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PTT Public Co. Ltd.

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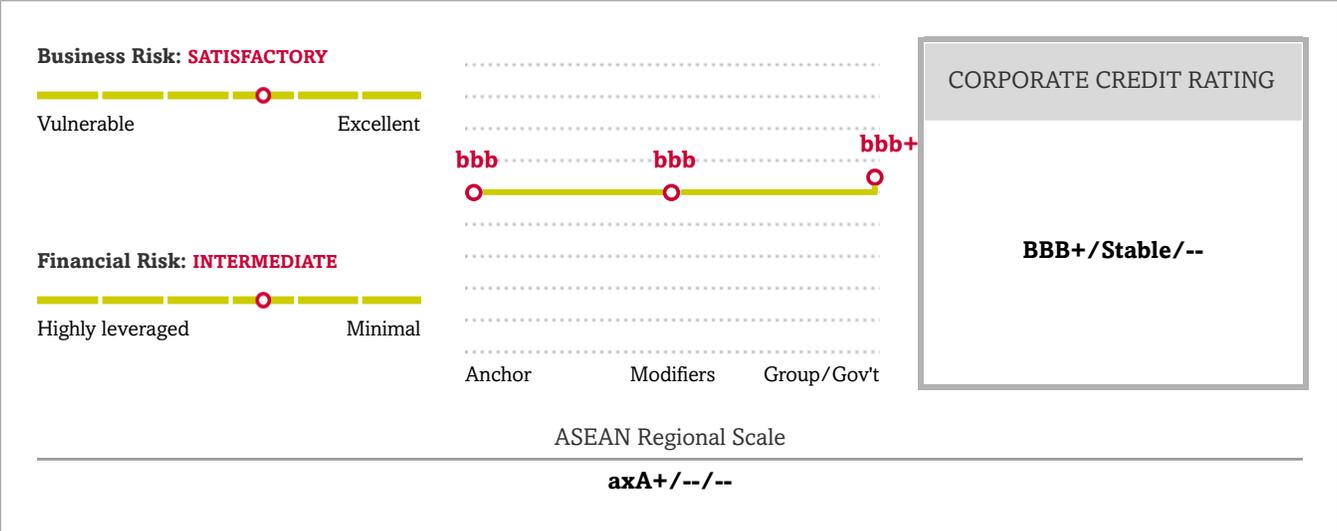
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PTT Public Co. Ltd.



Rationale

Business Risk: Satisfactory	Financial Risk: Intermediate
<ul style="list-style-type: none"> • Solid and stable operations in Thailand's energy industry. • Integrated operations in the domestic oil and gas value chain. • Depleting reserves at upstream operations. • Geographic concentration to Thailand. 	<ul style="list-style-type: none"> • Solid free cash flows across a product pricing cycle on conservative financial policies. • Ambitious growth plans in a capital intensive industry.

Outlook: Stable

The stable outlook on PTT Public Co. Ltd. mirrors that on the sovereign credit rating on Thailand (foreign currency BBB+/Stable/A-2; local currency A-/Stable/A-2; axAA/axA-1).

Downside scenario

We may downgrade PTT if any of the following occurs:

- We lower the local currency sovereign credit rating on Thailand by two notches or we lower the foreign currency sovereign credit rating on Thailand by one notch.
- We assess the likelihood of extraordinary support from the Thai government to PTT to have weakened substantially. This could occur if the Ministry of Finance's shareholding in PTT falls below 50% or the government shifts its energy policy significantly and liberalizes the gas industry, thereby eroding the company's market share, asset base, and relevance to the country.
- PTT's 'bbb' stand-alone credit profile (SACP) weakens by more than four notches, which we consider highly unlikely.

We could lower the SACP if: (1) PTT's consolidated capital structure weakens, with a debt-to-EBITDA ratio exceeding 3.0x; or (2) we believe that a reducing scope of fully owned, upstream assets has permanently impaired the company's earnings quality.

Upside scenario

We could upgrade PTT if we raise the local and foreign currency sovereign credit ratings by at least a notch.

We could raise PTT's SACP if the company: (1) establishes a record of a solid capital structure, with the debt-to-EBITDA ratio below 2.0x; (2) generates sizable and recurring positive discretionary operating cash flows; and (3) has a clear and stabilized scope of assets.

Our Base-Case Scenario

Assumptions	Key Metrics			
<ul style="list-style-type: none"> Brent crude price of US\$50 per barrel in 2017, US\$50 in 2018, and US\$55 in 2019. Still-favorable, yet slightly less supportive, operating conditions for petrochemicals (including olefins and polyolefin); stable conditions for aromatics products; and a modest improvement in gross refining margins. PTT's oil and gas sales volumes of 300,000-320,000 barrels of oil equivalent per day in 2017 and 2018. Production could gradually decline thereafter, given the natural depletion of assets, and depending on new major projects. Consolidated capital expenditure of up to Thai Baht (THB) 200 billion in 2017 (PTT spent THB25 billion in the first quarter of 2017), increasing to about THB250 billion in 2018, assuming group companies proceed with all investment projects currently under study. 	2016A	2017E	2018E	
	EBITDA (bil. THB)	319	270-300	280-320
	Debt/EBITDA (%)	1.5	1.6-1.9	1.7-2.0
	FOCF/Debt (%)	30.8	Nil	Nil
	Fully adjusted.			
	A--Actual. E--Estimated. FOCF--Free operating cash flows.			

Company Description

PTT is an integrated oil, gas, and energy company domiciled and operating mostly in Thailand. The company is involved in upstream oil and gas production (35% of 2016 EBITDA amounting to US\$8.6 billion), domestic gas transportation and supply (23%), oil trading and marketing (9%), refined petroleum (13%), and petrochemical products (20%). The Ministry of Finance owns the majority of PTT's shares.

Business Risk: Satisfactory

PTT's solid and sustainable market position in Thailand across the oil and gas value chain underpins the company's earnings quality. PTT is the main operator of Thailand's gas pipeline network and the largest domestic producer of oil and gas. The company controls close to 60% of the country's total refining capacity of about 1.1 million barrels a day. PTT is also the main producer of certain chemical products, with a dominant market position in aromatics or olefins and polyolefins. The company's marketing network is also the largest in the country, with about 40% share of the domestic market by volumes sold through service stations.

PTT's vertical integration across upstream, midstream, and downstream activities mitigates cash flows and profitability sensitivity to volatile oil prices. For instance, the close to 40% decline in EBITDA at upstream subsidiary PTT Exploration and Production Public Co. Ltd. (PTTEP) since 2014 has been tempered by resilient EBITDA at the petrochemicals and refining operations (more than double) and gas-related activities (more than 30%). To that extent, any corporate reorganization could weaken PTT's creditworthiness if the company divests, even partially, fully owned

assets that we consider critical to its operations.

PTT has an extensive record of well-managed operations through a pricing cycle, and high utilization rates at its efficient downstream facilities.

Modest proven reserve life at PTTEP partly offsets PTT's operating strengths. PTTEP's proven reserve life, at about five years of production in 2016, nearly halved from about nine years in 2012. Its five-year average reserve replacement ratio (RRR), which has been on a downward trend since 2012, was 0.57x in 2016, yet marking an improvement against the multi-year low of 0.45x in 2014. The effect for PTT is two-fold. Midstream and downstream subsidiaries, most notably petrochemicals producer PTT Global Chemical Public Co. Ltd. (PTTGC), rely on production from PTTEP for their own operations. Reduced availability will affect utilization rates and profitability and could erode the long-term sustainability of their operations. And, sizable reserve addition--organically or through acquisitions--may require financial support from PTT, similar to the past acquisitions of assets in Canada and Mozambique.

In addition, PTT remains largely concentrated in Thailand, and hence dependent on the strength of domestic demand for petrochemicals and refined petroleum products.

Our Base-Case Operating Scenario

- Thailand's GDP to grow 3.4% in 2017 and 2018, resulting in a resilient rise in the demand for gas and refined petroleum products.
- Further reduction in subsidiary costs for natural gas vehicles, with this activity's margins gradually reaching breakeven.
- Consistent earnings from gas pipelines and separation units.
- Mostly stable sales volumes in the company's marketing operations.
- Generally steady performance at the downstream operations, with a modest increase in gross refining margins and some normalization of spreads for olefins and polyolefin products, after a strong 2016.
- Annual EBITDA of up to THB300 billion in 2017, compared to THB89 billion in the first three months of the year.

Peer comparison

Table 1

PTT Public Co. Ltd. -- Peer Comparison

Industry Sector: Integrated Oil & Gas

	PTT Public Co. Ltd.	Petroliam Nasional Bhd.	PT Pertamina (Persero)	Oil and Natural Gas Corp. Ltd.	Reliance Industries Ltd.
	--Average of past three fiscal years--				
(Mil. US\$)					
Revenues	61,141.7	64,693.4	49,415.3	25,099.7	58,097.7
EBITDA	8,676.0	24,279.0	7,487.4	8,745.1	6,184.1
Funds from operations (FFO)	6,635.1	19,099.6	5,118.2	6,600.7	5,207.7
Net income from cont. oper.	1,661.4	5,808.6	2,004.6	3,162.4	3,897.7
Cash flow from operations	7,879.1	19,730.3	6,218.7	8,126.9	6,261.2

Table 1

PTT Public Co. Ltd. -- Peer Comparison (cont.)						
Industry Sector: Integrated Oil & Gas						
	PTT Public Co. Ltd.	Petroliam Nasional Bhd.	PT Pertamina (Persero)	Oil and Natural Gas Corp. Ltd.	Reliance Industries Ltd.	
Capital expenditures	4,102.1	14,917.0	2,968.0	5,585.4	9,219.6	
Free operating cash flow	3,777.1	4,813.2	3,250.7	2,541.6	(2,958.4)	
Discretionary cash flow	2,260.7	(3,311.4)	2,624.4	1,194.4	(3,671.5)	
Cash and short-term investments	10,071.2	31,983.1	4,140.8	3,616.0	13,556.3	
Debt	15,950.1	0.0	15,259.8	7,801.2	16,001.3	
Equity	31,126.1	100,934.0	18,989.4	28,912.0	35,202.2	
Adjusted ratios						
EBITDA margin (%)	14.2	37.5	15.2	34.8	10.6	
Return on capital (%)	7.8	17.5	14.3	13.4	11.2	
EBITDA interest coverage (x)	8.8	22.9	8.7	32.0	5.2	
FFO cash int. cov. (x)	7.3	36.5	10.9	38.8	5.8	
Debt/EBITDA (x)	1.8	0.0	2.0	0.9	2.6	
FFO/debt (%)	41.6	N.M.	33.5	84.6	32.5	
Cash flow from operations/debt (%)	49.4	N.M.	40.8	104.2	39.1	
Free operating cash flow/debt (%)	23.7	N.M.	21.3	32.6	(18.5)	
Discretionary cash flow/debt (%)	14.2	N.M.	17.2	15.3	(22.9)	

N.M.--Not meaningful.

Financial Risk: Intermediate

We anticipate that PTT will maintain manageable debt and ample cash balances through 2019.

We regard PTT's financial policies as well articulated and conservative. The company has a record of operating at moderate leverage levels and has shown discipline in adjusting cash outflows--mostly capital spending--to more difficult pricing conditions. Such caution applies consistently across the group. As a result, the group has established a record of generating consistent free operating cash flows through a pricing cycle.

However, PTT has an ambitious capital spending plan for the next three years, which we estimate at more than THB600 billion. Along with relatively sticky dividends, we project discretionary cash flows to be negative over the period. As of Dec. 31, 2016, the group has THB392 billion in consolidated cash and an adjusted ratio of debt to EBITDA of 1.5x. We anticipate the company will spend these funds on enhancing its business portfolio, eroding a part of its sizable financial headroom after three years of cautious investments amid low oil prices and a steady operating performance. However, we expect cash flow adequacy to stay fairly robust over the period. Potential outflows include:

- Up to THB200 billion over 2017-2018 at the parent company, with a sizable portion for expanding the pipeline

network.

- Thai Oil Public Co. Ltd.'s clean fuel project, which will increase the company's refining capacity and complexity. We estimate the outlay to be up to US\$4 billion over 2018-2021.
- PTTGC's olefin reconfiguration project to build a new naphtha cracker, and objective to complete its chemical value chain toward polyurethane.
- Sustained investments at power subsidiary, Global Power Synergy Public Co. Ltd., given its growth aspiration.
- Declining expenditures for commodity chemicals producer IRPC Public Co. Ltd. after 2017.
- Potentially accelerating spending at oil and gas upstream subsidiary PTTEP to protect its reserves base.

Our Base-Case Cash Flow And Capital Structure Scenario

- Operating cash flows of THB220 billion-THB250 billion annually, depending on working capital performance.
- Dividend payout of at least 40% of net income at PTT. The subsidiaries and associates will maintain distributions consistent with their historical levels, including at least 40% at PTTEP, PTTGC, and Thai Oil.
- Minimum cash holdings of THB150 billion at the group level, 60% of which we deduct from debt in our adjusted credit ratios calculations.
- Net debt to peak toward THB350 billion by end-2019, from THB186 billion at end-March 2017.

Financial summary

Table 2

PTT Public Co. Ltd. -- Financial Summary

Industry Sector: Integrated Oil & Gas

	--Fiscal year ended Dec. 31--				
	2016	2015	2014	2013	2012
(Mil. THB)					
Revenues	1,718,846.0	2,025,551.7	2,605,062.4	2,842,688.0	2,793,833.1
EBITDA	318,914.4	294,989.2	293,703.5	247,486.2	240,166.0
Funds from operations (FFO)	258,544.4	228,028.1	208,926.3	179,560.8	172,102.9
Net income from continuing operations	94,039.7	20,666.4	58,677.8	94,652.3	104,608.4
Cash flow from operations	251,213.4	274,658.7	295,865.0	170,433.6	168,069.6
Capital expenditures	102,825.0	152,424.4	171,166.4	111,898.5	114,037.3
Free operating cash flow	148,388.4	122,234.3	124,698.6	58,535.1	54,032.3
Discretionary cash flow	103,798.5	78,423.3	56,024.1	12,167.5	11,723.9
Cash and short-term investments	392,380.0	346,725.4	316,757.0	253,506.2	143,322.9
Debt	481,809.2	556,011.9	623,669.1	630,740.4	424,746.9
Equity	1,153,002.8	1,069,093.1	1,036,099.9	1,020,061.8	729,896.1
Adjusted ratios					
EBITDA margin (%)	18.6	14.6	11.3	8.7	8.6
Return on capital (%)	10.6	4.0	9.1	12.7	17.4
EBITDA interest coverage (x)	9.7	8.5	8.4	12.1	11.9
FFO cash int. cov. (x)	8.2	6.7	7.0	9.4	9.1
Debt/EBITDA (x)	1.5	1.9	2.1	2.5	1.8

Table 2

PTT Public Co. Ltd. -- Financial Summary (cont.)					
Industry Sector: Integrated Oil & Gas					
	--Fiscal year ended Dec. 31--				
	2016	2015	2014	2013	2012
FFO/debt (%)	53.7	41.0	33.5	28.5	40.5
Cash flow from operations/debt (%)	52.1	49.4	47.4	27.0	39.6
Free operating cash flow/debt (%)	30.8	22.0	20.0	9.3	12.7
Discretionary cash flow/debt (%)	21.5	14.1	9.0	1.9	2.8

THB--Thai baht.

Liquidity: Adequate

PTT has adequate liquidity on a consolidated basis. We expect sources of liquidity, including cash and available credit facilities, to cover uses of liquidity by at least 1.2x over the 12 months to March 2018. Sources of funds will exceed uses even if EBITDA declines by 15%. We also assess the liquidity at the parent company to be adequate on account of its large cash balances, stable operating cash flows, dividend from subsidiaries and associates, and manageable debt maturities, despite prospective capital spending.

There are maintenance financial covenants on the debt instruments at the subsidiaries level (none at the parent or PTTEP), but we do not expect them to be a restriction, given the group's adequate headroom.

Principal Liquidity Sources	Principal Liquidity Uses
<ul style="list-style-type: none"> Cash and cash equivalents of THB404 billion as of March 31, 2017. Strong access to external funding, given PTT's market position and connection to the government. Cash flow from operations that we estimate at THB220 billion-THB250 billion annually. 	<ul style="list-style-type: none"> Short-term debt maturities of THB104 billion. Consolidated capital spending of up to THB200 billion. Dividend payments of about THB45 billion, including distributions to non-controlling interests.

Debt maturities

Table 3

PTT Public Co. Ltd. -- Debt Maturities*	
Year	Amount (bil. THB)
2017	94.6
2018-2021	275.2
2021 onwards	244.0
Total	613.8

*As of Dec. 31, 2016. THB--Thai baht.

Government Influence

We expect PTT to continue to benefit from its status as a government-related entity and see an extremely high likelihood that the Thai government will provide sufficient and timely extraordinary support to the company in the event of financial distress. PTT is Thailand's only integrated energy company and plays a critical role in developing long-term natural gas supply for the country. PTT implements Thailand's energy policies and plays an essential role in maintaining the country's energy supplies. We believe the government will maintain a very strong link with, through its 51.1% ownership in, the company for the next two years at least, and will continue to yield considerable influence on PTT's policies and direction through a strong representation on the company's board. Government-supported equity investor Vayupak Fund currently owns 13.7% of PTT, taking total effective government ownership to 64.8%.

A gradual depletion of PTT's fully owned asset base through divestment could lead us to reassess the Thai government's appetite to support the group as a coherent, integrated ecosystem.

Ratings Score Snapshot

Corporate Credit Rating

BBB+/Stable/--

Business risk: Satisfactory

- **Country risk:** Moderately high
- **Industry risk:** Intermediate
- **Competitive position:** Satisfactory

Financial risk: Intermediate

- **Cash flow/Leverage:** Intermediate

Anchor: bbb

Modifiers

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Stand-alone credit profile : bbb

- **Related government rating:** BBB+
- **Likelihood of government support:** Extremely high (+1 notch from SACP)

Reconciliation

Table 4

Reconciliation Of PTT Public Co. Ltd. Reported Amounts With S&P Global Ratings' Adjusted Amounts

--Fiscal year ended Dec. 31, 2016--

PTT Public Co. Ltd. reported amounts (mil. THB)

	Debt	Shareholders' equity	EBITDA	Operating income	Interest expense	EBITDA	Cash flow from operations	Capital expenditures
Reported	613,849.6	762,947.6	315,976.9	180,040.1	27,599.4	315,976.9	270,435.2	105,632.5
S&P Global Ratings' adjustments								
Interest expense (reported)	--	--	--	--	--	(27,599.4)	--	--
Interest income (reported)	--	--	--	--	--	6,423.3	--	--
Current tax expense (reported)	--	--	--	--	--	(31,782.5)	--	--
Operating leases	9,734.3	--	2,383.6	708.8	708.8	1,674.8	1,674.8	--
Intermediate hybrids reported as equity	18,594.3	(18,594.3)	--	--	1,166.3	(1,166.3)	--	--
Postretirement benefit obligations/ deferred compensation	16,857.9	--	1,738.4	1,738.4	547.2	1,604.6	(1,653.7)	--
Surplus cash	(235,428.0)	--	--	--	--	--	--	--
Capitalized interest	--	--	--	--	2,807.5	(2,807.5)	(2,807.5)	(2,807.5)
Dividends received from equity investments	--	--	5,342.3	--	--	5,342.3	--	--
Asset retirement obligations	58,201.2	--	--	--	--	--	--	--
Exploration costs	--	--	2,595.1	--	--	--	--	--
Non-operating income (expense)	--	--	--	4,143.2	--	--	--	--
Reclassification of interest and dividend cash flows	--	--	--	--	--	--	(22,038.1)	--
Non-controlling Interest/Minority interest	--	408,649.4	--	--	--	--	--	--
EBITDA - Foreign Exchange gain/(loss)	--	--	(4,472.7)	(4,472.7)	--	(4,472.7)	--	--
EBITDA - Other	--	--	(4,649.3)	(4,649.3)	--	(4,649.3)	--	--
Working capital - Other	--	--	--	--	--	--	5,602.6	--
Total adjustments	(132,040.4)	390,055.1	2,937.5	(2,531.6)	5,229.8	(57,432.6)	(19,221.8)	(2,807.5)

S&P Global Ratings' adjusted amounts

	Debt	Equity	EBITDA	EBIT	Interest expense	Funds from operations	Cash flow from operations	Capital expenditures
Adjusted	481,809.2	1,153,002.8	318,914.4	177,508.6	32,829.2	258,544.4	251,213.4	102,825.0

Table 4**Reconciliation Of PTT Public Co. Ltd. Reported Amounts With S&P Global Ratings' Adjusted Amounts (cont.)**

THB--Thai baht.

Related Criteria And Research**Related Criteria**

- Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- National And Regional Scale Credit Ratings, Sept. 22, 2014
- S&P Global Ratings' National And Regional Scale Mapping Tables, June 1, 2016
- Key Credit Factors For The Oil Refining And Marketing Industry, March 27, 2014
- Key Credit Factors For The Commodity Chemicals Industry, Dec. 31, 2013
- Key Credit Factors For The Midstream Energy Industry, Dec. 19, 2013
- Key Credit Factors For The Oil And Gas Exploration And Production Industry, Dec. 12, 2013
- Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Corporate Methodology, Nov. 19, 2013
- Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Group Rating Methodology, Nov. 19, 2013
- Methodology: Industry Risk, Nov. 19, 2013
- Methodology For Crude Oil And Natural Gas Price Assumptions For Corporates And Sovereigns, Nov. 19, 2013
- Linking Short-Term And Long-Term Ratings, April 7, 2017
- Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- Stand-Alone Credit Profiles: One Component Of A Rating, Oct. 01, 2010
- Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008
- 2008 Corporate Criteria: Rating Each Issue, April 15, 2008

Related Research

- PTT Public Co. Ltd. 'BBB+' Ratings Affirmed On Consistent Earnings Quality After Reorganization; Outlook Stable, April 21, 2017

Business And Financial Risk Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	Significant	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	a-	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of May 24, 2017)

PTT Public Co. Ltd.

Corporate Credit Rating	BBB+/Stable/--
<i>ASEAN Regional Scale</i>	axA+/--/--
Senior Unsecured	BBB+

Corporate Credit Ratings History

10-Dec-2010	<i>Foreign Currency</i>	BBB+/Stable/--
01-Dec-2008		BBB+/Negative/--
31-Oct-2006		BBB+/Stable/--
10-Dec-2010	<i>Local Currency</i>	BBB+/Stable/--
14-Apr-2009		BBB+/Negative/--
01-Dec-2008		A-/Negative/--
22-Nov-2012	<i>ASEAN Regional Scale</i>	axA+/--/--

Related Entities**Global Power Synergy Public Co. Ltd.**

Issuer Credit Rating	BBB-/Stable/--
<i>ASEAN Regional Scale</i>	axA-/--/--

IRPC Public Co. Ltd.

Issuer Credit Rating	BB+/Stable/--
<i>ASEAN Regional Scale</i>	axBBB+/--/--
Senior Unsecured	BB+

PTT Exploration and Production Public Co. Ltd.

Issuer Credit Rating	BBB+/Stable/--
<i>ASEAN Regional Scale</i>	axA+/--/--
Senior Unsecured	BBB+
Subordinated	BBB-

PTT Global Chemical Public Co. Ltd.

Issuer Credit Rating	BBB/Stable/--
<i>ASEAN Regional Scale</i>	axA/--/--
Senior Unsecured	BBB

Thai Oil Public Co. Ltd.

Issuer Credit Rating	BBB/Stable/--
<i>ASEAN Regional Scale</i>	axA/--/--
Senior Unsecured	
<i>ASEAN Regional Scale</i>	axA
Senior Unsecured	BBB

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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