

# CLOVER POWER

# CV TB

THAILAND / UTILITIES - RENEWABLES

# REDUCE

FROM BUY

## Stumbling growth on feedstock pain

- We project CV's NP to decline from THB147m in 2021 to THB81m in 2022, while revenue should increase from THB1.7b to THB1.9b.
- Despite the acquisition and expansion strategy, we have not noticed a significant operational improvement.
- Downgrade to a REDUCE recommendation.

TARGET PRICE	THB1.80
CLOSE	THB2.00
UP/DOWNSIDE	-10.0%
PRIOR TP	THB5.50
CHANGE IN TP	-67.3%
TP vs CONSENSUS	-

### KEY STOCK DATA

YE Dec (THB m)	2021	2022E	2023E	2024E
Revenue	1,722	1,946	2,712	5,509
Net profit	147	81	127	283
EPS (THB)	0.11	0.06	0.10	0.22
vs Consensus (%)	-	-	-	-
EBITDA	270	206	307	586
Core net profit	147	81	127	283
Core EPS (THB)	0.11	0.06	0.10	0.22
Chg. In EPS est. (%)	nm	(53.5)	(28.2)	nm
EPS growth (%)	39.4	(45.2)	57.9	122.3
Core P/E (x)	17.4	31.7	20.1	9.0
Dividend yield (%)	-	1.3	2.0	4.4
EV/EBITDA (x)	10.7	14.7	10.2	5.5
Price/book (x)	1.3	1.3	1.2	1.1
Net debt/Equity (%)	16.5	22.6	24.2	21.6
ROE (%)	11.5	4.1	6.2	13.1

### Subpar operations to continue to drag earnings in 2H22

After a series of disappointing quarterly net profits (NP) due to feedstock price hikes (gas and woodchips) and a supply shortage (woodchips), we believe CV will continue to see weak gross margins for its biomass power plants and gas-fired small power producer (SPP). The main reasons include 1) low woodchip feedstock quality and availability for the biomass power plants; 2) rising gas and woodchip feedstock prices; and 3) poor operational efficiency with suboptimal running rates. We project CV's NP to plunge from THB147m in 2021 to THB81m in 2022 before rebounding to THB127m in 2023 and THB283m in 2024, as we expect to see improvements in operational efficiency and the reliability of the woodchip feedstock supply, plus a subsiding gas cost for the SPP.

### Feedstock price hikes erode earnings of biomass and VSPP

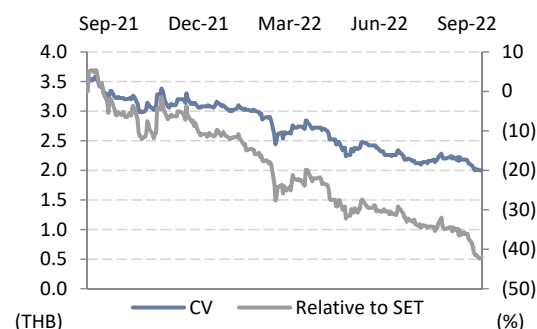
CV's poor utilisation rate and earnings for its biomass, WTE and VSPP power plants have been triggered by its overreliance on external sources of feedstock used for the power plants, including woodchips, RDF waste, and natural gas. While the spike in the gas cost is driven by the import of high-priced spot LNG to replace the lower domestic gas production, mainly from Erawan gas field, the higher price of woodchips was caused by a seasonal supply shortage. CV will not be able to start procuring woodchip feedstock from its new RDF plant and the acquired woodchip plant in Vietnam until 2023, according to management.

### Acquisition and Japanese market may not provide a big enough boost

Even with CV's acquisition of DKC Energy in 2Q22 and a plan to secure new growth for its biomass power plant in Japan up to an installed capacity of 180MW by 2026, we believe the growth plan remains "too little, too late" to turn CV's NP growth around without any significant improvement in its existing operational power plant assets.

### Downgrade to a REDUCE recommendation

We downgrade CV to REDUCE from Buy based on our SoTP valuation of THB1.80/share. We revise down our EPS forecasts by 76.9%/80.2%/54.8% in 2022-24 to reflect our estimates for CV's operational performance and the difficulties in running its business.



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	(9.1)	(13.8)	(46.2)
Relative to country (%)	(11.0)	(16.6)	(47.3)
Mkt cap (USD m)	70		
3m avg. daily turnover (USD m)	0.1		
Free float (%)	57		
Major shareholder	Saksithisereekul family (28%)		
12m high/low (THB)	3.82/1.99		
Issued shares (m)	1,280.00		

Sources: Bloomberg consensus; FSSIA estimates



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

**Chonthicha Khanijoh**  
 chonthicha.kha@fssia.com  
 +66 2611 3552

## Investment thesis

CV engages in three main businesses: 1) a power producing business – operating two biomass power plants, one waste-to-energy (WTE) power plant and one very small power producer (VSPP) with a total installed capacity of 23.7MW; 2) a fuel supply business – a recently acquired wood pellet plant and a refuse-derived fuel (RDF) Type 3 plant with a total installed capacity of 150,000tpa; and 3) an engineering, procurement, and construction (EPC) business – comprising general construction, renewable energy, modular and energy conservation power plants, and infrastructure.

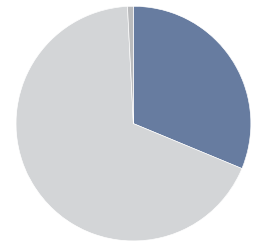
## Company profile

CV is a leading EPC and biomass power plant and waste-to-energy power plant producer.

[www.cloverpower.co.th](http://www.cloverpower.co.th)

## Principal activities (revenue, 2021)

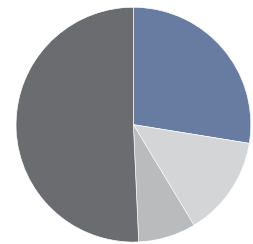
- Power Business - 31.3 %
- EPC Business - 67.9 %
- Service and other - 0.8 %



Source: Clover Power

## Major shareholders

- Saksithisereekul family - 27.5 %
- Loetruangsuphakun family - 13.8 %
- Bunditkitsada family - 7.9 %
- Others - 50.7 %



Source: Clover Power

## Catalysts

Potential catalysts are a lower utilisation rate, higher feedstock prices and higher operational efficiency.

## Risks to our call

The upside risks to our SoTP-based TP include 1) a higher-than-expected demand for electricity in Thailand; 2) lower feedstock prices; and 3) increased operational efficiency.

## Event calendar

Date	Event
Oct 2022	3Q22 results announcement

## Key assumptions

Key assumptions	2022E	2023E	2024E
Utilisation rate (%)	88	88	89
Gas price (THB/mmbtu)	339	407	488

Source: FSSIA estimates

## Earnings sensitivity

- For every 1% increase in utilisation rate, we estimate 2022 earnings would rise by 1.2%, and vice versa, all else being equal.
- For every 1% increase in feedstock cost, we estimate 2022 earnings would decline by 1.7%, and vice versa, all else being equal.

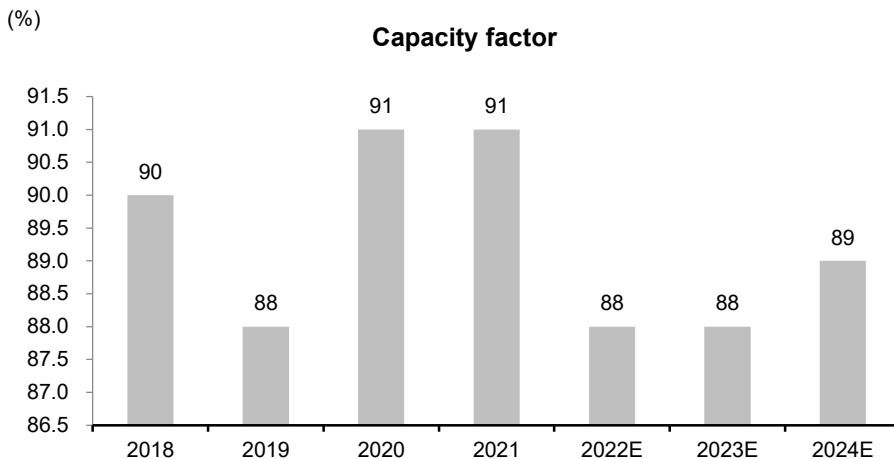
Source: FSSIA estimates

## Inability to secure new growth

CV has long been running at an average capacity factor of 88% in 1H22 mainly due to the unplanned shutdown of the CPL power plant. In addition, we believe CV has encountered multiple challenges while running the power plant, including 1) feedstock quality and availability; 2) a rise in feedstock prices; and 3) lower operational efficiency.

Due to the lack of an internal feedstock supply, CV usually purchases woodchips, RDF waste, and natural gas in bulk from domestic suppliers to feed in its operating biomass, WTE and VSPP power plants.

### Exhibit 1: Capacity factor



Sources: Clover Power; FSSIA estimates

### Woodchips

CV purchases wood logs in bulk from its supplier and further converts them into smaller woodchips. Due to the inclusion of soil and other mixed components, it usually weighs more than the actual feed. Along with the high freight cost, it comes with additional fees for chopping and removing unused parts.

Humidity, one of the causes that depletes feedstock quality, continues to disrupt the operation of CV's biomass power plants. As a result, CV has been buying additional feedstock at a higher price to overcome the shortage. In 1H22, feedstock was unavailable, leading a lower-than-expected utilisation rate. CV was unable to find solutions to improve feedstock quality and availability, even though it recently acquired DKC Energy – a wood pellet supply company in Vietnam. Moreover, we think CV is unlikely to import from DKC, given the higher freight cost.

### Exhibit 2: Woodchips



Source: Clover Power

### Exhibit 3: Woodchips



Source: Clover Power

## RDF waste

CV is currently in the process of constructing an RDF Type 3 plant, 'CVR' to feed its WTE power plant (CPX). CV is focusing on decreasing the fuel cost and trading it with other thermal plants, cement plants, and WTE power plants, and generating income in 4Q22.

Exhibit 4: RDF waste



Source: Clover Power

Exhibit 5: RDF waste



Source: Clover Power

## Natural gas

Given that domestic gas production has sharply declined, Thailand's natural gas importers have been forced to purchase from the global market at a price higher than THB900/MMBtu in order to substitute a sufficient supply until 2024. The natural gas from the Gulf of Thailand and Myanmar was previously bought at a price almost five times cheaper at THB180/MMBtu. Due to the global energy price issue, specifically the constantly fluctuating and steadily rising price of natural gas (LNG) and crude oil, the price of generating power for the Electricity Generating Authority of Thailand (EGAT) increased over the previous year. We expect that the price will continue in an upward trend due to the unavoidable power imbalance.

Exhibit 6: Gas engine and generator



Source: Clover Power

Exhibit 7: Absorption chiller



Source: Clover Power

## Divesting a loss-making power supply business

As a result of RTB's chronic operational performance issues, CV eventually sold off its entire 25% share to avoid the continual losses. Consequently, CV currently has four operating power plants with a declining total equity capacity from 23.5MW to 21.2MW. From our point of view, CV deals with issues where the root causes are not well handled.

## Less lucrative project led to CV’s shrinking margin

### Power supply & EPC business

The Office of the Energy Regulatory Commission announced that some companies were chosen to participate in the Community Power Plant project – a total of 43 projects up for bidding representing a total of 149.5MW of electricity offered for sale (with an average selling price of THB3.18/kWh). CV was chosen for three projects, all of which are biomass power plant projects with an installed capacity totalling 18MW.

Considering that big players in the energy sector have a higher potential to sweep 50-60% of the total projects, we assume that such players can incur comparatively lower cost of sales and operating expenses given their massive production capability.

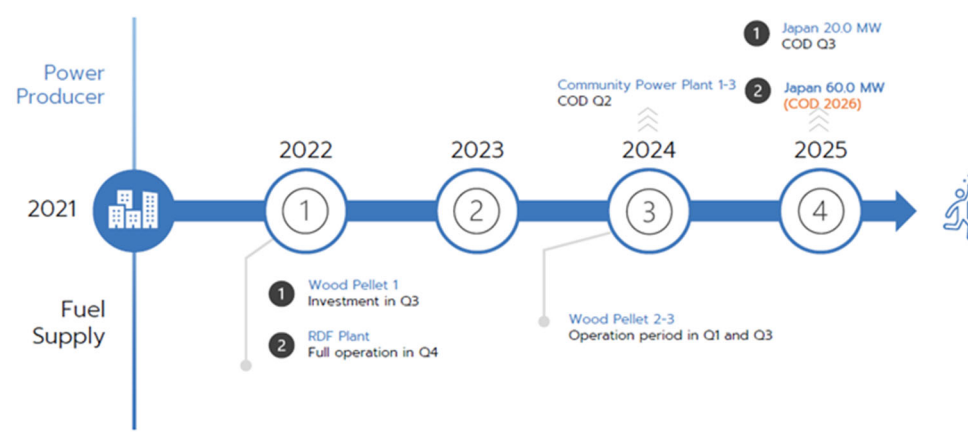
We doubt if CV, with its operational difficulties, may survive such a low margin with its three selected community biomass plants, commercial operation date (COD) 2024. We believe the impact will be the same for the EPC business.

### Exhibit 8: CV’s projects

Projects	Type	Equity Capacity	COD	Location
<b>Operating</b>				
<b>Power Supply Business (MW)</b>				
CV	Biomass	8.00	Feb-16	Phrae
CPL	Biomass	4.50	Aug-18	Phitsanulok
CPX	WTE	1.88	Oct-20	Phichit
SPP	Natural Gas	6.80	Jan-20	Saraburi
<b>Fuel Supply Business (tpa)</b>				
DKC	Wood Pellet	100,000	Jul-22	Vietnam
CVR	RDF Waste	50,000	2022E	Phichit
<b>Expansion</b>				
<b>Power Supply Business (MW)</b>				
Community Biomass 1	Biomass	6.00	2024E	n.a
Community Biomass 2	Biomass	6.00	2024E	n.a
Community Biomass 3	Biomass	6.00	2024E	n.a
Miyazaki 1	Biomass	6.00	2025E	Japan
Miyazaki 2	Biomass	6.00	2025E	Japan
Owase 3	Biomass	54.00	2026E	Japan
<b>Fuel Supply Business (tpa)</b>				
Wood Pellet 2	Wood Pellet	200,000	2024E	n.a
Wood Pellet 3	Wood Pellet	200,000	2024E	n.a

Sources: Clover Power; FSSIA estimates

### Exhibit 9: CV’s expansion timeline



Source: Clover Power

## From Thailand's competitive to Japan's attractive power market

### Acquisition of DKC Energy – wood pellet fuel supply

In July 2022, CV acquired 60% of DKC Energy's operating wood pellet plant in Vietnam, with an installed capacity of 100,000tpa. The plant, according to CV, was recently installed using imported high-quality German machinery. Employees are undergoing training on how to operate the machinery, which we believe could take some time before adequate operational efficiency can be achieved.

Moreover, the plant serves as an intermediary for the continual export of fuel supplies to Korea and Japan. The acquisition strategy was developed under the premise that CV aims to install power plants in Japan so it can provide feedstock to prospective power plants.

Given that CV's revenue from its fuel supply business rose to THB91m in 1H22 from the recognition of revenue from the sale of goods, we expect CV to earn another THB62m in 2H22.

#### Exhibit 10: DKC Energy, Vietnam



Source: Clover Power

### Expanding in the Japanese market

CV is pursuing plans to expand its biomass power plant in Japan, targeting a total installed capacity of 180MW by 2026. Given that the market in Japan is growing and is less competitive, CV is currently undergoing R&D and finalising the prospective location. Moreover, the Japanese government has developed policies to enhance the availability of renewable energy sources. The expansion is still a long way ahead.

Although the plan is theoretically interesting, we do not expect that it will be sufficient to turn CV's NP growth around unless the existing operational issues are solved.

## TP lowered to THB1.80 on lower EPS

We downgrade CV to REDUCE from Buy based on our SoTP valuation of THB1.80/share. We revise down our EPS forecasts by 76.9%/80.2%/54.8% in 2022-24 to reflect our estimates for CV's operational performance and the difficulties in running its business.

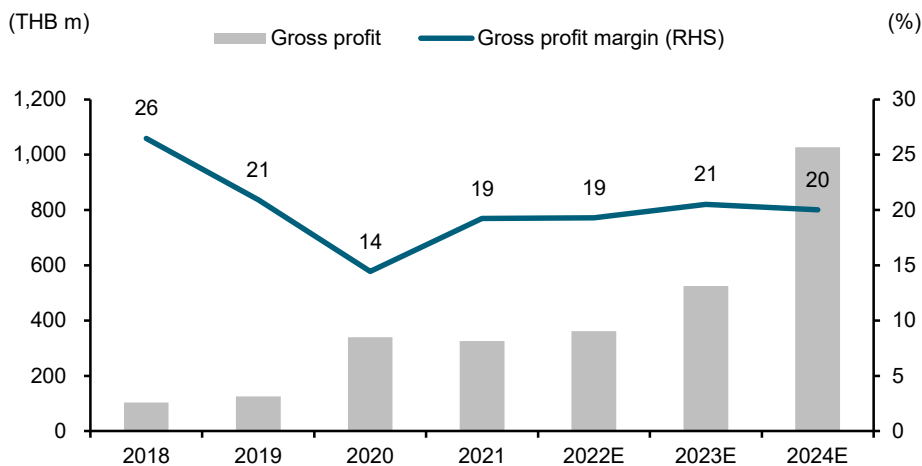
We revise down our gross profit assumptions in 2022-23 by 46.6%/46.9%, but raise our 2024 gross profit estimate by 4.2% due to a rise in feedstock prices and our lower operating profit assumptions by 66.8%/67.4%/38.1%.

We derive our SoTP-based target price of THB1.80 from:

- THB0.07/share for the four operating power plants (DCF);
- THB0.10/share for the newly acquired operating wood pellet plant and RDF CVR plant that we expect to generate income in 4Q22.
- THB1.62/share for the EPC business, based on 14x 2023E P/E, a discount to Thailand's contractor EPC peers' average of over 20x, as we think CV's EPC still faces operational and margin risks.
- THB0.36/share for the three community biomass power plants using a DCF valuation.

We apply a DCF valuation for each power plant using a similar risk-free rate of 3%, a risk premium of 8%, and a beta of 0.8, which results in a WACC of 8.2%.

### Exhibit 11: Gross profit & gross profit margin



Sources: Clover Power; FSSIA estimates

### Exhibit 12: Changes in key assumptions and EPS forecasts

	Current			Previous			Change		
	2022E (THB m)	2023E (THB m)	2024E (THB m)	2022E (THB m)	2023E (THB m)	2024E (THB m)	2022E (%)	2023E (%)	2024E (%)
Revenue	1,946	2,712	5,509	1,983	2,311	2,291	(1.9)	17.4	140.5
Gross profit	362	524	1,027	679	988	985	(46.6)	(46.9)	4.2
Operating profit	132	217	414	398	668	668	(66.8)	(67.4)	(38.1)
Net profit	81	127	283	349	644	630	(76.9)	(80.2)	(55.0)
EPS	0.06	0.10	0.22	0.27	0.50	0.49	(76.9)	(80.2)	(54.8)
<b>Key assumptions</b>									
Utilisation rate (%)	88	88	89	93	93	93	(5.7)	(5.7)	(4.6)
Gas price (THB/mmbtu)	339	407	488	226	210	195	50.0	93.5	149.7

Note: Change of items in percentage terms are represented in ppt change

Sources: Clover Power; FSSIA estimates

## Exhibit 13: CV's SoTP valuation

Cost of equity assumptions		Cost of debt assumptions	
	(%)		(%)
Risk free rate	3.0	Pretax cost of debt	6.2
Market risk premium	8.0	Marginal tax rate	20.0
Stock beta	0.8		
Cost of equity, Ke	9.4	Net cost of debt, Kd	4.9
Weight applied	72.0	Weight applied	28.0
WACC (%)	8.2		

Sum-of-part valuation estimate	% stake	Capacity	Value	Comments
	(%)	(MW)	(THB m)	(THB/share)
<b>Operating and committed power plants (A)</b>				<b>1.43</b>
CV (Biomass, 5 Feb 2016)	100	8.0	176	0.14 DCF WACC 8.2%, Risk free rate 3.0%, Risk premium 8.0%
CPL (Biomass, 9 Aug 2018)	100	4.5	(12)	(0.01) DCF WACC 8.2%, Risk free rate 3.0%, Risk premium 8.0%
CPX (WTE-RDF, 30 Oct 2020)	49	1.9	(17)	(0.01) DCF WACC 8.2%, Risk free rate 3.0%, Risk premium 8.0%
SPP (VSPP, 23 Jan 2020)	100	6.8	(61)	(0.05) DCF WACC 8.2%, Risk free rate 3.0%, Risk premium 8.0%
DKC (Wood Pellet, 21 Jul 2022)	60	n/a	132	0.10 At 2023E
EPC Business	100	n/a	2,074	1.62 At 2023E 14x P/E
Net cash (debt)	n/a	n/a	(455)	(0.36) At end-2023E
<b>Under development power plants (B)</b>				<b>0.00</b>
CVR (RDF Type 3, Jul 2022)	100	n/a	2	0.00 Full operation in 4Q2022
<b>Residual ordinary equity</b>				<b>1.44</b>
(Community Biomass 1, 2024)	100	6.0	153	0.12 DCF WACC 8.2%, Risk free rate 3.0%, Risk premium 8.0%
(Community Biomass 2, 2024)	100	6.0	153	0.12 DCF WACC 8.2%, Risk free rate 3.0%, Risk premium 8.0%
(Community Biomass 3, 2024)	100	6.0	153	0.12 DCF WACC 8.2%, Risk free rate 3.0%, Risk premium 8.0%
<b>Total potential upside</b>	<b>100</b>	<b>39.2</b>	<b>2,298</b>	<b>1.80</b>

Sources: Clover Power; FSSIA estimates



## Financial Statements

### Clover Power

Profit and Loss (THB m) Year Ending Dec	2020	2021	2022E	2023E	2024E
Revenue	2,469	1,722	1,946	2,712	5,509
Cost of goods sold	(2,063)	(1,314)	(1,584)	(2,188)	(4,483)
<b>Gross profit</b>	<b>406</b>	<b>408</b>	<b>362</b>	<b>524</b>	<b>1,027</b>
Other operating income	-	-	-	-	-
Operating costs	(122)	(138)	(156)	(217)	(441)
<b>Operating EBITDA</b>	<b>285</b>	<b>270</b>	<b>206</b>	<b>307</b>	<b>586</b>
Depreciation	(64)	(80)	(75)	(90)	(172)
Goodwill amortisation	0	0	0	0	0
<b>Operating EBIT</b>	<b>221</b>	<b>189</b>	<b>132</b>	<b>217</b>	<b>414</b>
Net financing costs	(11)	(33)	(48)	(59)	(65)
Associates	(7)	(1)	0	0	0
Recurring non-operating income	21	13	20	35	35
Non-recurring items	0	0	0	0	0
<b>Profit before tax</b>	<b>231</b>	<b>169</b>	<b>104</b>	<b>194</b>	<b>383</b>
Tax	(31)	(19)	(14)	(13)	(46)
<b>Profit after tax</b>	<b>200</b>	<b>150</b>	<b>90</b>	<b>181</b>	<b>337</b>
Minority interests	(121)	(3)	(9)	(54)	(54)
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
<b>Reported net profit</b>	<b>79</b>	<b>147</b>	<b>81</b>	<b>127</b>	<b>283</b>
<b>Non-recurring items &amp; goodwill (net)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Recurring net profit</b>	<b>79</b>	<b>147</b>	<b>81</b>	<b>127</b>	<b>283</b>
<b>Per share (THB)</b>					
Recurring EPS *	0.08	0.11	0.06	0.10	0.22
Reported EPS	0.08	0.11	0.06	0.10	0.22
DPS	0.00	0.00	0.03	0.04	0.09
Diluted shares (used to calculate per share data)	960	1,280	1,280	1,280	1,280
<b>Growth</b>					
Revenue (%)	293.3	(30.3)	13.0	39.4	103.1
Operating EBITDA (%)	134.9	(5.3)	(23.4)	48.9	90.6
Operating EBIT (%)	261.7	(14.3)	(30.4)	64.9	90.2
Recurring EPS (%)	14.2	39.4	(45.2)	57.9	122.3
Reported EPS (%)	14.2	39.4	(45.2)	57.9	122.3
<b>Operating performance</b>					
Gross margin inc. depreciation (%)	13.9	19.0	14.8	16.0	15.5
Gross margin of key business (%)	-	-	-	-	-
Operating EBITDA margin (%)	11.5	15.7	10.6	11.3	10.6
Operating EBIT margin (%)	9.0	11.0	6.8	8.0	7.5
Net margin (%)	3.2	8.5	4.1	4.7	5.1
Effective tax rate (%)	13.2	11.2	13.4	6.5	12.1
Dividend payout on recurring profit (%)	-	-	40.0	40.0	40.0
Interest cover (X)	22.0	6.1	3.2	4.3	6.9
Inventory days	1.7	4.0	4.2	4.0	3.4
Debtor days	44.4	202.9	283.9	235.0	161.2
Creditor days	101.4	137.7	138.7	130.7	112.8
Operating ROIC (%)	18.6	9.7	4.7	7.2	12.6
ROIC (%)	18.2	9.2	5.0	7.7	12.6
ROE (%)	20.3	11.5	4.1	6.2	13.1
ROA (%)	10.5	6.7	3.5	5.4	7.3
* Pre-exceptional, pre-goodwill and fully diluted					
<b>Revenue by Division (THB m)</b>					
Power Business	434	538	646	645	1,202
EPC Business	2,025	1,170	1,148	1,182	1,218
Service and other	10	14	152	885	3,090

Sources: Clover Power; FSSIA estimates

## Financial Statements

### Clover Power

Cash Flow (THB m) Year Ending Dec	2020	2021	2022E	2023E	2024E
Recurring net profit	79	147	81	127	283
Depreciation	64	80	75	90	172
Associates & minorities	(7)	(1)	0	0	0
Other non-cash items	-	-	-	-	-
Change in working capital	6	(946)	(73)	16	(17)
<b>Cash flow from operations</b>	<b>141</b>	<b>(720)</b>	<b>82</b>	<b>234</b>	<b>439</b>
Capex - maintenance	(64)	(80)	(81)	(89)	(100)
Capex - new investment	(70)	(204)	(113)	(211)	(272)
Net acquisitions & disposals	(109)	52	0	0	0
Other investments (net)	345	397	0	0	0
<b>Cash flow from investing</b>	<b>102</b>	<b>165</b>	<b>(194)</b>	<b>(301)</b>	<b>(372)</b>
Dividends paid	(309)	(459)	(32)	(51)	(113)
Equity finance	331	1,211	0	0	0
Debt finance	(71)	(40)	515	(158)	369
Other financing cash flows	(252)	0	12	54	54
<b>Cash flow from financing</b>	<b>(301)</b>	<b>712</b>	<b>495</b>	<b>(156)</b>	<b>309</b>
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
<b>Net other adjustments</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Movement in cash</b>	<b>(57)</b>	<b>156</b>	<b>383</b>	<b>(223)</b>	<b>375</b>
Free cash flow to firm (FCFF)	278.09	(522.51)	(63.76)	(8.13)	131.74
Free cash flow to equity (FCFE)	(79.41)	(595.52)	415.40	(171.77)	488.48

### Per share (THB)

FCFF per share	0.22	(0.41)	(0.05)	(0.01)	0.10
FCFE per share	(0.06)	(0.47)	0.32	(0.13)	0.38
Recurring cash flow per share	0.14	0.18	0.12	0.17	0.36

Balance Sheet (THB m) Year Ending Dec	2020	2021	2022E	2023E	2024E
Tangible fixed assets (gross)	1,391	1,392	1,592	1,892	2,192
Less: Accumulated depreciation	(250)	(47)	(128)	(217)	(317)
<b>Tangible fixed assets (net)</b>	<b>1,141</b>	<b>1,345</b>	<b>1,465</b>	<b>1,675</b>	<b>1,875</b>
<b>Intangible fixed assets (net)</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
Long-term financial assets	-	-	-	-	-
Invest. in associates & subsidiaries	109	57	57	57	57
Cash & equivalents	37	193	576	354	729
A/C receivable	498	1,416	1,611	1,882	2,984
Inventories	12	17	20	28	56
Other current assets	89	127	143	199	405
<b>Current assets</b>	<b>637</b>	<b>1,753</b>	<b>2,350</b>	<b>2,463</b>	<b>4,174</b>
Other assets	66	155	155	155	155
<b>Total assets</b>	<b>1,955</b>	<b>3,312</b>	<b>4,029</b>	<b>4,352</b>	<b>6,264</b>
Common equity	604	1,953	2,004	2,080	2,250
Minorities etc.	0	4	14	67	121
<b>Total shareholders' equity</b>	<b>604</b>	<b>1,957</b>	<b>2,017</b>	<b>2,147</b>	<b>2,371</b>
Long term debt	328	356	932	774	1,142
Other long-term liabilities	38	67	67	67	67
<b>Long-term liabilities</b>	<b>366</b>	<b>424</b>	<b>999</b>	<b>841</b>	<b>1,210</b>
A/C payable	446	546	658	909	1,862
Short term debt	228	160	100	100	100
Other current liabilities	312	225	255	355	721
<b>Current liabilities</b>	<b>985</b>	<b>931</b>	<b>1,013</b>	<b>1,364</b>	<b>2,684</b>
<b>Total liabilities and shareholders' equity</b>	<b>1,955</b>	<b>3,312</b>	<b>4,029</b>	<b>4,352</b>	<b>6,264</b>
Net working capital	(158)	788	861	845	862
Invested capital	1,160	2,348	2,540	2,735	2,951

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

### Per share (THB)

Book value per share	0.63	1.53	1.57	1.62	1.76
Tangible book value per share	0.63	1.52	1.56	1.62	1.76

### Financial strength

Net debt/equity (%)	85.9	16.5	22.6	24.2	21.6
Net debt/total assets (%)	26.5	9.8	11.3	11.9	8.2
Current ratio (x)	0.6	1.9	2.3	1.8	1.6
CF interest cover (x)	0.2	(10.9)	12.1	1.7	12.6

Valuation	2020	2021	2022E	2023E	2024E
<b>Recurring P/E (x) *</b>	<b>24.2</b>	<b>17.4</b>	<b>31.7</b>	<b>20.1</b>	<b>9.0</b>
<b>Recurring P/E @ target price (x) *</b>	<b>21.8</b>	<b>15.6</b>	<b>28.5</b>	<b>18.0</b>	<b>8.1</b>
Reported P/E (x)	24.2	17.4	31.7	20.1	9.0
Dividend yield (%)	-	-	1.3	2.0	4.4
Price/book (x)	3.2	1.3	1.3	1.2	1.1
Price/tangible book (x)	3.2	1.3	1.3	1.2	1.1
EV/EBITDA (x) **	8.6	10.7	14.7	10.2	5.5
EV/EBITDA @ target price (x) **	7.9	9.7	13.4	9.4	5.0
EV/invested capital (x)	2.1	1.2	1.2	1.2	1.1

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

Sources: Clover Power; FSSIA estimates

## Corporate Governance report of Thai listed companies 2021

EXCELLENT LEVEL – Score range 90-100										
AAV	BCPG	CPALL	GCAP	K	MSC	PLANET	SAMART	SPI	THRE	TVD
ADVANC	BDMS	CPF	GFPT	KBANK	MST	PLAT	SAMTEL	SPRC	THREL	TVI
AF	BEM	CPI	GGC	KCE	MTC	PORT	SAT	SPVI	TIPCO	TVO
AH	BGC	CPN	GLAND	KKP	MVP	PPS	SC	SSSC	TISCO	TWPC
AIRA	BGRIM	CRC	GLOBAL	KSL	NCL	PR9	SCB	SST	TK	U
AKP	BIZ	CSS	GPI	KTB	NEP	PREB	SCC	STA	TKT	UAC
AKR	BKI	DDD	GPSC	KTC	NER	PRG	SCCC	STEC	TMT	UBIS
ALT	BOL	DELTA	GRAMMY	LALIN	NKI	PRM	SCG	STI	TNDT	UV
AMA	BPP	DEMCO	GULF	LANNA	NOBLE	PROUD	SCGP	SUN	TNITY	VGI
AMATA	BRR	DRT	GUNKUL	LH	NSI	PSH	SCM	SUSCO	TOA	VIH
AMATAV	BTS	DTAC	HANA	LHFG	NVD	PSL	SDC	SUTHA	TOP	WACOAL
ANAN	BTW	DUSIT	HARN	LIT	NWR	PTG	SEAFCO	SVI	TPBI	WAVE
AOT	BWG	EA	HMPRO	LPN	NYT	PTT	SEAOIL	SYMC	TQM	WHA
AP	CENTEL	EASTW	ICC	MACO	OISHI	PTTEP	SE-ED	SYNTEC	TRC	WHAUP
ARIP	CFRESH	ECF	ICHI	MAJOR	OR	PTTGC	SELIC	TACC	TRU	WICE
ARROW	CHEWA	ECL	III	MAKRO	ORI	PYLON	SENA	TASCO	TRUE	WINNER
ASP	CHO	EE	ILINK	MALEE	OSP	Q.CON	SHR	TCAP	TSC	ZEN
AUCT	CIMBT	EGCO	ILM	MBK	OTO	QH	SIRI	TEAMG	TSR	
AWC	CK	EPG	INTUCH	MC	PAP	QTC	SIS	TFMAMA	TSTE	
AYUD	CKP	ETC	IP	MCOT	PCSGH	RATCH	SITHAI	TGM	TSTH	
BAFS	CM	FPI	IRPC	METCO	PDG	RS	SMK	THANA	TTA	
BANPU	CNT	FPT	ITEL	MFEC	PDJ	S	SMPC	THANI	TTB	
BAY	COM7	FSMART	IVL	MINT	PG	S & J	SNC	THCOM	TTCL	
BBL	COMAN	GBX	JSP	MONO	PHOL	SAAM	SONIC	THGOM	TTW	
BCP	COTTO	GC	JWD	MOONG	PLANB	SABINA	SPALI	THIP	TU	
VERY GOOD LEVEL – Score range 80-89										
2S	ASIMAR	CHOW	FLOYD	IT	LOXLEY	OCC	RPC	SKY	TCC	TVT
7UP	ASK	CI	FN	ITD	LRH	OGC	RT	SLP	TCMC	TWP
ABICO	ASN	CIG	FNS	J	LST	PATO	RWI	SMIT	TEAM	UEC
ABM	ATP30	CMC	FORTH	JAS	M	PB	S11	SMT	TFG	UMI
ACE	B	COLOR	FSS	JCK	MATCH	PICO	SA	SNP	TFI	UOBKH
ACG	BA	CPL	FTE	JCKH	MBAX	PIMO	SAK	SO	TIGER	UP
ADB	BAM	CPW	FVC	JMART	MEGA	PJW	SALEE	SORKON	TITLE	UPF
AEONTS	BC	CRD	GEL	JMT	META	PL	SAMCO	SPA	TKN	UPOIC
AGE	BCH	CSC	GENCO	KBS	MFC	PM	SANKO	SPC	TKS	UTP
AHC	BEC	CSP	GJS	KCAR	MGT	PMTA	SAPPE	SPCG	TM	VCOM
AIT	BEYOND	CWT	GYT	KEX	MICRO	PPP	SAWAD	SR	TMC	VL
ALL	BFIT	DCC	HEMP	KGI	MILL	PPPM	SCI	SRICHA	TMD	VPO
ALLA	BJC	DCON	HPT	KIAT	MITSIB	PRIME	SCN	SSC	TMI	VRANDA
ALUCON	BJCHI	DHOUSE	HTC	KISS	MK	PRIN	SCP	SSF	TMILL	WGE
AMANAH	BLA	DOD	HYDRO	KOOL	MODERN	PRINC	SE	STANLY	TNL	WIJK
AMARIN	BR	DOHOME	ICN	KTIS	MTI	PSG	SFLEX	STGT	TNP	WP
APCO	BROOK	DV8	IFS	KUMWEL	NBC	PSTC	SFP	STOWER	TOG	XO
APCS	CBG	EASON	IMH	KUN	NCAP	PT	SFT	STPI	TPA	XPG
APURE	CEN	EFORL	IND	KWC	NCH	QLT	SGF	SUC	TPAC	YUASA
AQUA	CGH	ERW	INET	KWM	NETBAY	RBF	SIAM	SWC	TPCS	
ASAP	CHARAN	ESSO	INSET	L&E	NEX	RCL	SINGER	SYNEX	TPS	
ASEFA	CHAYO	ESTAR	INSURE	LDC	NINE	RICHY	SKE	TAE	TRITN	
ASIA	CHG	ETE	IRC	LEO	NRF	RML	SKN	TAKUNI	TRT	
ASIAN	CHOTI	FE	IRCP	LHK	NTV	ROJNA	SKR	TBSP	TSE	
GOOD LEVEL – Score range 70-79										
A	BGT	CITY	GIFT	JTS	MDX	PK	SGP	SUPER	TQR	YGG
AI	BH	CMAN	GLOCON	JUBILE	MJD	PLE	SICT	SVOA	TTI	ZIGA
AIE	BIG	CMO	GREEN	KASET	MORE	PPM	SIMAT	TC	TYCN	
AJ	BLAND	CMR	GSC	KCM	MUD	PRAKIT	SISB	TCCC	UKEM	
ALPHAX	BM	CPT	GTB	KK	NC	PRAPAT	SK	THMUI	UMS	
AMC	BROCK	CRANE	HTECH	KKC	NDR	PRECHA	SMART	TNH	UNIQ	
APP	BSBM	CSR	HUMAN	KWI	NFC	PTL	SOLAR	TNR	UPA	
AQ	BSM	D	IHL	KYE	NNCL	RJH	SPACK	TOPP	UREKA	
ARIN	BTNC	EKH	IIG	LEE	NOVA	RP	SPG	TPCH	VIBHA	
AS	BYD	EMC	INGRS	LPH	NPK	RPH	SQ	TPIPL	W	
AU	CAZ	EP	INOX	MATI	NUSA	RSP	SSP	TPIPP	WIN	
B52	CCP	F&D	JAK	M-CHAI	PAF	SABUY	STARK	TPLAS	WORK	
BEAUTY	CGD	FMT	JR	MCS	PF	SF	STC	TPOLY	WPH	

**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

Sources: Thai Institute of Directors Association (IOD); FSSIA's compilation; data as of 26 October 2021

## Anti-corruption Progress Indicator

CERTIFIED										
2S	BCH	CPALL	GC	K	MFC	PE	QLT	SNP	THCOM	TU
7UP	BCP	CPF	GCAP	KASET	MFEC	PG	QTC	SORKON	THIP	TVD
ADVANC	BCPG	CPI	GEL	KBANK	MILL	PHOL	RATCH	SPACK	THRE	TVI
AF	BE8	CPN	GFPT	KBS	MINT	PK	RML	SPALI	THREL	TVO
AI	BEYOND	CSC	GGC	KCAR	MONO	PL	RWI	SPC	TIDLOR	TWPC
AIE	BGC	DCC	GJS	KCE	MOONG	PLANB	S & J	SPI	TIPCO	U
AIRA	BGRIM	DELTA	GPI	KGI	MSC	PLANET	SAAM	SPRC	TISCO	UBE
AKP	BJCHI	DEMCO	GPSC	KKP	MST	PLAT	SABINA	SRICHA	TKS	UBIS
ALPHAX	BKI	DIMET	GSTEEL	KSL	MTC	PM	SAPPE	SSF	TKT	UEC
AMA	BLA	DRT	GUNKUL	KTB	MTI	PPP	SAT	SSP	TMD	UKEM
AMANAHA	BPP	DTAC	HANA	KTC	NBC	PPPM	SC	SSSC	TMILL	UOBKH
AMATA	BROOK	DUSIT	HARN	KWC	NEP	PPS	SCB	SST	TMT	UPF
AMATAV	BRR	EA	HEMP	KWI	NINE	PR9	SCC	STA	TNITY	UV
AP	BSBM	EASTW	HENG	L&E	NKI	PREB	SCCC	STOWER	TNL	VGI
APCS	BTS	ECL	HMPRO	LANNA	NMG	PRG	SCG	SUSCO	TNP	VIH
AQUA	BWG	EGCO	HTC	LH	NNCL	PRINC	SCN	SVI	TNR	WACOAL
ARROW	CEN	EP	ICC	LHFG	NOBLE	PRM	SEAOIL	SYMC	TOG	WHA
AS	CENTEL	EPG	ICHI	LHK	NOK	PROS	SE-ED	SYNTEC	TOP	WHAUP
ASIAN	CFRESH	ERW	IFEC	LPN	NSI	PSH	SELIC	TAE	TOPP	WICE
ASK	CGH	ESTAR	IFS	LRH	NWR	PSL	SENA	TAKUNI	TPA	WIIK
ASP	CHEWA	ETE	ILINK	M	OCC	PSTC	SGP	TASCO	TPP	XO
AWC	CHOTI	FE	INET	MAKRO	OGC	PT	SINGER	TBSP	TRU	ZEN
AYUD	CHOW	FNS	INSURE	MALEE	ORI	PTG	SIRI	TCAP	TRUE	
B	CIG	FPI	INTUCH	MATCH	PAP	PTT	SITHAI	TCMC	TSC	
BAFS	CIMBT	FPT	IRC	MBAX	PATO	PTTEP	SKR	TFG	TSTE	
BAM	CM	FSMART	IRPC	MBK	PB	PTTGC	SMIT	TFI	TSTH	
BANPU	CMC	FSS	ITEL	MC	PCSGH	PYLON	SMK	TFMAMA	TTA	
BAY	COM7	FTE	IVL	MCOT	PDG	Q-CON	SMPC	TGH	TTB	
BBL	COTTO	GBX	JKN	META	PDJ	QH	SNC	THANI	TTCL	
DECLARED										
AJ	CHG	DDD	ETC	JR	MAJOR	NUSA	RS	SSS	TQM	YUASA
ALT	CPL	DHOUSE	FLOYD	JTS	NCAP	NYT	SAK	STECH	TSI	ZIGA
APCO	CPR	DOHOME	GULF	KEX	NCL	OR	SCGP	STGT	VARO	
B52	CPW	ECF	III	KUMWEL	NOVA	PIMO	SCM	TKN	VCOM	
BEC	CRC	EKH	INOX	LDC	NRF	PLE	SIS	TMI	VIBHA	

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 26 October 2021) are categorised into: 1) companies that have declared their intention to join CAC, and; 2) companies certified by CAC.

Sources: 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

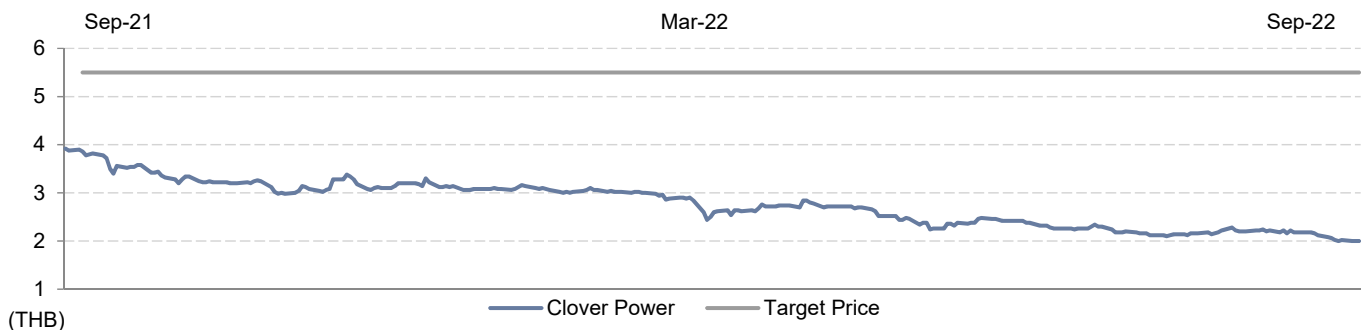
The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s)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

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### History of change in investment rating and/or target price

#### Clover Power (CV TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
06-Sep-2021	BUY	5.50	-	-	-	-	-	-

Suwat Sinsadok, CFA, FRM, ERP started covering this stock from 06-Sep-2021

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
Clover Power	CV TB	THB 2.00	REDUCE	The upside risks to our SoTP-based TP include 1) a higher-than-expected demand for electricity in Thailand; 2) lower feedstock prices; and 3) increased operational efficiency.

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

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All share prices are as at market close on 14-Sep-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.