

PTT Global Chemical

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Public Company Limited

PTTGC

Bloomberg PTTGC TB
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Challenges continuing

Although we expect PTTGC's huge loss in 3Q22 to be this year's bottom, earnings outlook remains challenging as fears of a global recession weaken demand. Management says PTTGC is well prepared to withstand the uncertain economic outlook with strong financial position and liquidity. It continues to improve production efficiency to maintain competitiveness while keeping on the path to decarbonization (net zero emissions by 2050). The near-term challenge will deter investment in chemical stocks for the next three months despite undemanding valuation. Neutral with TP of Bt56, on 0.8x PBV (2023F).

3Q22 earnings recap. PTTGC's net loss in 3Q22 of Bt13.4bn was worse than expected with a lower adjusted EBITDA (-51% QoQ) in all segments and Bt14.2bn in extra losses: stock loss and NRV, hedging loss, FX loss and extra provisions relating to an incident at a subsidiary. The upstream segment (refinery, aromatics, olefins & utilities) did poorest; polymer did best though adjusted EBITDA fell 16% QoQ.

4Q22F remains challenging. Management admits earnings are vulnerable to a global economic slowdown and other uncontrollable factors, including China's COVID lockdowns that cause supply chain disruption and sluggish demand for petrochemical products, and geopolitical risk in Europe pushing up feedstock cost. It says it has risk mitigation plans, including cuts in operating expenses (10-15% reduction) and capital expenditure (Bt5bn savings) and an efficiency enhancement project (Bt4bn benefit in 2022). PTTGC has prepared financial liquidity to withstand uncertainty in financial markets at a manageable financing cost to ensure continuity of operations while reducing exposure to floating interest rate.

Increasing high value products portion to continue. Management reaffirms its target to increase the portion of HVP to 56% by 2030 from 36% in 2022. The current weak product spread of commodity grade products in the polymer segment, which hurt earnings in 9M22, especially in 3Q22, has led PTTGC to accelerate this growth strategy. Performance chemicals segment will be driven by allnex, who has a leading position in the global market. More synergy and collaboration between PTTGC and allnex will drive contribution to 35% of total EBITDA by 2030 from 22% in 9M22. The EBITDA margin hiccup in 3Q22 at allnex was caused by supply disruption in the automotive industry (~20% of allnex sales), expected to improve in 2023.

Cutting earnings forecast for 2022F but maintain TP. The disappointing 9M22 was mainly due to non-recurring items and we cut our 2022F to a loss of Bt5.6bn from a net loss of Bt2.9bn to reflect the higher losses from inventory, derivatives and FX in 3Q22. Earnings are expected to improve in 4Q22F without the huge inventory loss and other extra items. Despite the 2022F cut, the impact on TP of Bt56 is minimal. This is based on 0.8x PBV (2023F), equivalent to -1SD of 10-year average of 1.1x to reflect its earnings risk. Poor sentiment on its outlook from lower gas supply and high naphtha cost will continue until gas supply for the Gulf of Thailand looks better and demand for petrochemical products recovers. The key factor to be monitored is the relaxation of China's COVID lockdowns.

Key risk factors: 1) Volatile crude oil price and product spread for oil refining and petrochemicals, 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	63,655	66,049
Core profit	(Btmn)	(932)	32,313	23,040	21,957	26,241
Reported profit	(Btmn)	200	44,982	(5,567)	21,957	26,241
Core EPS	(Bt)	(0.21)	7.17	5.11	4.87	5.82
DPS	(Bt)	1.00	3.75	1.00	2.40	2.90
P/E, core	(x)	n.a.	6.6	9.3	9.8	8.2
EPS growth, core	(%)	n.a.	n.a.	(28.7)	(4.7)	19.5
P/BV, core	(x)	0.8	0.7	0.7	0.7	0.6
ROE	(%)	(0.3)	10.5	7.2	6.9	7.9
Dividend yield	(%)	2.1	7.9	2.1	5.1	6.1
FCF yield	(x)	(3.0)	(36.8)	(20.0)	5.9	18.7
EV/EBIT	(x)	(752.1)	8.9	15.9	14.9	12.8
EBIT growth, core	(%)	n.a.	n.a.	(26.5)	5.0	8.8
EV/CE	(x)	0.9	1.0	1.3	1.3	1.3
ROCE	(%)	(0.8)	8.3	7.8	7.4	8.4
EV/EBITDA	(x)	15.2	5.6	7.7	7.1	6.4
EBITDA growth	(%)	(27.0)	211.5	(4.1)	7.1	3.8

Source: InnovestX Research

Tactical: NEUTRAL

(3-month)

Stock data	
Last close (Nov 16) (Bt)	47.50
Target price (Bt)	56.00
Mkt cap (Btmn)	214.17
Mkt cap (US\$mn)	6,023

Beta	H
Mkt cap (%) SET	1.09
Sector % SET	2.65
Shares issued (mn)	4,509
Par value (Bt)	10.00
12-m high / low (Bt)	61.8 / 39.8
Avg. daily 6m (US\$mn)	16.10
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	78.71
Environmental Score	88.55
Social Score	57.68
Governance Score	89.86

Source: Bloomberg Finance L.P.

Share performance

(%)	1M	3M	12M
Absolute	15.9	(1.0)	(21.8)
Relative to SET	12.4	0.2	(20.6)

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 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

We expect PTTGC's 2023 earnings to improve from a net loss in 2022 when it was hit hard by a weaker profit margin and planned shutdown of most of its olefin crackers and oil refinery throughout the year (2022) as well as huge losses from inventory and hedging. Although outlook for petrochemical product price and spread remains uncertain due to heightening risk of a global economic recession, PTTGC's olefins operation is expected to be enhanced by higher gas supply from the Gulf of Thailand to its ethane crackers, hence better EBITDA margin. We also expect lower negative impact from inventory and hedging losses, assuming less volatile oil price. 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	4Q22F earnings momentum	Better QoQ but lower YoY	We expect some improvement of earnings in 4Q22F with lower impact from inventory and hedging losses despite planned shutdown of its refinery for 50 days. Market pessimism on the global economic outlook, high inflation and China's lockdowns will continue to depress petrochemical product spread.

Sensitivity Analysis

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

ESG Disclosure Score

Bloomberg ESG Score	78.41 (2021)
Rank in Sector	2/15

	CG Rating 0-5	DJSI	SETTHSI	THSI
PTTGC	5	Yes	Yes	Yes

Source: Thai Institute of Directors and SET

Environmental Issue (E)

- PTTGC targets to reduce greenhouse gas (scope 1 and 2) by 20% within 2030 and to achieve net zero emissions and cooperate with suppliers and customers to halve scope 3 emissions within 2050.
- It is one of the first organizations in Thailand to implement a Circular Economy by raising public awareness of waste management.
- PTTGC continues to invest in renewable energy technology and integrate green initiatives into its business operations, aiming at reducing the consumption of fossil fuels. This includes the installation of solar rooftops. The company also enhanced energy efficiency and reduced energy consumption in production process and offices.
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Social Issue (S)

- PTTGC set up social enterprises with the goal of generating sustainable income for local communities, leveraging strategy via a Circular Economy, mainly the management of waste for delivery as feedstock to its recycled plastic resin factory. Community satisfaction rate was high at 91.25%.
- PTTGC employed customer recommendations to enhance the efficiency of its customer relationship management. It continuously maintains customer satisfaction at 93%, higher than the industry average.
- PTTGC continued to emphasize improving employee capability while maintaining work-life balance and safety and occupational health with competitive compensation. Employee turnover rate was 3.83% and Lost Time Injury Frequency Rate was 0.05 and Total recordable incident rate was 0.05 and 0.41 case/1 million man-hours, respectively.

Governance Issue (G)

- PTTGC's board of directors consists of 13 directors, 12 non-executive directors (92.31% of the entire board), 9 independent directors, which exceeds half of the board (69.23% of the entire board), and an executive director. These include two female members (15.38% of the entire board).
- The company has been rated "Excellent" (5 stars) by the Thai Institute of Directors in 2022.
- We view PTTGC's management and governance as satisfactory, reflecting management's experience and expertise, its transparency with stakeholders, and its independent board of directors.

ESG Disclosure Score

	2020	2021
ESG Disclosure Score	80.81	78.71
Environment	89.10	88.55
Emissions Reduction Initiatives	Yes	Yes
Climate Change Policy	Yes	Yes
GHG Scope 1	5,880.00	6,737.60
Biodiversity Policy	Yes	Yes
Energy Efficiency Policy	Yes	Yes
Total Energy Consumption	41,518.40	43,233.80
Social	63.42	57.68
Human Rights Policy	Yes	Yes
Equal Opportunity Policy	Yes	Yes
Health and Safety Policy	Yes	Yes
Fatalities - Employees	0.00	0.00
Total Recordable Incident Rate - Employees	0.04	0.08
Employee Turnover Pct	6.33	3.83
Governance	89.86	89.86
Size of the Board	15	15
Number of Board Meetings for the Year	15	16
Board Meeting Attendance Pct	96	99
Number of Female Executives	7	7
Number of Independent Directors	8	8
Board Duration (Years)	3	3

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	639,710	590,540
Gross profit	(Btmn)	57,650	52,629	22,191	12,198	59,170	60,557	60,280	60,190
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	2,310	2,781
Interest expense	(Btmn)	3,935	3,593	3,119	3,511	5,945	10,180	10,304	8,964
Pre-tax profit	(Btmn)	41,882	36,876	4,922	(3,912)	33,269	18,646	19,970	23,981
Corporate tax	(Btmn)	3,863	2,986	649	(109)	7,228	(996)	1,997	2,398
Equity a/c profits	(Btmn)	5,572	6,895	4,559	3,323	6,841	3,977	4,574	5,260
Minority interests	(Btmn)	(2,822)	(201)	(667)	(452)	(568)	(579)	(591)	(602)
Core profit	(Btmn)	40,768	40,583	8,164	(932)	32,313	23,040	21,957	26,241
Extra-ordinary items	(Btmn)	(1,470)	(514)	3,518	1,132	12,669	(28,608)	0	0
Net Profit	(Btmn)	39,298	40,069	11,682	200	44,982	(5,567)	21,957	26,241
EBITDA	(Btmn)	65,267	59,524	27,239	19,891	61,952	59,424	63,655	66,049
Core EPS	(Btmn)	9.04	9.00	1.81	(0.21)	7.17	5.11	4.87	5.82
Net EPS	(Bt)	8.72	8.89	2.59	0.04	9.98	(1.23)	4.87	5.82
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	198,254	208,776	256,220
Total fixed assets	(Btmn)	294,226	324,945	348,020	359,472	546,871	540,763	528,537	514,231
Total assets	(Btmn)	434,964	469,255	452,514	489,383	754,115	739,018	737,313	770,451
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	98,446	85,127
Total long-term liabilities	(Btmn)	94,387	91,915	105,886	141,347	279,506	281,350	312,687	344,023
Total liabilities	(Btmn)	154,700	165,773	158,919	200,389	426,512	428,351	411,133	429,150
Paid-up capital	(Btmn)	45,088	45,088	45,088	45,088	45,088	45,088	45,088	45,088
Total equity	(Btmn)	280,264	303,482	293,595	288,994	327,603	310,667	326,180	341,300
BVPS	(Bt)	60.96	65.66	63.39	62.33	70.58	66.70	70.01	73.23

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	23,040	21,957	26,241
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	(18,368)	33,730	58,766
Investing cash flow	(Btmn)	(41,545)	(32,842)	(41,780)	(28,274)	(148,843)	(24,490)	(21,154)	(18,798)
Financing cash flow	(Btmn)	(9,511)	(27,397)	(6,461)	31,794	90,036	24,528	(11,607)	20,216
Net cash flow	(Btmn)	10,709	(6,685)	(17,904)	25,473	11,300	(18,330)	969	60,183

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	8.6	9.2
Operating margin	(%)	9.9	7.3	1.4	(0.8)	8.0	3.6	4.0	4.6
EBITDA margin	(%)	14.8	11.5	6.6	6.0	13.2	8.0	9.1	10.1
EBIT margin	(%)	10.4	7.8	1.9	(0.1)	8.4	3.9	4.3	5.1
Net profit margin	(%)	8.9	7.7	2.8	0.1	9.6	(0.8)	3.1	4.0
ROE	(%)	14.9	13.9	2.7	(0.3)	10.5	7.2	6.9	7.9
ROA	(%)	9.6	9.0	1.8	(0.2)	5.2	3.1	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	5.8	6.2	7.4
Debt service coverage	(x)	4.8	3.7	2.1	0.8	1.3	1.1	4.1	4.6
Payout Ratio	(%)	48.8	47.8	77.2	2,258.9	37.6	n.a.	49.3	49.8

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	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22
Total revenue	(Btmn)	88,362	102,676	112,627	113,189	140,461	176,767	197,603	183,141
Cost of goods sold	(Btmn)	78,889	87,920	96,409	97,421	128,033	155,316	171,252	179,474
Gross profit	(Btmn)	9,473	14,756	16,218	15,768	12,428	21,451	26,351	3,667
SG&A	(Btmn)	4,512	3,955	4,417	4,998	8,357	9,532	9,388	9,621
Other income	(Btmn)	939	408	363	567	433	811	818	591
Interest expense	(Btmn)	937	1,184	1,530	1,704	1,528	2,101	2,428	2,741
Pre-tax profit	(Btmn)	4,962	10,025	10,634	9,634	2,975	10,630	15,353	(8,103)
Corporate tax	(Btmn)	546	721	5,591	727	190	184	(324)	(101)
Equity a/c profits	(Btmn)	1,072	1,893	2,324	1,154	1,471	1,142	1,549	250
Minority interests	(Btmn)	(316)	(132)	(141)	(233)	(61)	(470)	(438)	(200)
Core profit	(Btmn)	5,173	11,065	7,226	9,828	4,195	11,120	16,788	(7,953)
Extra-ordinary items	(Btmn)	1,232	(1,370)	17,809	(2,822)	(947)	(6,908)	(15,400)	(5,431)
Net Profit	(Btmn)	6,405	9,695	25,035	7,005	3,248	4,212	1,388	(13,384)
EBITDA	(Btmn)	11,181	16,666	17,753	17,175	10,358	19,568	24,563	1,714
Core EPS	(Btmn)	1.15	2.45	1.60	2.18	0.93	2.47	3.72	(1.76)
Net EPS	(Bt)	1.42	2.15	5.55	1.55	0.72	0.93	0.31	(2.97)

Balance Sheet

FY December 31	Unit	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22
Total current assets	(Btmn)	129,911	188,244	222,986	221,154	207,244	238,676	252,436	198,814
Total fixed assets	(Btmn)	359,472	364,448	358,129	359,309	546,871	542,661	540,220	543,650
Total assets	(Btmn)	489,383	552,692	581,115	580,464	754,115	781,338	792,656	742,464
Total loans	(Btmn)	148,002	190,008	192,493	177,427	209,163	282,834	304,490	277,163
Total current liabilities	(Btmn)	59,041	68,911	73,277	101,041	147,007	165,246	165,556	123,985
Total long-term liabilities	(Btmn)	141,347	184,017	187,626	157,983	279,506	289,939	310,247	316,374
Total liabilities	(Btmn)	200,389	252,928	260,902	259,024	426,512	455,184	475,803	440,358
Paid-up capital	(Btmn)	45,088	45,088	45,088	45,088	45,088	45,088	45,088	45,088
Total equity	(Btmn)	288,994	299,764	320,212	321,439	327,603	326,153	316,853	302,106
BVPS	(Bt)	62.33	64.65	69.23	69.48	70.58	70.16	68.21	64.91

Cash Flow Statement

FY December 31	Unit	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22
Core Profit	(Btmn)	5,173	11,065	7,226	9,828	4,195	11,120	16,788	(7,953)
Depreciation and amortization	(Btmn)	5,281	5,458	5,589	5,837	5,854	6,837	6,782	7,076
Operating cash flow	(Btmn)	8,941	8,649	10,377	21,922	29,159	5,176	(3,262)	(547)
Investing cash flow	(Btmn)	(12,461)	(41,755)	(4,291)	11,934	(114,731)	(17,588)	(9,925)	28,046
Financing cash flow	(Btmn)	19,160	37,842	(4,705)	(29,262)	86,161	15,337	4,205	(42,332)
Net cash flow	(Btmn)	15,640	4,736	1,381	4,595	589	2,925	(8,982)	(14,834)

Key Financial Ratios

FY December 31	Unit	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22
Gross margin	(%)	10.7	14.4	14.4	13.9	8.8	12.1	13.3	2.0
Operating margin	(%)	5.6	10.5	10.5	9.5	2.9	6.7	8.6	(3.3)
EBITDA margin	(%)	12.7	16.2	15.8	15.2	7.4	11.1	12.4	0.9
EBIT margin	(%)	6.7	10.9	10.8	10.0	3.2	7.2	9.0	(2.9)
Net profit margin	(%)	7.2	9.4	22.2	6.2	2.3	2.4	0.7	(7.3)
ROE	(%)	7.2	15.0	9.3	12.3	5.2	13.6	20.9	(10.3)
ROA	(%)	4.4	8.5	5.1	6.8	2.5	5.8	8.5	(4.1)
Net D/E	(x)	0.4	0.5	0.4	0.4	0.5	0.7	0.8	0.8
Interest coverage	(x)	11.9	14.1	11.6	10.1	6.8	9.3	10.1	0.6
Debt service coverage	(x)	1.7	2.4	2.3	1.5	0.9	1.5	1.8	0.3

Key Statistics

FY December 31	Unit	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22
Utilization rate - Olefins	(%)	104.0	104.0	93.0	91.0	80.0	85.0	75.0	83.0
Utilization rate - Aromatics	(%)	98.0	98.0	102.0	100.0	97.0	100.0	80.0	88.0
Utilization rate - Oil Refinery	(%)	91.0	102.0	101.0	77.0	101.0	101.0	98.0	100.0
HDPE-naphtha spread	(US\$/t)	592	588	585	462	507	453	468	390
PX-condensate spread	(US\$/t)	191	240	283	304	211	248	354	279
Market GRM	(US\$/bbl)	1.8	3.2	2.0	3.2	6.4	7.6	21.1	9.8

3Q22 earnings recap. PTTGC's net loss in 3Q22 of Bt13.4bn was worse than expected given lower adjusted EBITDA (-51% QoQ) of all segments and several extra losses, i.e. stock loss and NRV, hedging loss, FX loss and extra provision relating to an incident of its subsidiary, of Bt14.2bn combined. **Upstream** segment (refinery, aromatics, olefins & utilities) was the worst performer as the adjusted EBITDA fell 69% QoQ and 42% YoY, mainly for oil refinery which booked a huge inventory loss (Bt8bn) and hedging loss (Bt2.1bn) as well as narrower product margin, though market GRM of US\$9.8/bbl remained higher than 5-year average.

Adjusted EBITDA of **intermediates** segment (EO Based, PTA, Phenol, GCO, PTTAC) also fell 57% QoQ and 87% YoY as adjusted EBITDA margin weakened from 6% in 2Q22 to 3% in 3Q22. This was due mainly to weaker BPA spread. **Performance chemicals**, mainly allnex, also generated lower adjusted EBITDA by 36% QoQ due to lower sales volume due to lower demand for final products and supply disruption in some industries. **Polymer** business was the best performer in 3Q22 although the adjusted EBITDA also fell 16% QoQ. The segment continued to be the key contributor to total adjusted EBITDA of polymer at 25% with the highest adj EBITDA margin of 10%, vs. overall adj EBITDA margin of 6%.

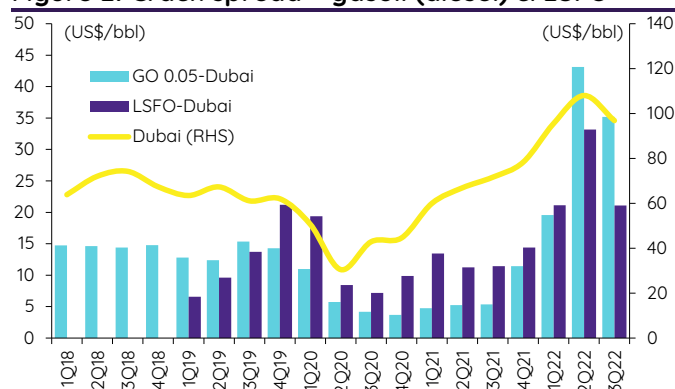
Figure 1: PTTGC – 3Q22 earnings review

	3Q21	2Q22	3Q22	%YoY	%QoQ	9M21	9M22	%YoY
P&L (Bt, mn)								
Total revenue	113,189	197,603	183,141	61.8	(7.3)	328,492	557,511	69.7
Gross profit	15,768	26,351	3,667	(76.7)	(86.1)	46,742	51,470	10.1
EBITDA	17,175	24,563	1,714	(90.0)	(93.0)	51,594	45,844	(11.1)
Profit before extra items	9,828	16,788	(7,953)	n.a.	n.a.	28,118	19,955	(29.0)
Net Profit	7,005	1,388	(13,384)	n.a.	n.a.	41,735	(7,784)	n.a.
EPS (Bt)	1.55	0.31	(2.97)	n.a.	n.a.	9.26	(1.73)	n.a.
B/S (Bt, mn)								
Total assets	580,464	792,656	742,464	27.9	(6.3)	580,464	742,464	27.9
Total liabilities	259,024	475,803	440,358	70.0	(7.4)	259,024	440,358	70.0
Total equity	321,439	316,853	302,106	(6.0)	(4.7)	321,439	302,106	(6.0)
BVPS (Bt)	69.48	68.21	64.91	(6.6)	(4.8)	69.48	64.91	(6.6)
Financial ratio (%)								
Gross margin (%)	13.9	13.3	2.0	(11.9)	(11.3)	14.2	9.2	(5.0)
EBITDA margin (%)	15.2	12.4	0.9	(14.2)	(11.5)	15.7	8.2	(7.5)
Net profit margin (%)	6.2	0.7	(7.3)	(13.5)	(8.0)	12.7	(1.4)	(14.1)
ROA (%)	6.8	8.5	(4.1)	(10.9)	(12.7)	10.4	(1.4)	(11.8)
ROE (%)	12.3	20.9	(10.3)	(22.5)	(31.2)	18.2	(3.3)	(21.5)
D/E (X)	0.8	1.5	1.5	65.2	(4.4)	0.8	1.5	65.2

Source: PTTGC and InnovestX Research

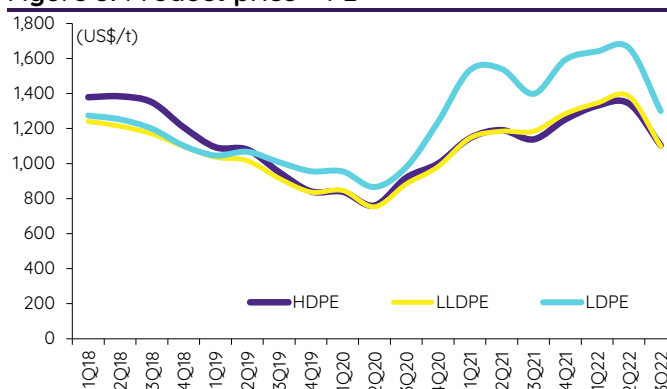
Appendix

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



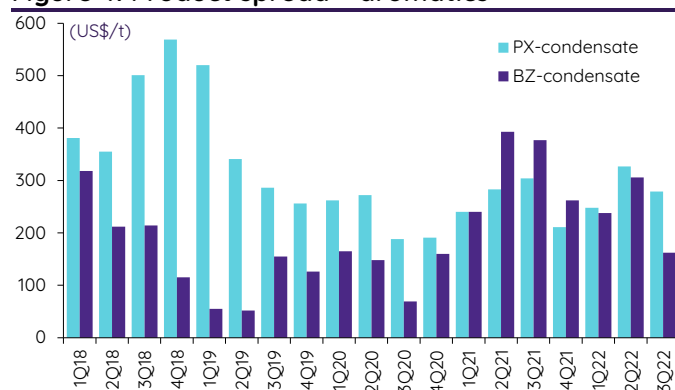
Source: Industry data, PTTGC and InnovestX Research

Figure 3: Product price – PE



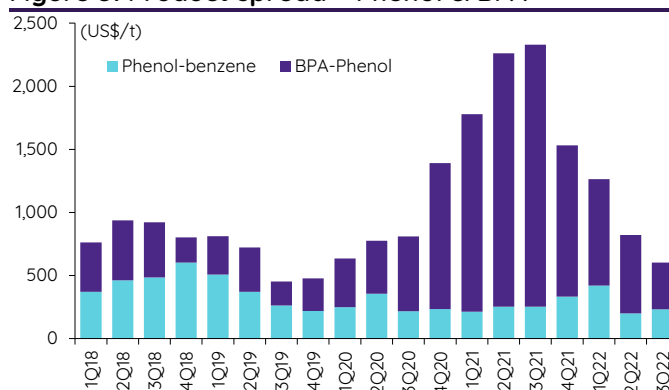
Source: Industry data, PTTGC and InnovestX Research

Figure 4: Product spread - aromatics



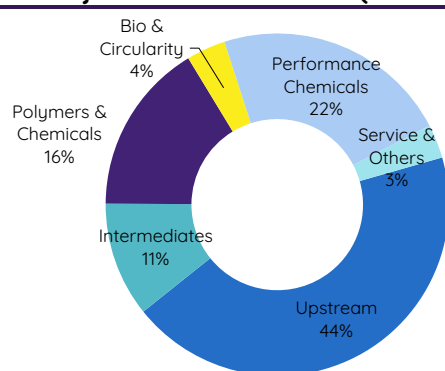
Source: Industry data, PTTGC and InnovestX Research

Figure 5: Product spread - Phenol & BPA



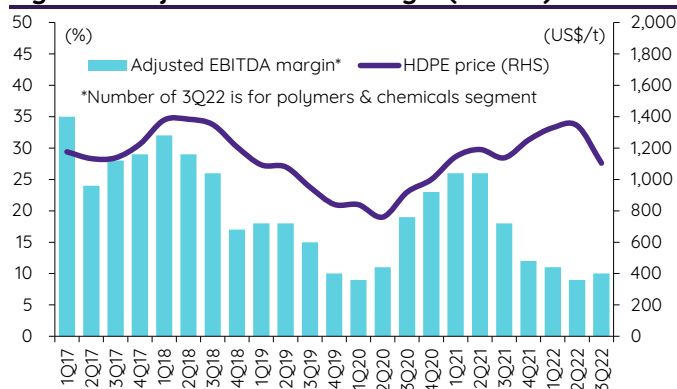
Source: Industry data, PTTGC and InnovestX Research

Figure 6: Adj. EBITDA breakdown (LTM-end 3Q22)



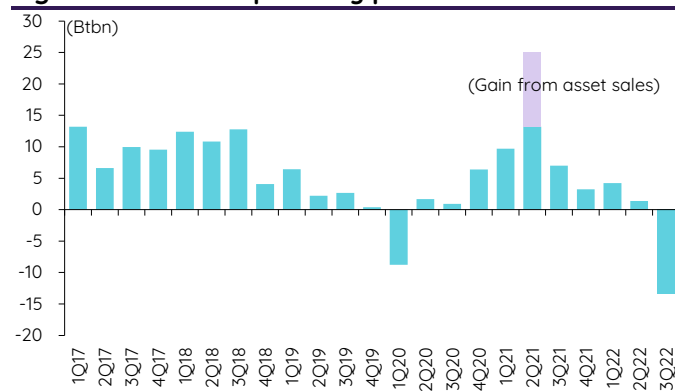
Source: PTTGC and InnovestX Research

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

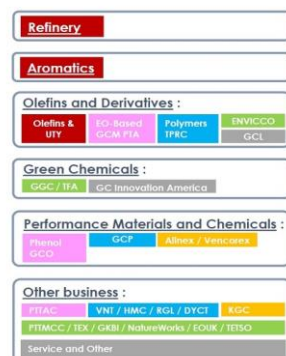
Figure 9: PTTGC - PBV band



Source: InnovestX Research

Figure 10: PTTGC - new segmentation

Before- by Business Groups

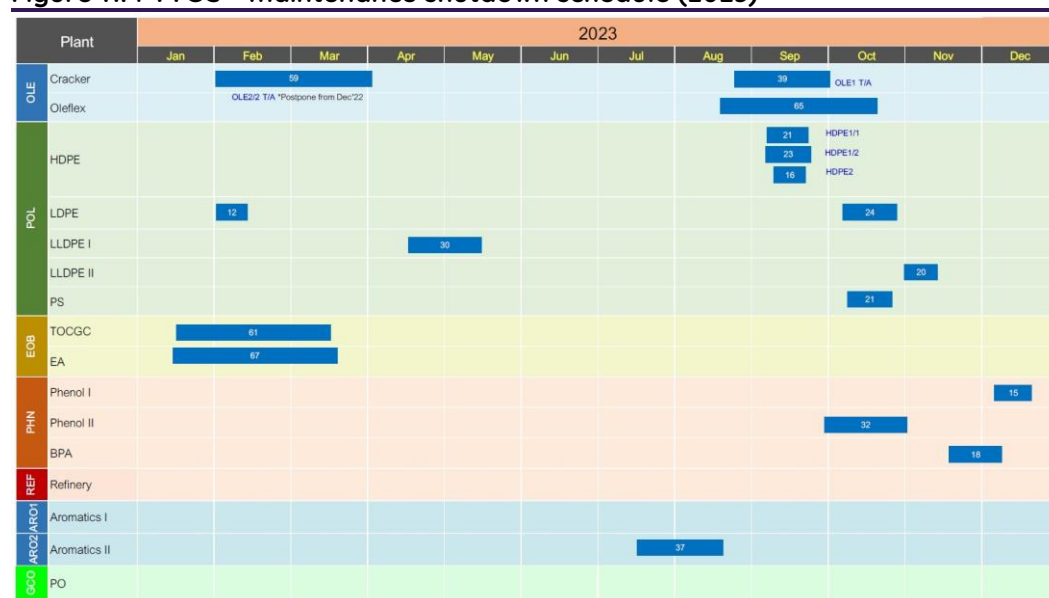


After - by Products Portfolios



Source: PTTGC

Figure 11: PTTGC - maintenance shutdown schedule (2023)



Source: PTTGC

Figure 12: Valuation summary (price as of Nov 16, 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	14.90	13.4	(6.1)	19.9	12.5	16.1	39	59	(22)	1.5	1.4	1.4	8	12	9	2.3	4.0	3.1	9.3	6.8	7.3
IVL	Outperform	42.50	66.0	61.4	8.8	5.0	4.8	2,210	77	3	1.5	1.2	1.0	19	27	23	2.4	6.1	6.6	6.8	4.0	3.5
PTTGC	Neutral	47.50	56.0	20.0	6.6	9.3	9.8	n.m.	(29)	(5)	0.7	0.7	0.7	10	7	7	7.9	2.1	5.1	5.6	7.7	7.1
Average					11.8	8.9	10.2	1,125	36	(8)	1.2	1.1	1.0	12	15	13	4.2	4.1	4.9	7.2	6.2	6.0

Source: InnovestX Research

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Corporate Governance Report

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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, NACA, 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, AAI, 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, BTG, 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, KLINIQ, 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, NFC, 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, POLY, 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, SEAFSCO, 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, TKC, TLI, TM, TMC, TMW, TNDT, TNH, TNPC, TOA, TPAC, TPBI, TPCH, TPIPL, TPIPP, TPLAS, TPOLY, TPS, TQR, TR, TRC, TRITN, TRUBB, TRV, TSE, TSF, TSR, TTI, TTT, TTW, TVT, TWP, TWG, 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.