 19: Global coal and gas reserves (2020)



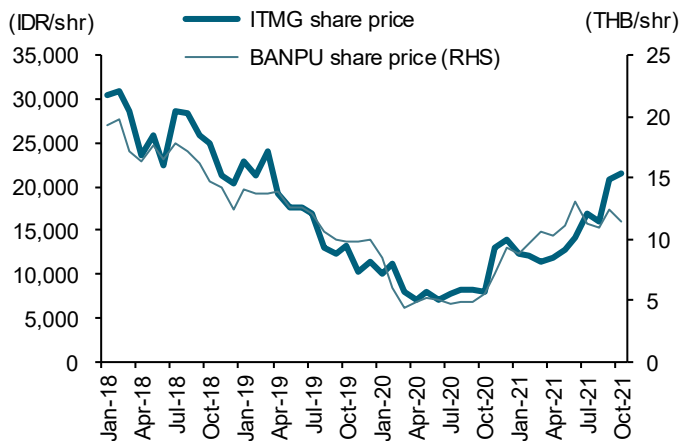
Source: EIA

Time to catch a coal

After its share price collapsed from its THB14.9 peak to the THB10.4 bottom within only two weeks, Banpu's share price has now rebounded to THB11.5, yet is still far underperforming the share price performance of ITMG and other Indonesian coal plays, as well as the NCT coal price which has risen by USD30/t from its USD139/t bottom (2 Nov-21) to USD185/t (25 Nov-21).

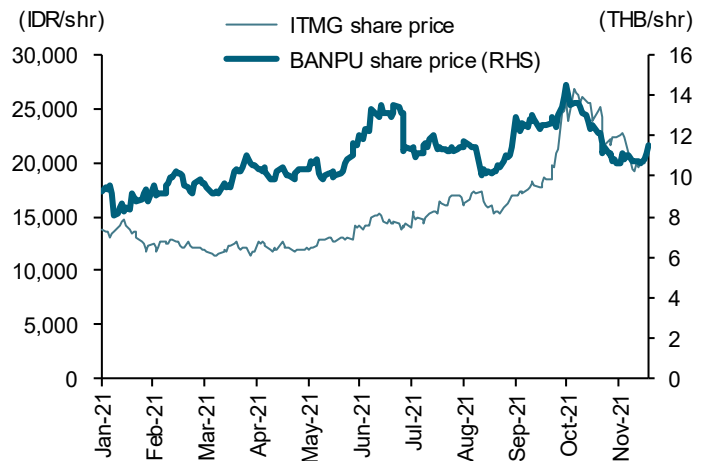
We believe Banpu's highly visible and strong reported and core net profits in 4Q21 and 1Q22, which we estimate to exceed THB5b, will be a key surprising factor to propel its share price back toward our THB16.9 target price by 1Q22.

Exhibit 20: Banpu's share price vs ITMG's (monthly)



Source: Bloomberg

Exhibit 21: Banpu's share price vs ITMG's (daily)



Source: Bloomberg

Exhibit 22: SoTP valuation

Banpu's valuation breakdown	THB/share	
ITMG (65%) (A)	10.4	DCF 9% WACC, terminal growth is zero for mines
China coal	2.2	DCF 9% WACC, terminal growth is zero for mines
Australian coal (Centennial)	10.0	DCF 9% WACC, terminal growth is zero for mines
Net value of non-ITMG coal (B)	22.6	
Value of power business		
BLCP	0.2	DCF 7.1% WACC, terminal growth is zero at the end of PPA
China power	2.5	DCF 7.1% WACC, terminal growth is zero at the end of PPA
Hongsa	4.3	DCF 7.1% WACC, terminal growth is zero at the end of PPA
SLG	1.2	DCF 7.1% WACC, terminal growth is zero at the end of PPA
NIGGC	1.2	DCF 4% WACC, terminal growth is zero at the end of PPA
Solar farms (Japan, Thailand, China)	1.0	DCF 7.1% WACC, terminal growth is zero at the end of PPA
Net value of power (C)	10.5	
Net value of shale gas (D)	3.0	DCF 7.1% WACC, terminal growth is zero at the end of PPA
Banpu's net debt	(19.2)	at end-2022E
Net value of Banpu (A+B+C+D)	16.9	Target price

Sources: BANPU; 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	PAP	PCSGH	PDJ	PG	PHOL	PLANB
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:

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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 FSS International Investment Advisory Securities Co., Ltd

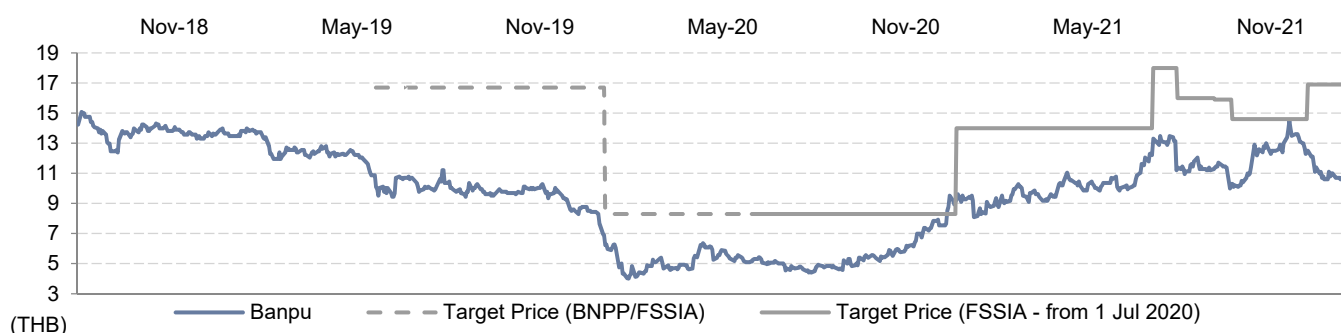
The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s)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

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History of change in investment rating and/or target price

Banpu (BANPU TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
13-Aug-2019	BUY	16.70	14-Jan-2021	BUY	14.00	17-Aug-2021	BUY	14.60
26-Feb-2020	HOLD	8.30	24-Feb-2021	BUY	14.00	27-Aug-2021	BUY	14.60
26-Feb-2020	HOLD	8.30	10-Jun-2021	BUY	18.00	04-Oct-2021	BUY	14.60
09-Oct-2020	BUY	8.30	01-Jul-2021	HOLD	16.00	21-Oct-2021	BUY	16.90
23-Dec-2020	BUY	14.00	02-Aug-2021	BUY	15.90			

Suwat Sinsadok started covering this stock from 09-Oct-2018

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
Banpu	BANPU TB	THB 11.00	BUY	We see downside risks to our SoTP-based TP from lower coal prices, higher diesel costs and any unplanned shutdowns of its power 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 26-Nov-2021 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.