



IRPC Pcl.

(IRPC.BK/IRPC TB)*

SET ESG Rating of AA

Underperform • Downgraded

Price as of 25 Sep 2024	1.78
12M target price (Bt/shr)	1.60
Unchanged/Revised up(down)(%)	(15.8)
Upside/downside (%)	(10.1)

Key messages

เรายังคงมองลบกับแนวโน้ม spread ของ PP เนื่องจากจะมีอุปทาน PP ใหม่เพิ่มเติมเข้ามาในตลาดเป็นจำนวนมาก โดยเฉพาะจากจีน ซึ่งทำให้ spread ของ PP ร่วงลงมาจาก US\$678/ton ในปี 2564 เหลือเพียง US\$358/ton ใน YTD67 และคาดว่าจะยังถูกกดดันต่อไปอีกจากกำลังการผลิตใหม่ที่จะเพิ่มเติมเข้ามาในช่วงปี 2568-2570 ดังนั้นเราจึงปรับลดประมาณการปี 2567F ของ IRPC ลงจากกำไรสุทธิ 1.7 พันล้านบาท เป็นขาดทุนสุทธิ 872 ล้านบาท และปรับลดประมาณการกำไรสุทธิปี 2568F ลง 45% เหลือ 3.2 พันล้านบาท เนื่องจาก spread ของ PP ลดลง นอกจากนี้เรายังขยับไปใช้ราคาเป้าหมายปี 2568F ที่ 1.60 บาท ลดลงจากเดิมที่ 1.90 บาท อิงจาก EV/EBITDA ที่ลดลงเหลือ 6.0x จาก 7.0x เพื่อสะท้อนถึงการปรับลดประมาณการกำไร และมุมมองลบต่อแนวโน้ม PP เราจึงปรับลดคำแนะนำหุ้น IRPC จากถือเป็นขาย โดยเราคาดว่าผลการดำเนินงานใน 3Q67F จะอ่อนแอเนื่องจาก i) ผลขาดทุนจากสต็อกน้ำมันเพิ่มขึ้น และ ii) spread ของ PP ลดลง

Trading data

Mkt cap (Btbn/US\$m)	36.6/1,110		
Outstanding shares (mn)	20,434		
Foreign ownership (mn)	879		
3M avg. daily trading (mn)	41.7		
52-week trading range (Bt)	1.35 – 2.10		
Performance (%)	3M	6M	12M
Absolute	9.1	(5.8)	(13.1)
Relative	(2.5)	(11.5)	(11.4)

Quarterly EPS

Bt	1Q	2Q	3Q	4Q
2022	0.07	0.19	(0.12)	(0.35)
2023	0.01	(0.11)	0.12	(0.17)
2024	0.08	(0.04)		

Share price chart



Source: SET

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อุปทาน PP ใหม่ระลอกสองจากจีน

Event

ปรับลดประมาณการกำไรเต็มปี, ปรับลดราคาเป้าหมาย และปรับลดคำแนะนำ

Impact

อุปทาน PP ใหม่ระลอกสองจากจีน

เรายังคงมองลบกับแนวโน้ม spread ของ PP เนื่องจากจะมีอุปทาน PP ใหม่เพิ่มเติมเข้ามาในตลาดเป็นจำนวนมาก โดยเฉพาะจากจีน ทั้งนี้นโยบายพึ่งตนเองของจีนก่อให้เกิดผลกระทบต่อตลาด PP โลกในช่วงที่มีอุปทานใหม่ระลอกแรกทะลักเข้ามาในตลาดระหว่างปี 2564 ถึง 2567 (ดังแสดงใน Figure 1) ทำให้ spread ของ PP ร่วงลงมาจาก US\$678/ton ในปี 2564 เหลือเพียง US\$358/ton ใน YTD67 ซึ่งอยู่ในเกณฑ์ที่แย่มาก (ต่ำกว่า US\$550/ton) เราคาดว่ากำลังการผลิต PP ใหม่ระลอกสองจะเข้ามาในตลาดจากปี 2568 เป็นต้นไป ซึ่งจะทำให้การแข่งขันในตลาดโลกเข้มข้นยิ่งขึ้นอีก โดยคาดว่าจะมีอุปทานใหม่เพิ่มเติมเข้ามาอีก 5.5 MTA ในปี 2568, 6.9 MTA ในปี 2569 และ 5.7 MTA ในปี 2570 ในขณะที่เดียวกันตลาดคาดว่าอุปสงค์ PP โลกจะเพิ่มขึ้นเพียง 3.2 ล้านตันต่อปีในช่วงปี 2568-2570 ซึ่งต่ำกว่าอุปทานที่เพิ่มขึ้นอย่างมาก ดังนั้นตลาด PP โลกจึงจะยังคงเผชิญแรงกดดันอย่างต่อเนื่อง ซึ่งน่าจะกดดันให้ spread ต่ำในระยะยาว

ปรับลดประมาณการปี 2567F-2568F ลง

เราปรับลดประมาณการปี 2567F ของ IRPC ลงจากกำไรสุทธิ 1.7 พันล้านบาท เป็นขาดทุนสุทธิ 872 ล้านบาท และปรับลดประมาณการกำไรสุทธิปี 2568F ลง 45% เหลือ 3.2 พันล้านบาท เนื่องจาก spread ของ PP ลดลง โดยเราได้ปรับลดสมมติฐาน spread ของ PP ปีนี้สูง 10% เหลือ US\$360/ton และปีหน้าสูง 16% เหลือ US\$380/ton เพราะจะมีกำลังการผลิต PP ใหม่เพิ่มเติมเข้ามาในตลาดเป็นจำนวนมากถึง 5.3 MTA ในปี 2567F และอีก 5.5 MTA ในปี 2568F ซึ่งสูงกว่าการเพิ่มขึ้นของอุปสงค์ PP ที่คาดว่าจะเพิ่มขึ้นเพียง 2.5 ล้านตันในปี 2567F และ 3.2 ล้านตันในปี 2568F นอกจากนี้เรายังปรับลดสมมติฐานอัตราการใช้กำลังการผลิต olefins ของ IRPC ในปีหน้าลงจาก 85% เหลือ 80% เพื่อสะท้อนถึงการแข่งขันที่สูงในตลาดโลกของ PP แต่อย่างไรก็ตาม เราปรับเพิ่มสมมติฐาน spread ของ ABS ในปี 2567F ขึ้นอีก 7% เป็น US\$750/ton และปี 2568F ขึ้นอีก 13% เป็น US\$850/ton เนื่องจากนโยบายเพิ่มประสิทธิภาพเครื่องใช้ไฟฟ้าภายในบ้านและรถ EV ของจีนจะทำให้อุปสงค์ ABS เพิ่มขึ้น โดย spread ของ ABS คืบตัวขึ้นมาอยู่ที่ US\$783/ton ใน 3QTD67 เพิ่มขึ้น 13% จาก US\$691/ton ใน 1H67

Valuation & action

เราขยับไปใช้ราคาเป้าหมายปี 2568F ที่ 1.60 บาท ลดลงจากเดิมที่ 1.90 บาท อิงจาก EV/EBITDA ที่ลดลงเหลือ 6.0x จาก 7.0x เพื่อสะท้อนถึงการปรับลดประมาณการกำไร และมุมมองลบต่อแนวโน้ม PP นอกจากนี้เรายังปรับลดคำแนะนำหุ้น IRPC จากถือเป็นขาย โดยเราคาดว่าผลการดำเนินงานใน 3Q67F จะอ่อนแอเนื่องจาก i) ผลขาดทุนจากสต็อกน้ำมันเพิ่มขึ้น หลังจากที่ราคาน้ำมันดิบดูไบลดลงจาก US\$85/ton ใน 2Q67 เหลือ US\$78/ton ใน 3QTD67 และ ii) spread ของ PP ลดลงเหลือ US\$344/ton ใน 3QTD67 (-6% QoQ)

Risks

ความผันผวนของราคาน้ำมันดิบ, GRM และ spread ปีโตรเคมี

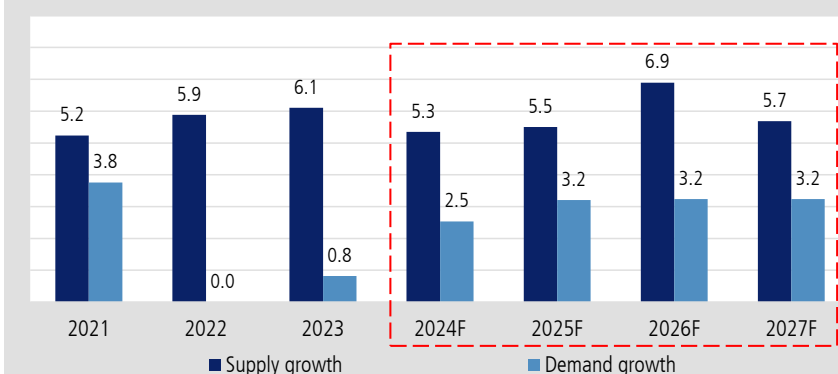
Key financials and valuations

	Dec-22A	Dec-23A	Dec-24F	Dec-25F	Dec-26F
Revenue (Bt mn)	324,800	319,047	323,266	295,930	283,670
Gross profit (Bt mn)	9,908	3,549	7,038	11,944	14,817
EBIT (Bt mn)	3,256	(2,621)	555	5,607	8,394
Net profit (Bt mn)	(4,364)	(2,923)	(872)	3,227	5,948
EPS (Bt)	(0.21)	(0.14)	(0.04)	0.16	0.29
DPS (Bt)	0.07	0.03	0.03	0.05	0.09
EPS growth (%)	N.A.	N.A.	N.A.	N.A.	84.3
P/E (x)	N.A.	N.A.	N.A.	11.3	6.1
P/B (x)	0.8	0.5	0.5	0.5	0.4
EV/EBITDA (x)	11.5	17.6	10.8	6.2	4.5
Net Debt to Equity (x)	0.9	0.9	0.9	0.7	0.5
Dividend Yield (%)	2.3	1.5	1.7	2.7	4.9
Return on Avg. Equity (%)	(5.2)	(3.8)	(1.2)	4.3	7.5

Source: Company data, KGI Securities Research

Figure 1: Second-wave PP supply addition from China

Global PP capacity addition and demand growth, mn ton



Source: PTT Global Chemical (PTTGC), KGI Securities Research

Figure 2: Changes in key assumptions for 2024F-2025F

Our assumptions	2024F			2025F		
	Previous	Revised	Change (%)	Previous	Revised	Change (%)
Olefins						
HDPE-naphtha (US\$/ton)	400	360	(10.0)	450	420	(6.7)
PP-naphtha (US\$/ton)	400	360	(10.0)	450	380	(15.6)
Utilization rate (%)	80	80	0.0	85	80	(5.9)
Aromatics & Styrenics						
ABS-naphtha (US\$/ton)	700	750	7.1	750	850	13.3
PS-naphtha (US\$/ton)	650	650	0.0	700	750	7.1
Utilization rate (%)	84	82	(2.6)	92	89	(2.8)
Income statement						
Earnings (Bt mn)	1,701	(872)	N.A.	5,822	3,227	(44.6)

Source: Company data, KGI Securities Research

Figure 3: Key assumptions for IRPC

	2022	2023	2024F	2025F	2026F
Benchmark					
Dubai crude (US\$/bbl)	96	82	81	75	70
Gasoline spread (US\$/bbl)	18.8	16.7	14.0	13.0	13.0
Jet oil spread (US\$/bbl)	30.3	22.5	17.0	20.0	20.0
Diesel spread (US\$/bbl)	34.3	21.9	18.0	20.0	20.0
HSFO spread (US\$/bbl)	(14.1)	(10.3)	(7.5)	(10.0)	(10.0)
500SN-HSFO (US\$/ton)	678	745	500	450	450
Refinery					
Market GRM (US\$/bbl)	8.0	5.7	5.0	6.1	6.4
Crude run (KBD)	175	192	200	205	205
Olefins					
HDPE-naphtha (US\$/ton)	418	394	360	420	420
PP-naphtha (US\$/ton)	422	358	360	380	380
Utilization rate (%)	86	73	80	80	80
Aromatics & Styrenics					
ABS-naphtha (US\$/ton)	901	634	750	850	900
PS-naphtha (US\$/ton)	731	570	650	750	800
Utilization rate (%)	86	74	82	89	92

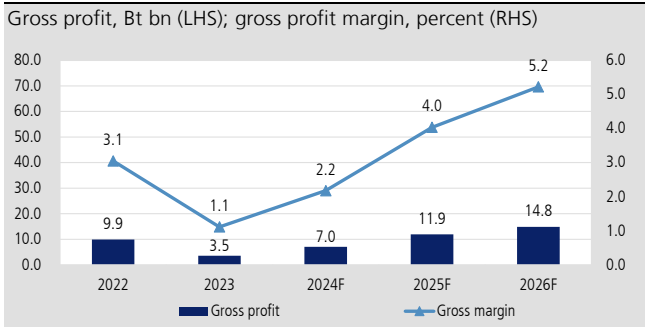
Source: Company data, KGI Securities Research

Figure 4: Company profile

IRPC's core businesses are i) refinery with 215KBD capacity, ii) petrochemical, which includes olefins (HDPE and PP) and aromatics (BZ and PS), and iii) port and tankfarm, which provides facilities and international standard dock services for domestic and international cargoes.

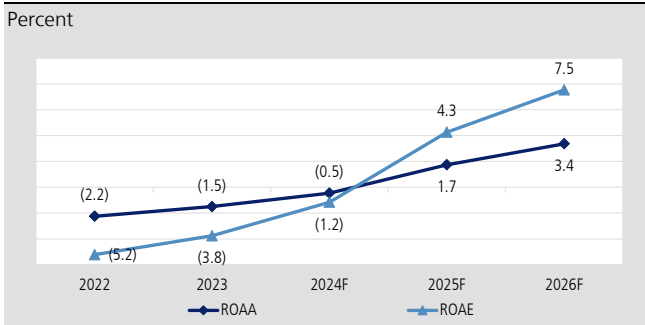
Source: Company data, KGI Securities Research

Figure 6: Gross profit



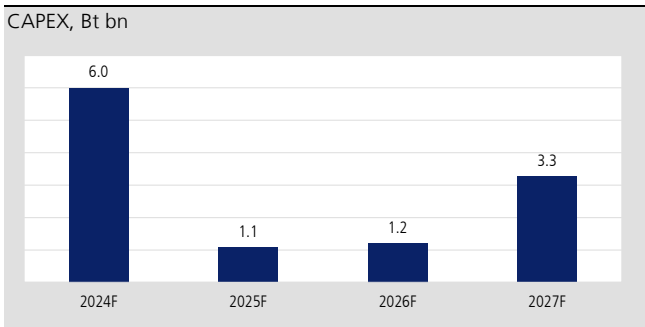
Source: Company data, KGI Securities Research

Figure 8: Company ROAA and ROAE



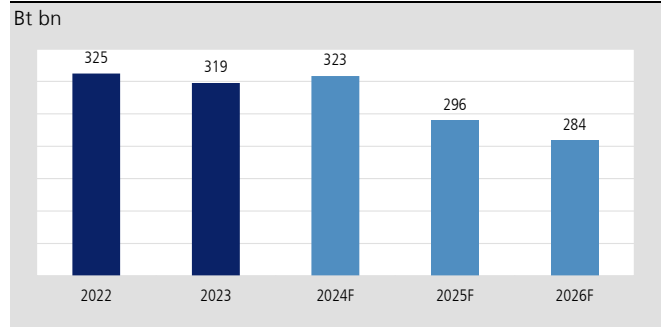
Source: Company data, KGI Securities Research

Figure 10: Four-year investment plan (2024F-2027F)



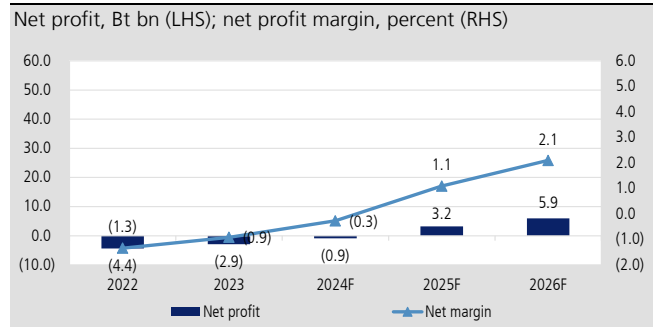
Source: Company data, KGI Securities Research

Figure 5: Revenue



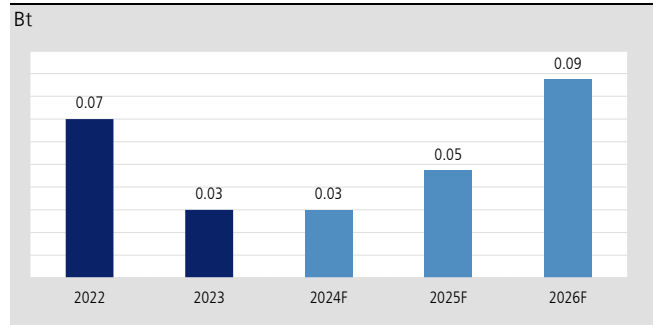
Source: Company data, KGI Securities Research

Figure 7: Net profit



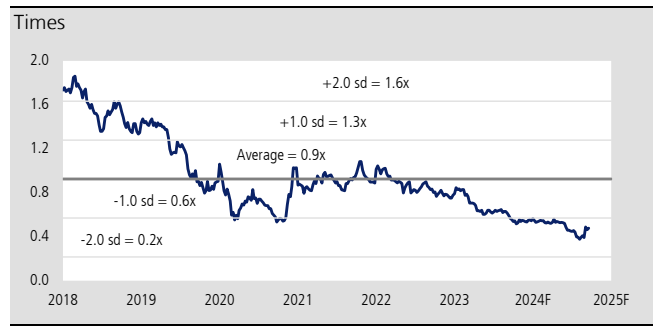
Source: Company data, KGI Securities Research

Figure 9: Dividend



Source: Company data, KGI Securities Research

Figure 11: Company trading PB



Source: KGI Securities Research

Quarterly Income Statement

(Bt mn)	Mar-22A	Jun-22A	Sep-22A	Dec-22A	Mar-23A	Jun-23A	Sep-23A	Dec-23A	Mar-24A	Jun-24A
Income Statement (Bt mn)										
Revenue	79,432	98,951	89,410	57,007	81,430	76,915	81,642	79,059	79,348	81,630
Cost of Goods Sold	(72,615)	(86,512)	(91,647)	(64,118)	(79,117)	(77,882)	(76,219)	(82,281)	(75,656)	(80,859)
Gross Profit	6,817	12,439	(2,237)	(7,111)	2,313	(967)	5,423	(3,221)	3,692	771
Operating Expenses	(1,798)	(1,855)	(1,759)	(1,828)	(1,697)	(1,682)	(1,698)	(1,700)	(1,662)	(1,972)
Other incomes	141	189	107	150	109	193	162	144	95	198
Operating Profit	5,160	10,772	(3,889)	(8,788)	725	(2,456)	3,887	(4,777)	2,125	(1,003)
Depreciation of fixed assets	2,008	2,015	2,014	2,022	2,106	2,157	2,173	2,229	2,141	2,244
Operating EBITDA	7,168	12,787	(1,875)	(6,766)	2,832	(299)	6,060	(2,548)	4,266	1,241
Non-Operating Income	0	0	985	45	84	0	0	1,079	0	136
Interest Income	0	0	0	0	0	0	0	0	0	0
Other Non-op Income	0	0	985	45	84	0	0	1,079	0	136
Non-Operating Expenses	(3,564)	(6,431)	(499)	(526)	(497)	(660)	(1,048)	(520)	(581)	(650)
Interest Expenses	(398)	(449)	(499)	(526)	(497)	(520)	(540)	(520)	(500)	(650)
Other Non-op Expenses	(3,166)	(5,982)	0	0	0	(140)	(508)	0	(81)	0
Net Investment Income/(Loss)	129	174	67	(86)	10	111	85	48	140	437
Pre-tax Profit	1,725	4,515	(3,336)	(9,356)	323	(3,005)	2,924	(4,172)	1,684	(1,080)
Current Taxation	(338)	(927)	655	1,752	(70)	580	(599)	860	(362)	299
Minorities	3	2	1	(2)	3	1	3	4	1	0
Extraordinary items	117	247	133	454	50	180	116	(101)	223	49
Net Profit	1,501	3,833	(2,549)	(7,149)	301	(2,246)	2,439	(3,417)	1,545	(732)
EPS (Bt)	0.07	0.19	(0.12)	(0.35)	0.01	(0.11)	0.12	(0.17)	0.08	(0.04)
Margins										
Gross profit margin	8.6	12.6	(2.5)	(12.5)	2.8	(1.3)	6.6	(4.1)	4.7	0.9
Operating EBIT margin	6.5	10.9	(4.3)	(15.4)	0.9	(3.2)	4.8	(6.0)	2.7	(1.2)
Operating EBITDA margin	9.0	12.9	(2.1)	(11.9)	3.5	(0.4)	7.4	(3.2)	5.4	1.5
Net profit margin	1.9	3.9	(2.9)	(12.5)	0.4	(2.9)	3.0	(4.3)	1.9	(0.9)
Growth										
Revenue growth	48.1	59.6	33.4	(21.3)	2.5	(22.3)	(8.7)	38.7	(2.6)	6.1
Operating EBIT growth	(18.5)	69.7	(199.2)	(410.8)	(85.9)	(122.8)	(200.0)	(45.6)	193.0	(59.2)
Operating EBITDA growth	(15.8)	49.4	(131.0)	(237.9)	(60.5)	(102.3)	(423.3)	(62.3)	50.7	(515.5)
Net profit growth	(73.1)	(16.2)	(218.3)	(425.8)	(80.0)	(158.6)	(195.7)	(52.2)	413.6	(67.4)

Source: Company data, KGI Securities Research

Balance Sheet

As of 31 Dec (Bt mn)	2022	2023	2024F	2025F	2026F
Total Assets	198,187	192,661	189,638	182,109	171,828
Current Assets	70,920	61,683	64,820	65,273	63,022
Cash & ST Investments	3,230	6,220	4,152	8,182	8,393
Inventories	39,376	32,413	36,388	34,234	32,410
Accounts Receivable	15,051	15,597	16,828	15,405	14,766
Others	13,263	7,453	7,453	7,453	7,453
Non-current Assets	127,267	130,978	124,817	116,837	108,806
LT Investments	12,094	12,377	12,377	12,377	12,377
Net fixed Assets	111,432	114,362	108,250	100,316	92,329
Others	3,741	4,239	4,190	4,144	4,100
Total Liabilities	118,509	116,539	115,001	105,214	90,770
Current Liabilities	62,056	58,944	61,660	57,659	53,161
Accounts Payable	34,466	34,305	34,655	31,122	29,463
ST Borrowings	19,865	18,188	20,554	20,087	17,247
Others	7,725	6,451	6,451	6,451	6,451
Long-term Liabilities	56,453	57,596	53,342	47,555	37,609
Long-term Debts	52,024	53,118	48,864	43,077	33,131
Others	4,429	4,478	4,478	4,478	4,478
Shareholders' Equity	79,678	76,122	74,636	76,895	81,058
Common Stock	20,434	20,434	20,434	20,434	20,434
Capital Surplus	28,664	28,641	28,641	28,641	28,641
Retained Earnings	30,579	27,046	25,561	27,819	31,983
Preferred Stock	0	0	0	0	0

Source: KGI Securities Research

Key Ratios

Year to 31 Dec (Bt mn)	2022	2023	2024F	2025F	2026F
Forecast Drivers					
Growth (% YoY)					
Sales	27.3	(1.8)	1.3	(8.5)	(4.1)
OP	(83.2)	N.A.	N.A.	910.5	49.7
EBITDA	(59.6)	(46.6)	55.4	55.7	20.3
NP	N.A.	N.A.	N.A.	N.A.	84.3
EPS	N.A.	N.A.	N.A.	N.A.	84.3
Profitability (%)					
Gross Margin	3.1	1.1	2.2	4.0	5.2
Operating Margin	1.0	(0.8)	0.2	1.9	3.0
EBITDA Margin	3.5	1.9	2.9	4.9	6.2
Net Profit Margin	(1.3)	(0.9)	(0.3)	1.1	2.1
ROAA	(2.2)	(1.5)	(0.5)	1.7	3.4
ROAE	(5.2)	(3.8)	(1.2)	4.3	7.5
Stability					
Gross Debt/Equity (%)	90.2	93.7	93.0	82.1	62.1
Net Debt/Equity (%)	86.2	85.5	87.4	71.5	51.8
Interest Coverage (x)	(1.9)	(0.8)	0.6	2.7	5.0
Interest & ST Debt Coverage (x)	(0.2)	(0.1)	0.1	0.3	0.5
Cash Flow Interest Coverage (x)	(2.0)	9.0	1.3	5.6	9.1
Cash Flow/Interest & ST Debt (x)	(0.2)	0.9	0.1	0.6	0.8
Current Ratio (x)	1.1	1.0	1.1	1.1	1.2
Quick Ratio (x)	0.5	0.5	0.5	0.5	0.6
Net Debt (Bt mn)	68,659	65,086	65,266	54,982	41,984
Per Share Data (Bt)					
EPS	(0.2)	(0.1)	(0.0)	0.2	0.3
CFPS	(0.2)	0.9	0.2	0.6	0.8
BVPS	3.9	3.7	3.6	3.8	4.0
SPS	--	--	--	--	--
EBITDA/Share	0.6	0.3	0.5	0.7	0.9
DPS	0.1	0.0	0.0	0.0	0.1
Activity					
Asset Turnover (x)	1.7	1.6	1.7	1.6	1.6
Days Receivables	16.9	17.8	19.0	19.0	19.0
Days Inventory	45.6	37.5	42.0	44.0	44.0
Days Payable	10.9	10.9	11.0	11.0	11.0
Cash Cycle	51.6	44.5	50.0	52.0	52.0

Source: KGI Securities Research

Profit & Loss

Year to 31 Dec (Bt mn)	2022	2023	2024F	2025F	2026F
Revenue	324,800	319,047	323,266	295,930	283,670
Cost of Goods Sold	(314,892)	(315,499)	(316,228)	(283,986)	(268,853)
Gross Profit	9,908	3,549	7,038	11,944	14,817
Operating Expenses	(7,240)	(6,777)	(7,109)	(6,982)	(7,087)
Other incomes	587	608	626	645	664
Operating Profit	3,256	(2,621)	555	5,607	8,394
Depreciation of fixed assets	8,059	8,666	8,840	9,016	9,197
Operating EBITDA	11,314	6,045	9,394	14,623	17,591
Non-Operating Income	0	515	0	0	0
Interest Income	0	0	0	0	0
Other Non-op Income	0	515	0	0	0
Non-Operating Expenses	(9,992)	(2,077)	(2,421)	(2,203)	(1,755)
Interest Expenses	(1,873)	(2,077)	(2,421)	(2,203)	(1,755)
Other Non-op Expenses	(8,119)	0	0	0	0
Net Investment Income/(Loss)	284	254	840	450	455
Pre-tax Profit	(6,453)	(3,929)	(1,026)	3,854	7,093
Current Taxation	1,142	772	164	(617)	(1,135)
Minorities	4	11	10	11	11
Extraordinary items	951	245	0	0	0
Net Profit	(4,364)	(2,923)	(872)	3,227	5,948
EPS (Bt)	(0.21)	(0.14)	(0.04)	0.16	0.29

Source: KGI Securities Research

Cash Flow

Year to 31 Dec (Bt mn)	2022	2023	2024F	2025F	2026F
Operating Cash Flow	(3,712)	18,630	3,105	12,280	15,942
Net Profit	(4,364)	(2,923)	(872)	3,227	5,948
Depreciation & Amortization	8,059	8,666	8,840	9,016	9,197
Change in Working Capital	(1,081)	6,256	(4,855)	44	804
Others	(6,327)	6,631	(7)	(7)	(6)
Investment Cash Flow	(8,931)	(12,022)	(2,679)	(1,035)	(1,166)
Net CAPEX	(8,819)	(11,870)	(2,728)	(1,082)	(1,210)
Change in LT Investment	0	0	0	0	0
Change in Other Assets	(112)	(152)	49	47	44
Free Cash Flow	(12,531)	6,760	377	11,198	14,732
Financing Cash Flow	4,637	(3,618)	(2,494)	(7,215)	(14,564)
Change in Share Capital	5	(23)	0	0	0
Net Change in Debt	10,532	(585)	(1,881)	(6,247)	(12,780)
Change in Other LT Liab.	(5,901)	(3,011)	(613)	(968)	(1,784)
Net Cash Flow	(8,006)	2,990	(2,068)	4,030	212

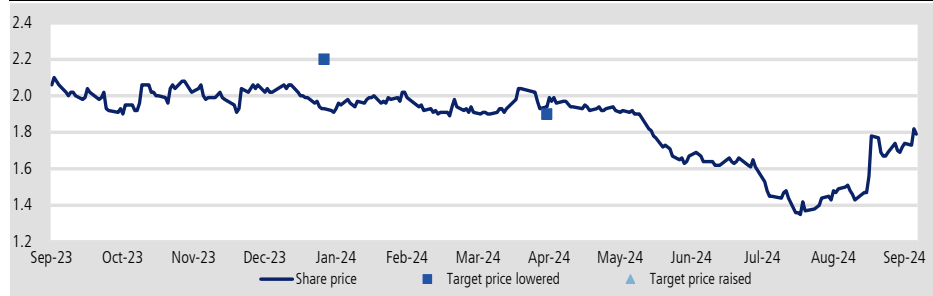
Source: KGI Securities Research

Rates of Return on Invested Capital

Year	1- Revenue	+ COGS Revenue	+ Depreciation Revenue	+ Operating Exp. Revenue	= Operating Margin	
2022	94.5%	2.5%	2.2%	0.8%	0.8%	
2023	96.2%	2.7%	2.1%	-1.0%	-1.0%	
2024F	95.1%	2.7%	2.1%	0.1%	0.1%	
2025F	92.9%	3.0%	2.4%	1.7%	1.7%	
2026F	91.5%	3.2%	2.5%	2.7%	2.7%	
Year	1/ Revenue	+ Working Capital Revenue	+ Net PPE Revenue	+ Other Assets Revenue	= Capital Turnover	
2022	0.03	0.34	0.01	2.62	2.62	
2023	0.01	0.36	0.01	2.63	2.63	
2024F	0.01	0.33	0.01	2.80	2.80	
2025F	0.03	0.34	0.01	2.64	2.64	
2026F	0.03	0.33	0.01	2.67	2.67	
Year	Operating Margin	x	Capital Turnover	x	Cash Tax Rate	= After-tax Return on Inv. Capital
2022	0.8%		2.6		79.3	1.7
2023	-1.0%		2.6		79.1	-2.1
2024F	0.1%		2.8		84.2	0.2
2025F	1.7%		2.6		84.0	3.7
2026F	2.7%		2.7		84.0	6.1

Source: KGI Securities Research

IRPC Pl - Recommendation & target price history



Source: KGI Securities Research

Company's ESG details

Environment

- IRPC recognizes the importance of controlling air quality and odor to prevent impacting surrounding communities and measures its air quality and odor performance through odor complaints every year. Through continuous development of new technologies to monitor air quality, IRPC places measures to control air pollutants, such as Sulfur Oxide (SO_x), Nitrogen Oxide (NO_x), and Total Suspended Particles (TSP). Control measures also focus on Volatile Organic Compounds (VOCs) through improving chemical tanks and establishing a VOC inventory record to monitor the emission source. Odor control projects have been implemented through an Elevated Flare and Enclosed Ground Flare (EGF) to lower odor levels and shield surrounding communities from noise and light.
- IRPC uses water from natural sources to feed into the production process. The water is allocated from Rayong Irrigation Department, released into quality improvement for use in various systems, including cooling water system, demineralized water production, using saltwater for Flue Gas Desulfurization (FGD). IRPC controls the quality of water before discharging it out of the premises under standards established by the Department of Industrial Works and other relevant authorities. Furthermore, to assure the effective use of water, IRPC has implemented the 3Rs principles to water management approach.
- IRPC is committed to the research and development of new products to meet the different requirements from customers and development of environmental-friendly products which creates more business opportunity and helps IRPC to be able to adapt to the change in economy, society and environment, which leads to sustainable growth. The company offers alternative solutions for users who are concerned about environmental impacts by developing the products as follows: i) POLIMAXX Green ABS, in which synthetic rubber is replaced by a natural rubber, and ii) POLIMAXX Green PS, an innovative product made from 20-50% of styrenic mixed with natural rubber.

Social

- IRPC adheres to three main principles under its human rights management system, to "Protect", "Respect", and "Remedy". To "Protect" is to apply human rights protections to the policy of IRPC and its subsidiaries, especially through increasing communication with employees, suppliers, business partners, and joint ventures. To "Respect" is to show respect towards human rights with zero tolerance for discrimination and harassment by performing a human rights risk assessment, human rights due diligence, and supply chain management. If human rights are violated as a result of IRPC's operations, IRPC would provide a "Remedy" according to its complaint mechanism, verification process and provide remedial actions and compensation appropriately.
- IRPC recognizes the importance of improving the skills and capabilities of all employees, especially in regards to developing updated skills to align with the future demand of data analysis and digital innovation. IRPC human resource management team is assigned to develop a benchmarking study on capacities of employees in the global companies, which allow IRPC to effectively review employees' leadership and competencies for further enhancement, as well as prepared to train employees of different sectors to align with organizational needs through various training programs.
- To ensure communities flourish and thrive, IRPC always prioritizes and applies community needs and problems for developing CSR projects, enabling IRPC to conduct CSR projects in all IRPC operations (100% of operations). In general, IRPC realizes community needs and problems through engagement activities with communities surrounding IRPC Industrial Zone (i.e. 5 km. radius of the industrial park), especially public consultation during the preparation of Environmental Impact Assessment (EIA) reports. Another important engagement activity that provides IRPC insights into communities is regular meetings with representatives of the communities, where all community members, including elders and children are welcome and encouraged to express their needs and problems.

Governance

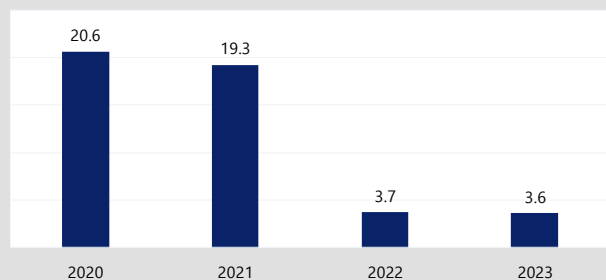
- IRPC maintains annual "Excellent" CG scoring From Thai Institute of Directors Association (IOD).

Climate Management (Subset of environment)

- IRPC aims to reduce direct and indirect greenhouse gas emissions and water consumption in accordance with QSSHE Policy to carbon neutrality in 2050 and net zero by 2060 aligned with the Paris agreement to limit global temperature rise to well below 2 degrees Celsius by 3 GHG reduction program, consisting of i) Eco-operation & Technology (Shift the operation from fossil based power to renewable energy and increase energy efficiency), ii) Reshape-Portfolio (Adjust portfolio by investing in non-oil with Eco-Solutions), and iii) Absorption and offset (Seek all means to absorb and offset carbon).
- IRPC commits to reduce emissions 20% by 2030.

Source: Company data, KGI Securities Research

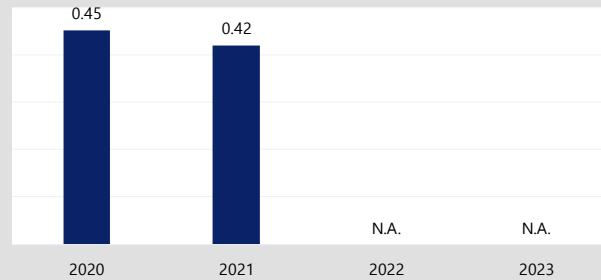
Total GHG emissions

 GHG emissions, mn tons of CO₂e


Source: Company data, SETSMART, KGI Securities Research

Total electricity consumption

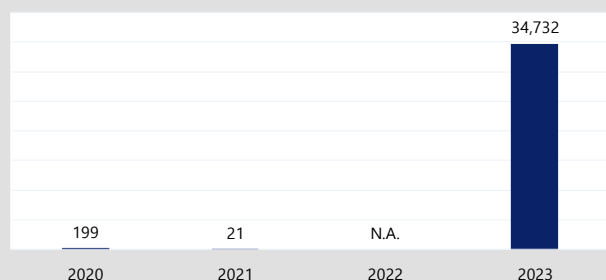
Electricity consumption, GWh



Source: Company data, SETSMART, KGI Securities Research

Total water consumption

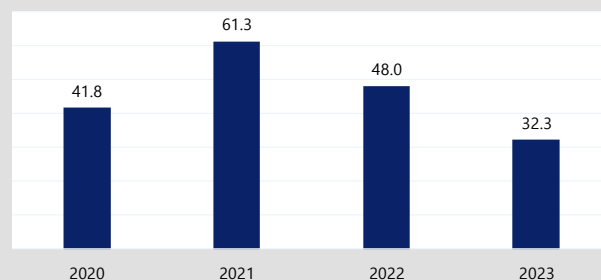
Water consumption, k cubic meters



Source: Company data, SETSMART, KGI Securities Research

Total waste

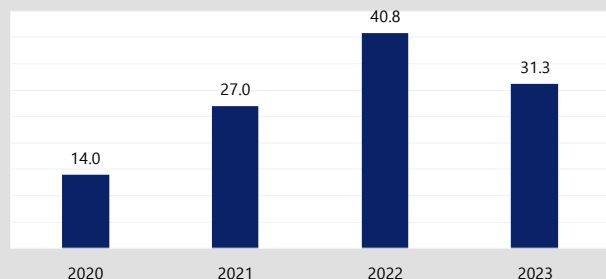
Waste generated, k tons



Source: Company data, SETSMART, KGI Securities Research

Average employee training hours

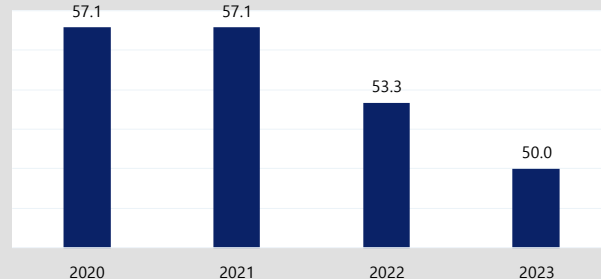
Average employee training hour, hours per person per year



Source: Company data, SETSMART, KGI Securities Research

Proportion of independent directors

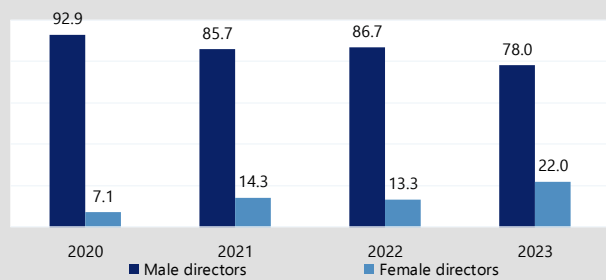
Independent directors, percent



Source: Company data, SETSMART, KGI Securities Research

Gender diversification of directors

Gender diversification, percent



Source: Company data, SETSMART, KGI Securities Research

SET ESG Ratings

Stock	Company name	SET ESG Ratings	Stock	Company name	SET ESG Ratings
ADVANC	ADVANCED INFO SERVICE	AAA	KTC	KRUNGTHAI CARD	AAA
AMATA	AMATA CORPORATION	AAA	LH	LAND AND HOUSES	A
AOT	AIRPORTS OF THAILAND	A	MAJOR	MAJOR CINEPLEX GROUP	AA
AP	AP (THAILAND)	AA	MEGA	MEGA LIFESCIENCES	A
BAFS	BANGKOK AVIATION FUEL SERVICES PCL.	AA	MINT	MINOR INTERNATIONAL	AA
BAM	BANGKOK COMMERCIAL ASSET MANAGEMEN	AA	MTC	MUANGTHAI CAPITAL	A
BANPU	BANPU	AAA	OR	PTT OIL AND RETAIL BUSINESS	AAA
BBGI	BBGI	AA	ORI	ORIGIN PROPERTY	AA
BBL	BANGKOK BANK	AA	OSP	OSOTSPA	AA
BCH	BANGKOK CHAIN HOSPITAL	AA	PLANB	PLAN B MEDIA	AA
BCP	BANGCHAK CORPORATION	AAA	PSH	PRUKSA HOLDING	BBB
BCPG	BCPG	AA	PTT	PTT	AAA
BDMS	BANGKOK DUSIT MEDICAL SERVICES	AA	PTTEP	PTT EXPLORATION AND PRODUCTION	AAA
BEM	BANGKOK EXPRESSWAY AND METRO	AA	PTTGC	PTT GLOBAL CHEMICAL	AAA
BGRIM	B.GRIMM POWER	AAA	RATCH	RATCH GROUP	AA
BPP	BANPU POWER	AAA	RBF	R&B FOOD SUPPLY	BBB
BTS	BTS GROUP HOLDINGS	AA	SAK	SAKSIAM LEASING	A
CBG	CARABAO GROUP	A	SAPPE	SAPPE	BBB
CENTEL	CENTRAL PLAZA HOTEL	A	SAT	SOMBOON ADVANCE TECHNOLOGY	AA
CK	CH. KARNCHANG	A	SAWAD	SRISAWAD CORPORATION	BBB
CKP	CK POWER	AAA	SCB	SCB X	AA
COM7	COM7	A	SCC	THE SIAM CEMENT	AAA
CPALL	CP ALL	AAA	SCCC	SIAM CITY CEMENT	AA
CPAXT	CP AXTRA	AAA	SCGP	SCG PACKAGING	AAA
CPF	CHAROEN POKPHAND FOODS	AAA	SHR	S HOTELS AND RESORTS	A
CPN	CENTRAL PATTANA	AA	SICT	SILICON CRAFT TECHNOLOGY	A
EGCO	ELECTRICITY GENERATING	AA	SMPC	SAHAMITR PRESSURE CONTAINER	AA
ERW	THE ERWAN GROUP	A	SNC	SNC FORMER	A
GFPT	GFPT	BBB	SPALAI	SUPALAI	AA
GLOBAL	SIAM GLOBAL HOUSE	AA	STEC	SINO-THAI ENGINEERING AND CONSTRUCTION	A
GPSC	GLOBAL POWER SYNERGY	AA	STGT	SRI TRANG GLOVES (THAILAND)	AAA
GULF	GULF ENERGY DEVELOPMENT	AA	TCAP	THANACHART CAPITAL	A
HANA	HANA MICROELECTRONICS	AA	TFG	THAIFOODS GROUP	A
HENG	HENG LEASING AND CAPITAL	A	THCOM	THAICOM	AAA
HMPRO	HOME PRODUCT CENTER	AA	TISCO	TISCO FINANCIAL GROUP	AAA
INTUCH	INTOUCH HOLDINGS	AA	TOP	THAI OIL	AAA
IRPC	IRPC	AA	TTB	TMBTHANACHART BANK	AA
IVL	INDORAMA VENTURES	AA	UBE	UBON BIO ETHANOL	A
KBANK	KASIKORNBANK	AAA	VGI	VGI	AA
KEX	KERRY EXPRESS (THAILAND)	BBB	WHA	WHA CORPORATION	AAA
KKP	KIATNAKIN PHATRA BANK	BBB	WHAUP	WHA UTILITIES AND POWER	AAA
KTB	KRUNG THAI BANK	AAA	ZEN	ZEN CORPORATION GROUP	AA

Source: www.setsustainability.com

Disclaimer: The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by the relevant institution as disclosed by the Office of the Securities and Exchange Commission, is made in order to comply with the policy and sustainable development plan for the listed companies. The relevant institution 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 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, KGI Securities (Thailand) Public Company Limited (KGI) does not confirm, verify, or certify the accuracy and completeness of the assessment result.

Corporate Governance Report of Thai Listed Companies



Companies with Excellent CG Scoring

Stock	Company name	Stock	Company name	Stock	Company name
AAV	ASIA AVIATION	GFPT	GFPT	SAK	SAKSIAM LEASING
ADVANC	ADVANCED INFO SERVICE	GGC	GLOBAL GREEN CHEMICALS	SAPPE	SAPPE
AEONTS	AEON THANA SINSAP (THAILAND)	GLOBAL	SIAM GLOBAL HOUSE	SAT	SOMBOON ADVANCE TECHNOLOGY
AMA	AMA MARINE	GPSC	GLOBAL POWER SYNERGY	SCB	SCB X
AMATA	AMATA CORPORATION	GULF	GULF ENERGY DEVELOPMENT	SCC	THE SIAM CEMENT
ANAN	ANANDA DEVELOPMENT	HANA	HANA MICROELECTRONICS	SCCC	SIAM CITY CEMENT
AOT	AIRPORTS OF THAILAND	HENG	HENG LEASING AND CAPITAL	SCGP	SCG PACKAGING
AP	AP (THAILAND)	HMPRO	HOME PRODUCT CENTER	SEAFKO	SEAFKO
BAFS	BANGKOK AVIATION FUEL SERVICES PCL.	INTUCH	INTOUCH HOLDINGS	SFT	SHRINKFLEX (THAILAND)
BAM	BANGKOK COMMERCIAL ASSET MANAGEMENT	IRPC	IRPC	SHR	S HOTELS AND RESORTS
BANPU	BANPU	ITC	i-Tail Corporation	SICT	SILICON CRAFT TECHNOLOGY
BBGI	BBGI	IVL	INDORAMA VENTURES	SMPC	SAHAMITR PRESSURE CONTAINER
BBL	BANGKOK BANK	KBANK	KASIKORNBANK	SNC	SNC FORMER
BCH	BANGKOK CHAIN HOSPITAL	KCE	KCE ELECTRONICS	SNNP	SRINANAPORN MARKETING
BCP	BANGCHAK CORPORATION	KEX	KERRY EXPRESS (THAILAND)	SPALI	SUPALAI
BCPG	BCPG	KKP	KIATNAKIN PHATRA BANK	SPRC	STAR PETROLEUM REFINING
BDMS	BANGKOK DUSIT MEDICAL SERVICES	KTB	KRUNG THAI BANK	STEC	SINO-THAI ENGINEERING AND CONSTRUCTION
BEC	BEC WORLD	KTC	KRUNGTHAI CARD	STGT	SRI TRANG GLOVES (THAILAND)
BEM	BANGKOK EXPRESSWAY AND METRO	LH	LAND AND HOUSES	SUN	SUNSWEEP
BGRIM	B.GRIMM POWER	LPN	L.P.N. DEVELOPMENT	SVI	SVI
BH	BUMRUNGRAD HOSPITAL	M	MK RESTAURANT GROUP	TACC	T.A.C. CONSUMER
BPP	BANPU POWER	MAJOR	MAJOR CINEPLEX GROUP	TCAP	THANACHART CAPITAL
BTS	BTS GROUP HOLDINGS	MBK	MBK	TFG	THAIFOODS GROUP
CBG	CARABAO GROUP	MEGA	MEGA LIFESCIENCES	THCOM	THAICOM
CENTEL	CENTRAL PLAZA HOTEL	MINT	MINOR INTERNATIONAL	TIDLOR	NGERN TID LOR
CK	CH. KARNCHANG	MTC	MUANGTHAI CAPITAL	TISCO	TISCO FINANCIAL GROUP
CKP	CK POWER	OR	PTT OIL AND RETAIL BUSINESS	TKN	TAOKAENOI FOOD & MARKETING
COM7	COM7	ORI	ORIGIN PROPERTY	TOP	THAI OIL
CPALL	CP ALL	OSP	OSOTSPA	TTB	TMBTHANACHART BANK
CPAXT	CP AXTRA	PLANB	PLAN B MEDIA	UBE	UBON BIO ETHANOL
CPF	CHAROEN POKPHAND FOODS	PSH	PRUKSA HOLDING	VGI	VGI
CPN	CENTRAL PATTANA	PTT	PTT	WHA	WHA CORPORATION
DELTA	DELTA ELECTRONICS (THAILAND)	PTTEP	PTT EXPLORATION AND PRODUCTION	WHAUP	WHA UTILITIES AND POWER
DOHOM	DOHOME	PTTGC	PTT GLOBAL CHEMICAL	ZEN	ZEN CORPORATION GROUP
EGCO	ELECTRICITY GENERATING	QH	QUALITY HOUSES		
ERW	THE ERAWAN GROUP	RATCH	RATCH GROUP		



Companies with Very Good CG Scoring

Stock	Company name	Stock	Company name	Stock	Company name
BSRC	BANGCHAK SRIRACHA	JMART	JAYMART GROUP HOLDINGS	SINGER	SINGER THAILAND
BTG	BETAGRO	NTSC	Nutrition SC	TNP	THANAPIRIYA
EKH	EKACHAI MEDICAL CARE	POS	Premier Quality Starch	XO	EXOTIC FOOD
HUMAN	HUMANICA	PYLON	PYLON		



Companies with Good CG Scoring

Stock	Company name	Stock	Company name	Stock	Company name
IIG	I&I GROUP	SAWAD	SRISAWAD CORPORATION	SPA	SIAM WELLNESS GROUP
JMT	JMT NETWORK SERVICES	SMD	SAINTMED		

Companies classified Not in the three highest score groups

Stock	Company name	Stock	Company name	Stock	Company name
AU	AFTER YOU	PJW	PANJAWATTANA PLASTIC	TGE	THACHANG GREEN ENERGY
CHG	CHULARAT HOSPITAL	PLT	Pilatus Marine	TPCH	TPC POWER HOLDING
LPH	LADPRAO GENERAL HOSPITAL	PTG	PTG ENERGY	TU	THAI UNION GROUP
MENA	MENA TRANSPORT	SFLEX	STARFLEX		
NETBAY	NETBAY	SISB	SISB		

Source: www.thai-iod.com

Disclaimer: The disclosure of the survey result 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 assessment 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 result may be changed after that date or when there is any change to the relevant information. Nevertheless, KGI Securities (Thailand) Public Company Limited (KGI) does not confirm, verify, or certify the accuracy and completeness of such survey result.

Anti-corruption Progress Indicator

Level 5: Extended

Stock	Company name	Stock	Company name	Stock	Company name
ADVANC	ADVANCED INFO SERVICE	GLOBAL	SIAM GLOBAL HOUSE	QH	QUALITY HOUSES
ANAN	ANANDA DEVELOPMENT	GPSC	GLOBAL POWER SYNERGY	RATCH	RATCHABURI ELECTRICITY GENERATING HOLDING
BBL	BANGKOK BANK	HMPRO	HOME PRODUCT CENTER	ROBINS	ROBINSON DEPARTMENT STORE
BCH	BANGKOK CHAIN HOSPITAL	IRPC	IRPC	SCC	THE SIAM CEMENT
BDMS	BANGKOK DUSIT MEDICAL SERVICES	KBANK	KASIKORN BANK	SIRI	SANSIRI
BIGC	BIG C SUPERCENTER	KCE	KCE ELECTRONICS	SPALI	SUPALAI
CK	CH. KARNCHANG	KKP	KIATNAKIN BANK	STEC	SINO-THAI ENGINEERING AND CONSTRUCTION
DCC	DYNASTY CERAMIC	KTB	KRUNG THAI BANK	TCAP	THANACHART CAPITAL
DELTA	DELTA ELECTRONICS (THAILAND)	LPH	LADPRAO GENERAL HOSPITAL	TISCO	TISCO FINANCIAL GROUP
DRT	DIAMOND ROOFING TILES	PACE	PACE DEVELOPMENT CORPORATION	TMT	THAI METAL TRADE
EGCO	ELECTRICITY GENERATING	PTT	PTT	TOP	THAI OIL
GFPT	GFPT	PTTGC	PTT GLOBAL CHEMICAL		

Level 4: Certified

Stock	Company name	Stock	Company name	Stock	Company name
AAV	ASIA AVIATION	ERW	THE ERAWAN GROUP	SAPPE	SAPPE
AP	ASIAN PROPERTY DEVELOPMENT	GLOW	GLOW ENERGY	SAWAD	SRISAWAD POWER 1979
BA	BANGKOK AIRWAYS	GUNKUL	GUNKUL ENGINEERING	SCB	THE SIAM COMMERCIAL BANK
BANPU	BANPU	ILINK	INTERLINK COMMUNICATION	SCN	SCAN INTER
BGP	THE BANGCHAK PETROLEUM	KTC	KRUNGTHAI CARD	SEAFSCO	SEAFSCO
BH	BUMRUNGRAD HOSPITAL	LH	LAND AND HOUSES	SVI	SVI
BJCHI	BJC HEAVY INDUSTRIES	LPN	L.P.N. DEVELOPMENT	TASCO	TIPCO ASPHALT
CBG	CARABAO GROUP	MAKRO	SIAM MAKRO	TKN	TAOKAENOI FOOD & MARKETING
CENDEL	CENTRAL PLAZA HOTEL	MALEE	MALEE SAMPRAN	TMB	TMB BANK
CHG	CHULARAT HOSPITAL	MINT	MINOR INTERNATIONAL	TRT	TIRATHAI
CKP	CK POWER	MODERN	MODERNFORM GROUP	TRUE	TRUE CORPORATION
CPF	CHAROEN POKPHAND FOODS	NOK	NOK AIRLINES	TVO	THAI VEGETABLE OIL
CPN	CENTRAL PATTANA	PTTEP	PTT EXPLORATION AND PRODUCTION		
DTAC	TOTAL ACCESS COMMUNICATION	PYLON	PYLON		

Level 3: Established

Stock	Company name	Stock	Company name	Stock	Company name
BEM	BANGKOK EXPRESSWAY AND METRO	MTLS	MUANGTHAI LEASING	SPRC	STAR PETROLEUM REFINING
CPALL	CP ALL	SCI	SCI ELECTRIC		

No progress

Stock	Company name	Stock	Company name	Stock	Company name
AOT	AIRPORTS OF THAILAND	BPP	BANPU POWER	FN	FN FACTORY OUTLET
BPCG	BPCG	BTS	BTS GROUP HOLDINGS	TPCH	TPC POWER HOLDING

Source: www.cgthailand.org

Disclaimer: The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by the relevant institution as disclosed by the Office of the Securities and Exchange Commission, is made in order to comply with the policy and sustainable development plan for the listed companies. The relevant institution 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 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, KGI Securities (Thailand) Public Company Limited (KGI) does not confirm, verify, or certify the accuracy and completeness of the assessment result.

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Rating	Definition
Outperform (OP)	The stock's excess return over the next twelve months is ranked in the top 40% of KGI's coverage universe in the related market (e.g. Taiwan)..
Neutral (N)	The stock's excess return over the next twelve months is ranked in the range between the top 40% and the bottom 40% of KGI's coverage universe in the related market (e.g. Taiwan)
Under perform (U)	The stock's excess return over the next twelve months is ranked in the bottom 40% of KGI's coverage universe in the related market (e.g. Taiwan).
Not Rated (NR)	The stock is not rated by KGI.
Restricted (R)	KGI policy and/or applicable law regulations preclude certain types of communications, including an investment recommendation, during the course of KGI's engagement in an investment banking transaction and in certain other circumstances. Excess return = 12M target price/current price-
Note	When an analyst publishes a new report on a covered stock, we rank the stock's excess return with those of other stocks in KGI's coverage universe in the related market. We will assign a rating based on its ranking. If an analyst does not publish a new report on a covered stock, its rating will not be changed automatically.

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