

PTT PCL PTT TB

THAILAND / OIL & GAS

BUY

 UNCHANGED

Hedging losses led to a weak 1Q22

- 1Q22 NP of THB25.6b (-7% q-q and -22% y-y); core NP dropped to THB24.6b (-19% q-q, +33% y-y) due to lower coal earnings.
- We think PTT's NP growth remains strong on high oil, gas, and coal prices in 2022.
- Maintain BUY and our SoTP-based TP of THB60.

| | |
|-----------------|----------|
| TARGET PRICE | THB60.00 |
| CLOSE | THB36.50 |
| UP/DOWNSIDE | +64.4% |
| TP vs CONSENSUS | +26.2% |

KEY STOCK DATA

| YE Dec (THB m) | 2021 | 2022E | 2023E | 2024E |
|---------------------|-----------|-----------|-----------|-----------|
| Revenue | 2,258,818 | 2,384,459 | 2,556,087 | 2,722,943 |
| Net profit | 108,363 | 134,095 | 151,749 | 141,896 |
| EPS (THB) | 3.79 | 4.69 | 5.31 | 4.97 |
| vs Consensus (%) | - | 14.0 | 29.7 | 16.8 |
| EBITDA | 392,983 | 394,234 | 409,622 | 383,442 |
| Core net profit | 89,249 | 134,095 | 151,749 | 141,896 |
| Core EPS (THB) | 3.12 | 4.69 | 5.31 | 4.97 |
| EPS growth (%) | 57.2 | 50.2 | 13.2 | (6.5) |
| Core P/E (x) | 11.7 | 7.8 | 6.9 | 7.3 |
| Dividend yield (%) | 1.4 | 4.1 | 4.1 | 4.6 |
| EV/EBITDA (x) | 5.3 | 4.6 | 4.0 | 3.8 |
| Price/book (x) | 1.0 | 0.9 | 0.9 | 0.8 |
| Net debt/Equity (%) | 39.3 | 25.6 | 9.6 | (3.4) |
| ROE (%) | 9.5 | 12.7 | 13.2 | 11.3 |

Hedging losses dragged down 1Q22 earnings

PTT posted a 1Q22 net profit (NP) of THB25.6b, down 7% q-q and 22% y-y, missing the Bloomberg consensus estimate by 24% and our forecast by 10%. Key drivers were a non-recurring loss of THB0.9b, including a reversal of take-or-pay expenses of THB0.7b, an FX gain of THB5.7b, a THB49b hedging loss, and other impairment losses from subsidiaries and associates. 1Q22 core NP dropped to THB24.6b (-19% q-q, +33% y-y) due to the q-q lower earnings from coal which offset the higher NPs from gas, PTT Exploration and Production (PTTEP TB, BUY), and refinery and petrochemical associates. Gas NP inched up to THB15b, due to higher NPs from its pipeline transmission (TM) and gas separation plant (GSP) which offset the weaker NPs from gas sales & marketing (S&M), trading, and natural gas for vehicles (NGV). PTTEP's EBIT rose 8.9% q-q to THB36.4b in 1Q22 due to the higher average selling price (ASP).

GSPs and TM drove gas EBITDA in 1Q22

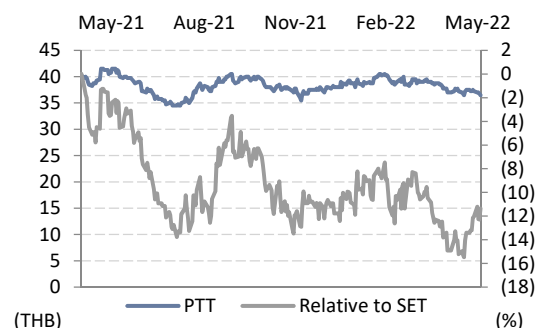
1Q22 core gas EBIT rose to THB15.1b (+5% q-q, -12% y-y), driven by the higher product prices of GSPs and higher sales volumes for TM to offset the weaker margins for S&M and NGV. EBIT from its oil trading unit jumped to THB15.5b due to a rise in the oil sales volume. Transmission pipeline EBITDA rose to THB8.5b in 1Q22 (+4% y-y, +7% q-q) due to higher volumes, while EBITDA from its GSP rose to THB10.3b due to the higher product margins and fewer planned shutdowns at a 92% run rate.

Rescuers: stock gain in 1Q22 and a q-q lower gas price in 2Q22

EBIT from downstream petrochemical and refinery associates surged to THB34.5b in 1Q22 (+152% q-q) due to higher stock gains which offset the lower olefins and aromatics margins. Coal EBIT dipped to THB1.4b, down 38% q-q, due to a 22% q-q lower sales volume of 1.4mt despite the 4% q-q higher ASP for coal. PTT guided that its pool gas price should drop by over 20% in 2Q22, driven by a lower price and volume of imported LNG with a projected spot LNG price of USD26/mmbtu in 2Q22 vs USD35/mmbtu in 1Q22.

A defensive recovery oil & gas play

Maintain BUY and our SoTP-based TP of THB60. We think PTT's NP growth potential remains strong on high oil, gas, and coal prices in 2022.



| | | | |
|--------------------------------|---------------------------|---------|----------|
| Share price performance | 1 Month | 3 Month | 12 Month |
| Absolute (%) | (1.4) | (9.3) | (8.2) |
| Relative to country (%) | 4.2 | (2.8) | (8.9) |
| Mkt cap (USD m) | 30,050 | | |
| 3m avg. daily turnover (USD m) | 64.3 | | |
| Free float (%) | 49 | | |
| Major shareholder | Ministry of Finance (51%) | | |
| 12m high/low (THB) | 42.00/34.00 | | |
| Issued shares (m) | 28,563.00 | | |

Sources: Bloomberg consensus; FSSIA estimates



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Exhibit 1: Summary of 1Q22 operations

| | 1Q21 | 4Q21 | 1Q22 | | | 2021 | 2022E | Chg. |
|----------------------|----------------|----------------|----------------|---------------|---------------|------------------|------------------|--------------|
| | (THB m) | (THB m) | (THB m) | (q-q %) | (y-y %) | (THB m) | (THB m) | (y-y %) |
| Revenue | 477,837 | 688,838 | 758,465 | 10.1 | 58.7 | 2,258,818 | 2,384,459 | 5.6 |
| Operating costs | (374,840) | (587,567) | (615,764) | 4.8 | 64.3 | (2,651,801) | (2,778,693) | 4.8 |
| EBITDA | 102,997 | 101,271 | 142,701 | 40.9 | 38.5 | 392,983 | 394,234 | 0.3 |
| EBITDA margin (%) | 21.6 | 14.7 | 18.8 | nm | nm | 17.4 | 16.5 | nm |
| Depreciation & amort | (35,036) | (33,850) | (37,145) | 9.7 | 6.0 | (163,799) | (173,007) | 5.6 |
| EBIT | 67,961 | 67,421 | 105,556 | 56.6 | 55.3 | 229,184 | 221,227 | (3.5) |
| Interest expense | (6,439) | (7,153) | (7,445) | 4.1 | 15.6 | (28,163) | (30,424) | 8.0 |
| Interest & invt inc | 14,354 | 6,529 | 3,787 | (42.0) | (73.6) | (3,018) | 8,740 | nm |
| Associates' contri | 1,947 | 1,937 | 1,949 | 0.6 | 0.1 | 9,010 | 9,911 | 10.0 |
| Exceptional | (18,935) | (10,868) | (45,270) | 316.6 | 139.1 | 12,646 | 0 | nm |
| Pretax profit | 58,889 | 57,866 | 58,578 | 1.2 | (0.5) | 219,658 | 209,454 | (4.6) |
| Tax | (11,683) | (19,648) | (21,874) | 11.3 | 87.2 | (67,591) | (43,985) | (34.9) |
| Tax rate (%) | (19.8) | (34.0) | (37.3) | nm | nm | 30.8 | 21.0 | nm |
| Minority interests | (14,618) | (10,674) | (11,133) | 4.3 | (23.8) | (43,704) | (31,373) | (28.2) |
| Net profit | 32,588 | 27,544 | 25,571 | (7.2) | (21.5) | 108,363 | 134,095 | 23.7 |
| Non-recurring | 14,022 | (2,901) | 929 | nm | (93.4) | 19,114 | 0 | nm |
| Core profit | 18,566 | 30,445 | 24,642 | (19.1) | 32.7 | 89,249 | 134,095 | 50.2 |
| EPS (THB) | 1.14 | 0.96 | 0.90 | (7.2) | (21.5) | 3.79 | 4.69 | 23.7 |
| Core EPS (THB) | 0.65 | 1.07 | 0.86 | (19.1) | 32.7 | 3.12 | 4.69 | 50.2 |

Sources: PTT; FSSIA estimates

Exhibit 2: 1Q22 performance of key segments

| | 1Q21 | 4Q21 | 1Q22 | Change | |
|---|----------------|----------------|----------------|---------------|---------------|
| | (THB m) | (THB m) | (THB m) | (q-q %) | (y-y %) |
| EBITDA | 102,997 | 101,271 | 142,701 | 40.9 | 38.5 |
| Oil | 6,531 | 4,513 | 6,686 | 48.1 | 2.4 |
| Oil trading | 3,975 | (54) | 15,625 | nm | 293.1 |
| Gas | 21,775 | 19,200 | 19,520 | 1.7 | (10.4) |
| PTTEP | 31,824 | 47,419 | 53,465 | 12.8 | 68.0 |
| Petrochem and refining | 33,492 | 23,573 | 45,162 | 91.6 | 34.8 |
| Coal | 1,230 | 2,943 | 1,836 | (37.6) | 49.3 |
| Others | 4,786 | 3,298 | 2,456 | (25.5) | (48.7) |
| EBIT* | 4Q21 | 4Q21 | 1Q22 | (q-q%) | (y-y%) |
| Oil | 5,127 | 2,939 | 5,177 | 76.1 | 1.0 |
| Oil trading | 3,926 | (108) | 15,502 | nm | 294.9 |
| Gas | 17,178 | 14,411 | 15,089 | 4.7 | (12.2) |
| PTTEP | 15,327 | 33,439 | 36,431 | 8.9 | 137.7 |
| Petrochem and refining | 23,984 | 13,662 | 34,457 | 152.2 | 43.7 |
| Coal | 897 | 2,257 | 1,390 | (38.4) | 55.0 |
| Others | 2,138 | 441 | (441) | nm | nm |
| Share of profit/(loss) - Petrochem and refining | 1,465 | 1,393 | 1,075 | (22.8) | (26.6) |
| Share of profit/(loss) - Others | 482 | 555 | 879 | 58.4 | 82.4 |
| FX gain (loss) | (4,330) | 5,139 | 5,712 | 11.2 | nm |
| Net profit | 32,588 | 27,544 | 25,571 | (7.2) | (21.5) |

*Note: EBIT includes exceptionals, share of profit (loss), and investment income, hence it differs from EBIT in Exhibit 1, which excludes these items

Source: PTT

Exhibit 3: 1Q22 quarterly key drivers

| | Unit | 1Q21 | 4Q21 | 1Q22 | Change | |
|----------------------|--------------|---------------|---------------|---------------|--------------|---------------|
| | | | | | (q-q %) | (y-y %) |
| Oil sales volume | bpd | 1,694,381 | 2,152,143 | 2,929,197 | 36.1 | 72.9 |
| Gas sales volume | mmscfd | 4,584 | 4,158 | 4,422 | 6.3 | (3.5) |
| GSP volume | tonnes | 1,780,056 | 1,637,187 | 1,703,083 | 4.0 | (4.3) |
| PTTEP's ASP | USD/boe | 40.4 | 46.9 | 51.4 | 9.6 | 27.2 |
| PTTEP's sales volume | boed | 382,877.0 | 420,965.0 | 427,368.0 | 1.5 | 11.6 |
| Coal ASP | USD/tonne | 67.9 | 95.3 | 99.2 | 4.1 | 46.1 |
| Coal sales volume | m tonnes | 1.5 | 1.8 | 1.4 | (22.2) | (6.7) |
| Net profit | THB m | 32,588 | 27,544 | 25,571 | (7.2) | (21.5) |

Source: PTT

Financial Statements

PTT PCL

| Profit and Loss (THB m) Year Ending Dec | 2020 | 2021 | 2022E | 2023E | 2024E |
|---|----------------|-----------------|----------------|----------------|----------------|
| Revenue | 1,615,665 | 2,258,818 | 2,384,459 | 2,556,087 | 2,722,943 |
| Cost of goods sold | (1,305,456) | (1,736,431) | (1,944,920) | (2,097,900) | (2,287,765) |
| Gross profit | 310,209 | 522,388 | 439,539 | 458,187 | 435,178 |
| Other operating income | - | - | - | - | - |
| Operating costs | (76,974) | (129,405) | (45,305) | (48,566) | (51,736) |
| Operating EBITDA | 233,235 | 392,983 | 394,234 | 409,622 | 383,442 |
| Depreciation | (154,591) | (163,799) | (173,007) | (182,215) | (191,423) |
| Goodwill amortisation | 0 | 0 | 0 | 0 | 0 |
| Operating EBIT | 78,644 | 229,184 | 221,227 | 227,407 | 192,020 |
| Net financing costs | (19,267) | (34,632) | (30,424) | (30,230) | (30,036) |
| Associates | 4,178 | 9,010 | 9,911 | 10,902 | 11,992 |
| Recurring non-operating income | 24,757 | 5,992 | 18,651 | 36,177 | 60,521 |
| Non-recurring items | (19,017) | 19,114 | 0 | 0 | 0 |
| Profit before tax | 65,116 | 219,658 | 209,454 | 233,354 | 222,504 |
| Tax | (25,166) | (67,591) | (43,985) | (49,004) | (46,726) |
| Profit after tax | 39,950 | 152,068 | 165,469 | 184,350 | 175,778 |
| Minority interests | (2,184) | (43,704) | (31,373) | (32,601) | (33,883) |
| Preferred dividends | 0 | 0 | 0 | 0 | 0 |
| Other items | - | - | - | - | - |
| Reported net profit | 37,766 | 108,363 | 134,095 | 151,749 | 141,896 |
| Non-recurring items & goodwill (net) | 19,017 | (19,114) | 0 | 0 | 0 |
| Recurring net profit | 56,783 | 89,249 | 134,095 | 151,749 | 141,896 |
| Per share (THB) | | | | | |
| Recurring EPS * | 1.99 | 3.12 | 4.69 | 5.31 | 4.97 |
| Reported EPS | 1.32 | 3.79 | 4.69 | 5.31 | 4.97 |
| DPS | 0.50 | 0.50 | 1.50 | 1.48 | 1.68 |
| Diluted shares (used to calculate per share data) | 28,563 | 28,563 | 28,563 | 28,563 | 28,563 |
| Growth | | | | | |
| Revenue (%) | (27.2) | 39.8 | 5.6 | 7.2 | 6.5 |
| Operating EBITDA (%) | (18.8) | 68.5 | 0.3 | 3.9 | (6.4) |
| Operating EBIT (%) | (44.5) | 191.4 | (3.5) | 2.8 | (15.6) |
| Recurring EPS (%) | (38.9) | 57.2 | 50.2 | 13.2 | (6.5) |
| Reported EPS (%) | (59.4) | 186.9 | 23.7 | 13.2 | (6.5) |
| Operating performance | | | | | |
| Gross margin inc. depreciation (%) | 9.6 | 15.9 | 11.2 | 10.8 | 9.0 |
| Gross margin of key business (%) | 9.6 | 15.9 | 11.2 | 10.8 | 9.0 |
| Operating EBITDA margin (%) | 14.4 | 17.4 | 16.5 | 16.0 | 14.1 |
| Operating EBIT margin (%) | 4.9 | 10.1 | 9.3 | 8.9 | 7.1 |
| Net margin (%) | 3.5 | 4.0 | 5.6 | 5.9 | 5.2 |
| Effective tax rate (%) | 38.6 | 30.8 | 21.0 | 21.0 | 21.0 |
| Dividend payout on recurring profit (%) | 25.2 | 16.0 | 32.0 | 28.0 | 33.8 |
| Interest cover (X) | 5.4 | 6.8 | 7.9 | 8.7 | 8.4 |
| Inventory days | 39.4 | 35.8 | 40.6 | 40.0 | 39.2 |
| Debtor days | 31.4 | 24.8 | 30.9 | 30.6 | 30.7 |
| Creditor days | 57.9 | 51.7 | 61.1 | 60.3 | 59.1 |
| Operating ROIC (%) | 6.9 | 24.0 | 21.5 | 18.4 | 16.8 |
| ROIC (%) | 3.2 | 7.4 | 8.3 | 9.7 | 9.7 |
| ROE (%) | 6.5 | 9.5 | 12.7 | 13.2 | 11.3 |
| ROA (%) | 2.8 | 5.6 | 6.1 | 6.5 | 6.0 |
| * Pre exceptional, pre-goodwill and fully diluted | | | | | |
| Revenue by Division (THB m) | | | | | |
| Petroleum exploration and production | 192,963 | 194,893 | 196,842 | 198,810 | 200,798 |
| Natural gas | 512,874 | 531,465 | 531,465 | 531,465 | 531,465 |
| Coal | 22,654 | 21,452 | 21,452 | 21,452 | 21,452 |
| Oil | 511,478 | 531,211 | 531,211 | 531,211 | 531,211 |

Sources: PTT PCL; FSSIA estimates

Financial Statements

PTT PCL

| Cash Flow (THB m) Year Ending Dec | 2020 | 2021 | 2022E | 2023E | 2024E |
|-----------------------------------|------------------|------------------|------------------|------------------|------------------|
| Recurring net profit | 56,783 | 89,249 | 134,095 | 151,749 | 141,896 |
| Depreciation | 154,591 | 163,799 | 173,007 | 182,215 | 191,423 |
| Associates & minorities | (4,178) | (9,010) | (9,911) | (10,902) | (11,992) |
| Other non-cash items | 79,186 | (79,095) | 130,046 | 130,131 | 130,287 |
| Change in working capital | 3,052 | (52,023) | 101,680 | 103,932 | 103,863 |
| Cash flow from operations | 289,435 | 112,921 | 528,917 | 557,125 | 555,476 |
| Capex - maintenance | - | - | - | - | - |
| Capex - new investment | (110,494) | (110,494) | (110,494) | (110,494) | (110,494) |
| Net acquisitions & disposals | 5,283 | 5,194 | 5,194 | 5,194 | 5,194 |
| Other investments (net) | 0 | 0 | 0 | 0 | 0 |
| Cash flow from investing | (105,212) | (105,300) | (105,300) | (105,300) | (105,300) |
| Dividends paid | (14,281) | (14,281) | (42,844) | (42,415) | (47,998) |
| Equity finance | 0 | 0 | 0 | 0 | 0 |
| Debt finance | 109,972 | 129,476 | 0 | 0 | 0 |
| Other financing cash flows | (240,423) | (142,117) | (181,118) | (181,203) | (181,358) |
| Cash flow from financing | (144,733) | (26,922) | (223,962) | (223,617) | (229,357) |
| Non-recurring cash flows | - | - | - | - | - |
| Other adjustments | 0 | 0 | 0 | 0 | 0 |
| Net other adjustments | 0 | 0 | 0 | 0 | 0 |
| Movement in cash | 39,490 | (19,302) | 199,654 | 228,207 | 220,819 |
| Free cash flow to firm (FCFF) | 212,759.39 | 35,783.75 | 454,040.89 | 482,055.02 | 480,211.44 |
| Free cash flow to equity (FCFE) | 53,771.55 | (5,020.35) | 242,498.77 | 270,622.10 | 268,817.16 |

Per share (THB)

| | | | | | |
|-------------------------------|-------|--------|-------|-------|-------|
| FCFF per share | 7.45 | 1.25 | 15.90 | 16.88 | 16.81 |
| FCFE per share | 1.88 | (0.18) | 8.49 | 9.47 | 9.41 |
| Recurring cash flow per share | 10.03 | 5.77 | 14.96 | 15.87 | 15.81 |

| Balance Sheet (THB m) Year Ending Dec | 2020 | 2021 | 2022E | 2023E | 2024E |
|---|------------------|------------------|------------------|------------------|------------------|
| Tangible fixed assets (gross) | 1,910,343 | 2,020,837 | 2,131,332 | 2,241,826 | 2,352,320 |
| Less: Accumulated depreciation | (1,392,217) | (1,556,017) | (1,729,024) | (1,911,239) | (2,102,661) |
| Tangible fixed assets (net) | 518,126 | 464,821 | 402,308 | 330,588 | 249,659 |
| Intangible fixed assets (net) | 21,678 | 21,679 | 21,679 | 21,679 | 21,679 |
| Long-term financial assets | - | - | - | - | - |
| Invest. in associates & subsidiaries | 75,680 | 128,779 | 184,568 | 241,347 | 299,217 |
| Cash & equivalents | 333,251 | 313,949 | 513,604 | 741,811 | 962,630 |
| A/C receivable | 110,528 | 196,243 | 207,158 | 222,069 | 236,565 |
| Inventories | 129,779 | 210,410 | 222,114 | 238,101 | 253,644 |
| Other current assets | 147,372 | 132,804 | 583,070 | 579,144 | 575,483 |
| Current assets | 720,930 | 853,406 | 1,525,945 | 1,781,126 | 2,028,321 |
| Other assets | 1,207,769 | 1,609,335 | 963,831 | 889,566 | 816,413 |
| Total assets | 2,544,183 | 3,078,019 | 3,098,330 | 3,264,306 | 3,415,289 |
| Common equity | 882,040 | 1,006,696 | 1,097,947 | 1,207,281 | 1,301,178 |
| Minorities etc. | 403,805 | 466,243 | 393,333 | 425,934 | 459,817 |
| Total shareholders' equity | 1,285,845 | 1,472,940 | 1,491,280 | 1,633,215 | 1,760,995 |
| Long term debt | 664,732 | 786,224 | 781,224 | 776,224 | 771,224 |
| Other long-term liabilities | 295,579 | 325,201 | 306,563 | 303,542 | 300,355 |
| Long-term liabilities | 960,312 | 1,111,425 | 1,087,786 | 1,079,766 | 1,071,578 |
| A/C payable | 174,873 | 316,864 | 334,488 | 358,564 | 381,970 |
| Short term debt | 98,793 | 106,778 | 114,763 | 122,748 | 130,733 |
| Other current liabilities | 24,360 | 70,013 | 70,013 | 70,013 | 70,013 |
| Current liabilities | 298,026 | 493,654 | 519,264 | 551,325 | 582,716 |
| Total liabilities and shareholders' equity | 2,544,183 | 3,078,019 | 3,098,330 | 3,264,306 | 3,415,289 |
| Net working capital | 188,446 | 152,580 | 607,841 | 610,738 | 613,708 |
| Invested capital | 2,011,699 | 2,377,193 | 2,180,226 | 2,093,918 | 2,000,676 |

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

Per share (THB)

| | | | | | |
|-------------------------------|-------|-------|-------|-------|-------|
| Book value per share | 30.88 | 35.24 | 38.44 | 42.27 | 45.55 |
| Tangible book value per share | 30.12 | 34.49 | 37.68 | 41.51 | 44.80 |

Financial strength

| | | | | | |
|---------------------------|------|------|------|------|-------|
| Net debt/equity (%) | 33.5 | 39.3 | 25.6 | 9.6 | (3.4) |
| Net debt/total assets (%) | 16.9 | 18.8 | 12.3 | 4.8 | (1.8) |
| Current ratio (x) | 2.4 | 1.7 | 2.9 | 3.2 | 3.5 |
| CF interest cover (x) | 9.5 | 4.0 | 12.6 | 13.6 | 13.6 |

| Valuation | 2020 | 2021 | 2022E | 2023E | 2024E |
|---|-------------|-------------|-------------|-------------|-------------|
| Recurring P/E (x) * | 18.4 | 11.7 | 7.8 | 6.9 | 7.3 |
| Recurring P/E @ target price (x) * | 30.2 | 19.2 | 12.8 | 11.3 | 12.1 |
| Reported P/E (x) | 27.6 | 9.6 | 7.8 | 6.9 | 7.3 |
| Dividend yield (%) | 1.4 | 1.4 | 4.1 | 4.1 | 4.6 |
| Price/book (x) | 1.2 | 1.0 | 0.9 | 0.9 | 0.8 |
| Price/tangible book (x) | 1.2 | 1.1 | 1.0 | 0.9 | 0.8 |
| EV/EBITDA (x) ** | 8.0 | 5.3 | 4.6 | 4.0 | 3.8 |
| EV/EBITDA @ target price (x) ** | 10.9 | 7.0 | 6.3 | 5.6 | 5.5 |
| EV/invested capital (x) | 0.9 | 0.9 | 0.8 | 0.8 | 0.7 |

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

Sources: PTT PCL; 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:

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

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

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

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

Anti-corruption Progress Indicator 2020

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

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

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

Disclaimer:

The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by Thaipat Institute, is made in order to comply with the policy and sustainable development plan for the listed companies of the Office of the Securities and Exchange Commission. Thaipat Institute made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of Thaipat Institute that is a third party. It is not an assessment of operation and is not based on any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, FSS International Investment Advisory Company Limited does not confirm, verify, or certify the accuracy and completeness of the assessment results.

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

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

GENERAL DISCLAIMER

ANALYST(S) CERTIFICATION

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

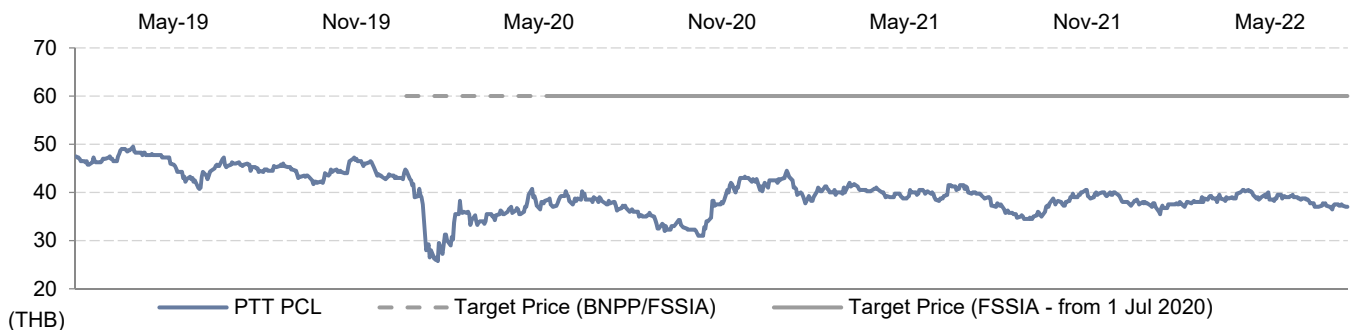
The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s)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

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History of change in investment rating and/or target price

PTT PCL (PTT TB)



| Date | Rating | Target price | Date | Rating | Target price | Date | Rating | Target price |
|-------------|--------|--------------|------|--------|--------------|------|--------|--------------|
| 21-Feb-2020 | BUY | 60.00 | - | - | - | - | - | - |

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

Price and TP are in local currency

Source: FSSIA estimates

PTT Explor & Prod (PTTEP TB)



| Date | Rating | Target price | Date | Rating | Target price | Date | Rating | Target price |
|-------------|--------|--------------|-------------|--------|--------------|-------------|--------|--------------|
| 29-Oct-2019 | HOLD | 123.00 | 12-Jun-2020 | BUY | 101.00 | 28-Jan-2022 | BUY | 162.00 |
| 11-Mar-2020 | HOLD | 81.00 | 30-Dec-2020 | BUY | 116.00 | 16-Mar-2022 | BUY | 176.00 |
| 26-Mar-2020 | BUY | 81.00 | 11-Feb-2021 | BUY | 136.00 | | | |
| 30-Apr-2020 | BUY | 85.00 | 05-Jul-2021 | BUY | 158.00 | | | |

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

Price and TP are in local currency

Source: FSSIA estimates

| Company | Ticker | Price | Rating | Valuation & Risks |
|-------------------|----------|------------|--------|---|
| PTT PCL | PTT TB | THB 36.50 | BUY | Risks to our SoTP-based valuation are the oil price and potential earnings downside from government intervention. |
| PTT Explor & Prod | PTTEP TB | THB 149.50 | 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. |

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 12-May-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.