

# Thailand Market Strategy

## Is Russia-Ukraine conflict an active or dormant volcano?

- SET index has a limited downside under our stress-test assumptions of a higher oil price and lower GDP growth.
- Higher inflation: a short-term bane but a long-term boon to the Thai economy.
- We prefer domestic to cyclical sectors, backed by a domestic recovery and the return of tourism. Maintain OVERWEIGHT.

### 2.2% EPS downside on rising oil price and weaker GDP growth in 2022

Fears of stagflation have triggered a sell-off of risky assets across the globe, including the SET index, as the likelihood of concurrently rising inflation driven by high energy prices and an economic slowdown is rising. We, however, believe that the recent 5.8% sell-off on the SET index should have already priced in the worst impact of the Russia-Ukraine war since 24 Feb-22. To assess the earnings downside risks, we conducted stress tests on the SET index with a high crude oil price and weaker GDP growth for Thailand using both top-down and bottom-up approaches. We found that the downside risk to the SET index would be 4.6% to 1,567 via the top-down approach and 3.6% to 1,584 via the bottom-up approach.

### Higher inflation: a short-term bane but a long-term boon to the Thai economy

While we believe that higher inflation could dim the Thai economy in the short term due to weaker purchasing power and the Bank of Thailand (BoT)'s policy rate hike, we think that in the long term, inflation should boost Thai economic growth, driven by rising tourism revenue, mild inflation on government subsidies, and stronger industrial production for exports and investments. Based on the BoT's analysis of GDP growth sensitivity to changes in the crude oil price, every USD10/bbl rise in crude oil price would reduce Thailand's GDP growth by 0.1% and increase inflation by 0.5%. Thus, if the Brent crude oil price rises by USD35-40/bbl to USD100/bbl, we project Thai GDP growth to weaken by 0.4% to 3% y-y.

### Limited downsides for the SET index; in both top-down and bottom-up tests

We have gauged the downside risks to the SET index, using both top-down and bottom-up approaches, and found that the potential downsides would be 3.6-4.6% with SET values of 1,567 and 1,584, and -0.4% GDP growth in 2022. Our chief methodologies are a top-down approach using the SET's historical gross margin levels during the prolonged high oil price period in 2011-14 under an average inflation adjusted oil price of USD110/bbl; and a bottom-up approach using FSSIA's analyses of the impact on the SET's EPS. Our key assumptions are: 1) an average USD100/bbl Brent crude oil price in 2022, up from the current USD75/bbl; and 2) 3.4% 2022 GDP growth as forecast by the BoT.

### Overweight on Thai equity market

We believe the SET index has limited downsides (3.6-4.6%) under our stress-test assumptions of a higher oil price and lower GDP growth, and hence prefer domestic sectors to cyclical, backed by a strong domestic recovery and the return of tourism. We are OVERWEIGHT on Thai equity and maintain our SET index target of 1,892, based on 17.2x 2022E P/E, the 10-year average, by end-2022, backed by 1) stronger corporate earnings; 2) an improving economic outlook; and 3) upsides from tourism and export growth.



**Songklod Wongchai**  
songklod.won@fssia.com  
+66 2611 3553

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

## Russia-Ukraine conflict: implications for Thai economy and SET

Global stock markets have fallen sharply, with US and European equities hitting new lows for the year and the SET index plunged by 5.8% from its most recent peak. Government bond yields have declined but not as much as the equity sell-off, indicating that fixed-income assets are losing their appeal as diversifiers in the inflationary environment. Russian assets have been hit hard by increasing sanctions from the US and its allies.

Russia's invasion of Ukraine could lead to significantly higher risks of inflation and a demand slowdown and potentially lead to stagflation. Even a recession cannot be ruled out due to the sharp rise in the prices of energy, soft commodities, and metals, all being essential components for global supply chains, manufacturing, and service sectors.

We have analysed some studies and expert views regarding the impact of the oil price hike on Thailand's 2022 GDP growth and inflation and assessed the potential downsides to the SET index and its earnings.

Based on an expert economist's analysis at the BoT\* on the sensitivity of Thailand's GDP growth to changes in the crude oil price, an increase of USD10/bbl would reduce Thailand's GDP growth by 0.1% and increase inflation by 0.5%. Thus, if the Brent crude oil price rises by USD35-40/bbl to USD100/bbl, this implies that Thai GDP growth could weaken by 0.4% to 3% y-y.

**Exhibit 1: Potential impact of crude oil price on Thai GDP growth and inflation as estimated by an economist\***

2022E	+ USD10/bbl (%)	Base cases** (%)	FSSIA's implied + USD45/bbl (%)
GDP growth	± 0.10	3.40	± 0.25
Headline inflation	± 0.5	1.20	± 2.25

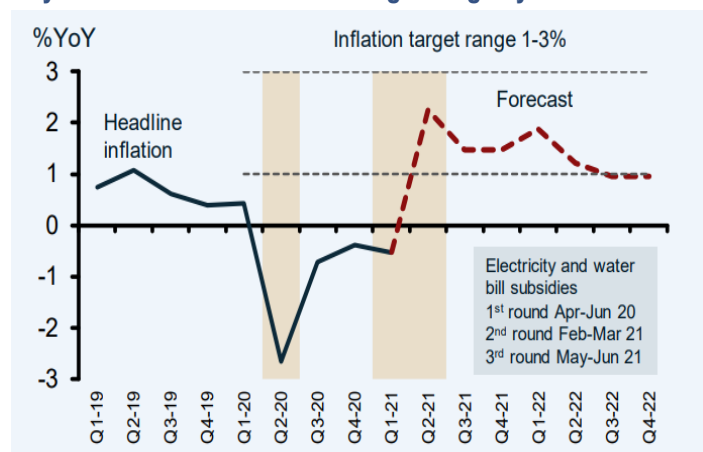
\*Quoted by Dr. Don Nakornthab, Senior Director of the Financial Stability Department, Bank of Thailand, in [his interview with media on 8 Mar 2022](#). \*\*Bank of Thailand's forecasts, [Bank of Thailand, Monetary Policy Report December 2021, pg. 13-14](#)  
Source: FSSIA's compilation

**Exhibit 2: Potential impact of crude oil price on GDP growth and inflation of countries across the region**

Economic impact			
Impact of every 10% rise in oil prices			
	GDP growth (pp)	CPI inflation (pp)	Current account (% of GDP)
China	0.00	0.10	-0.20
Hong Kong	0.00	0.07	-0.07
India	-0.20	0.40	-0.30
Indonesia	0.05	0.10	-0.20
Malaysia	0.04	0.20	-0.03
Philippines	-0.07	0.40	-0.30
Singapore	-0.03	0.20	-0.70
South Korea	-0.05	0.20	-0.15
Taiwan	-0.03	0.20	-0.10
Thailand	-0.08	0.30	-0.50

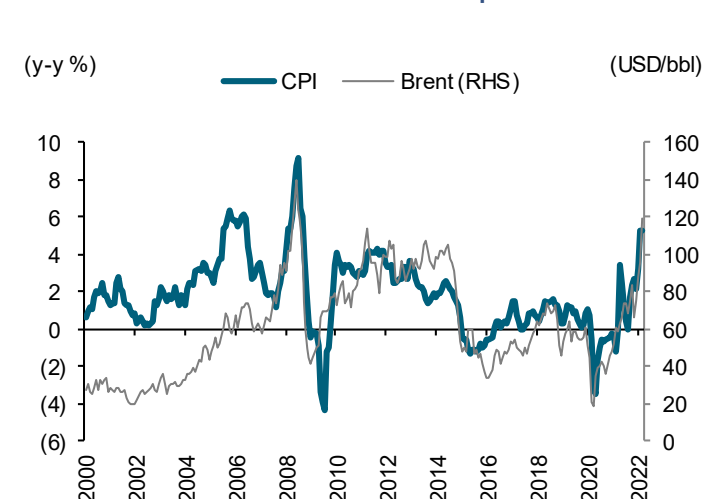
Source: [Extracted from thaienquirer.com, dated 7 Mar 2022](#), as estimated by Bloomberg and Nomura Global Economics, citing low impact of oil price hike as Thailand is a food exporter and key items are administered

**Exhibit 3: BoT forecasts inflation to gradually decline and stay in the lower bound of the target range by mid-2022**



Source: [Bank of Thailand](#)

**Exhibit 4: Thailand's CPI vs Brent crude price**



Source: Bloomberg

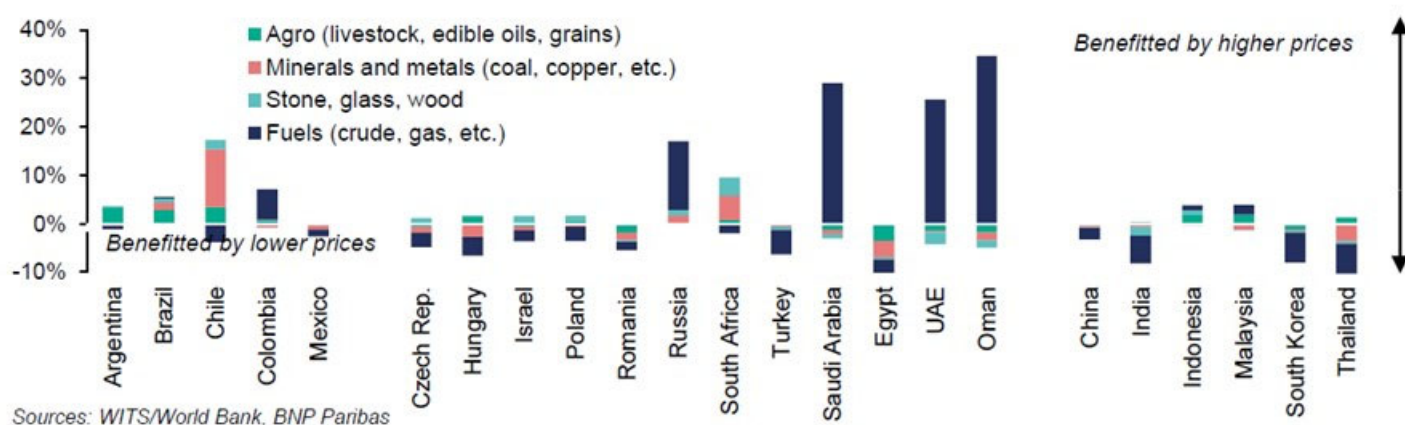
## Higher inflation is a bane to Thai economy in the short term

In our view, the short-term negative impacts from the rising crude oil price could consist of 1) reduced purchasing power for Thai consumers due to inflation, which could reduce investments and consumer spending; and 2) the BoT's potential policy rate hike could further jeopardise economic growth. Higher borrowing costs would make it more expensive to finance investments in new ventures, business expansions, and home buying – the three vital growth engines for the Thai economy.

While we believe that higher inflation could dim the Thai economy in the short term, we think that in the long term, Thai economic growth could be boosted by rising tourism revenue, mild inflation on government subsidies, and stronger industrial production for exports and investments.

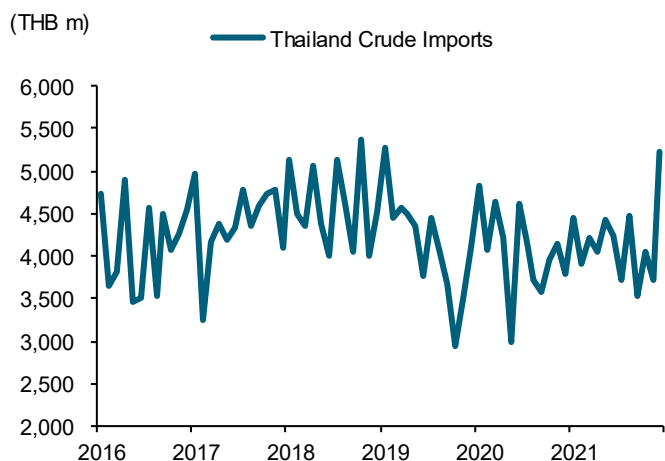
**Other non-energy and utilities sectors.** While the capital outflows have higher values and imported energy could hurt Thailand's revenue, we think Thailand will be healthy enough to withstand the spike in energy prices thanks to the country's high current account balance.

### Exhibit 5: Thailand's exposure to commodities is high from energy imports and agricultural exports



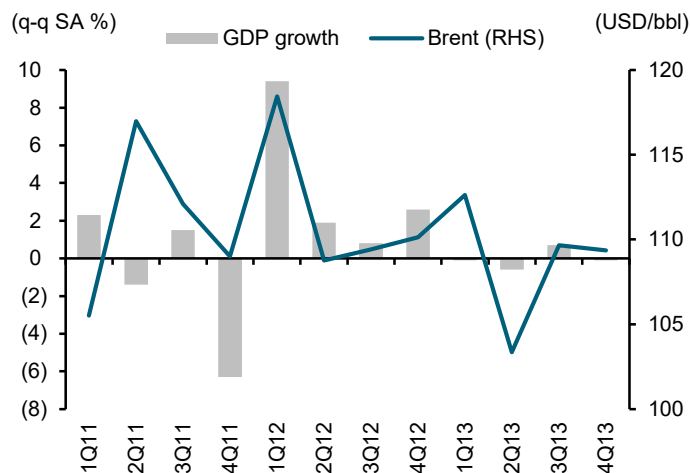
Sources: World Bank; BNP Paribas

### Exhibit 6: Thailand's crude oil import value

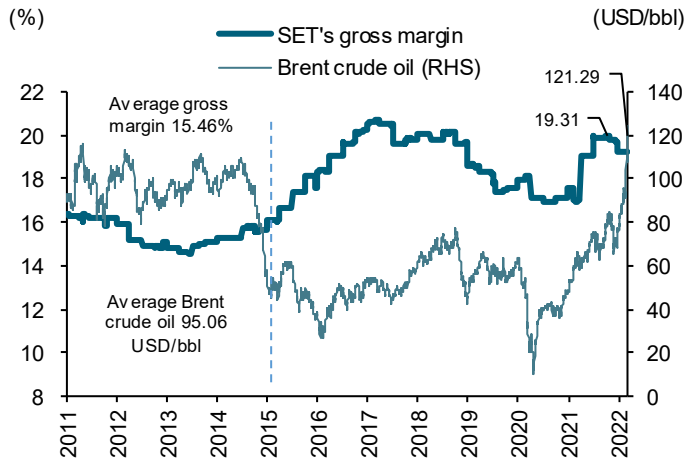


Source: Bloomberg

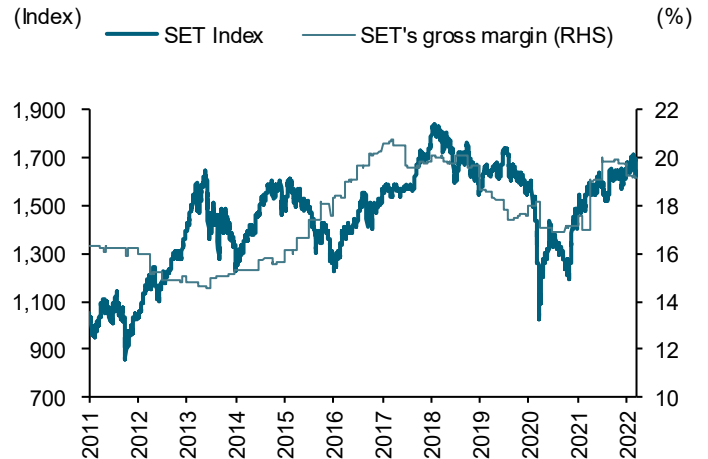
### Exhibit 7: Thailand's GDP growth vs Brent crude price during 2011-13



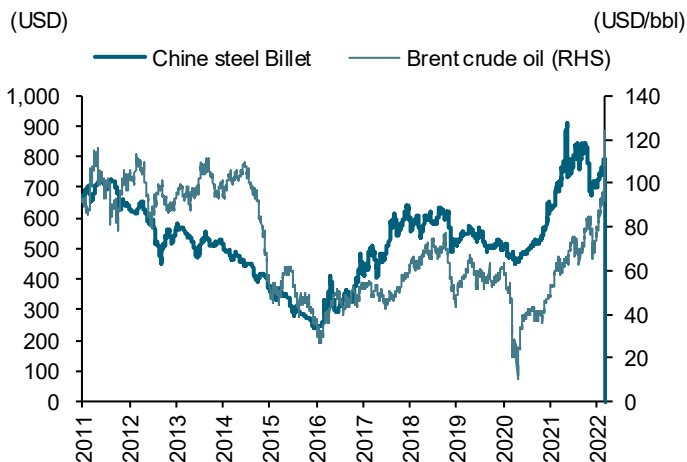
Source: Bloomberg

**Exhibit 8: Brent crude oil – inflation adjusted vs SET's gross margin**

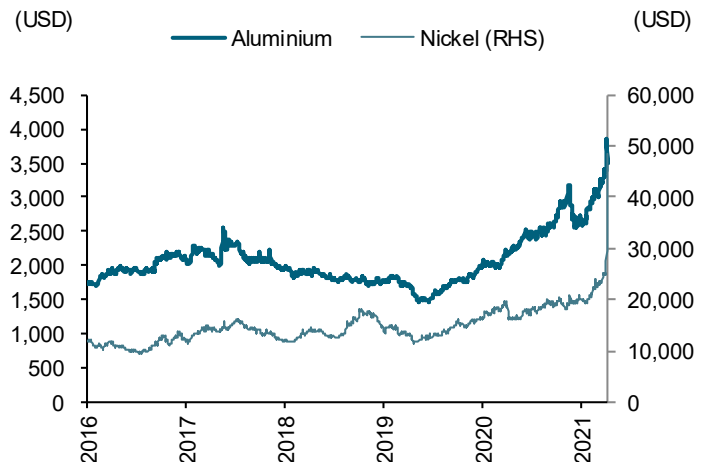
Source: Bloomberg

**Exhibit 9: Downside risk to SET index if rising crude oil pressures gross margin**

Source: Bloomberg

**Exhibit 10: Steel price remains high**

Source: Bloomberg

**Exhibit 11: All-time high aluminium and nickel prices**

Source: Bloomberg

## Rising crude oil price a key drag on SET index

We have gauged the downside risks to the SET index, using both top-down and bottom-up approaches, and found that the potential downsides would be 3.6-4.6% with SET values of 1,567 and 1,584 and -0.4% GDP growth in 2022.

Our chief methodologies are a top-down approach using the SET's historical gross margin levels during the prolonged high oil price period in 2011-14 under an average inflation adjusted oil price of USD110/bbl; and a bottom-up approach using FSSIA's analyses of the impact on the SET's EPS.

Our key assumptions are: 1) an average USD100/bbl Brent crude oil price in 2022, up from the current USD75/bbl; and 2) 3.4% 2022 GDP growth as forecast by the BoT.

### Top-down approach: will history repeat itself for a lower gross margin under the high oil price?

We believe so. Although today's economic conditions differ from 2011-14, we believe that there are sufficient analogies, including the rising oil price, the economic sanctions against Russia by the US and its allies, and the Fed's move to raise its policy rate after a long period of low interest.

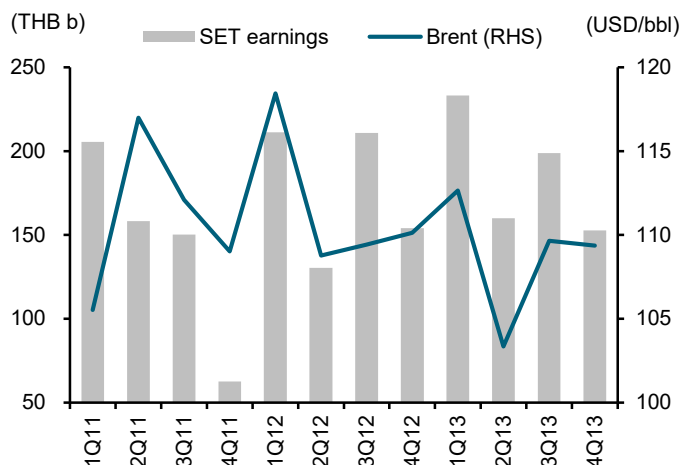
To assess the potential downside risks to the SET index and Thailand's GDP, we employed the SET's historical gross margin average of 15.46% during 2011-14 compared to the 2022E average of 19.31% and USD95/bbl in 2011-14 vs the 2022E Brent crude oil price of USD100/bbl.

Under our assumption a of USD100/bbl Brent crude oil price in 2022, we estimate that the SET's gross margin would decline by 4.24 ppts from 19.3% to 15.46%, the level seen in 2011-2014. With a lower SET's gross margin of 15.46%, we then applied a 4.24% drop in SET's EPS to THB105.77, and concluded that the lowest SET index level would be 1,567.

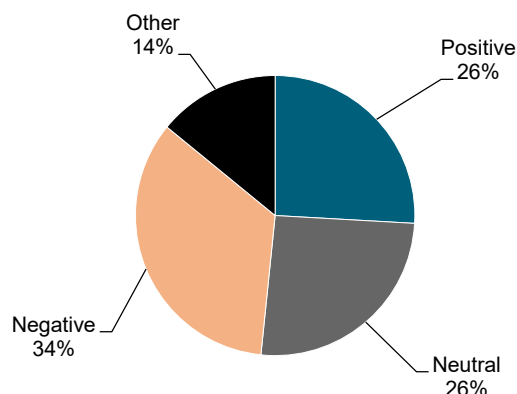
### Exhibit 12: Top-down approach; downside risk to the SET index

	SET's gross margin (%)	Inflation adjusted Brent crude oil price (USD/bbl)
2011-2014	15.46	95
Annual avg. Brent in 2022E	19.31	100
<i>Diff</i>	<i>(3.85)</i>	
<b>Expected impact on SET's EPS</b>		
FSSIA's EPS estimate for 2022	110.00	
Impact from lower gross margin	(4.24)	
SET's new 2022E EPS	105.77	
Current SET index		1,630
SET value after downward revision		1,567

Source: FSSIA estimates

**Exhibit 13: SET's corporate earnings vs brent crude price during 2011-13**

Source: Bloomberg

**Exhibit 14: Inflation-linked sectors by market capitalisation, classified by potential impact**

Source: FSSIA's estimates

**Bottom-up approach: 2.2% EPS downside on rising oil price and weaker GDP growth**

From our bottom-up approach based on an EPS downside and weaker Thai GDP growth, we find that the downside risk to the SET index would be 3.6% to 1,584.

**In our base-case scenario, our key assumptions are:**

- 1) We estimate that the Brent crude oil price would likely jump from an annual average of USD75/bbl to USD100/bbl in 2022, or up USD35/bbl, as we think the oil market would likely see an increase of USD35-40/bbl amid the Russia-Ukraine conflict, depending on the scale of any sanctions applied to Russian exports.
- 2) In our projection, based on the BoT's forecast of Thailand's 2022 GDP growth at 3.4%, the potential impact of a USD35-40/bbl Brent crude oil price hike would drag GDP growth down by around 0.4% in 2022.

Based on the EPS sensitivities of each sector conducted by FSSIA's analysts, we find that, on aggregate, our 2022 base case EPS would decline by 2.2%, an equivalent of THB2.4 from THB110. At the implied EPS level of THB107.6, our estimated SET index value would be 1,584.

**Exhibit 15: Winners and losers from rising oil price and lower GDP growth**

	Weighting (%)	Estimated impact (%)	Downside to SET (%)
Energy	22.2	10.0	2.2
Commerce	9.3	(0.5)	(0.0)
Bank	8.7	(2.0)	(0.2)
Petrochem	3.3	(16.0)	(0.5)
Commu	7.0	(5.0)	(0.4)
Conmat	4.4	(15.0)	(0.7)
Food & beverage	6.4	(4.0)	(0.3)
Healthcare	4.2	0.0	0.0
Electronic	4.8	(5.0)	(0.2)
Finance	4.9	0.0	0.0
Transport	8.5	(17.0)	(1.4)
Property	5.7	(3.0)	(0.2)
Others	10.6	(5.0)	(0.5)
<b>Total</b>	<b>100.0</b>		<b>(2.2)</b>

Sources: Bloomberg; FSSIA estimates

**Exhibit 16: Downward revision on the SET index by EPS estimate**

	----- FSSIA -----	Downside
	22E EPS	Index (%)
SET's 2022 EPS for our target index 1,892	110.0	
Potential impact from rising oil price and lower GDP growth	(2.4)	
--- > Implying SET's 2022E EPS	107.6	
SET index target @ 17.2x P/E (10-year average)		1,892
Downside to SET index end-2022 target		1,851 (2.17)
Current SET Index		1,630
--- > Implying the 2.17% downside		1,584 (2.17)

Sources: Bloomberg; FSSIA estimates

## Exhibit 17: Impact from the increase in oil price and implications from potentially lower GDP and higher inflation

Sector	Impact	Implication	FSSIA's views
<b>Energy</b>	Positive	↑ Demand	<ul style="list-style-type: none"> <li>Energy companies are expected to <u>greatly benefit</u> from the high prices of oil and inflation, given the <u>strong demand outlook</u> that should allow downstream refiners to <u>pass through the rising costs</u> to the end users, while upstream producers would enjoy <u>wider margins</u> on the rising average selling prices. <ul style="list-style-type: none"> <li>Strong volume growth y-y for PTTEP and Banpu should further drive up their net profit growth on the back of higher margins.</li> <li>Long term, energy companies should continue to enjoy solid demand growth in 2H22 onward on the global economic recovery post Covid-19 pandemic.</li> </ul> </li> <li>Among three major commodities, we think <u>coal is the most attractive</u> thanks to the limited supply and higher demand as a substitute fuel for oil and gas. <ul style="list-style-type: none"> <li>Gas price is now at the highest level due to the European gas supply risk, but we think the global LNG price should subside in 2H22 when the new supply from the US comes on stream.</li> </ul> </li> <li>We believe the positive impact of the higher prices would more than offset the weaker GDP for the domestic market as the demand growth for refined oil products has been strengthening since 3Q21 as a result of the more normal living conditions after a period of lockdowns.</li> </ul>
<b>Petrochemical</b>	Negative	↑ Costs	<ul style="list-style-type: none"> <li><u>Chemical margins are likely to suffer</u> from the higher oil price as the cost of naphtha feedstock derived from refineries, will move in tandem with the rise in the oil price. <ul style="list-style-type: none"> <li>The pass-through ability for chemical producers varies across different chains, mainly depending on the demand-supply balance. In 2022, olefins and aromatics chains are expected to see weak margins due to oversupply, while the polyester and PVC chains should continue to see strong margins thanks to the limited supply and strong demand.</li> </ul> </li> </ul>
<b>Utilities</b>	Negative	↑ Costs	<ul style="list-style-type: none"> <li>Due to the higher gas cost, SPPs should suffer from a <u>margin squeeze</u> in 2H21-1Q22 but... <ul style="list-style-type: none"> <li>...We think the margin should gradually improve by 2Q22 on the back of lower global LNG and domestic gas prices and the rising demand for industrial users.</li> <li>For BGRIM and GULF, LNG imports should start in 1Q23, effectively reducing the gas cost by 7-10%, based on our estimate.</li> <li>IPPs remain defensive plays with relatively lower capacity growth than SPPs as the margins are expected to flatten y-y along with the limited demand growth.</li> </ul> </li> </ul>
<b>Banking</b>	Indirect	↑ NPLs ↓ Loan growth	<ul style="list-style-type: none"> <li>Banking sector's earnings have not been directly impacted by the increase in oil price.</li> <li>A negative impact could occur if the oil price sustains at a high level for a long time. This may slow down the economic recovery and reduce the purchasing power of people. Thus, NPLs might increase, resulting in potentially higher provisions. Also, the loan growth of the banking sector might slow down.</li> <li>We currently forecast the 2022 credit cost of the banking sector at 134 bps and +3.9% y-y 2022 sector loan growth. For every 10 bps increase in credit cost, we see a 5-6% downside to our current 2022 forecast. For a 10 bps decline in loan growth, there would be a 0.5-1% downside to our 2022 earnings forecast.</li> <li>In the short term, the banking sector should have a negative sentiment impact from the lower bond yield as investors move to lower-risk assets, and the potentially slower economic recovery in some major countries may slow down the rate hike decision.</li> </ul>
<b>Diversified financial</b>	Indirect	Negative, if conflict prolonged	<ul style="list-style-type: none"> <li>Like the banking sector, the diversified financial sector's earnings have not been directly affected by the increase in oil price.</li> <li>A negative impact could occur if the oil price sustains at a high level for a long time. This may slow down the economic recovery and reduce the purchasing power of people. Thus, NPLs might increase, resulting in potentially higher provisions.</li> <li>The most vulnerable segment in the diversified financial sector is truck-related, in our view. Those clients might have a short-term impact from the increase in transportation costs. However, due to the cost-plus pricing structure in Thailand, we think truck lenders should finally pass through these costs to their clients. As a result, the net negative impact should be at a manageable level in 1-2 quarters, in our view.</li> </ul>
<b>Commerce</b>	Indirect/limited	↑ Costs	<ul style="list-style-type: none"> <li>Commerce sector should have limited impact from the higher oil price.</li> <li>In general, retailers have a direct impact from the oil price from the transportation cost which accounts for 1-2% of total expenses, and an indirect impact from utility expenses, which is normally around 5-15% of total expenses. However, the rising oil price and other commodity prices would lead to a high inflation environment.</li> <li>In general, retailers would benefit from higher revenue sharing due to the increasing retail price, and it should also lead to positive SSSG.</li> <li>Only BJC would be exposed to natural gas costs from its packaging business (c13% of total sales in 2021). Natural gas is the main cost of its glass packaging (c7% of total sales) which account for c30% of its COGS.</li> </ul>
<b>Food and beverage</b>	Indirect	↑ Costs	<ul style="list-style-type: none"> <li>The sector has not been directly affected by the increase in the fuel price except for CBG and OSP. <ul style="list-style-type: none"> <li><u>Natural gas costs</u> account for 5-10% of total COGS for OSP. OSP guided that every THB10/mmBTU increase in gas cost would impact net profit by THB30m per year.</li> <li>The impact on CBG would be c30% of OSP's impact, or THB10m per year.</li> </ul> </li> <li>However, this sector will likely be hard hit by the <u>rising commodity price trend</u>. The currently high aluminium and steel prices will likely impact the manufacturing GPMs of CBG, OSP, and APURE, as those raw materials are used in their product packaging. <ul style="list-style-type: none"> <li>CBG should be the hardest hit by the currently high aluminium price at above USD3,700/tonne, as the company is considering hedging the aluminium price. We estimate that, ceteris paribus, for every USD100/tonne increase (c8-10% of total COGS) its export GPM would drop by 30bps (export sales normally account for c50% of total sales).</li> <li>We see a limited impact on OSP as the company has already hedged the aluminium cost at USD2,800-2,900/tonne in 4Q21.</li> </ul> </li> <li>The <u>higher freight rate cost</u> would be another key negative factor for APURE and ASIAN. <ul style="list-style-type: none"> <li>APURE experienced order delays from small to medium-sized customers in 2021.</li> <li>ASIAN could struggle to pass through its high raw material costs, such as the tuna and chicken cost, as their customers have been absorbing high freight rate costs for a while.</li> </ul> </li> </ul>
<b>Property</b>	Indirect	↑ Costs	<ul style="list-style-type: none"> <li>The property sector's earnings have not been directly affected by the increase in the oil price. The negative impact is mainly from the increasing of <u>construction costs</u>, especially the steel price. <ul style="list-style-type: none"> <li>For <u>low-rise</u> projects, the steel cost accounts for c8-10% of total COGS, but accounts for 15-20% of total COGS for high-rise projects.</li> <li>The impact on <u>high rise</u> GPM would be lower due to the low number of new launches in 2020-21. The high-rise projects which will be transferred in 2022 to early 2023 would have already completed their structures and thus there would be no impact from the high steel cost.</li> <li>Overall, most developers see construction costs increasing by c3-4% of total COGS, but could pass this cost through to the end customers, resulting in a 2-3% increase in house prices.</li> </ul> </li> </ul>

Source: FSSIA estimates

**Exhibit 18: Impact from the increase in oil price and implications from potentially lower GDP and higher inflation (cont.)**

Sector	Impact	Implication	FSSIA's views
<b>ICT</b>	Direct	Flat ARPU	<ul style="list-style-type: none"> <li>Given that mobile services have now become a community product similar to oil and other agricultural products, we believe that the increase in oil price and inflation could hurt mobile service revenue for every mobile operator.               <ul style="list-style-type: none"> <li>Average revenue per user (ARPU) may stay flat or slightly decline compared to our expectation that ARPU for the mobile sector should be flat or slightly increase in 2022.</li> <li>In this case, we believe the indirect impact of the oil price and inflation could hurt mobile operators at about a 3-5% downside risk to our earnings forecasts in 2022.</li> </ul> </li> </ul>
<b>Media</b>	Indirect	↑ Adex	<ul style="list-style-type: none"> <li>We believe there is an indirect impact on media companies. Both oil and inflation may have a very low impact on their costs and margins, but there is a potential slowdown in advertising expenditure (adex) in 2022 because...               <ul style="list-style-type: none"> <li>... When the advertising spenders, especially on FMCG products, see higher costs they may try to reduce some expenses from the marketing side in order to maintain their product's price, which may lead to some slowdown in adex in 2022.</li> <li>As a result, we expect to see only a low-single digit decline in media revenue due to an increase in the oil price and inflation.</li> </ul> </li> </ul>
<b>Auto parts</b>	Indirect	↑ Raw material price	<ul style="list-style-type: none"> <li>The auto sector has seen no impact from the increase in oil price as well as inflation, as we see that the number of cars produced per year has no relationship with the oil price.</li> <li>In addition, oil is not a key raw material for auto parts production. However, inflation may have a slight short-term impact on raw material prices, mainly from steel, aluminium, and chemicals. The increase in those prices could lead to GPM pressure in the short term. Nevertheless, the companies can pass through all of the costs related to raw materials to their customers with about 3-6 months' lead time.</li> </ul>
<b>Transportation (Land)</b>	Neutral	Insignificant	<ul style="list-style-type: none"> <li>We believe that transportation companies, including BTS, BEM, and DMT, may see a minimal impact from a higher oil price. For the expressway business of BEM and DMT, we expect to see a tiny impact on the traffic numbers as expressways are a service for consumers who are willing to pay more in order to save time, in our view. Therefore, we believe <u>expressways are a low elasticity service</u>.</li> <li>The mass transit business, on the other hand, may benefit somewhat, as there may be some consumers who are not willing to use their personal cars during the period of the high oil price and decide to use more public transportation. Therefore, we believe there should be some benefit to the mass transit business (BTS and BEM).</li> <li>On the cost side, we don't see any significant impact from the oil price to the companies' operating costs as the expressway business' costs mostly come from depreciation, amortisation, and maintenance. For the mass transit business, the main expenses are also depreciation and amortisation, staff costs, and utility (non-oil) costs.</li> <li>As a result, we see both positive and negative impacts from the surge in the oil price, which should mean that there would be no significant impact on revenue or the margin for the transportation sector.</li> </ul>
<b>Tourism – hotel</b>	Indirect	↑ Utility cost	<ul style="list-style-type: none"> <li>The hotel sector would have an indirect impact from higher fuel prices. However, the impact would be limited given that utility expenses are normally around 5-10% of total expenses only. The majority of hotel expenses are staff expenses and depreciation.</li> </ul>
<b>Tourism – airline</b>	Direct	↑ Fuel cost	<ul style="list-style-type: none"> <li>The sector that would be directly impacted by rising fuel prices is the airline sector. Jet fuel expenses accounted for 34% and 17% of total expenses for AAV and BA in 2019, respectively. The proportion reduced to 11% and 4% of total expenses for AAV and BA in 2021 due to lower flight capacity.</li> <li>We price jet fuel at USD85/bbl in our assumptions, while the current jet fuel price is USD140/bbl currently and averaging USD110/bbl over the past month.               <ul style="list-style-type: none"> <li>Our sensitivity analysis on the impact of rising fuel costs suggests that for every ±USD10/bbl, the 2022 earnings of AAV and BA would be impacted by cTHB0.8b and cTHB0.3b, respectively, all else being equal.</li> <li>BA would have a smaller impact as it has other sources of income with a limited impact from rising fuel costs, including the airport business, dividends from BDMS, and the cargo business.</li> </ul> </li> </ul>
<b>Contractor</b>	Neutral for CK,  Negative for STEC	↑ Material cost cushioned by K factor  ↑ Material cost	<ul style="list-style-type: none"> <li>Building material cost – steel and cement, mainly, account for 60% of total construction costs.</li> <li>For CK, the impact of the higher building material and labour costs would be limited as most of construction projects have a K factor which should be claimable with the government if the building material prices increase over the contracted amount.               <ul style="list-style-type: none"> <li>CK's gross margin should be resilient as new major projects (double-track rail from Denchai - Chiang Rai and MRT Purple Line) are in the design process, with construction scheduled to begin at least a year from now.</li> <li>For STEC, the higher steel price would impact its ongoing power plant projects as steel is used to build the plants.</li> </ul> </li> </ul>

Source: 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	ICHI	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	SEOIL	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	TSC	TSR	TSTE	TSTH	TTA
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	MITSI	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	TPIPP	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	AMANAH	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	WIIK	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

#### Songklod Wongchai 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.

Company	Ticker	Price	Rating	Valuation & Risks
PTT Explor & Prod	PTTEP TB	THB 146.00	BUY	Risks our TP, which is based on EV/EBITDA, are a sharp decline in oil price and a potential earnings downside from government intervention.
Banpu	BANPU TB	THB 11.70	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.
B.Grimm Power	BGRIM TB	THB 31.75	BUY	The downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand, 2) a lower crude price, and 3) unplanned shutdowns of its SPPs.
Gulf Energy Development	GULF TB	THB 47.75	BUY	The downside risks to our SoTP-based TP on GULF include 1) lower-than-expected demand for electricity in Thailand; 2) a lower crude price; and 3) delays in project commercial operation dates.
Berli Jucker	BJC TB	THB 35.00	BUY	Key downside risks to our DCF-based TP could come from 1) competition with Lotus which could impact its sales and gross margin; and 2) a lower-than-expected utilisation rate and profit margin from its packaging unit after losing major customers in Thailand.
Carabao Group	CBG TB	THB 101.50	BUY	The key downside risks to our DCF-based TP are 1) slower-than-expected sales growth in Myanmar, Cambodia, and the vitamin C drink market; 2) a decrease in domestic energy drink market share; and 3) higher-than-expected SG&A expenses from overseas operations, such as in China and the UK.
Osotspa PCL	OSP TB	THB 35.75	BUY	The key downside risks to our DCF-based TP are 1) a decline in energy drink market share in Myanmar due to strong competition; 2) a slow recovery in the economy; and 3) lower-than-expected SG&A savings from the Fast Forward 10X program.
Agripure Holdings	APURE TB	THB 6.05	BUY	Downside risks to our P/E based TP would be 1) order cancellations from big customers like Walmart; 2) a stronger-than-expected THB against USD; and 3) the high volatility of raw material prices, such as the corn price, which could hurt the company's GPM.
Asian Sea Corporation	ASIAN TB	THB 15.00	BUY	Downside risks to our P/E based TP would be 1) a stronger-than-expected THB against USD; and 2) the high volatility of raw material prices, such as tuna and squid prices, which could hurt the company's GPM.
BTS Group Holdings	BTS TB	THB 9.20	BUY	The key downside risks to our SOTP-based TP include a slower-than-expected recovery of the Thai economic outlook and the company not being able to win new mass transit projects.
Bangkok Expressway and Metro	BEM TB	THB 8.60	BUY	The key downside risks to our SoTP-based TP are 1) traffic and ridership recovering more slowly than our expectation; and 2) the company being unable to win the new mass transit project bids.
Don Muang Tollway	DMT TB	THB 10.70	BUY	Downside risks to our DCF-based TP include 1) lower-than-expected tollway traffic, and 2) dispute risks.
Asia Aviation	AAV TB	THB 2.36	BUY	Downside risks to our P/BV multiple target price include 1) extraordinary events such as political turmoil and natural disasters; 2) higher-than-expected fuel expenses following an increase in oil prices; and 3) the slower-than-expected recovery of international tourist numbers.
Bangkok Airways	BA TB	THB 9.00	BUY	Downside risks to our SoTP-based TP include 1) extraordinary events such as political turmoil and natural disasters; 2) higher-than-expected fuel expenses following an increase in oil prices; and 3) the slower-than-expected recovery of international tourist numbers.
Bangkok Dusit Medical Services	BDMS TB	THB 24.60	BUY	Downside risks to our DCF-based target price include 1) a slowdown in international patients due to economic concerns, political protests or floods; 2) regulatory risks from drug price and medical bill controls; and 3) higher-than-expected capex and opex for CoE projects.
CH. Karnchang	CK TB	THB 20.10	BUY	Key downside risks to our SoTP-based TP are delays in new bids, political instability, fluctuations in construction material prices, cost overruns, and the prolonged Covid-19 pandemic.
Sino-Thai E&C	STEC TB	THB 13.40	HOLD	Downside risks to our P/BV multiple valuation-based TP are 1) prolonged political uncertainty; and 2) delays in projects and the construction margin contracting more than expected. The upside risk is if STEC can win the Orange Line bid.

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 09-Mar-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.