

## PTT Global Chemical

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Public Company Limited

## PTTGC

Bloomberg PTTGC TB  
Reuters PTTGC.BK

## Preview 3Q22: big loss expected

**We expect PTTGC to report a huge loss of Bt9.5bn in 3Q22F (Nov 9) due to weaker product spread and losses on inventory, crack spread hedging and FX. This will be its worst quarter since 2011, when it was hurt by a poor petrochemical business and gas feedstock supply shortage. We cut our 2022F to a loss of Bt2.9bn from net profit of Bt12.3bn. We also slash TP to Bt56 from Bt72, based on 0.8x PBV (2023F) but stay Neutral as valuation is undemanding. We see no catalysts ahead.**

**All core businesses to fall QoQ.** We look for a plunge in operating profit QoQ to only Bt505mn in 3Q22F from Bt13.7bn in 2Q22 on lower market GRM for diesel and low-sulfur fuel oil and weak olefins product spread on a low proportion of ethane in total feedstock of 35-40% vs. 50-60% normally. Although PX and benzene product spread picked up QoQ, aromatics contribution will remain weak on lower margin for byproducts. We also expect it to book inventory and hedging losses of Bt8bn and FX loss of Bt3bn in 3Q22F from lower oil price and THB depreciation.

**Performance chemicals down QoQ with lower contribution from allnex.** Earnings from the performance chemicals segment is also expected to weaken QoQ as phenol and BPA product spread continued to normalize in 3Q22. Profit from allnex will decline on lower sales volume from lower demand from customers in the automotive and home appliance industries although margin will stay high. Overall, we expect EBITDA contribution from the PC segment to fall 52% QoQ.

**Cutting 2022F earnings forecast.** This year's earnings are turning out far weaker than previously expected, disintegrated by volatile oil price and the uncertain global economic outlook. We cut our 2022F to a net loss of Bt2.9bn from a net profit of Bt12.3bn to reflect the higher losses than expected from derivatives and FX as well as inventory loss in 3Q22.

**TP cut to Bt56 based on 0.8x PBV.** Share price is down 6% over the past three months and 29% YTD, reflecting market pessimism on its earnings in the face of lower gas supply and high naphtha cost. Further, planned maintenance of its plants throughout 2022 continues to undermine this year's earnings. The forecast revision leads us to cut TP to Bt56 from Bt72 based on 0.8x PBV (2023F). This is equivalent to -1SD of 10-year average of 1.1x, to reflect its earnings risk.

**Key risk factors:** 1) volatile crude oil price and product spread for oil refining and petrochemical segments, 2) higher feedstock cost due to lower gas feedstock, 3) asset impairment and 4) regulatory change on GHG emissions and single-use plastics (<3% of capacity).

## Forecasts and valuation

Year to 31 Dec	Unit	2020	2021	2022F	2023F	2024F
Revenue	(Btmn)	329,291	468,953	741,036	699,990	650,731
EBITDA	(Btmn)	19,891	61,952	59,424	60,866	63,796
Core profit	(Btmn)	(932)	32,313	25,674	21,990	26,212
Reported profit	(Btmn)	200	44,982	(2,934)	21,990	26,212
Core EPS	(Bt)	(0.21)	7.17	5.69	4.88	5.81
DPS	(Bt)	1.00	3.75	1.00	2.40	2.90
P/E, core	(x)	n.a.	5.8	7.3	8.5	7.1
EPS growth, core	(%)	n.a.	n.a.	(20.5)	(14.3)	19.2
P/BV, core	(x)	0.7	0.6	0.6	0.6	0.6
ROE	(%)	(0.3)	10.5	8.0	6.8	7.8
Dividend yield	(%)	2.4	9.0	2.4	5.8	7.0
FCF yield	(x)	(3.4)	(42.1)	(22.8)	5.6	20.5
EV/EBIT	(x)	(684.6)	8.2	14.9	15.5	13.0
EBIT growth, core	(%)	n.a.	n.a.	(26.5)	(4.6)	11.7
EV/CE	(x)	0.9	0.9	1.2	1.3	1.2
ROCE	(%)	(0.8)	8.3	7.8	6.7	7.8
EV/EBITDA	(x)	13.8	5.2	7.3	7.0	6.3
EBITDA growth	(%)	(27.0)	211.5	(4.1)	2.4	4.8

Source: InnovestX Research

## Tactical: NEUTRAL

(3-month)

## Stock data

Last close (Oct 20) (Bt)	41.50
Target price (Bt)	56.00
Mkt cap (Btbn)	187.12
Mkt cap (US\$mn)	4,918

Beta	H
Mkt cap (%) SET	0.97
Sector % SET	2.50
Shares issued (mn)	4,509
Par value (Bt)	10.00
12-m high / low (Bt)	66.8 / 39.8
Avg. daily 6m (US\$mn)	15.24
Foreign limit / actual (%)	37 / 12
Free float (%)	54.8
Dividend policy (%)	≥ 30

## 2022 Sustainability/2021 ESG Score

Sustainability Index (THSI)	Included
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ESG Bloomberg Score	n.a.
Environmental Score	n.a.
Social Score	n.a.
Governance Score	n.a.

Source: Bloomberg Finance L.P.

## Share performance

(%)	1M	3M	12M
Absolute	(5.7)	(6.7)	(37.1)
Relative to SET	(3.3)	(9.5)	(35.1)

Source: SET, InnovestX Research

Note: \* Performance Chemicals

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### Value proposition

PTTGC is PTT Group's flagship chemical company. It is also the largest ethane-based petrochemical producer in Thailand with fully integrated petrochemical and refinery operations and a diversified product portfolio covering the full hydrocarbon chain, as well as ventures in green chemicals. While the ethylene output from the 2.9mtpa-crackers is mostly consumed internally to produce 1.9mtpa polyethylene, it also supplies propylene to contracted customers, primarily companies under the PTT Group. PTTGC also operates a 280kbd oil refinery, comprising a 145kbd conventional oil refinery and 135kbd condensate residual splitter. It has steadily expanded its product portfolio to specialty chemicals, including ethylene oxide (EO)-based performance products and ethylene glycol (EG), as well as phenol and related. It also invested in a global coating resins firm – allnex – to strengthen its HVA product portfolio and international business. PTTGC has invested in the bio-based chemical business, using crude palm oil and crude palm kernel oil as the key feedstock to produce methyl ester (biodiesel) and related products via subsidiary Global Green Chemicals Plc (GGC).

### Business outlook

PTTGC's earnings in 2022F will come down off the high base in 2021 given its planned shutdown of most of its olefin crackers and oil refinery throughout the year. Its earnings performance has been hurt by weak product spread for the olefins and aromatics chains while oil refining margin has improved strongly on higher demand for refined oil products as it recovers back to pre-COVID level. More earnings contribution from the specialty chemical business is expected from 2022 onwards after completion of the allnex acquisition in early 2022. Oil price fluctuation has caused inventory gain/loss throughout the year and its oil refinery is also affected by hedging loss from stronger than expected crack spread for gasoil. Expanding to more specialty and recycled products will also reduce earnings volatility compared to commodity grade products.

Bullish views	Bearish views
1. PTTGC's competitive feedstock cost, mainly ethane from PTT's gas separation plant, will support profitability in the medium term.	1. PTTGC's plan to invest in an olefins cracker in the US continues to undermine investor appetite for the stock as gas cost in the US may be less competitive on the new US administration's policy to reduce fracking activities.
2. Feedstock flexibility will increase after the olefins retrofit project (ORP) started up in 2Q21 and the olefins 2 modification project (OMP) commences operations in 2023.	2. Investors are concerned about the depleting gas reserves in the Gulf of Thailand which will reduce its competitiveness in the longer term.
3. The planned expansion in downstream specialty and recycled products will stabilize profitability in the long term.	

### Key catalysts

Factor	Event	Impact	Comment
Improving GRM	Demand recovery for refined oil product will support market GRM.	Positive	We expect demand for refined oil products, mainly middle distillates and low-sulfur fuel oil, to keep GRM strong in 2022F off a low base in 2021.
Near-term earnings outlook	3Q22F earnings momentum	Lower YoY and QoQ	We expect a huge loss in 3Q22F with lower earnings contribution from all core businesses and losses from inventory, crack spread hedging and FX to exacerbate the weak earnings results. The market is pessimistic on the global economic outlook, high inflation and China's lockdown.

### Sensitivity Analysis

Factor	Earnings impact	TP impact
EBITDA margin (+0.1%)	+2.9% (2023F)	+Bt0.11/share

**ESG Disclosure Score**

	2020	2021
<b>ESG Disclosure Score</b>	<b>80.81</b>	<b>n.a.</b>
<b>Environment</b>	<b>89.10</b>	<b>n.a.</b>
Total GHG Emissions	5,900.00	6,280.00
Total Water Use	80,359.00	81,799.80
Hazardous Waste	56.13	48.79
Total Waste	158.25	99.15
<b>Social</b>	<b>63.42</b>	<b>n.a.</b>
Number of Employees	9,246.00	9,037.00
Workforce Accidents	4.00	8.00
Lost Time from Accidents	n.a.	n.a.
Fatalities - Contractors	1.00	n.a.
Fatalities - Employees	n.a.	n.a.
Fatalities - Total	1.00	n.a.
Community Spending	158.72	n.a.
<b>Governance</b>	<b>89.86</b>	<b>n.a.</b>
Size of the Board	15.00	15.00
Independent Directors	8.00	8.00
% Independent Directors	53.33	53.33
Board Duration (Years)	3.00	3.00
# Board Meetings	15.00	16.00
Board Meeting Attendance	96.46	99.16

Source: Bloomberg Finance L.P.

**Disclaimer**

Bloomberg ESG Disclosure Scores rate companies on their level of disclosure of ESG data. Bloomberg offers four disclosure scores, for overall ESG, as well as Environmental, Social, and Governance such as energy consumption, board composition, and workforce accidents.

Company ESG reporting has evolved since our ESG Disclosure Score was originally created in 2010. In order to reflect the evolution in corporate reporting, in early 2022 Bloomberg updated its ESG disclosure scores methodology. The methodology changes were implemented for all years of data for all companies in the ESG Coverage universe.

To review the fully transparent methodology, calculate disclosure scores for any company, and compare a company's scores vs its peers, see ESG Disclosure Score Model in Bloomberg.

## Financial statement

## Profit and Loss Statement

FY December 31	Unit	2017	2018	2019	2020	2021	2022F	2023F	2024F
Total revenue	(Btmn)	439,921	518,655	412,810	329,291	468,953	741,036	699,990	650,731
Cost of goods sold	(Btmn)	382,271	466,026	390,619	317,093	409,783	680,479	642,501	592,761
<b>Gross profit</b>	<b>(Btmn)</b>	<b>57,650</b>	<b>52,629</b>	<b>22,191</b>	<b>12,198</b>	<b>59,170</b>	<b>60,557</b>	<b>57,489</b>	<b>57,969</b>
SG&A	(Btmn)	14,197	14,854	16,469	14,881	21,727	34,225	32,316	30,027
Other income	(Btmn)	2,364	2,694	2,319	2,283	1,771	2,494	2,313	2,749
Interest expense	(Btmn)	3,935	3,593	3,119	3,511	5,945	10,587	10,304	8,964
<b>Pre-tax profit</b>	<b>(Btmn)</b>	<b>41,882</b>	<b>36,876</b>	<b>4,922</b>	<b>(3,912)</b>	<b>33,269</b>	<b>18,239</b>	<b>17,182</b>	<b>21,728</b>
Corporate tax	(Btmn)	3,863	2,986	649	(109)	7,228	(1,037)	1,718	2,173
Equity a/c profits	(Btmn)	5,572	6,895	4,559	3,323	6,841	6,977	7,117	7,259
Minority interests	(Btmn)	(2,822)	(201)	(667)	(452)	(568)	(579)	(591)	(602)
<b>Core profit</b>	<b>(Btmn)</b>	<b>40,768</b>	<b>40,583</b>	<b>8,164</b>	<b>(932)</b>	<b>32,313</b>	<b>25,674</b>	<b>21,990</b>	<b>26,212</b>
Extra-ordinary items	(Btmn)	(1,470)	(514)	3,518	1,132	12,669	(28,608)	0	0
<b>Net Profit</b>	<b>(Btmn)</b>	<b>39,298</b>	<b>40,069</b>	<b>11,682</b>	<b>200</b>	<b>44,982</b>	<b>(2,934)</b>	<b>21,990</b>	<b>26,212</b>
EBITDA	(Btmn)	65,267	59,524	27,239	19,891	61,952	59,424	60,866	63,796
<b>Core EPS</b>	<b>(Btmn)</b>	<b>9.04</b>	<b>9.00</b>	<b>1.81</b>	<b>(0.21)</b>	<b>7.17</b>	<b>5.69</b>	<b>4.88</b>	<b>5.81</b>
Net EPS	(Bt)	8.72	8.89	2.59	0.04	9.98	(0.65)	4.88	5.81
DPS	(Bt)	4.25	4.25	2.00	1.00	3.75	1.00	2.40	2.90

## Balance Sheet

FY December 31	Unit	2017	2018	2019	2020	2021	2022F	2023F	2024F
Total current assets	(Btmn)	140,738	144,310	104,494	129,911	207,244	198,488	207,194	253,057
Total fixed assets	(Btmn)	294,226	324,945	348,020	359,472	546,871	543,163	532,971	520,264
<b>Total assets</b>	<b>(Btmn)</b>	<b>434,964</b>	<b>469,255</b>	<b>452,514</b>	<b>489,383</b>	<b>754,115</b>	<b>741,651</b>	<b>740,165</b>	<b>773,322</b>
Total loans	(Btmn)	96,022	95,655	106,778	148,002	209,163	300,660	295,496	326,833
Total current liabilities	(Btmn)	60,313	73,858	53,033	59,041	147,007	147,001	98,632	85,360
Total long-term liabilities	(Btmn)	94,387	91,915	105,886	141,347	279,506	281,350	312,687	344,023
<b>Total liabilities</b>	<b>(Btmn)</b>	<b>154,700</b>	<b>165,773</b>	<b>158,919</b>	<b>200,389</b>	<b>426,512</b>	<b>428,351</b>	<b>411,319</b>	<b>429,383</b>
Paid-up capital	(Btmn)	45,088	45,088	45,088	45,088	45,088	45,088	45,088	45,088
<b>Total equity</b>	<b>(Btmn)</b>	<b>280,264</b>	<b>303,482</b>	<b>293,595</b>	<b>288,994</b>	<b>327,603</b>	<b>313,300</b>	<b>328,847</b>	<b>343,939</b>
<b>BVPS</b>	<b>(Bt)</b>	<b>60.96</b>	<b>65.66</b>	<b>63.39</b>	<b>62.33</b>	<b>70.58</b>	<b>67.28</b>	<b>70.60</b>	<b>73.81</b>

## Cash Flow Statement

FY December 31	Unit	2017	2018	2019	2020	2021	2022F	2023F	2024F
Core Profit	(Btmn)	40,768	40,583	8,164	(932)	32,313	25,674	21,990	26,212
Depreciation and amortization	(Btmn)	19,451	19,055	19,198	20,292	22,738	30,598	33,381	33,104
Operating cash flow	(Btmn)	61,765	53,554	30,337	21,953	70,108	(15,734)	33,750	58,729
Investing cash flow	(Btmn)	(41,545)	(32,842)	(41,780)	(28,274)	(148,843)	(26,890)	(23,189)	(20,397)
Financing cash flow	(Btmn)	(9,511)	(27,397)	(6,461)	31,794	90,036	24,528	(11,607)	20,216
<b>Net cash flow</b>	<b>(Btmn)</b>	<b>10,709</b>	<b>(6,685)</b>	<b>(17,904)</b>	<b>25,473</b>	<b>11,300</b>	<b>(18,096)</b>	<b>(1,045)</b>	<b>58,547</b>

## Key Financial Ratios

FY December 31	Unit	2017	2018	2019	2020	2021	2022F	2023F	2024F
Gross margin	(%)	13.1	10.1	5.4	3.7	12.6	8.2	8.2	8.9
Operating margin	(%)	9.9	7.3	1.4	(0.8)	8.0	3.6	3.6	4.3
EBITDA margin	(%)	14.8	11.5	6.6	6.0	13.2	8.0	8.7	9.8
EBIT margin	(%)	10.4	7.8	1.9	(0.1)	8.4	3.9	3.9	4.7
Net profit margin	(%)	8.9	7.7	2.8	0.1	9.6	(0.4)	3.1	4.0
ROE	(%)	14.9	13.9	2.7	(0.3)	10.5	8.0	6.8	7.8
ROA	(%)	9.6	9.0	1.8	(0.2)	5.2	3.4	3.0	3.5
Net D/E	(x)	0.1	0.1	0.3	0.3	0.4	0.8	0.7	0.6
Interest coverage	(x)	16.6	16.6	8.7	5.7	10.4	5.6	5.9	7.1
Debt service coverage	(x)	4.8	3.7	2.1	0.8	1.3	1.1	3.9	4.4
Payout Ratio	(%)	48.8	47.8	77.2	2,258.9	37.6	n.a.	49.2	49.9

## Main Assumptions

FY December 31	Unit	2017	2018	2019	2020	2021	2022F	2023F	2024F
Utilization rate - Olefins	(%)	96.0	101.0	102.0	97.0	91.0	80.0	95.0	95.0
Utilization rate - Aromatics	(%)	79.8	93.0	88.0	96.0	99.0	95.0	95.0	95.0
Utilization rate - Oil Refinery	(%)	102.6	101.7	86.9	97.3	100.0	100.0	100.0	100.0
HDPE-naphtha spread	(US\$/t)	672	716	468	500	536	425	420	450
PX-condensate spread	(US\$/t)	381	451	351	228	250	280	280	280
Market GRM	(US\$/bbl)	6.74	6.08	3.86	2.24	3.80	19.92	17.05	15.61

## Financial statement

## Profit and Loss Statement

FY December 31	Unit	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22
Total revenue	(Btmn)	77,148	88,362	102,676	112,627	113,189	140,461	176,767	197,603
Cost of goods sold	(Btmn)	72,346	78,889	87,920	96,409	97,421	128,033	155,316	171,252
<b>Gross profit</b>	<b>(Btmn)</b>	<b>4,801</b>	<b>9,473</b>	<b>14,756</b>	<b>16,218</b>	<b>15,768</b>	<b>12,428</b>	<b>21,451</b>	<b>26,351</b>
SG&A	(Btmn)	3,528	4,512	3,955	4,417	4,998	8,357	9,532	9,388
Other income	(Btmn)	223	939	408	363	567	433	811	818
Interest expense	(Btmn)	909	937	1,184	1,530	1,704	1,528	2,101	2,428
<b>Pre-tax profit</b>	<b>(Btmn)</b>	<b>587</b>	<b>4,962</b>	<b>10,025</b>	<b>10,634</b>	<b>9,634</b>	<b>2,975</b>	<b>10,630</b>	<b>15,353</b>
Corporate tax	(Btmn)	235	546	721	5,591	727	190	184	(324)
Equity a/c profits	(Btmn)	884	1,072	1,893	2,324	1,154	1,471	1,142	1,549
Minority interests	(Btmn)	(74)	(316)	(132)	(141)	(233)	(61)	(470)	(438)
<b>Core profit</b>	<b>(Btmn)</b>	<b>1,163</b>	<b>5,173</b>	<b>11,065</b>	<b>7,226</b>	<b>9,828</b>	<b>4,195</b>	<b>11,120</b>	<b>16,788</b>
Extra-ordinary items	(Btmn)	(254)	1,232	(1,370)	17,809	(2,822)	(947)	(6,908)	(15,400)
<b>Net Profit</b>	<b>(Btmn)</b>	<b>908</b>	<b>6,405</b>	<b>9,695</b>	<b>25,035</b>	<b>7,005</b>	<b>3,248</b>	<b>4,212</b>	<b>1,388</b>
EBITDA	(Btmn)	6,575	11,181	16,666	17,753	17,175	10,358	19,568	24,563
<b>Core EPS</b>	<b>(Btmn)</b>	<b>0.26</b>	<b>1.15</b>	<b>2.45</b>	<b>1.60</b>	<b>2.18</b>	<b>0.93</b>	<b>2.47</b>	<b>3.72</b>
Net EPS	(Bt)	0.20	1.42	2.15	5.55	1.55	0.72	0.93	0.31

## Balance Sheet

FY December 31	Unit	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22
Total current assets	(Btmn)	98,951	129,911	188,244	222,986	221,154	207,244	238,676	252,436
Total fixed assets	(Btmn)	355,297	359,472	364,448	358,129	359,309	546,871	542,661	540,220
<b>Total assets</b>	<b>(Btmn)</b>	<b>454,249</b>	<b>489,383</b>	<b>552,692</b>	<b>581,115</b>	<b>580,464</b>	<b>754,115</b>	<b>781,338</b>	<b>792,656</b>
Total loans	(Btmn)	129,834	148,002	190,008	192,493	177,427	209,163	282,834	304,490
Total current liabilities	(Btmn)	53,780	59,041	68,911	73,277	101,041	147,007	165,246	165,556
Total long-term liabilities	(Btmn)	118,374	141,347	184,017	187,626	157,983	279,506	289,939	310,247
<b>Total liabilities</b>	<b>(Btmn)</b>	<b>172,153</b>	<b>200,389</b>	<b>252,928</b>	<b>260,902</b>	<b>259,024</b>	<b>426,512</b>	<b>455,184</b>	<b>475,803</b>
Paid-up capital	(Btmn)	45,088	45,088	45,088	45,088	45,088	45,088	45,088	45,088
<b>Total equity</b>	<b>(Btmn)</b>	<b>282,095</b>	<b>288,994</b>	<b>299,764</b>	<b>320,212</b>	<b>321,439</b>	<b>327,603</b>	<b>326,153</b>	<b>316,853</b>
<b>BVPS</b>	<b>(Bt)</b>	<b>60.87</b>	<b>62.33</b>	<b>64.65</b>	<b>69.23</b>	<b>69.48</b>	<b>70.58</b>	<b>70.16</b>	<b>68.21</b>

## Cash Flow Statement

FY December 31	Unit	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22
Core Profit	(Btmn)	1,163	5,173	11,065	7,226	9,828	4,195	11,120	16,788
Depreciation and amortization	(Btmn)	5,079	5,281	5,458	5,589	5,837	5,854	6,837	6,782
Operating cash flow	(Btmn)	2,587	8,941	8,649	10,377	21,922	29,159	5,176	(3,262)
Investing cash flow	(Btmn)	(1,027)	(12,461)	(41,755)	(4,291)	11,934	(114,731)	(17,588)	(9,925)
Financing cash flow	(Btmn)	(3,625)	19,160	37,842	(4,705)	(29,262)	86,161	15,337	4,205
<b>Net cash flow</b>	<b>(Btmn)</b>	<b>(2,065)</b>	<b>15,640</b>	<b>4,736</b>	<b>1,381</b>	<b>4,595</b>	<b>589</b>	<b>2,925</b>	<b>(8,982)</b>

## Key Financial Ratios

FY December 31	Unit	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22
Gross margin	(%)	6.2	10.7	14.4	14.4	13.9	8.8	12.1	13.3
Operating margin	(%)	1.7	5.6	10.5	10.5	9.5	2.9	6.7	8.6
EBITDA margin	(%)	8.5	12.7	16.2	15.8	15.2	7.4	11.1	12.4
EBIT margin	(%)	1.9	6.7	10.9	10.8	10.0	3.2	7.2	9.0
Net profit margin	(%)	1.2	7.2	9.4	22.2	6.2	2.3	2.4	0.7
ROE	(%)	1.7	7.2	15.0	9.3	12.3	5.2	13.6	20.9
ROA	(%)	1.0	4.4	8.5	5.1	6.8	2.5	5.8	8.5
Net D/E	(x)	0.4	0.4	0.5	0.4	0.4	0.5	0.7	0.8
Interest coverage	(x)	7.2	11.9	14.1	11.6	10.1	6.8	9.3	10.1
Debt service coverage	(x)	0.9	1.7	2.4	2.3	1.5	0.9	1.5	1.8

## Key Statistics

FY December 31	Unit	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22
Utilization rate - Olefins	(%)	103.0	104.0	104.0	93.0	91.0	80.0	85.0	75.0
Utilization rate - Aromatics	(%)	91.0	98.0	98.0	102.0	100.0	97.0	100.0	80.0
Utilization rate - Oil Refinery	(%)	94.0	91.0	102.0	101.0	77.0	101.0	101.0	98.0
HDPE-naphtha spread	(US\$/t)	522	592	588	585	462	507	453	468
PX-condensate spread	(US\$/t)	188	191	240	283	304	211	248	354
Market GRM	(US\$/bbl)	1.22	1.78	3.17	2.03	3.20	6.35	7.60	21.09

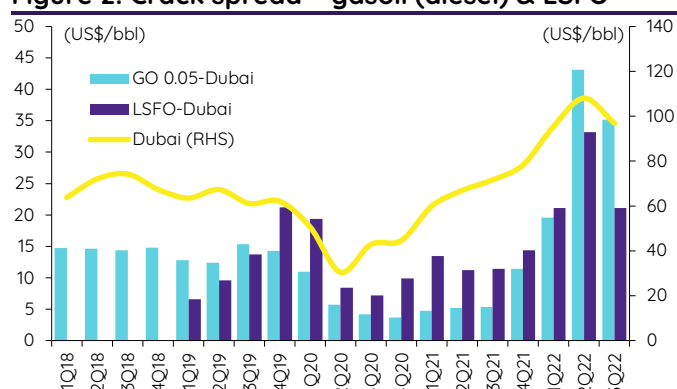
Figure 1: PTTGC - 3Q22F earnings preview

	3Q21	2Q22	3Q22F	%YoY	%QoQ
Sales	113,189	197,603	174,183	53.9	(11.9)
EBITDA	16,663	23,731	5,269	(68.4)	(77.8)
Operating profit	8,657	13,703	1,329	(84.6)	(90.3)
<b>Net profit</b>	<b>7,005</b>	<b>1,388</b>	<b>(9,589)</b>	<b>n.m.</b>	<b>n.m.</b>
<b>EPS (Bt/share)</b>	<b>1.55</b>	<b>0.31</b>	<b>(2.13)</b>	<b>n.m.</b>	<b>n.m.</b>
CDU utilization rate (%)	77%	98%	101%	24.0	3.0
Market GRM (PTTGC) (US\$/bbl)	3.20	21.09	11.00	243.8	(47.8)
Utilization rate - PE (%)	104%	90%	100%	(4.0)	10.0
EBITDA margin - Olefins (%)	18%	9%	8%	(10.0)	(1.0)
Utilization rate - BTX (%)	100%	80%	90%	(10.0)	10.0
P2F margin - aromatics (US\$/t)	188	117	100	(46.9)	(14.7)

Source: PTTGC and InnovestX Research

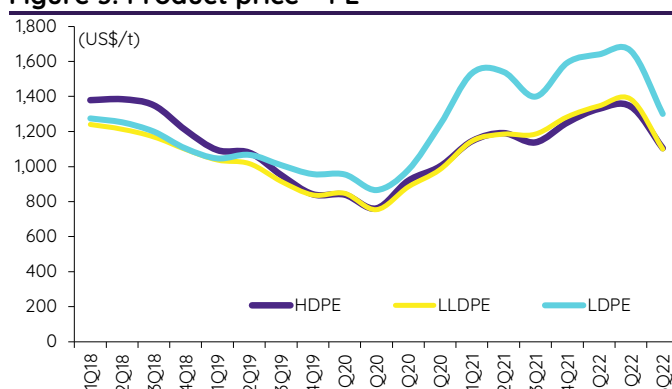
## Appendix

Figure 2: Crack spread - gasoil (diesel) & LSFO



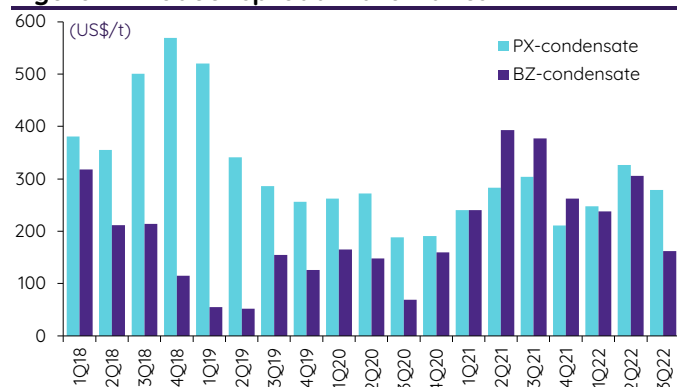
Source: Industry data, PTTGC and InnovestX Research

Figure 3: Product price - PE



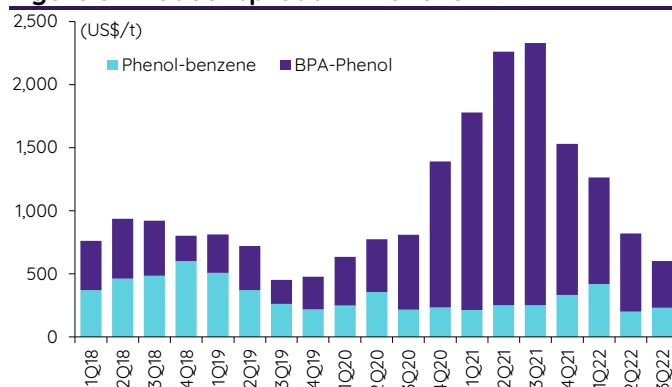
Source: Industry data, PTTGC and InnovestX Research

Figure 4: Product spread - aromatics



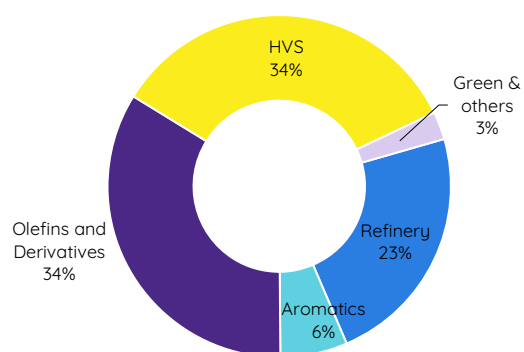
Source: Industry data, PTTGC and InnovestX Research

Figure 5: Product spread - Phenol & BPA



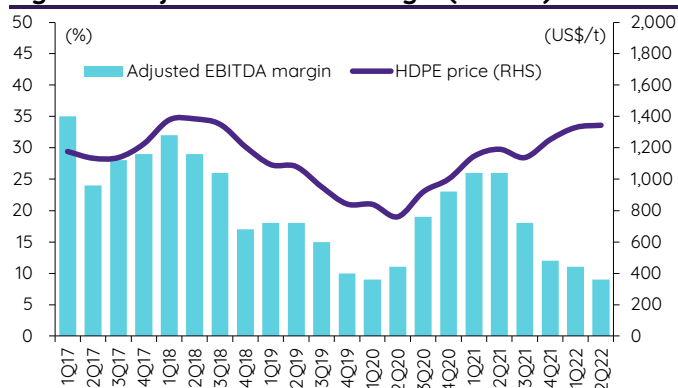
Source: Industry data, PTTGC and InnovestX Research

Figure 6: Adj. EBITDA breakdown (LTM-end 2Q22)



Source: PTTGC and InnovestX Research

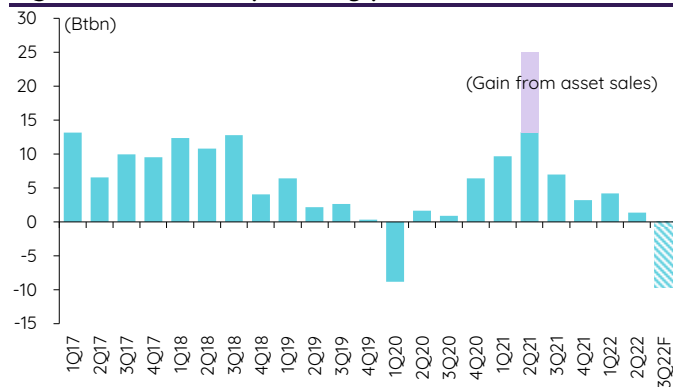
Figure 7: Adjusted EBITDA margin (olefins)



Source: PTTGC, Bloomberg Finance L.P. and InnovestX Research



Figure 8: PTTGC - quarterly profit



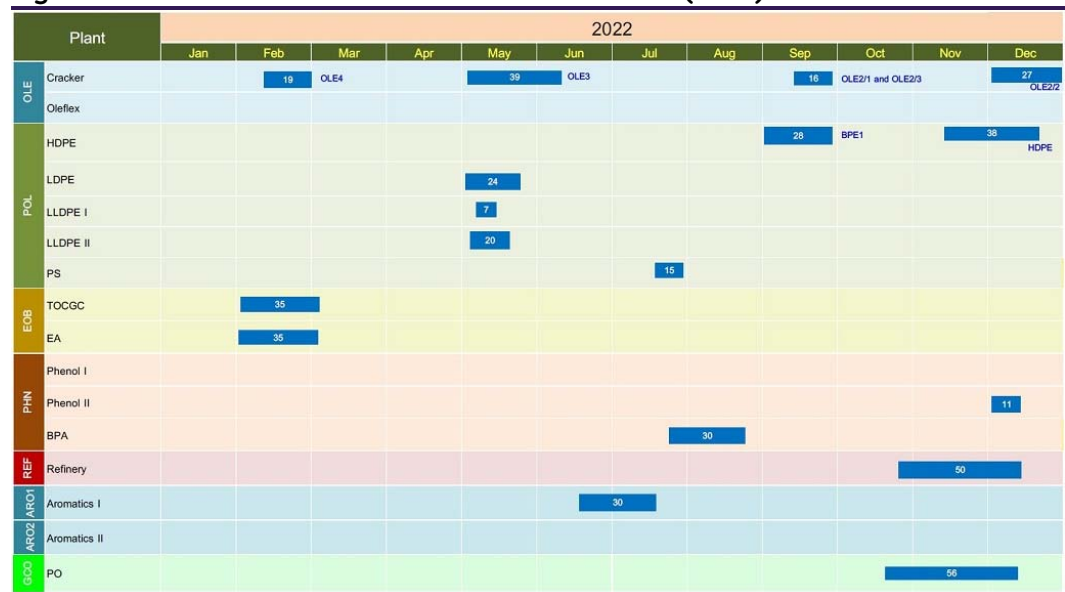
Source: PTTGC and InnovestX Research

Figure 9: PTTGC - PBV band



Source: InnovestX Research

Figure 10: PTTGC - maintenance shutdown schedule (2022)



Source: PTTGC

Figure 11: PTTGC - pathway to Net Zero Target in 2050



Source: PTTGC

**Figure 12: Valuation summary** (price as of Oct 20, 2022)

	Rating	Price (Bt/Sh)	Target (Bt/Sh)	ETR (%)	P/E (x)			EPS growth (%)			P/BV (x)			ROE (%)			Div. Yield (%)			EV/EBITDA (x)		
					21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F	21A	22F	23F
GGC	Neutral	14.60	13.4	(4.2)	19.5	12.3	15.8	39	59	(22)	1.5	1.4	1.3	8	12	9	2.4	4.1	3.2	9.1	6.6	7.1
IVL	Outperform	40.75	66.0	68.8	8.5	4.8	4.9	2,210	76	(2)	1.4	1.2	1.0	19	27	22	2.5	6.9	6.1	6.7	4.0	3.6
PTTGC	Neutral	41.50	56.0	37.3	5.8	7.3	8.5	n.m.	(21)	(14)	0.6	0.6	0.6	10	8	7	9.0	2.4	5.8	5.2	7.3	7.0
<b>Average</b>					<b>11.2</b>	<b>8.1</b>	<b>9.7</b>	<b>1,125</b>	<b>38</b>	<b>(13)</b>	<b>1.2</b>	<b>1.1</b>	<b>1.0</b>	<b>12</b>	<b>16</b>	<b>12</b>	<b>4.6</b>	<b>4.4</b>	<b>5.0</b>	<b>7.0</b>	<b>5.9</b>	<b>5.9</b>

Source: InnovestX Research

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**Corporate Governance Report**

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To recognize well performers, the list of companies attaining "Good", "Very Good" and "Excellent" levels of recognition

(Not including listed companies qualified in the "no announcement of the results" clause from 1 January 2020 to 26 October 2021) is publicized.

<sup>1</sup> TIP was voluntarily delisted from the Stock Exchange of Thailand effectively on July 24, 2021

<sup>2</sup> RCI was voluntarily delisted from the Stock Exchange of Thailand, effectively on July 16, 2021

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**Declared (ประกาศเจตนา)**

AH, ALT, APCO, ASW, B52, CHG, CI, CPR, CPW, DDD, DHOUSE, DOHOME, ECF, EKH, ETC, EVER, FLOYD, GLOBAL, ILM, INOX, J, JMART, JMT, JTS, KEX, KUMWEL, LDC, MEGA, NCH, APCO, NOVA, NRF, NUSA, OR, PIMO, PLE, RS, SAK, SIS, SSS, STECH, SUPER, SVT, TKN, TMD, TMI, TQM, TRT, TSI, VARO, VCOM, VIBHA, W, WIN

**N/A**

24CS, 3K-BAT, A, A5, AAV, ABICO, ABM, ACAP, ACC, ACE, ACG, ADB, ADD, AEONTS, AFC, AGE, AHC, AIT, AJA, AKR, ALL, ALLA, ALPHAX, ALUCON, AMARC, AMARIN, AMC, AMR, ANAN, AOT, APEX, APP, APURE, AQ, AQUA, ARIN, ARIP, ARROW, ASAP, ASEFA, ASIA, ASIMAR, ASN, ATP30, AU, AUCTION, BA, BBGI, BBIK, BC, BCT, BDMS, BEAUTY, BEM, BGT, BH, BIG, BIOTEC, BIS, BIZ, BJC, BJCHI, BKD, BLAND, BLESS, BLISS, BM, BOL, BR, BRI, BROCK, BSM, BTNC, BTW, BUI, BYD, CAZ, CBG, CCET, CCP, CEYE, CGD, CH, CHARAN, CHAYO, CHIC, CHO, CITY, CIVIL, CK, CKP, CMAN, CMO, CMR, CNT, COLOR, COMAN, CPANEL, CPH, CPT, CRANE, CRD, CSP, CSR, CSS, CTW, CV, CWT, D, DCON, DITTO, DMT, DOD, DPAINT, DTCI, DV8, EASON, ECL, EE, EFORL, EMC, ESSO, F&D, FANCY, FMT, FN, FORTH, FTI, FVC, GENCO, GIFT, GL, GLAND, GLOCON, GLORY, GRAMMY, GRAND, GREEN, GSC, GTB, GYT, HFT, HL, HPT, HTECH, HUMAN, HYDRO, ICN, IFEC, IHL, IIG, IMH, IND, INGRS, INSET, IP, IRCP, IT, ITD, ITNS, JAK, JAS, JCK, JCKH, JCT, JDF, JSP, JUBILE, JWD, KAMART, KC, KCC, KCM, KDH, KIAT, KISS, KK, KKC, KOOL, KTIS, KUN, KWC, KWM, KYE, LALIN, LEE, LEO, LIT, LOXLEY, LPH, LST, MACO, MANRIN, MATI, MAX, M-CHAI, MCS, MDX, MENA, METCO, MGT, MICRO, MIDA, MITSIB, MJD, MK, ML, MODERN, MORE, MPIC, MUD, MVP, NATION, NC, NCH, NCL, NDR, NER, NETBAY, NEW, NEWS, NEX, NFK, NNCL, NPK, NSL, NTV, NV, NVD, NYT, OHTL, OISHI, ONEE, OSP, OTO, PACE, PACO, PAF, PCC, PEACE, PERM, PF, PICO, PIN, PJW, PLUS, PMTA, POLAR, POMPUI, PORT, POST, PPM, PRAKIT, PRAPAT, PRECHA, PRIME, PRIN, PRO, PROEN, PROUD, PSG, PTC, PTECH, PTL, RAM, RBF, RCL, RICHY, RJH, ROCK, ROH, ROJNA, RP, RPC, RPH, RSP, RT, S, S11, SA, SABUY, SAFARI, SALEE, SAM, SAMART, SAMCO, SAMTEL, SANKO, SAUCE, SAWAD, SAWANG, SCAP, SCI, SCP, SDC, SE, SEAFICO, SECURE, SENAJ, SFLEX, SFP, SFT, SGF, SHANG, SHR, SIAM, SICT, SIMAT, SISB, SK, SKE, SKN, SKY, SLM, SLP, SMART, SMD, SMT, SNNP, SO, SOLAR, SONIC, SPA, SPCG, SPG, SPVI, SQ, SR, SSC, STANLY, STARK, STC, STEC, STHAI, STI, STP, STPI, SUC, SUN, SUTHA, SVH, SVOA, SWC, SYNEX, TACC, TAPAC, TC, TCC, TCCC, TCJ, TCOAT, TEAM, TEAMG, TEGH, TEKA, TFM, TGE, TGPRO, TH, THAI, THANA, THE, THG, THL, THMUI, TIGER, TIPH, TITLE, TK, TKT, TLI, TM, TMC, TMW, TNIT, TNH, TNPC, TOA, TPAC, TPBI, TPCH, TPIPL, TPIPP, TPLAS, TPOLY, TPS, TQR, TR, TRT, TRITN, TRUBB, TRV, TSE, TSF, TSR, TTI, TTT, TTW, TVT, TWP, TWZ, TYCN, UAC, UMI, UMS, UNIQ, UP, UPA, UPOIC, UREKA, UTP, UVAN, VL, VNG, VPO, VRANDA, WAVE, WFX, WGE, WINMED, WINNER, WORK, WORLD, WP, WPH, XPG, YGG, YONG

**Explanations**

Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of July 7, 2022) are categorised into: companies that have declared their intention to join CAC, and companies certified by CAC.