



MEMBER OF
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Sustainability Indices
In Collaboration with RobecoSAM



Thai Oil Public Company Limited

Q2/2017

Analyst Presentation 16 August 2017



Time : 2:30 – 5:00 pm.
Venue : ENCO - Synergy Hall Building C, 6th Floor

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| | |
|----------------|---|
| VISION | A LEADING FULLY INTEGRATED REFINING & PETROCHEMICAL COMPANY IN ASIA PACIFIC |
| MISSION | <ul style="list-style-type: none"> • To be in top quartile on performance and return on investment • To create a high-performance organization that promotes teamwork, innovation and trust for sustainability • To emphasis good Corporate Governance and commit to Corporate Social Responsibility |
| VALUES | <div> <div> Professionalism Ownership & Commitment Social Responsibility </div> <div>  </div> <div> Excellent Striving Vision Focus Initiative </div> </div> <p>Integrity Teamwork & Collaboration</p> |

Corporate Governance Policy

The board of directors, management and all staff shall commit to moral principles, equitable treatment to all stakeholders and perform their duties for the company's interest with dedication, integrity, and transparency.

Anti-Corruption Policy

The Board, the management, and employees must not corrupt or accept corruption of all forms in any circumstances, covering the business of the Company in every country and in every relevant agency. The Company defines guidelines, operating measures, and roles and duties of responsible persons, as well as regularly monitoring and reviewing the implementation of the anti-corruption policy in compliance with changes in businesses, rules, regulations, and relevant laws.

Roles and Responsibilities for Stakeholders

- Truthfully report company's situation and future trends to all stakeholders equally on a timely manner.
- Shall not exploit the confidential information for the benefit of related parties or personal gains.
- Shall not disclose any confidential information to external parties.

Whistle-Blowing Channels

Should you discover any ethical wrongdoing that is not compliance to CG policies or any activity that could harm the Company's interest, please inform:



Chairman of the Board or
Chairman of the CG Committee or
Chairman of the Audit Committee or
CEO/President or Company Secretary

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Our Achievement in Sustainable Development

The World Most Sustainable Oil & Gas Refining and Marketing Company

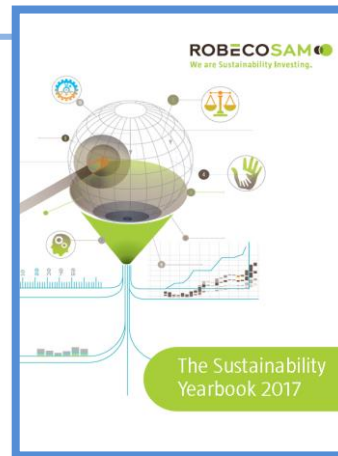
(from 28 invited companies in oil & gas refining and marketing industry)



ROBECOSAM
Sustainability Award
Gold Class 2017

MEMBER OF
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Sustainability Indices**
In Collaboration with RobecoSAM

For 4 consecutive years



For 4 consecutive years

60 industries
3,420 companies invited
2,473 companies assessed*

*cover companies outside DJSI invitation

Q2/17 KEY HIGHLIGHTS

Q2/17 PERFORMANCE ANALYSIS

Q4/17 MARKET OUTLOOK



Q2/17 KEY HIGHLIGHTS



Q2/17 Key Market Drivers Highlights

Refinery Implication



- **Lower Market GRM** pressured by **lower product spread** especially **weaker gasoline** from high U.S. inventory and **soften middle distillate** as a decrease in demand after winter. However, **lower crude premium** from abundant light crude supply partially help support the margin
- **Lower crude price** pressured by recovered supply from Nigeria and Libya as well as inventories in the U.S.

■ **Lower Mkt GRM at 6.1 \$/bbl**
(Q1/17 = 6.5 \$/bbl)

¹⁾ Include Profitability Improvement

■ **(2.2) \$/bbl inventory loss**
(from stock loss 0.2 \$/BBL in Q1/17)

²⁾ Based on refinery intake

Aromatics & LAB



- **Softer Aromatic spreads** pressured by **1) new aromatics supply** from startup of Reliance Phase II (PX 1.4 and BZ 0.4 MTA) **2) high downstream inventory** i.e. polyester and SM

■ **Soften Aromatics & LAB Margins**
(GIM contribution 1.5 \$/bbl from 2.1 \$/bbl in Q1/17)

³⁾ Aromatic contribution including LAB

Lube Base



- **Better Base Oil spread** supported by **tight supply** from scheduled plant maintenance in the region as well as **seasonal agricultural demand** in Asia
- **Soften Bitumen spread** pressured by **high regional inventory** and **weaker demand** particularly in Vietnam and Indonesia

↔ **Stable Lube Base Contribution**
(GIM contribution 0.9 \$/bbl stable from Q1/17)

Refinery + Aromatics & LAB + Lube Base

| \$/BBL | Q2/17 | Q1/17 |
|--------------------------|---------------------|-------|
| Market GIM | ↓ 8.3 | 9.4 |
| Inventory Gains / (Loss) | (2.1) ⁴⁾ | (0.1) |
| Accounting GIM | ↓ 6.2 | 9.3 |

⁴⁾ Based on integrated intake

Q2/17 Reliable Operation & Ongoing Competitive Cash Cost



Key Achievements Q2/17

Operational Excellence



■ Maintain high reliable production

| | Q2/17 | Q1/17 |
|----------|-------|-------|
| Refinery | 112 % | 111 % |
| Aromatic | 78 % | 90 % |
| Base Oil | 90 % | 88 % |

■ Capture high local & Indochina sales of petroleum products

| | Q2/17 | Q1/17 |
|---------------|-------|-------|
| Local | 86 % | 87 % |
| Indochina | 9 % | 8 % |
| Other exports | 5 % | 5 % |



Growth & Profitability Improvement



■ Competitive group cash cost at 1.9 \$/bbl (1.4 \$/bbl operating cash cost, 0.5 \$/bbl net interest expense)

■ Profitability Improvement activities at 1,072* MB

Sustainability & Awards



■ 2017 Certificate of ESG100 by THAI PAT 1 of 100 listed companies ranked by Environment Social & Governance (ESG)

■ 2017 Best IR Professionals by Institutional Investor Magazine (Best IR - First place)



TOP Group Net Profit

Unit : million THB (MB)

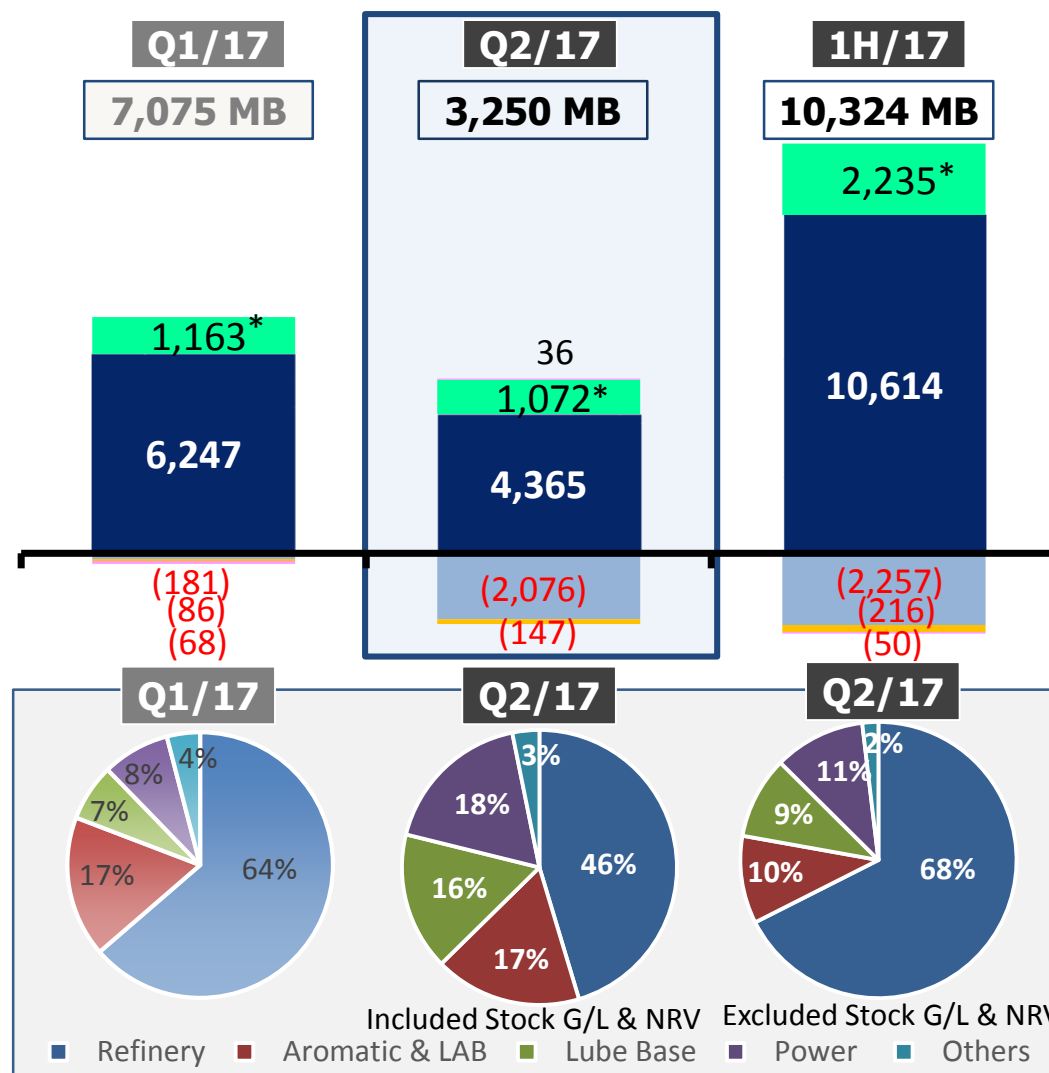
■ Net Operating Profit

■ Stock G/(L)

■ Others i.e. Hedging G/(L)

■ Profitability Improvement

■ Reversal of NRV /(NRV)







* Compared with Corp. plan

Q2/17 Profitability Improvement (VS Corporate Plan)

Margin Improvement

(Supply & Marketing / Hydrocarbon Management / **TRANSCENDENCE**)

EXCELLING BEYOND LIMIT

- ✓ LP Upgrading Model , Process Improvement 
- ✓ New crude processing 
- ✓ Plant optimization 
- ✓ Higher domestic/ CLMV petroleum sale 
- ✓ Energy improvement 

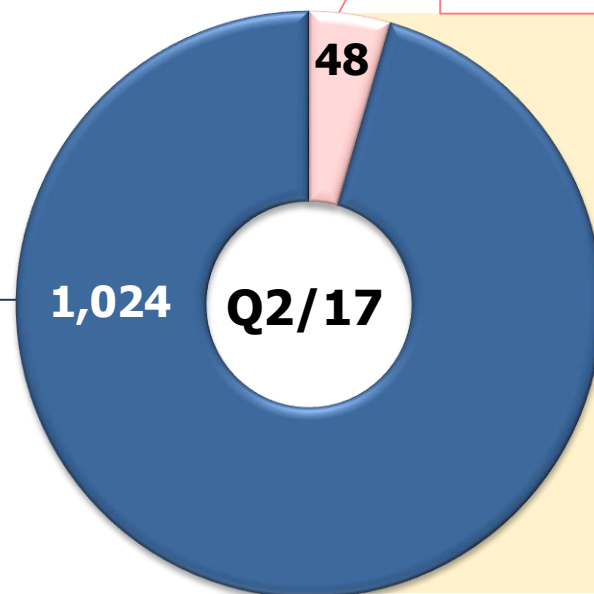
Energy

Cost Management

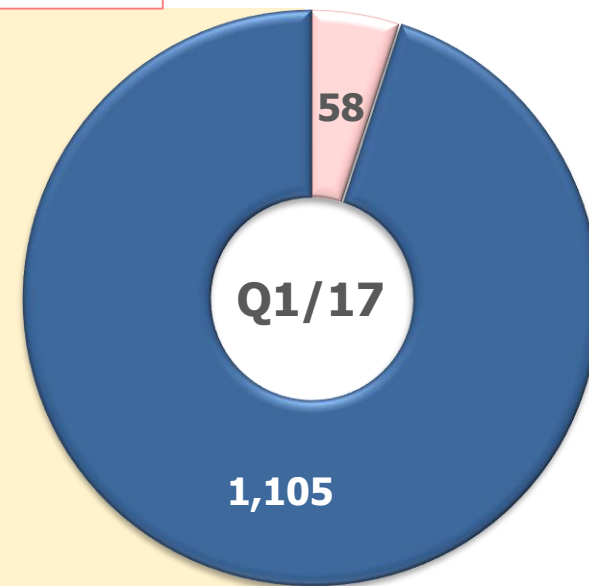
ORCHESTRA

- ✓ General & Admin , Procurement & warehouse , Operation & Maintenance , Project & Manpower management

Unit: million THB



THB 1,072 mn*



THB 1,163 mn*



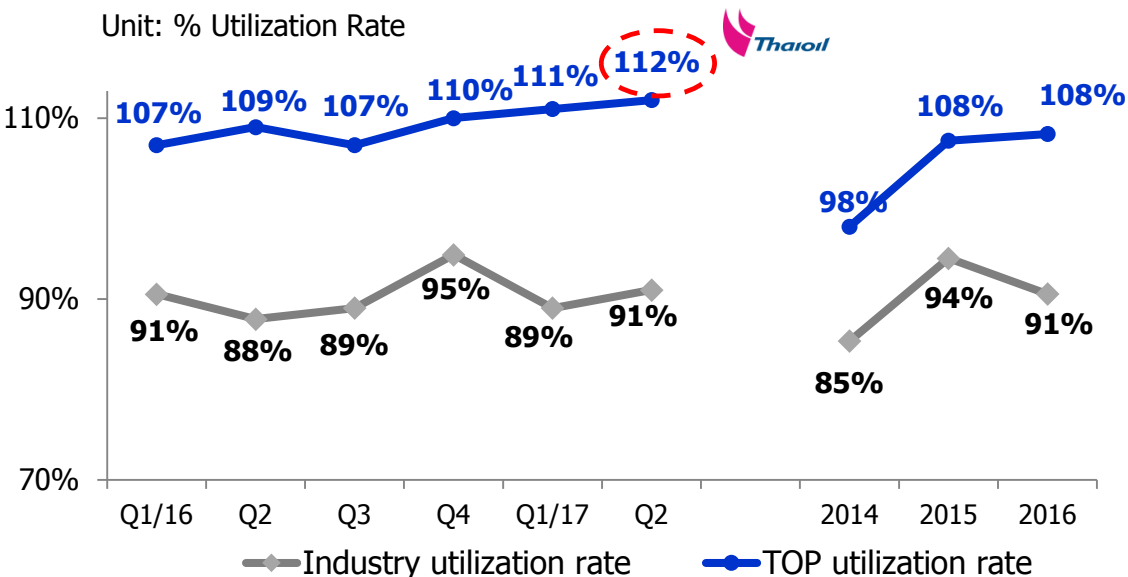
Q2/17 PERFORMANCE ANALYSIS



Refinery: Recorded High Quarterly Utilization Rate

TOP/ Domestic Refinery Utilization Rate

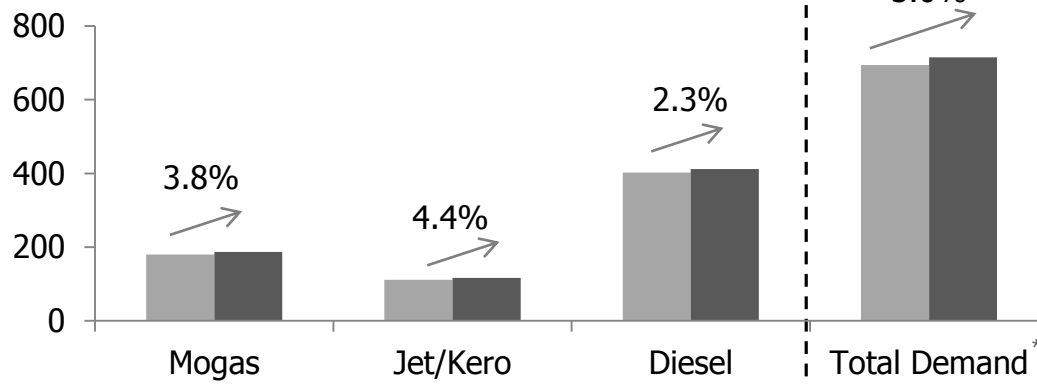
Unit: % Utilization Rate



Domestic Oil Demand

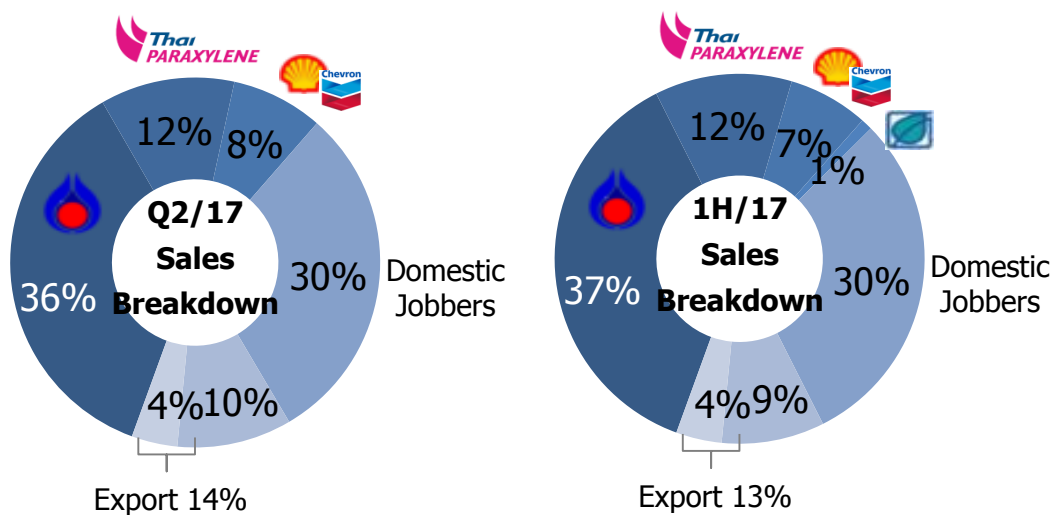
■ 1H/16 ■ 1H/17

KBD



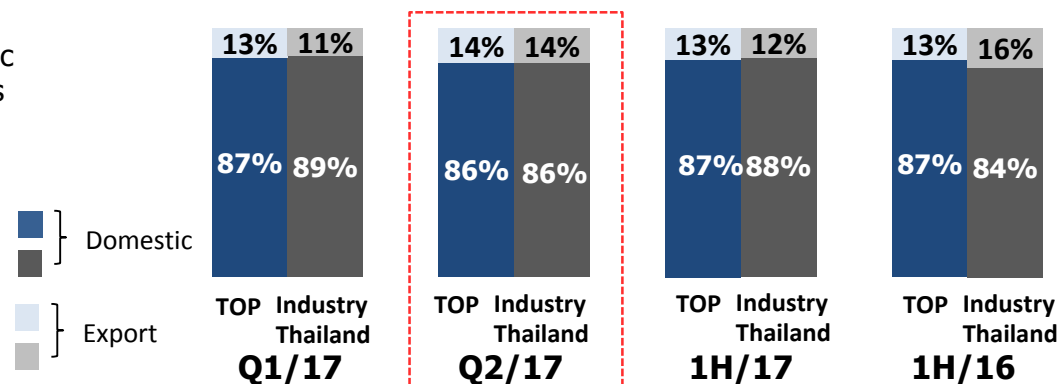
* exclude Fuel Oil & LPG demand

Sales breakdown by customers



TOP's Domestic Sale vs Industry**

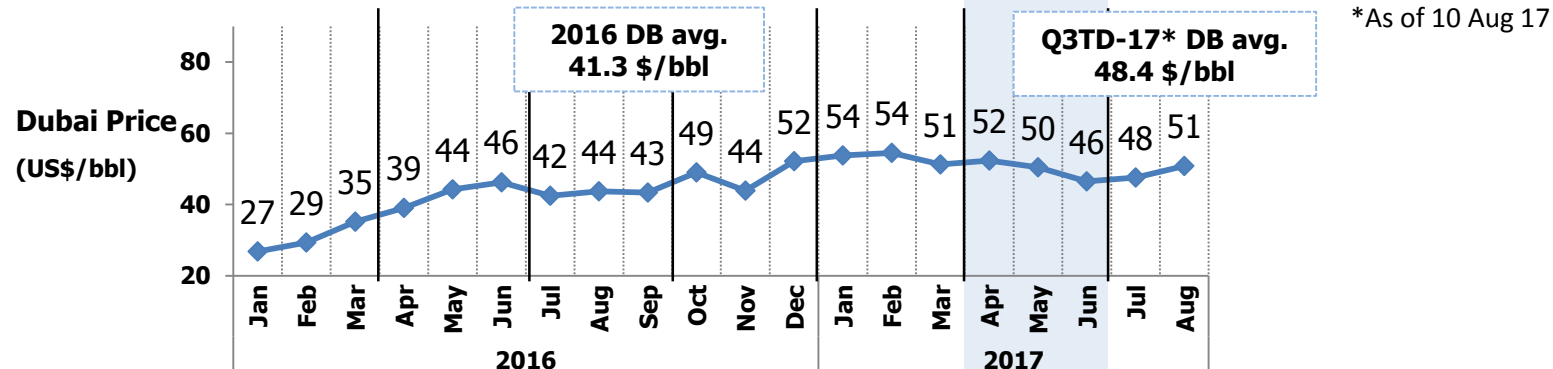
| Export | Q1/17 | | Q2/17 | | 1H/17 | | 1H/16 | |
|--------|-------|------|-------|------|-------|------|-------|------|
| | TOP | Ind. | TOP | Ind. | TOP | Ind. | TOP | Ind. |
| CLMV | 8% | 4% | 9% | 5% | 8% | 4% | 9% | 3% |
| Others | 5% | 7% | 5% | 9% | 5% | 8% | 4% | 13% |



Q2/17: Slightly Soften Mkt GRM as Lower Product Spread partially offset by Lower Crude Premium

Dubai Crude Price & Key Petroleum Product Spreads

| | 2016 | | | | | 2017 | | | 2016 |
|------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| \$/bbl | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | 1H | Q3TD* | FY16 |
| DUBAI (DB) | 30.4 | 43.2 | 43.2 | 48.3 | 53.1 | 49.8↓ | 51.4 | 48.4 | 41.3 |
| ULG95 - DB | 18.8 | 14.4 | 11.6 | 14.6 | 14.8 | 14.2↓ | 14.5 | 14.6 | 14.9 |
| JET - DB | 11.7 | 11.1 | 11.1 | 12.3 | 11.3 | 10.8↓ | 11.1 | 12.3 | 11.6 |
| GO - DB | 9.6 | 10.5 | 11.0 | 12.0 | 11.8 | 11.4↓ | 11.6 | 13.5 | 10.8 |
| HSFO - DB | (5.2) | (8.7) | (4.3) | (1.7) | (3.1) | (1.8)↑ | (2.5) | (0.8) | (5.0) |



Gross Refinery Margins - GRM

| | 2016 | | | | | 2017 | | 2016 |
|----------------|-------|-----|-------|-----|-------|-------|-------|------|
| \$/bbl | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | 1H | FY16 |
| Market GRM | 6.1 | 4.4 | 4.3 | 6.0 | 6.5 | 6.1 | 6.3 | 5.2 |
| Stock G/(L) | (1.0) | 4.2 | (0.6) | 3.5 | (0.2) | (2.2) | (1.2) | 1.6 |
| Accounting GRM | 5.1 | 8.6 | 3.7 | 9.5 | 6.3 | 3.9 | 5.1 | 6.8 |

Refinery Utilization

| Q1/17 | Q2/17 | 1H/17 |
|-------|-------|-------|
| 111% | 112% | 112% |

% MB Intake/OSP*

| 42%/1.6 | 44%/0.9 | 43%/1.2 |
|---------|---------|---------|
|---------|---------|---------|

*Murban OSP over Dubai (\$/bbl)

Q2/17 Market GRM

- + **Lower crude premium** from abundant light crude supply help support margins
- + **Better Fuel Oil Spread** as tight supply amid low arbitrage volumes from the ME
- **Lower Gasoline & Diesel Spread** due to high U.S. Gasoline inventory, and softer heating and travelling demand after winter

Q2/17 Performance

- + **High Run rate at 112%** to capture strong domestic and Indochina market

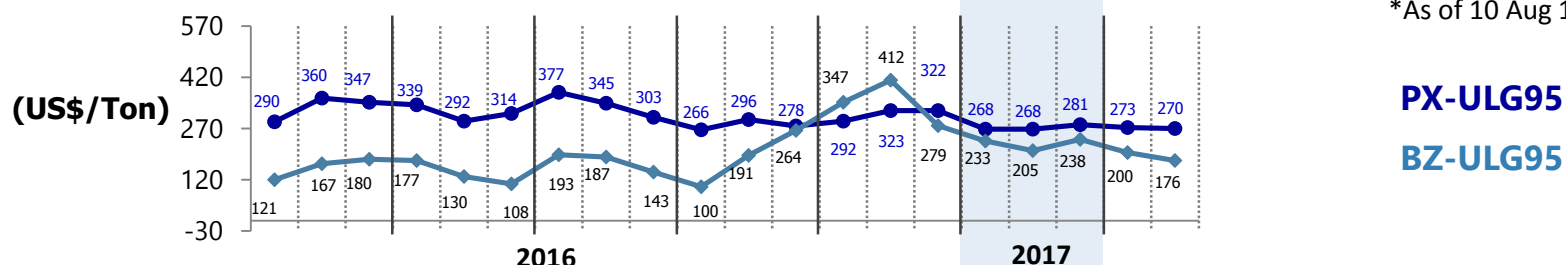
Q2/17: Lower Contribution pressured by New PX/BZ Supplies



Aromatics Spreads and Margins

| | 2016 | | | | 2017 | | | | 2016 |
|------------|------|-----|-----|-----|------|------|-----|-------|------|
| \$/ton | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | 1H | Q3TD* | FY16 |
| PX**-ULG95 | 332 | 315 | 341 | 280 | 312 | 273↓ | 292 | 273 | 317 |
| BZ**-ULG95 | 156 | 138 | 174 | 185 | 346 | 225↓ | 285 | 195 | 163 |

*As of 10 Aug 17



Aromatics Production

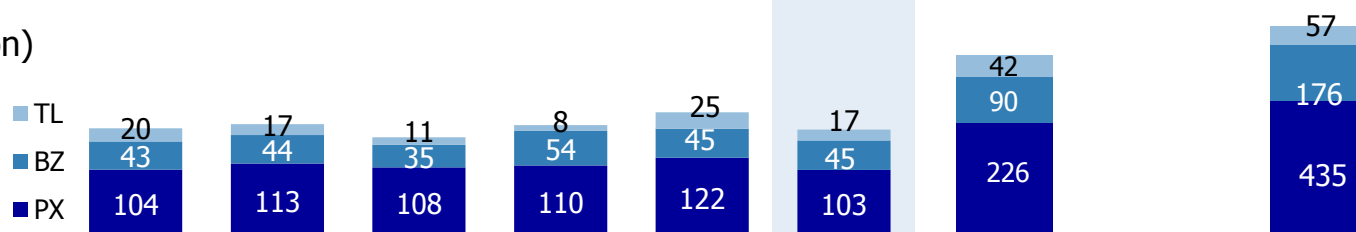
| Q1/17 | Q2/17 | 1H/17 |
|-------|-------|-------|
| 90% | 78% | 84% |

Q2/17 Market

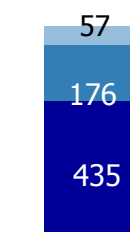
- **New PX/BZ supplies** from startup of Reliance Phase II with 1.4 and 0.4 MTA, respectively
- **High downstream inventory** i.e. Polyester, Styrene monomer

Aromatic's Sales (excluding by product) & Product-To-Feed Margin (P2F)

(Unit : KTon)



| | 2016 | | | | 2017 | | |
|----------------------|------|------|------|------|------|------|------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | 1H |
| Aromatic P2F -\$/ton | 98 | 99 | 109 | 95 | 126 | 91 | 109 |
| Aromatic P2F -\$/bbl | 12.8 | 13.0 | 14.3 | 12.4 | 16.4 | 11.9 | 14.2 |
| GIM contribution*** | 1.4 | 1.7 | 1.9 | 1.6 | 2.1 | 1.5 | 1.8 |



Q2/17 Performance

- + **Optimized Aromatics run** driven by Aromatics V.S. gasoline margins

| 2016 |
|------|
| FY16 |
| 100 |
| 13.1 |
| 1.7 |

** PX price = CFP Taiwan, BZ price = FOB Korea

*** including LAB contribution since 25 Feb 2016

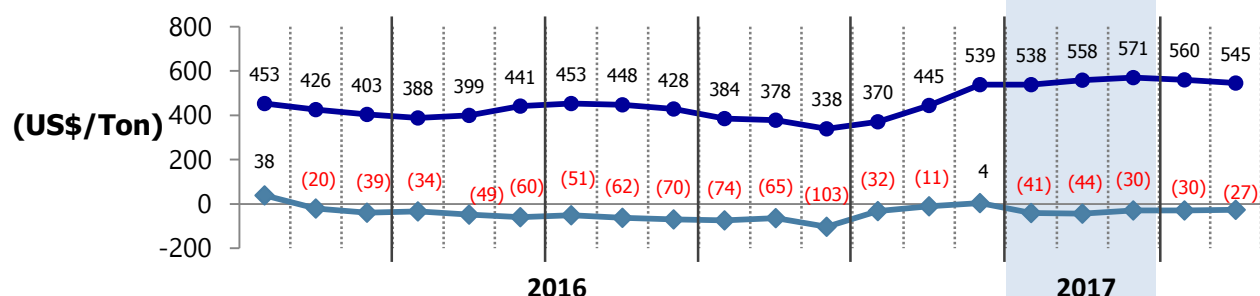
Remark: TOL -ULG95, Q1/17 = 120 \$/ton, Q2/17 = 73 \$/ton, 1H/17 = 97 \$/ton

Q2/17: Stable Contribution supported by Strong Base Oil Spread

Base Oil & Bitumen Spreads & Margins

| | 2016 | | | | 2017 | | | | 2016 |
|--------------|------|------|------|------|------|--------|------|-------|------|
| \$/ton | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | 1H | Q3TD* | FY16 |
| 500SN-HSFO | 427 | 409 | 443 | 367 | 451 | 556 ↑ | 503 | 556 | 412 |
| BITUMEN-HSFO | (7) | (48) | (61) | (80) | (13) | (38) ↓ | (28) | (29) | (49) |

*As of 10 Aug 17



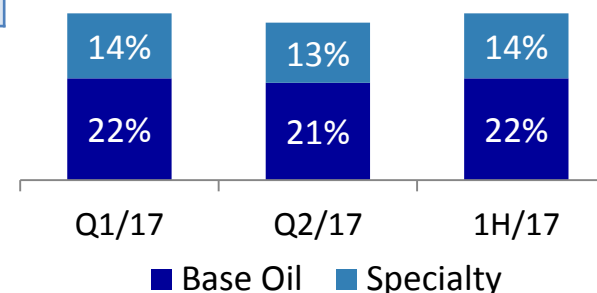
500SN-HSFO

Bitumen-HSFO

Base oil Production

| Q1/17 | Q2/17 | 1H/17 |
|-------|-------|-------|
| 88% | 90% | 89% |

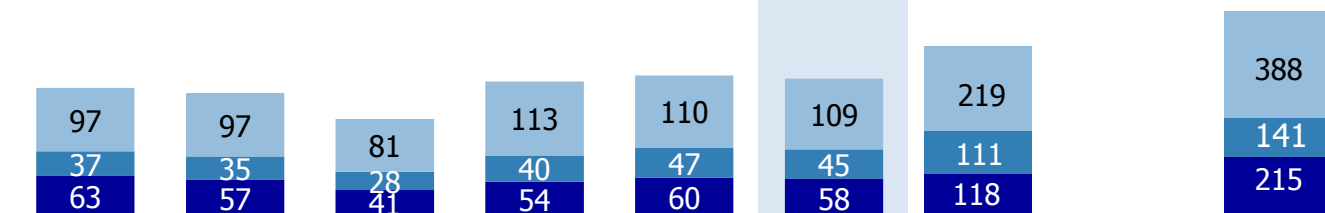
% Base Oil & Specialty Sales Volume



TLB's Sales (excluding byproduct) & Product-To-Feed Margin (P2F)

(Unit : KTon)

Bitumen
Specialty
Base Oil



| | 2016 | | | | 2017 | | |
|------------------|------|------|------|------|------|------|------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | 1H |
| P2F -\$/ton | 126 | 121 | 106 | 77 | 116 | 118 | 117 |
| P2F -\$/bbl | 19.2 | 18.4 | 16.1 | 11.7 | 17.6 | 17.9 | 17.7 |
| GIM contribution | 0.9 | 0.9 | 0.6 | 0.5 | 0.9 | 0.9 | 0.9 |

2016

FY16

107

16.2

0.7

Q2/17 Market

- + **Tight base oil supplies** from scheduled plant maintenance in the region
- + **High Seasonal agricultural demand** in Asia
- **High regional Bitumen inventory and weaker demand** particularly in Vietnam and Indonesia

Q2/17 Performance

- + **High utilization rate** supported by good margins and demand

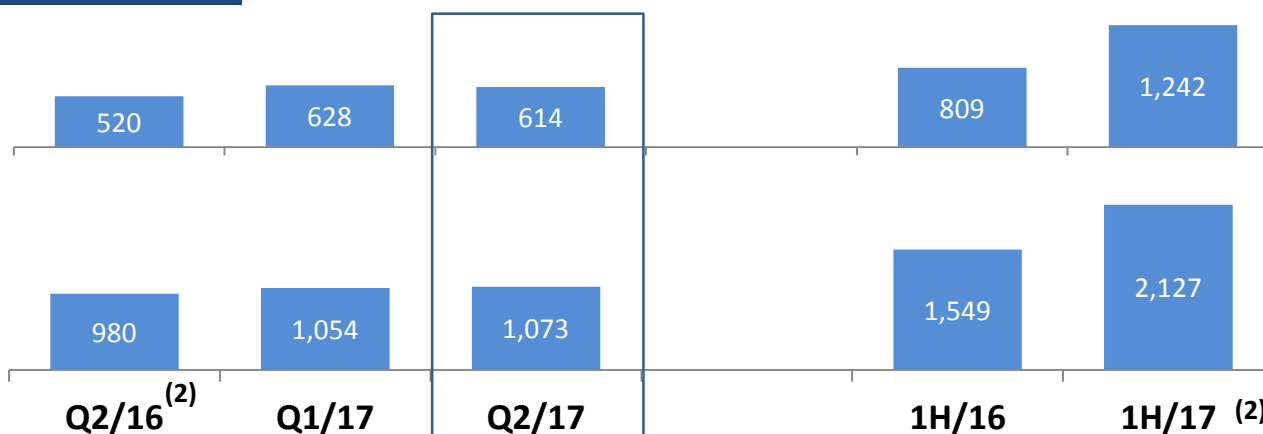
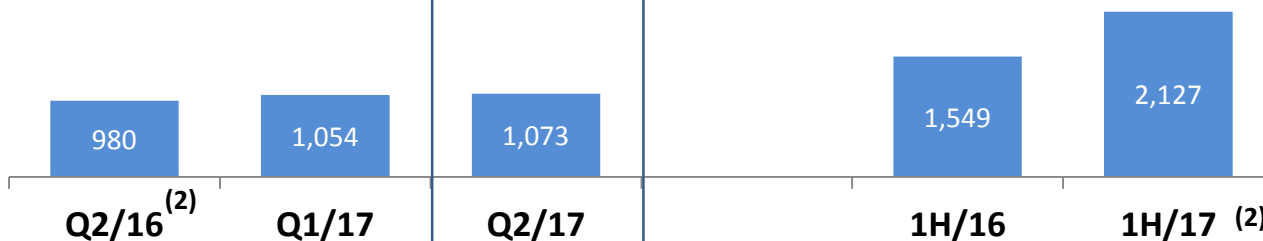
Q2/17 Power Sector Performance...Growing Contribution to the Group

Power Business Sector

SPP

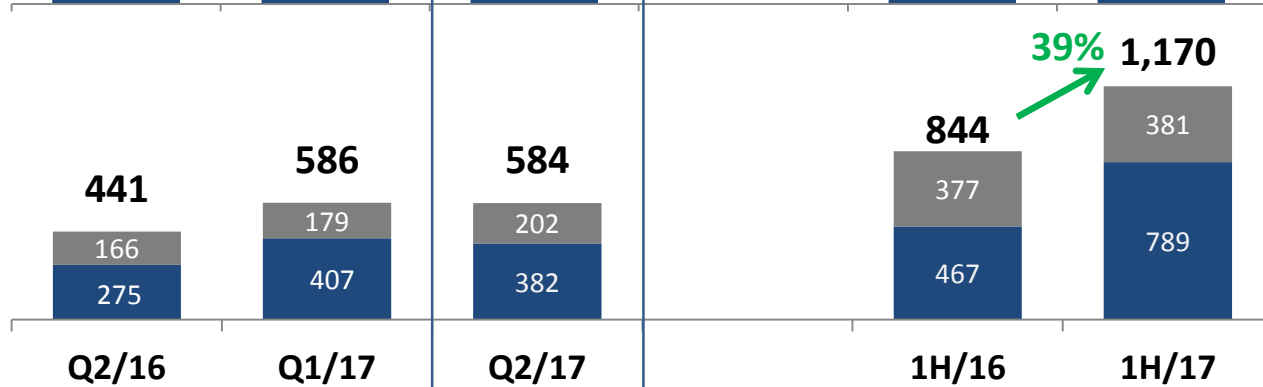
Equity holding in


Power & Steam Sales

Electricity⁽¹⁾
(GWh)

Steam⁽¹⁾
(kton)


EBITDA & Net Profit

EBITDA⁽³⁾
(THB million)

Net Profit⁽⁴⁾
(THB million)


***TOP shareholding 24.29% (8.91% via TOP and 20.79% via TP)

GPSC is an associate company of TOP. Equity method is applied to recognize share of profit. (EBITDA calculation excludes profit sharing from GPSC)

■ Equity income from GPSC
■ SPP (TP+TOP SPP)

(1) 100% of TP and TOP SPP

(2) TOP SPP COD 1st block in Apr 16 and 2nd block in Jun 16

Performance Highlight

- + **Stable electricity dispatch and steam**
- + **Higher Contribution from GPSC** driven by more sales to industrial customers after resumption from maintenance

(4) Net profit of 74% TP + 100 % TOP SPP + 24.29% profit sharing from GPSC

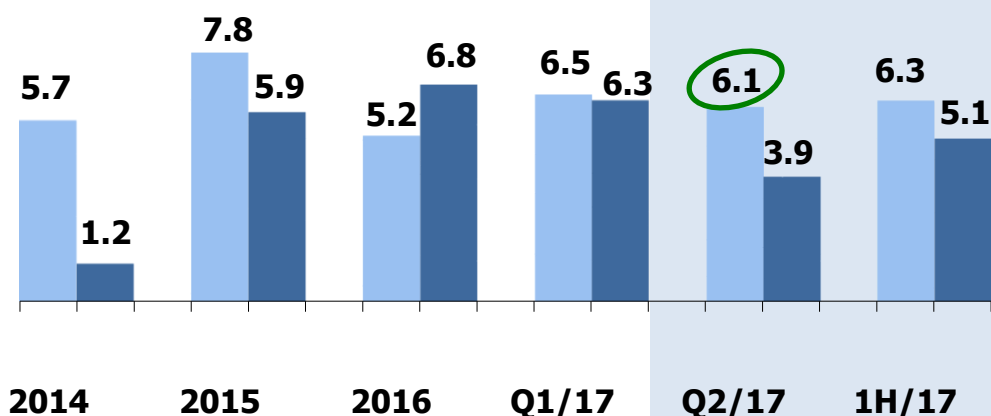


Integrated Margin & Competitive Cash Cost

Gross Refining Margin

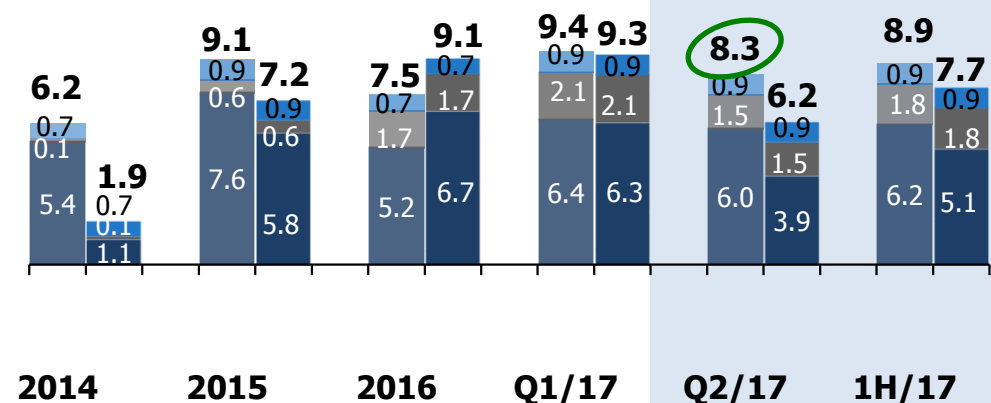
(Unit: US\$/bbl)

■ Market GRM ■ Accounting GRM (Market GRM + Stock G/L)



Gross Integrated Margin

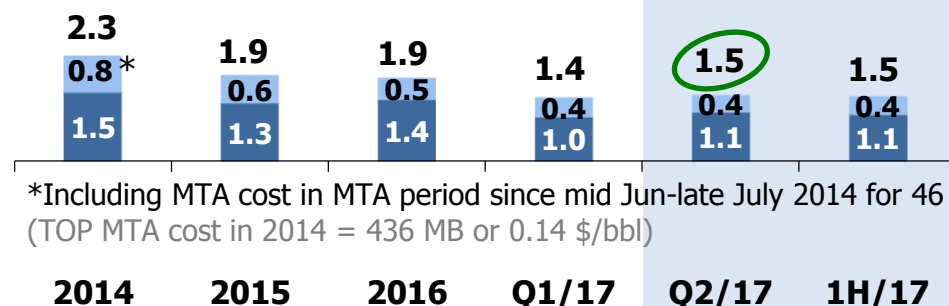
(Unit: US\$/bbl)

■ Market GIM ■ Accounting GIM (Market GIM + Stock G/L)
■ Refinery ■ Aromatics+LAB ■ Lube Base


Refinery's Cash Cost

(Unit: US\$/bbl)

■ Operating Cost (excl. one-time non-operating item) ■ Interest Expense (net)

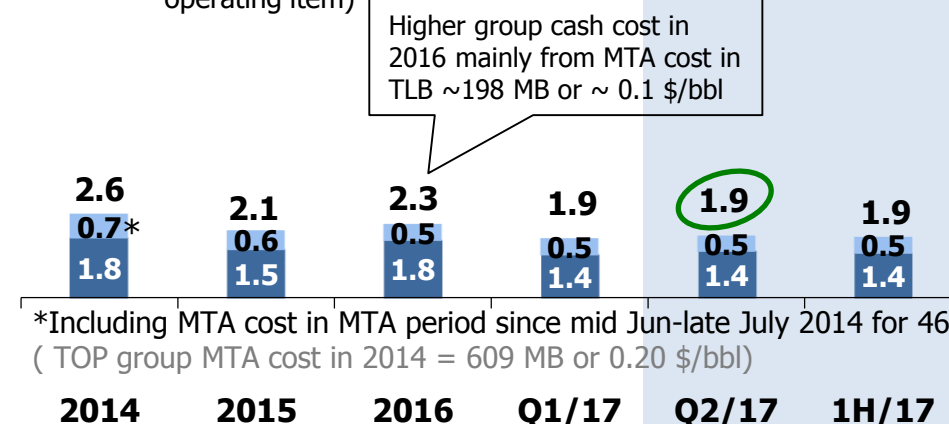


*Including MTA cost in MTA period since mid Jun-late July 2014 for 46 days (TOP MTA cost in 2014 = 436 MB or 0.14 \$/bbl)

Group's Cash Cost

(Unit: US\$/bbl)

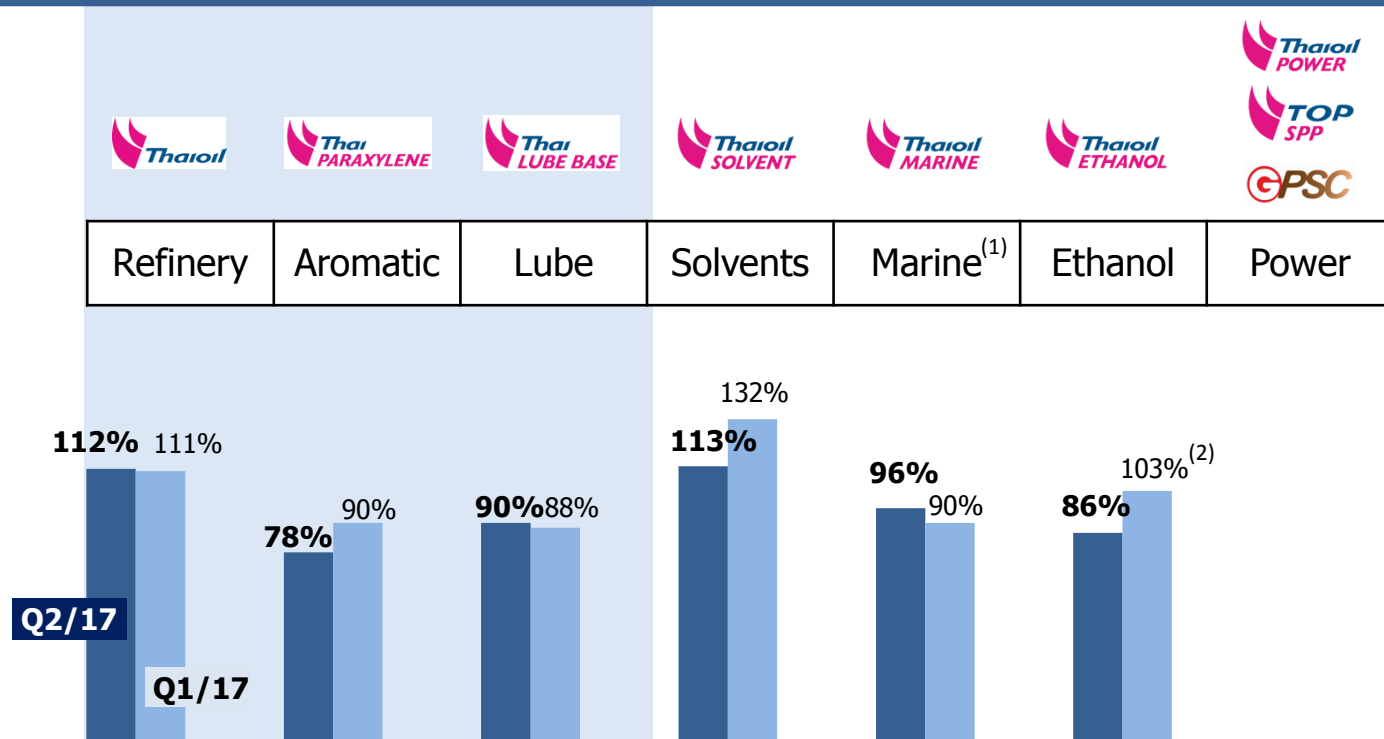
■ Operating Cost (excl. one-time non-operating item) ■ Interest Expense (net)



*Including MTA cost in MTA period since mid Jun-late July 2014 for 46 days (TOP group MTA cost in 2014 = 609 MB or 0.20 \$/bbl)

Q2/17: Performance Breakdown by Business Unit

Utilization/Production (%) & Net Profit (million THB)



Key Points

- **Refinery:** maximize utilization rate to capture decent margins and strong demand
- **Aromatic/LAB:** lower contribution mainly from weaker product spread due to new supply in the region
- **Lube:** high utilization to capture ongoing good base oil margins and regional demand
- **Power:** stable contribution from both SPPs & contribution from GPSC
- **Solvents:** lower utilization and net profit due to decreased demand in rainy season and long holiday in April'17
- **Marine:** higher TM vessel utilization supported better contribution
- **Ethanol:** soften contribution due to lower utilization rate from 10-15 days maintenance in SAPTHIP and UBE

| | | | | | | | | Consol | StkG/(L)& Reversal of NRV/(NRV) | Consol Excl Stock G/(L) & Reversal of NRV/(NRV) |
|-------|-------|----------------------|-------|-----|----|-----|----------------------|--------|---------------------------------|---|
| Q1/17 | 4,492 | 1,213 ⁽³⁾ | 489 | 148 | 1 | 120 | 586 ⁽⁴⁾ | 7,075 | (249) | 7,324 |
| Q2/17 | 1,316 | 555 ⁽³⁾ | 523 | 25 | 15 | 40 | 584 ⁽⁴⁾ | 3,250 | (2,223) | 5,473 |
| 1H/17 | 5,808 | 1,768 ⁽³⁾ | 1,012 | 173 | 16 | 160 | 1,170 ⁽⁴⁾ | 10,324 | (2,473) | 12,797 |

(1) U-rate of 5 Oil & Chemical Tankers (total capacity: 52,350 DWT)

(2) U-rate of TET Q1/17 includes MCE 1-month U-rate at 124%, SAPTHIP 102% and UBE 100% , Q2/17 includes SAPTHIP 93% and UBE 83%

(3) Includes 75% of LAB net profit Q1/17 = 118 MB, Q2/17 = (1) MB, and 1H/17 = 117 MB

(4) Apply on an equity accounted basis in the consolidated financial statement. (GPSC has been held by TOP 8.9% and TP 20.8%, TP has been held by TOP 74% & TOP SPP has been held by TOP 100%)

Q2/17 Key Highlight TOP Group Consolidated P&L

| (million THB) | Q2/17 | Q1/17 | QoQ+ / (-) | Q2/16 | YoY+ / (-) | 1H/17 | 1H/16 | YoY+ / (-) | QoQ analysis |
|---|--------------|--------------|-----------------------------|---------------|----------------|---------------|---------------|----------------|--|
| Sales Revenue | 80,053 | 87,596 | (7,543) ^A | 72,368 | 7,685 | 167,649 | 129,158 | 38,491 | ^A Decrease overall sale volume and product price |
| Hedging Gain / (Loss) | 36 | (86) | 122 ^B | (147) | 183 | (50) | (119) | 69 | |
| EBITDA | 5,584 | 9,548 | (3,964) ^C | 10,545 | (4,961) | 15,132 | 17,198 | (2,066) | ^B Mainly from gain in margin hedge |
| EBITDA excl. Stk G/(L) & Reversal of NRV/(NRV) | 7,807 | 9,797 | (1,990) ^D | 6,183 | 1,624 | 17,604 | 13,147 | (4,457) | |
| Financial Charges | (830) | (846) | 16 | (866) | 36 | (1,676) | (1,670) | (6) | ^C Mainly from a huge stock loss in Q2/17 (2.2) \$/bbl compared to stock loss (0.2)\$/bbl in Q1/17 |
| FX G/(L) & CCS | 476 | 1,323 | (847) ^E | 110 | 366 | 1,799 | 798 | 1,001 | |
| (Tax Expense)/reversal of income tax | (629) | (1,461) | 832 | (688) | 59 | (2,090) | (1,051) | (1,039) | |
| Net Profit / (Loss) | 3,250 | 7,075 | (3,825) | 7,753 | (4,503) | 10,324 | 12,479 | (2,155) | ^D Mainly from softer Mkt GIM 8.3\$/bbl from 9.4\$/bbl |
| EPS (THB/Share) | 1.59 | 3.47 | (1.87) | 3.80 | (2.21) | 5.06 | 6.12 | (1.06) | |
| Stock G/(L)&Reversal of NRV/(NRV) | (2,223) | (249) | (1,974) | 4,362 | (6,585) | (2,473) | 4,051 | (6,523) | ^E Lower unrealized gain on USD debt in Q2/17 compared to Q1/17 as Baht slightly appreciated |
| Net Profit/ (Loss) excl. Stk G/(L) and Reversal of NRV/(NRV) | 5,473 | 7,324 | (1,851) | 3,391 | 2,082 | 12,797 | 8,429 | 4,368 | |
| THB/US\$ - average | 34.45 | 35.28 | (0.83) | 35.45 | (1.00) | 34.86 | 35.64 | (0.78) | |
| THB/US\$ - ending | 34.15 | 34.61 | (0.46) | 35.34 | (1.19) | 34.15 | 35.34 | (1.19) | |
| Effective Tax Rate (%) | 16% | 17% | (1%) | 8% | 8% | 16% | 8% | 8% | |

1H/17 TOP Group Consolidated Cash Flow

(Unit: Million THB)

| Operating Cash Flow | | |
|----------------------------|---------------|---------------|
| | 6M/17 | 6M/16 |
| Operating Cash Flow | 15,895 | 12,791 |
| Net income & non-cash adj. | 16,309 | 16,891 |
| Change in working capital | (414) | (4,100) |

(Unit: Million THB)

| Investments | | |
|----------------------|-----------------------|-----------------|
| | 6M/17 | 6M/16 |
| Investments | (12,664) | (20,383) |
| ST investments | (8,301) | (16,595) |
| Available for sale | (2,946) | - |
| CAPEX (PP&E) & other | (1,417) ¹⁾ | (3,788) |

1) TOP 1,246MB, SAPTHIP 53MB

| | | |
|-----------------------|--------------|----------------|
| Free Cash Flow | 3,232 | (7,592) |
|-----------------------|--------------|----------------|

| Financing | | |
|------------------|-----------------------|----------------|
| | 6M/17 | 6M/16 |
| Financing | (13,464) | (3,584) |
| Loans proceeding | 425 ²⁾ | 2,701 |
| Loans repayment | (5,823) ³⁾ | (729) |
| Interest | (1,744) | (1,679) |
| Dividend | (6,323) | (3,876) |

2) SAPT 210MB, LABIX 180MB, TMS 35MB

3) TOP 4,932MB,
LABIX 497MB, SAKC 180MB
TP86MB, TM 69MB, SAPT 61MB

| | Beginning | | Change | | Effect of FCD | | Ending |
|---------------------------|---------------|---|-----------------------|---|---------------|---|----------------------------|
| cash | 31,121 | + | (10,232) ↓ | + | (568) | = | 20,320 |
| S/T investment | 29,654 | | 7,989 ⁴⁾ ↑ | | | | 37,643 |
| Available for sale | 244 | | 2,697 ⁵⁾ ↑ | | | | 2,941⁶⁾ |
| | 61,019 | | | | | | 60,904⁷⁾ |

4) non-cash transaction : adj. FX gain from fixed deposit 206MB,
Other adjustments 105MB

5) Reclassify ST to other investment 179MB, Others 70MB

6) Available for sale 2,941 MB is included in non current asset

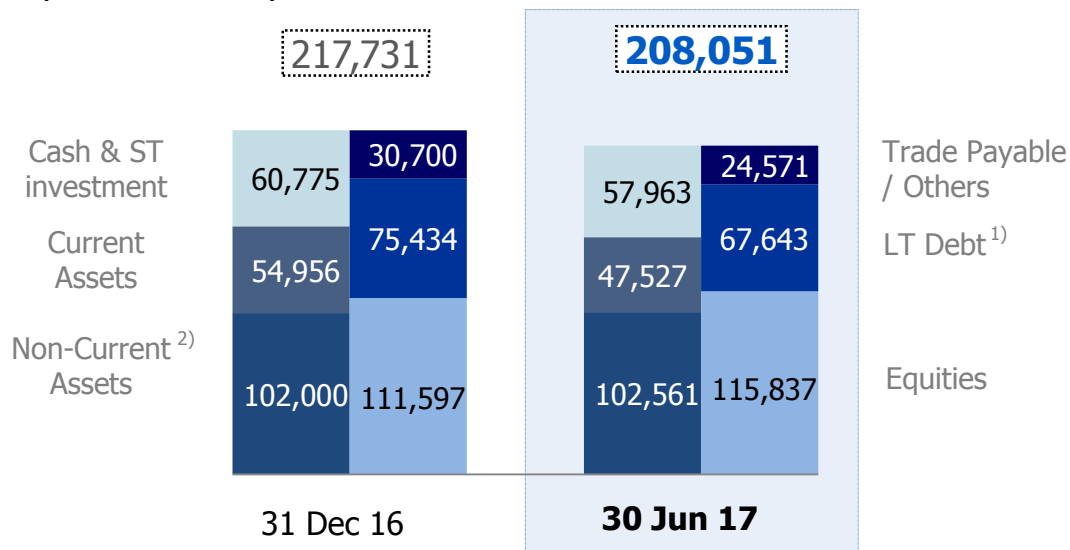
7) FCD = 16,051MB (475MUSD)

Q2/17 TOP Group Strong Financial Position & Financial Ratios



Statements of Financial Position

(Unit: million THB)



| | | |
|------|--------|--------|
| ROE | 20.3%* | 16.8%* |
| ROIC | 18.8%* | 15.8%* |

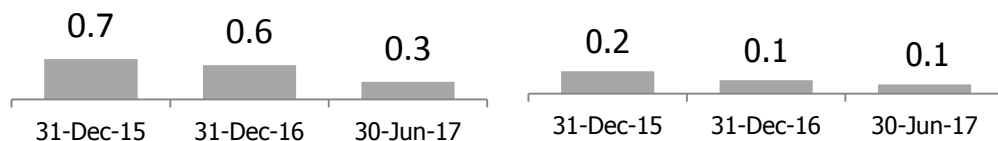
¹⁾ Including current portion of Long-Term Debt

²⁾ Including available for sale 31 Dec 16 = 244 MB, 30 Jun 17 = 2,941 MB

Financial Ratios

Net Debt / adj. EBITDA**

Net Debt / Equity



* Based on actual performance in the past 12 months

** Annualized EBITDA (excl stock gain/loss & Reversal of NRV/(NRV))

Consolidated Long-Term Debt as at 30 Jun 17

Total Long-Term Debt

67,643 million THB
(US\$ 1,981 million equivalence)

Net Debt

10,909 million THB
(US\$ 319 million equivalence)

As at 30 Jun 17 (34.15 THB/US\$)

| | Value (Million) | Portion |
|-----------------------|-----------------|---------|
| US\$ Bond & US\$ Loan | USD 1,101 | 56% |
| THB Bond | THB 23,500 | 34% |
| THB Loan | THB 6,525 | 10% |

| Interest Rate | Portion |
|-------------------|----------|
| Float | 10% |
| Fixed | 90% |
| TOP avg.debt life | 11.7 Yrs |

| Cost of Debt | |
|--------------------|-------|
| TOP Group (Net***) | 3.51% |
| TOP Group (Gross) | 4.74% |



Moody's Investors Service

Baa1
Stable Outlook

STANDARD
& POOR'S

BBB
Stable Outlook

FitchRatings

AA- (tha)
Stable Outlook

Q4-17 MARKET OUTLOOK

- *Crude Oil*
- *Petroleum Products*
- *Aromatics*
- *Base Oil & Bitumen*
- *Linear Alkyl Benzene (LAB)*



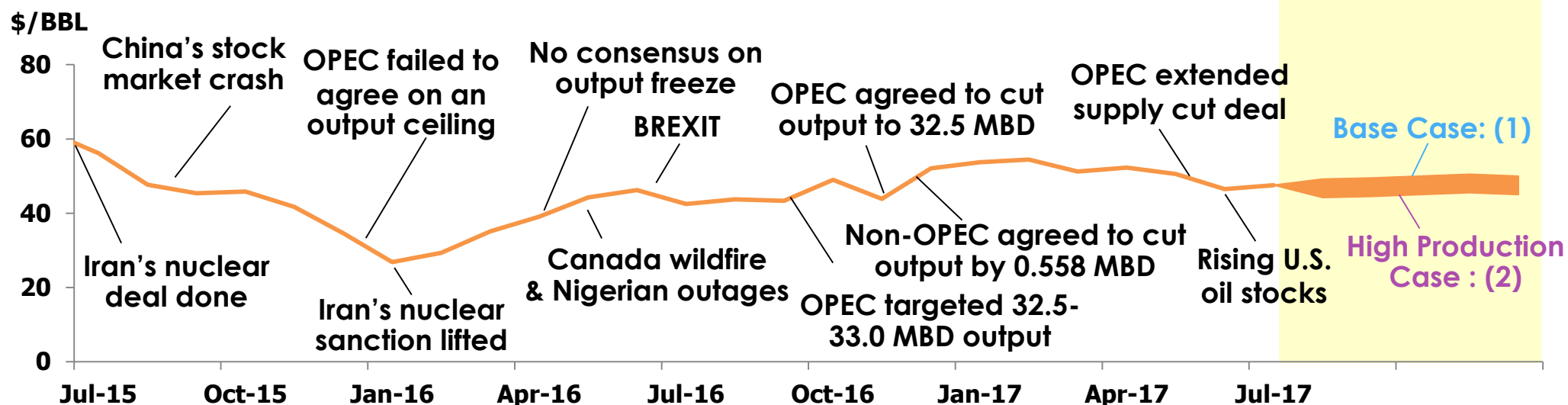


CRUDE OIL



Stable-to-Firm Crude Oil Price from Growing Demand amid Rising Supply

Dubai Price Movement



*Q3TD'17 (as of 10 Aug): \$ 48.4/BBL

Key Highlights in Q4-17

1

Strong Global Oil Demand Growth to be Mostly Offset by Rising Oil Supply

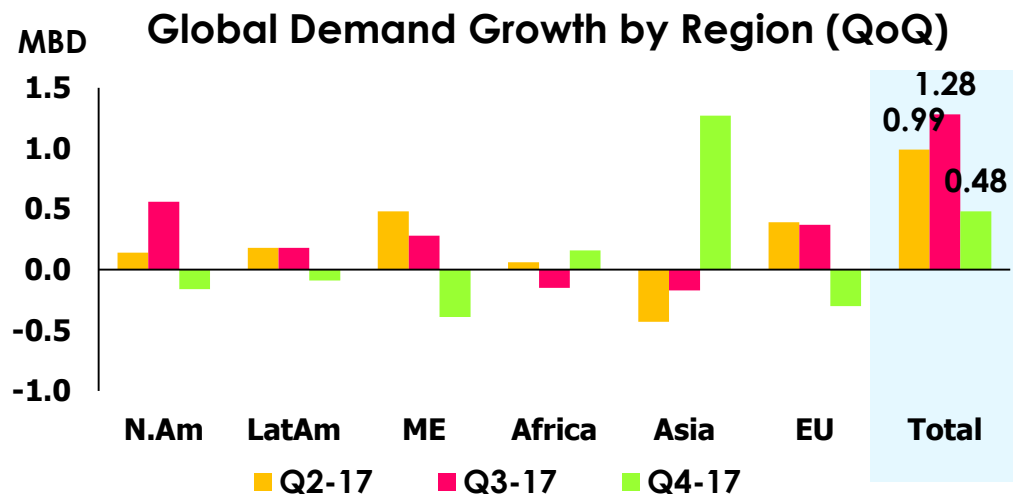
2

Risks over Surging U.S. Oil Outputs

1

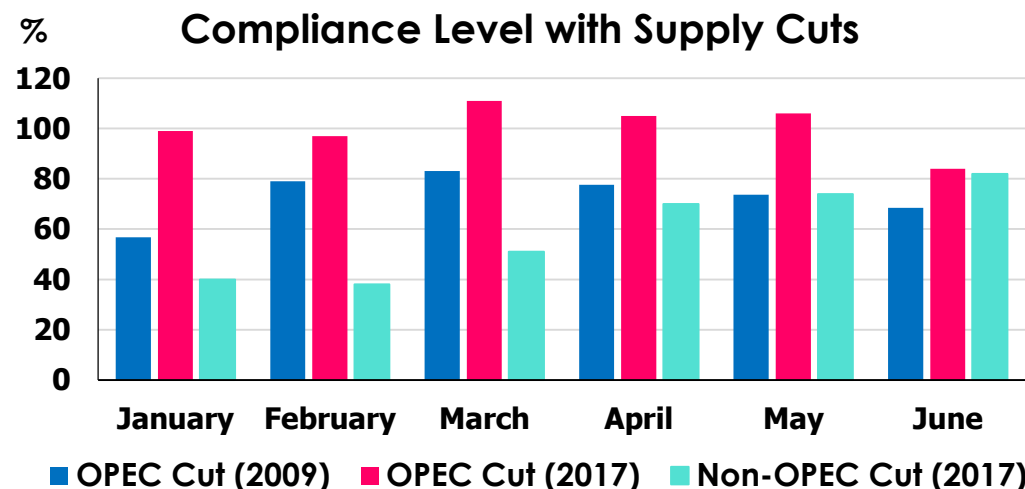
Strong Global Oil Demand Growth to be Mostly Offset by Rising Oil Supply

A Growing Oil Demand Continues to Support



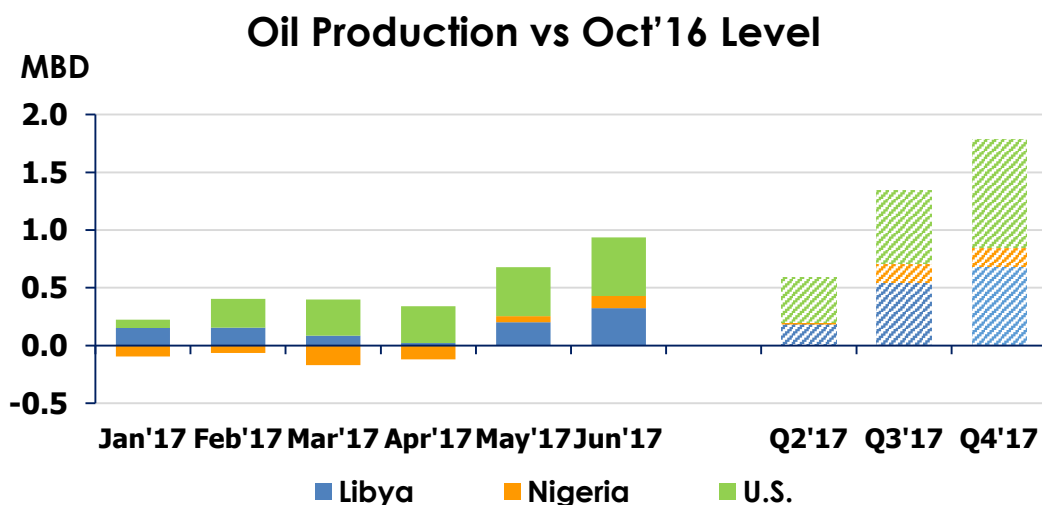
Source: IEA (Jul'17)

B Limited Supply with High Compliance



Sources: IEA (Jul'17) and OPEC (Jul'17)

C Supply Cuts Are Partly Offset

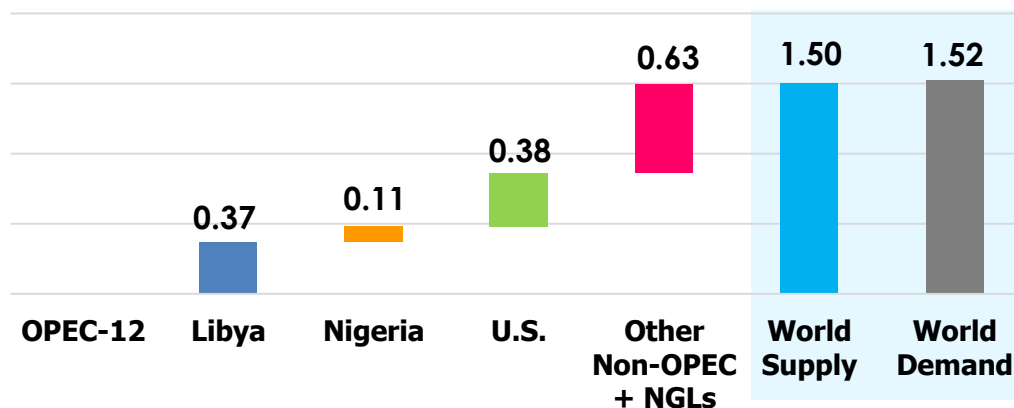


Sources: OPEC (Jul'17), EIA (STEO Jul'17) and TOP's Estimate

D Demand Growth Marginally Outpaces Supply

World Oil Supply Growth in 2H-17 vs. Q2-17 (Base Case)

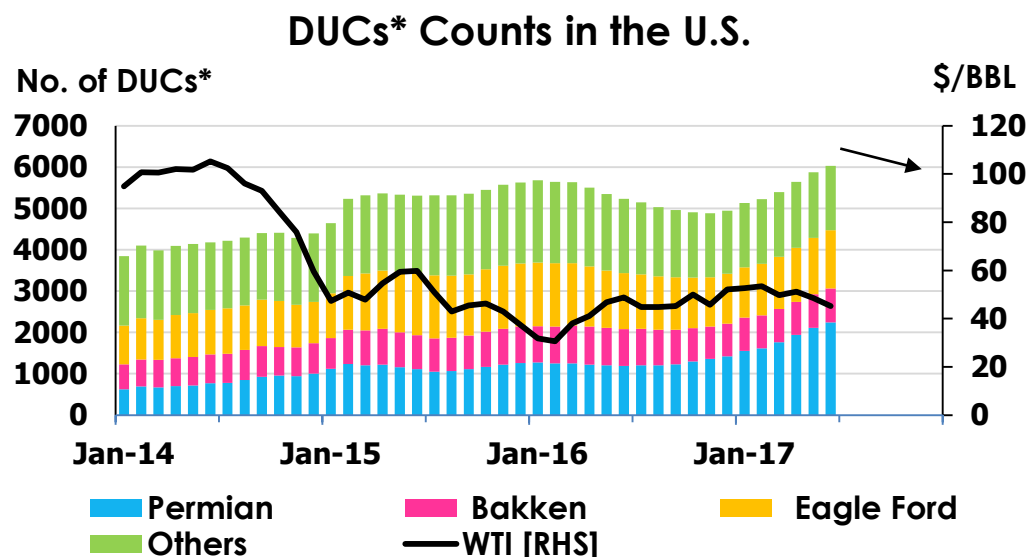
Unit : MBD



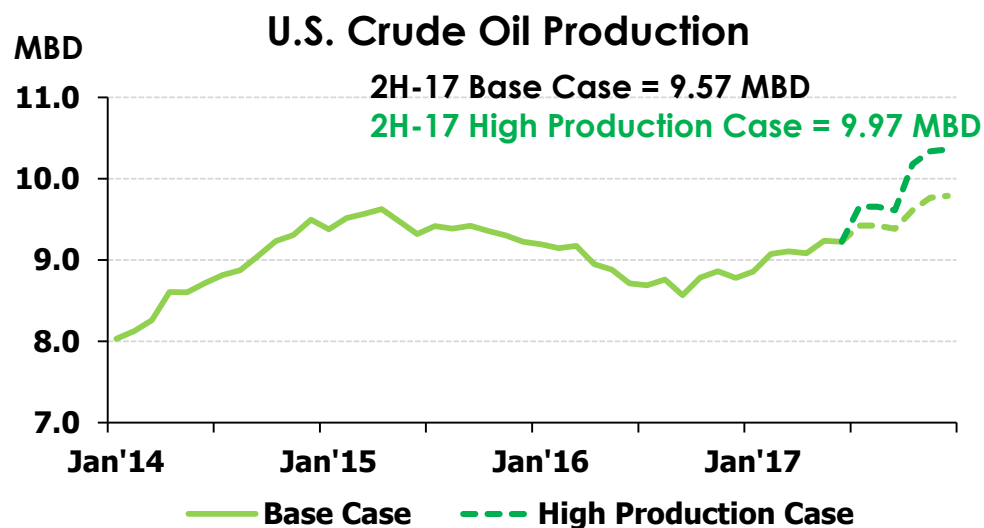
Sources: IEA (Jul'17), OPEC (Jul'17), EIA (Aug'17), TOP's Estimate

2 Risks over Surging U.S. Oil Outputs

A High Prices Could Resume Outputs from DUCs*

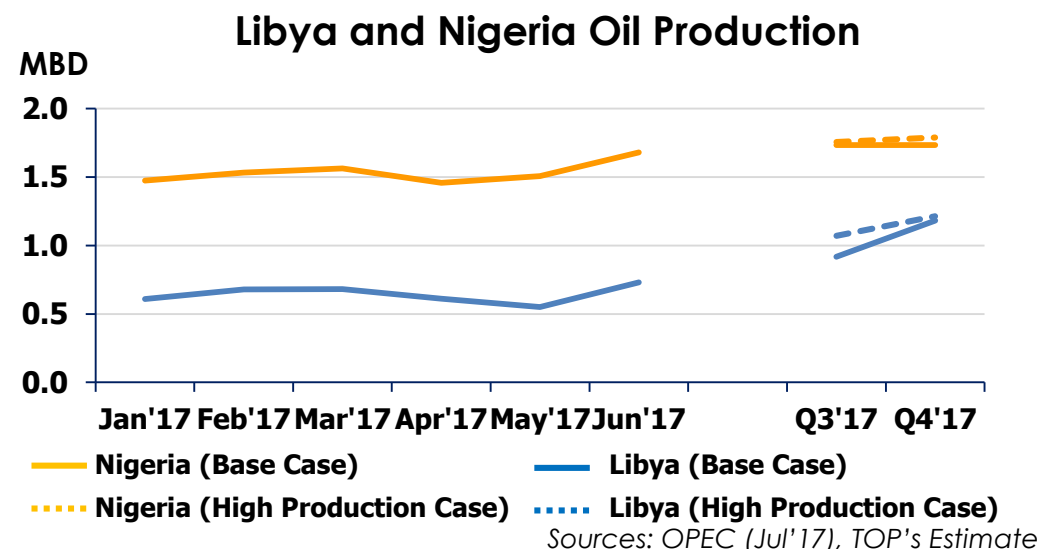


Note : *DUCs: Drilled but Uncompleted Wells (U.S. Shale Oil)

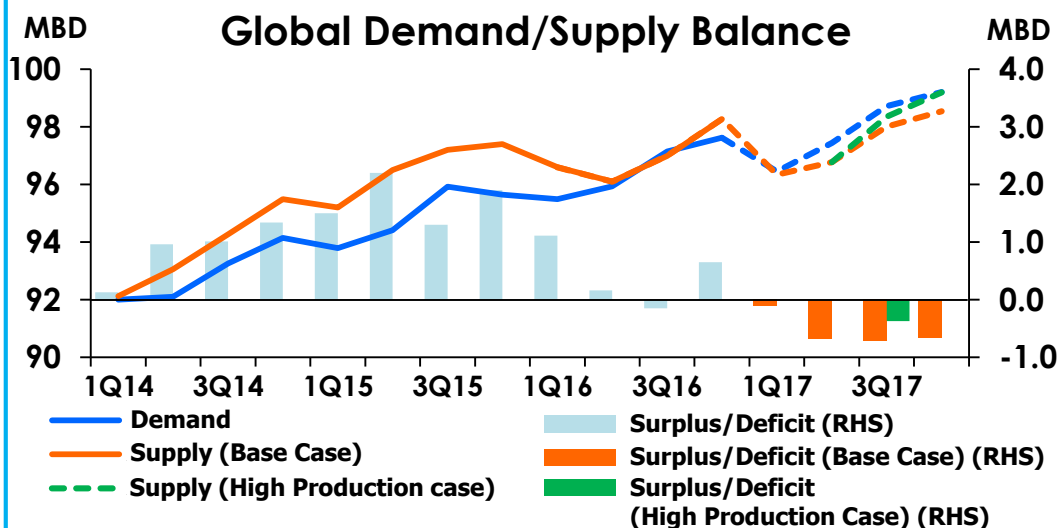


Sources: EIA (Aug'17), Goldman Sachs (Aug'17), TOP's Estimate

B Libyan & Nigerian Could Reach Its Capacity



C Global Oil Market to be Deficit in 2017



Sources: IEA (Jul'17), OPEC (Jul'17), EIA (Aug'17) and TOP's Estimate

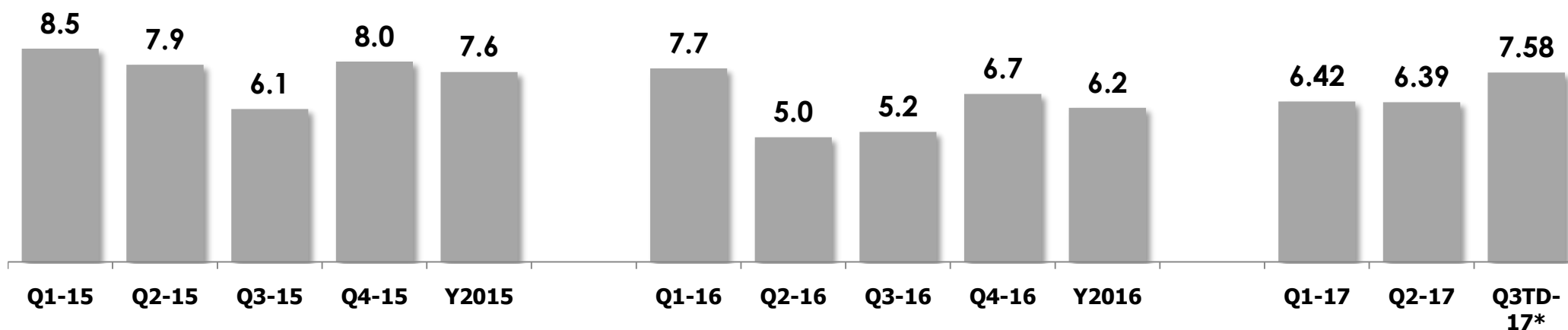


PETROLEUM PRODUCTS



Still-High Margins from Demand Outpacing Supply Addition

Singapore Cracking GRM (\$/BBL)



| (\$/BBL) | Q2-16 | Q3-16 | Q4-16 | 2016 | Q1-17 | Q2-17 | Q3TD-17* |
|----------|-------|-------|-------|-------|-------|-------|----------|
| ULG95-DB | 14.4 | 11.6 | 14.6 | 14.9 | 14.7 | 14.2 | 14.6 |
| JET-DB | 11.1 | 11.1 | 12.3 | 11.6 | 11.3 | 10.8 | 12.3 |
| GO-DB | 10.5 | 11.0 | 12.0 | 10.8 | 11.8 | 11.4 | 13.5 |
| HSFO-DB | (8.7) | (4.3) | (1.7) | (5.0) | (3.1) | (1.8) | (0.8) |

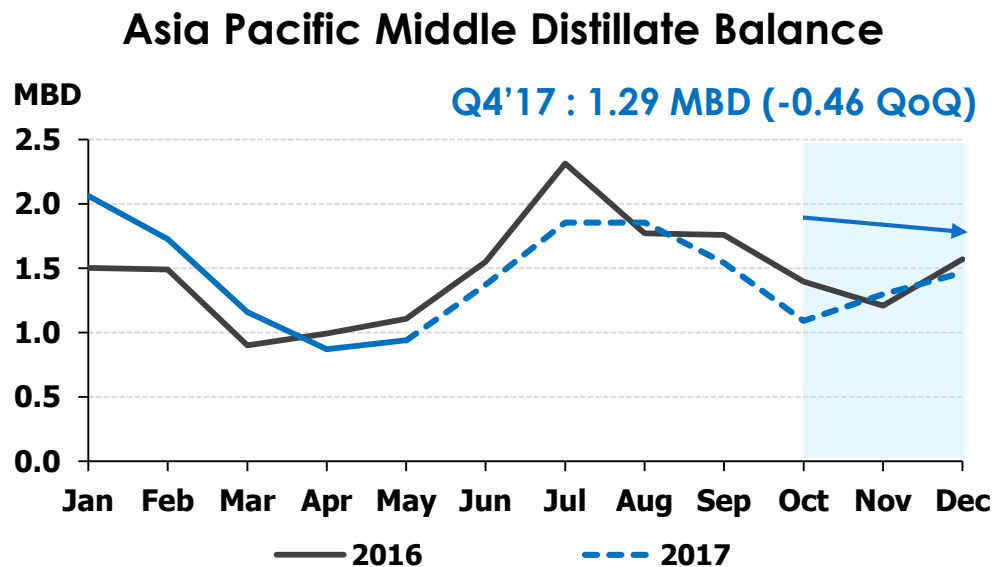
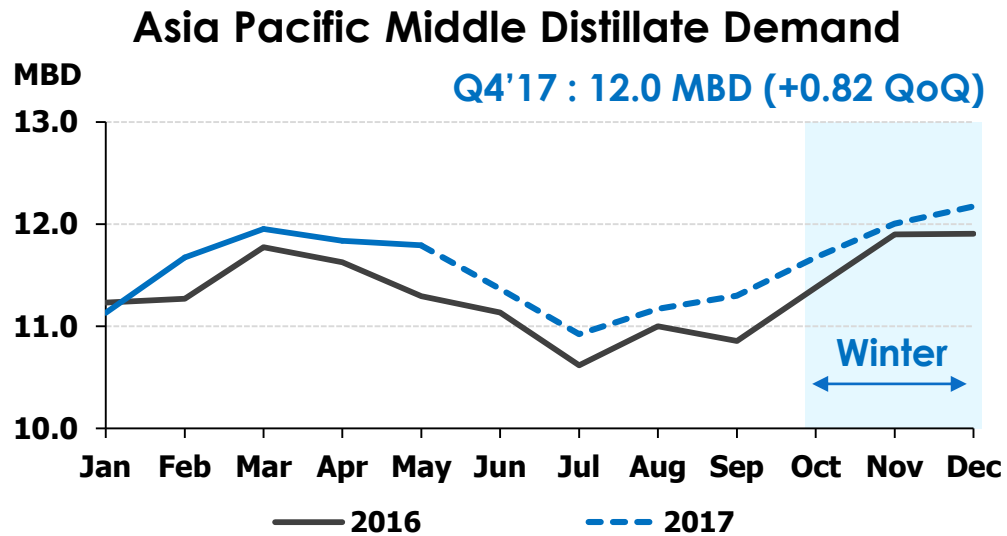
Remarks: *Q3TD-17 as of 10 Aug 17

Key Highlights in Q4'17

- 1 Steadily High Middle Distillate Cracks from Strong Demand and Less Chinese Supply
- 2 Slightly Soft Gasoline Cracks from Weak Demand, But Remain Supported by Asian Market

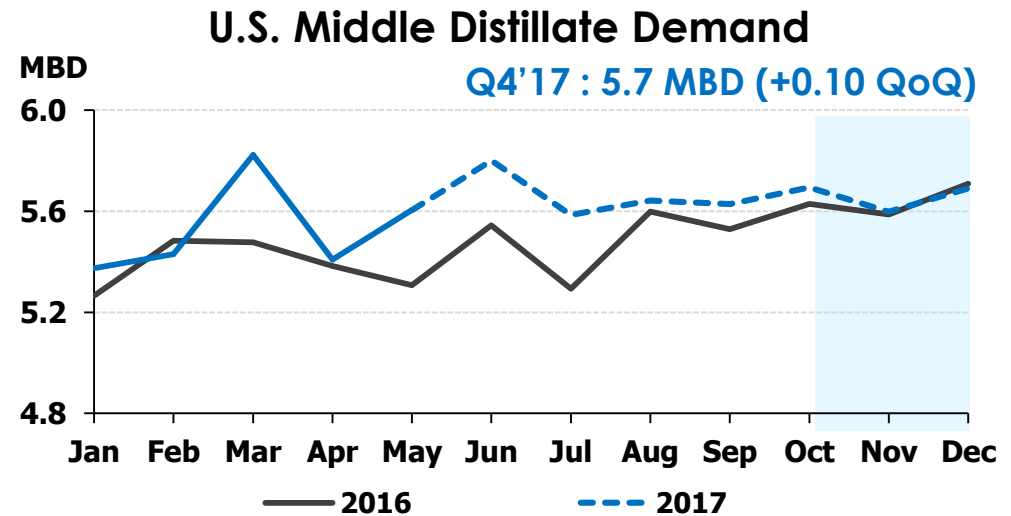
Steadily High Middle Distillate Cracks from Strong Demand and Less Chinese Supply

A Tight Market on Firm Demand and Limited Supply



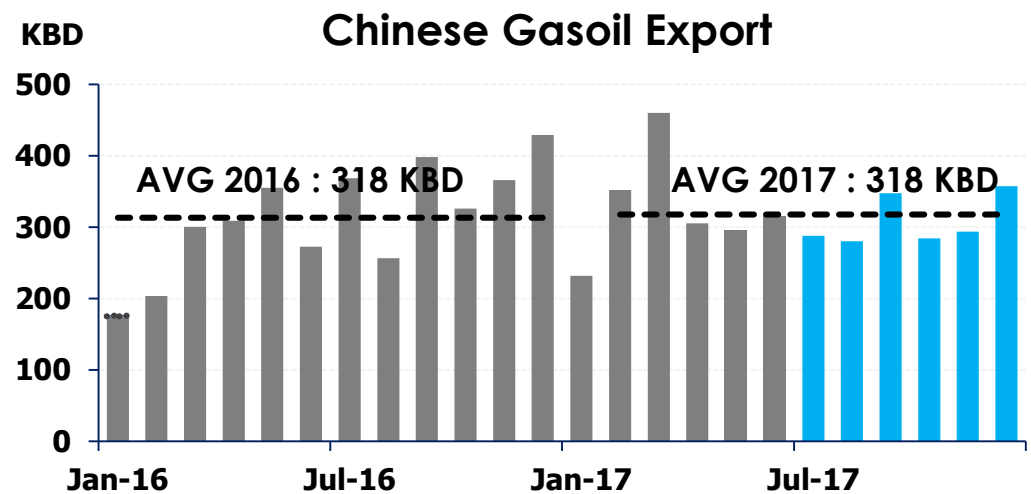
Source: FGE Energy (Jul'17)

B Steady U.S. Demand on Strong Economy



Source : EIA (Jul'17)

C Limited Chinese Exports from Tight Quotas

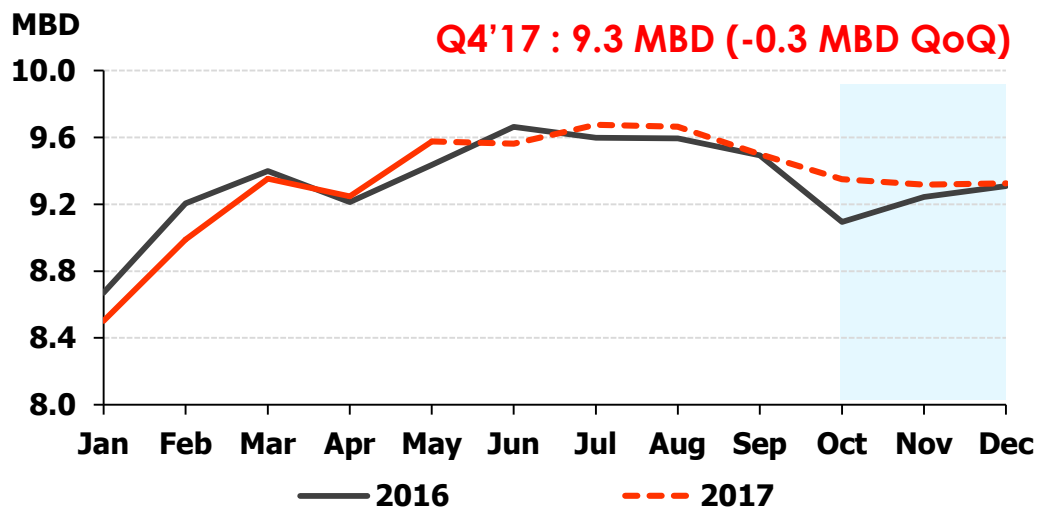


Source : FGE Energy (Jul'17)

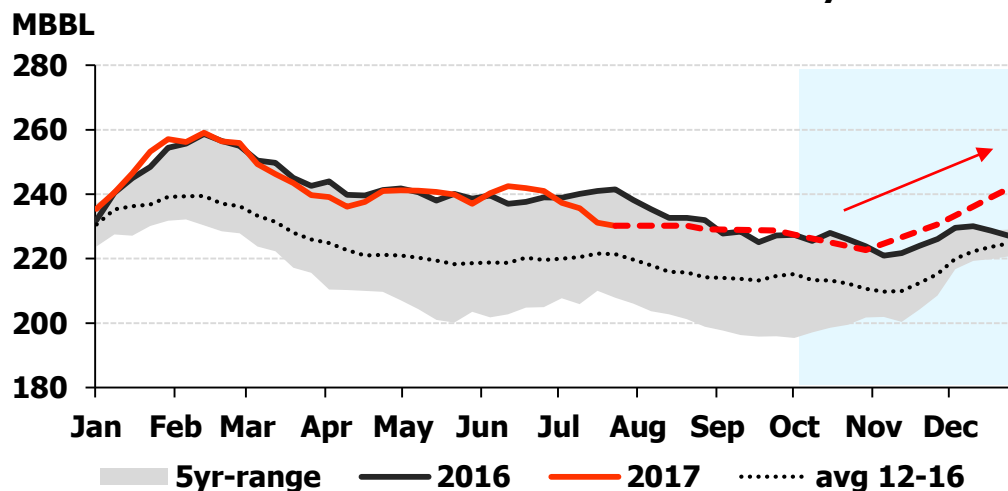
Slightly Soft Gasoline Cracks from Weak Demand, But Remain Supported by Asian Market

A Ample U.S. Inventories from Weak Demand

U.S. Gasoline Demand



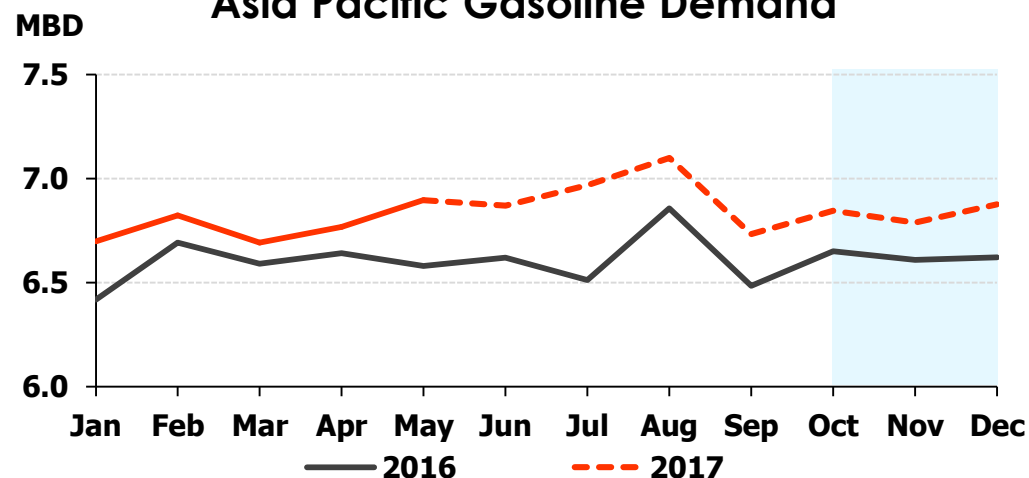
Total U.S. Gasoline Inventory



Source: FGE Energy (Jul'17)

B Firm Asian Demand Driven by China and India

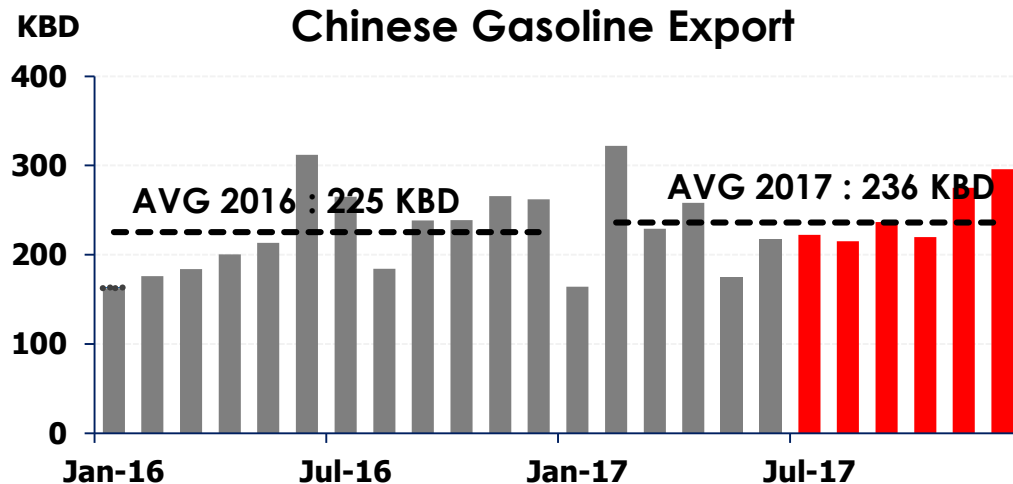
Asia Pacific Gasoline Demand



Source : FGE Energy (Jul'17)

C Limited Exports from Tight Export Quotas

Chinese Gasoline Export

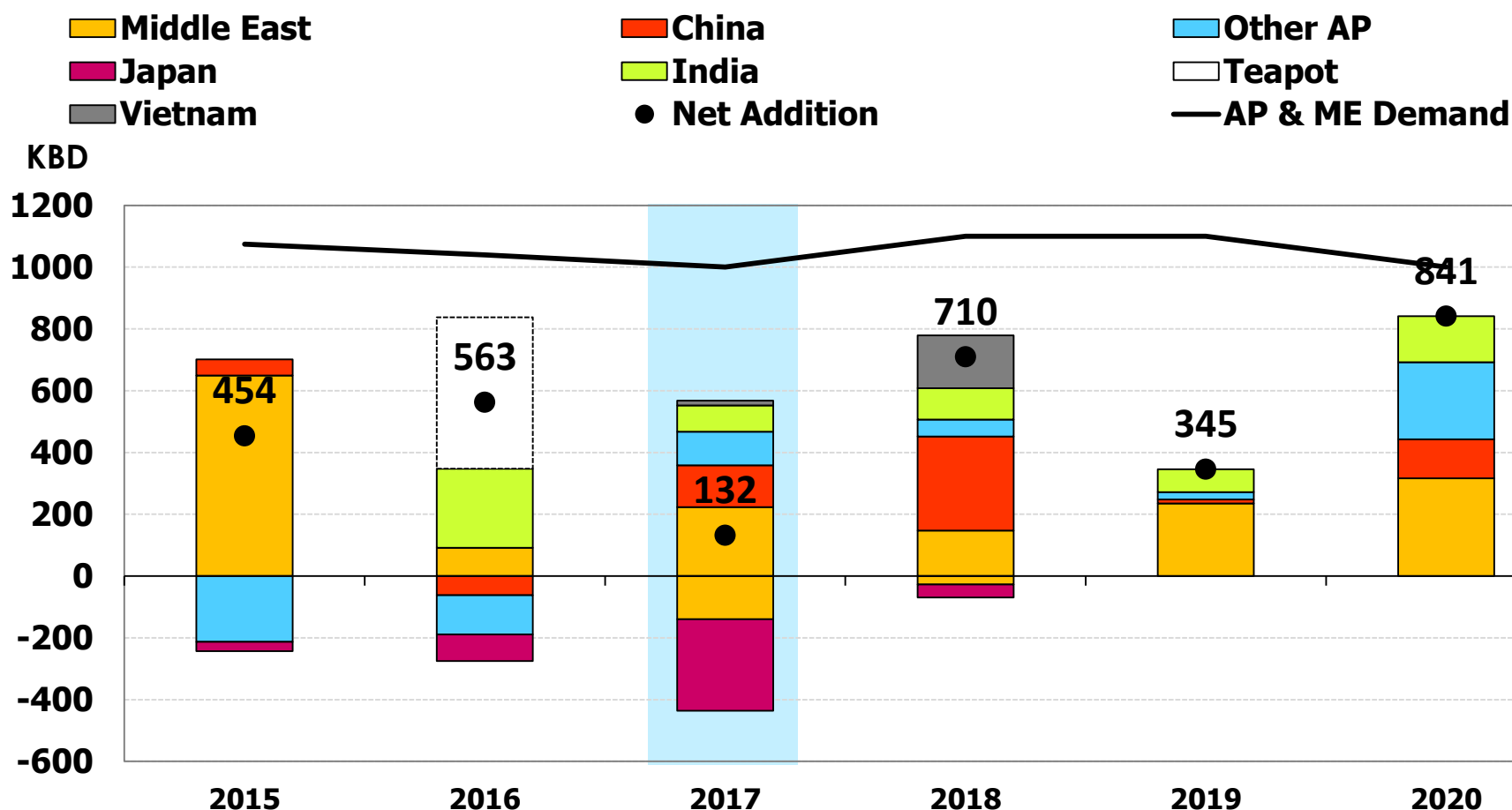


Source : FGE Energy (Jul'17)

Still-High Refinery Margins in 2017 as Demand Outpaces Refinery Addition

- Lower refinery addition in 2017 due to regulatory restrictions in Japan and delayed startup of refineries in China and Vietnam

CDU Addition VS Additional Demand – AP & ME



Note: Adjusted capacity based on start-up period (effective additional capacity)

Thailand Oil Demand Growth



Thailand Oil Demand Growth

| Year on Year | Average 2011-2015 ^(B) | Y 2016 ^(B) | YTD 6M/2017 ^(B) (vs 6M/2016) | Y2017F ^(C) |
|-----------------------|-------------------------------------|-----------------------|--|-----------------------|
| Mogas ^(A) | +7.1% | +9.8% | +3.8% | +2.7% |
| Jet/Kero | +4.4% | +6.8% | +4.4% | +3.6% |
| Diesel ^(A) | +3.4% | +3.1% | +2.3% | +1.4% |
| Total | +4.4% | +5.4% | +3.0% | +2.1% |
| GDP | +3.4% | +3.2% | N/A | +3.5% ^(D) |

Thailand oil demand growth at 2.1% YoY in 2017

- Remarks:**
- (A) Mogas and Diesel includes Ethanol and Biodiesel, respectively
 - (B) DOEB Statistics
 - (C) PTT's Estimation (Jul-17)
 - (D) BOT's Estimate (BOT Monetary Report as of Jun-17)



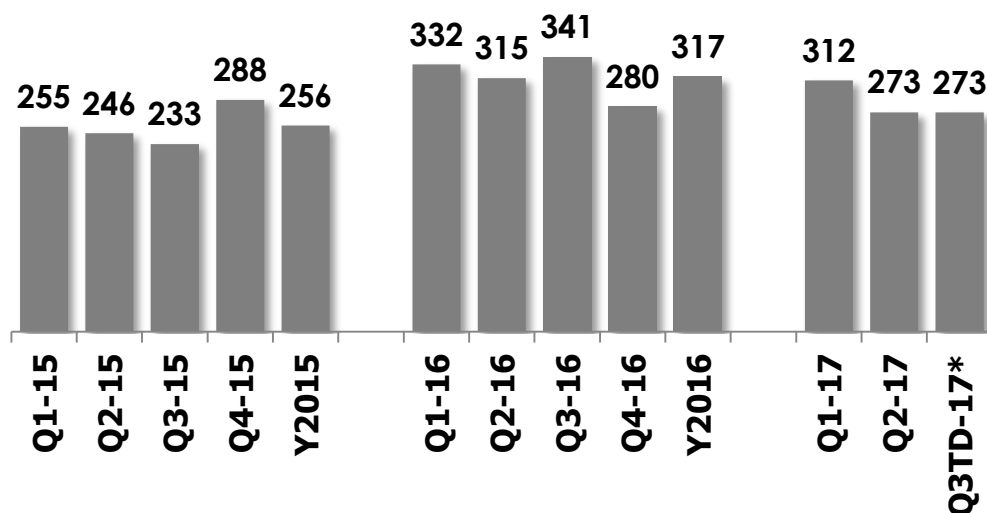
AROMATICS



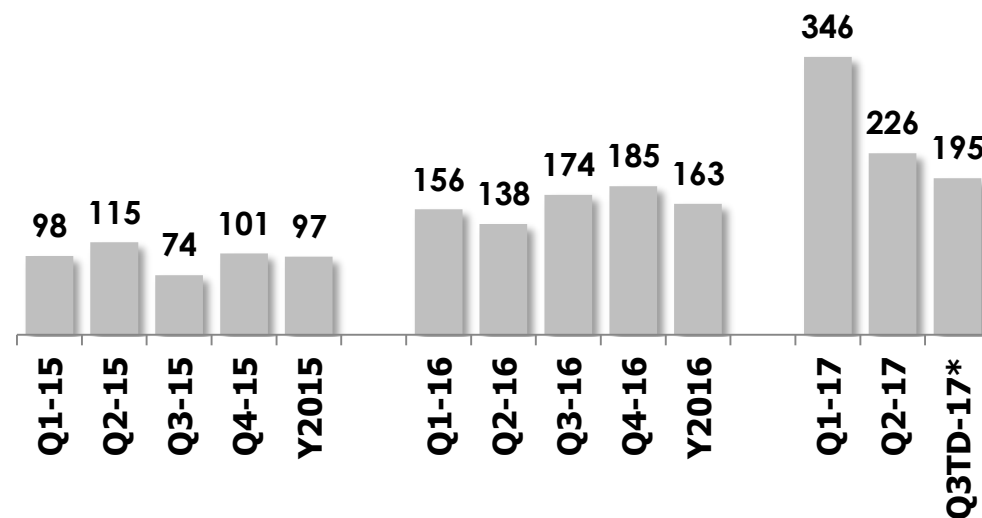
Stable-to-Firm Aromatics Market on Lower Capacity Addition

Aromatics Market

PX CFR Taiwan-ULG95 (\$/TON)



BZ FOB Korea-ULG95 (\$/TON)



| (\$/TON) | Q2-16 | Q3-16 | Q4-16 | 2016 | Q1-17 | Q2-17 | Q3TD-17* |
|----------|-------|-------|-------|------|-------|-------|----------|
| PX-ULG95 | 315 | 341 | 280 | 317 | 312 | 273 | 273 |
| BZ-ULG95 | 138 | 174 | 185 | 163 | 346 | 226 | 195 |

Remarks: *Q3TD-17 as of 10 Aug 17

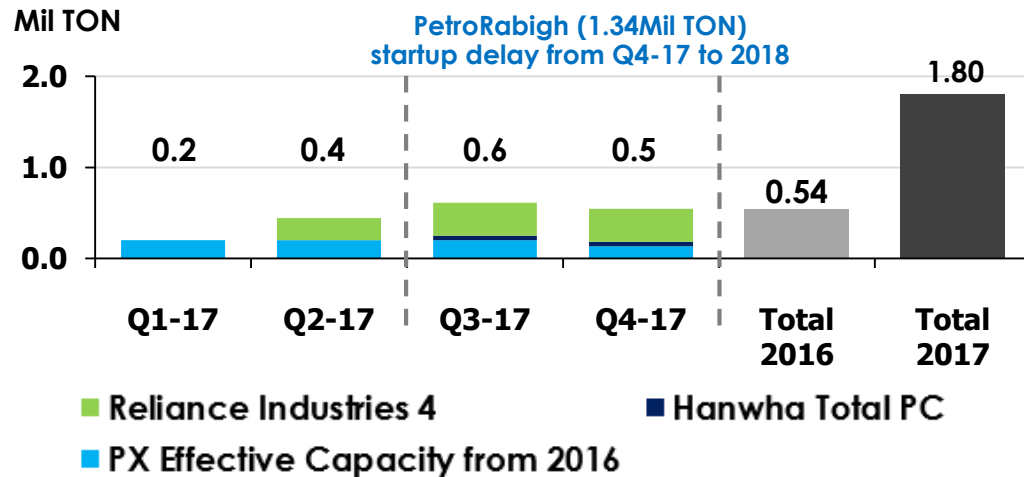
Key Highlights in Q4-17

- 1 Improved PX Market on Lower Capacity Addition amid New Downstream Plant Addition
- 2 Stable BZ Market due to Lower Capacity Addition amid Thin Plant Maintenance

Improved PX Market on Lower Capacity Addition amid New Downstream Plant

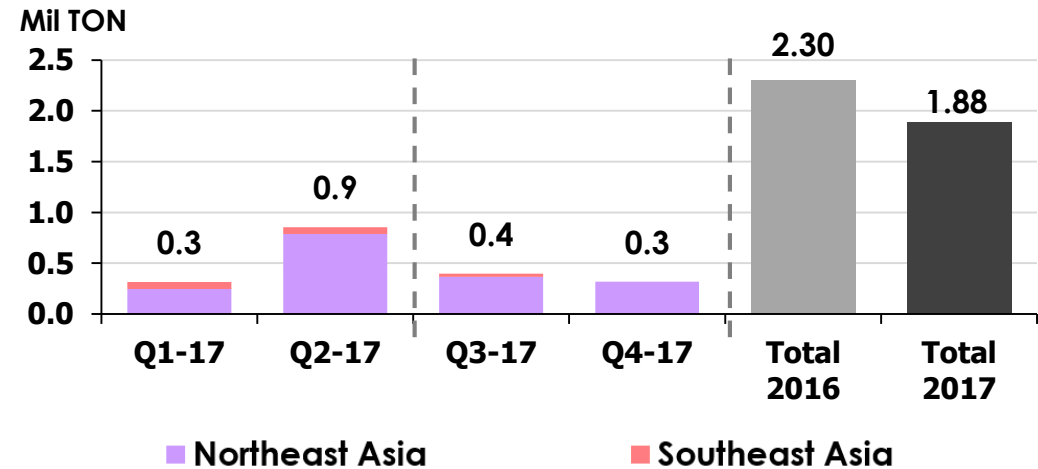
A Lower Capacity Addition in Q4-17 to Support Market

AP & ME Effective PX Capacity Addition



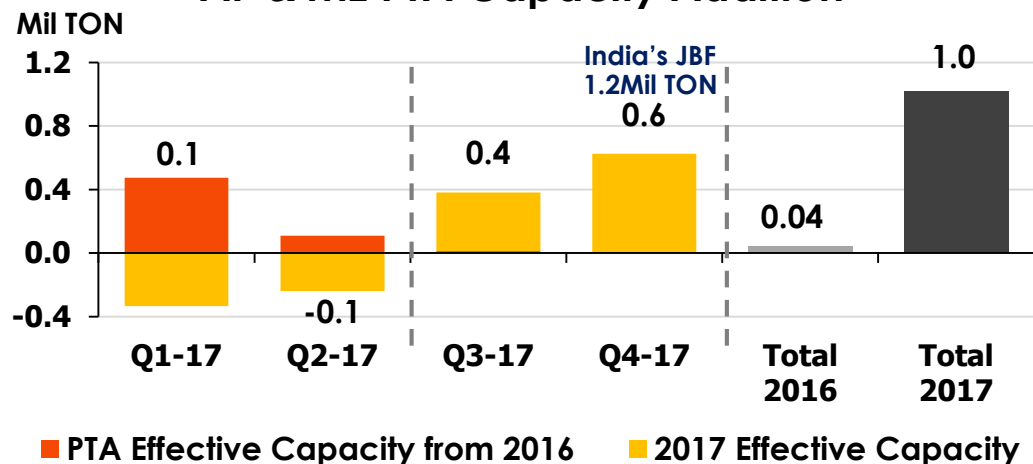
B Supply Pressure due to Low Plant Maintenance in Q4-17

AP PX Plant Maintenance



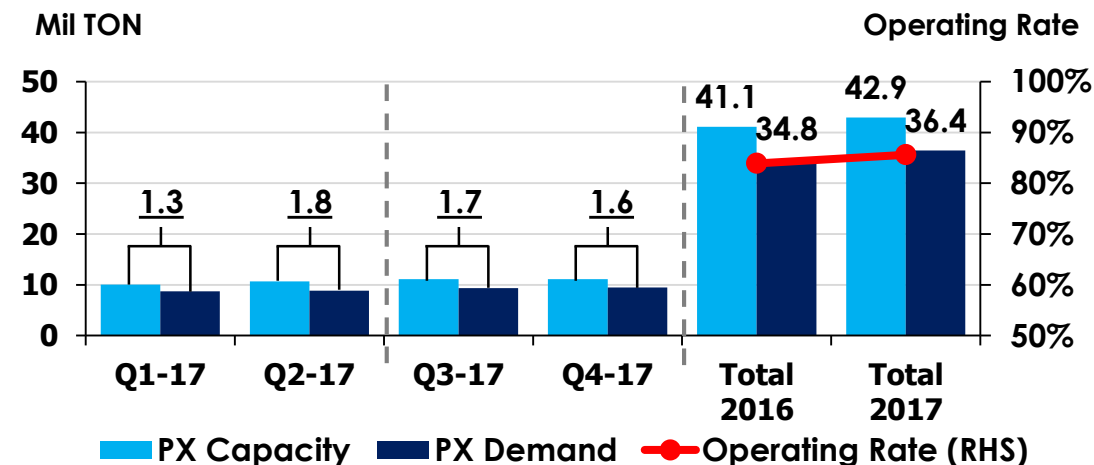
C New PTA plant to Support PX Consumption

AP & ME PTA Capacity Addition



D Lower Net Surplus (Capacity-Demand) in Q4-17

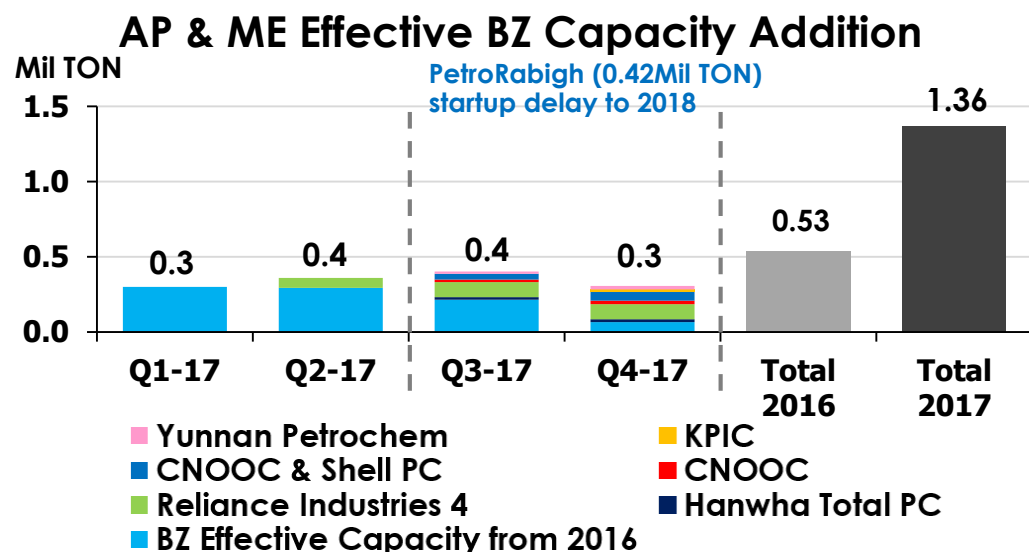
AP & ME Effective PX Capacity vs Demand



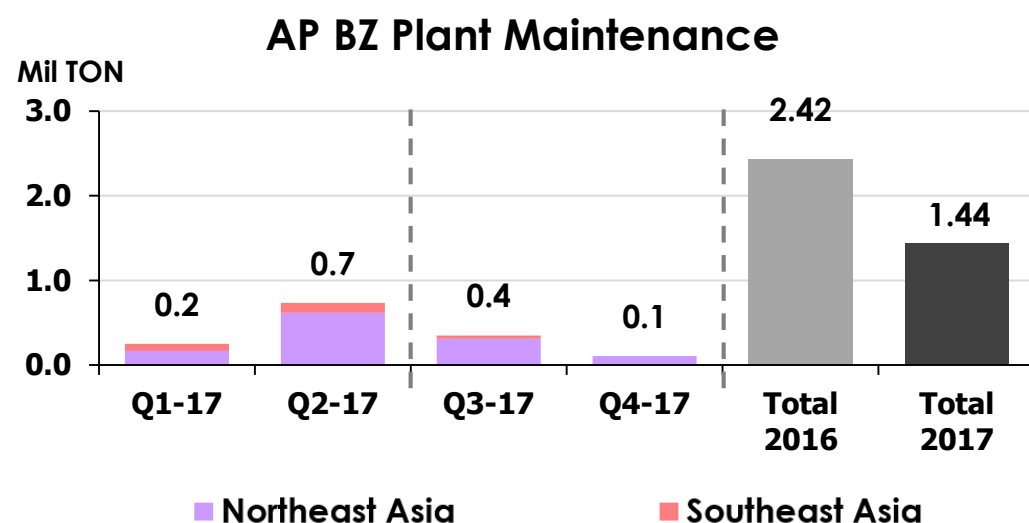
2

Stable BZ Market due to Lower Capacity Addition amid Thin Plant Maintenance

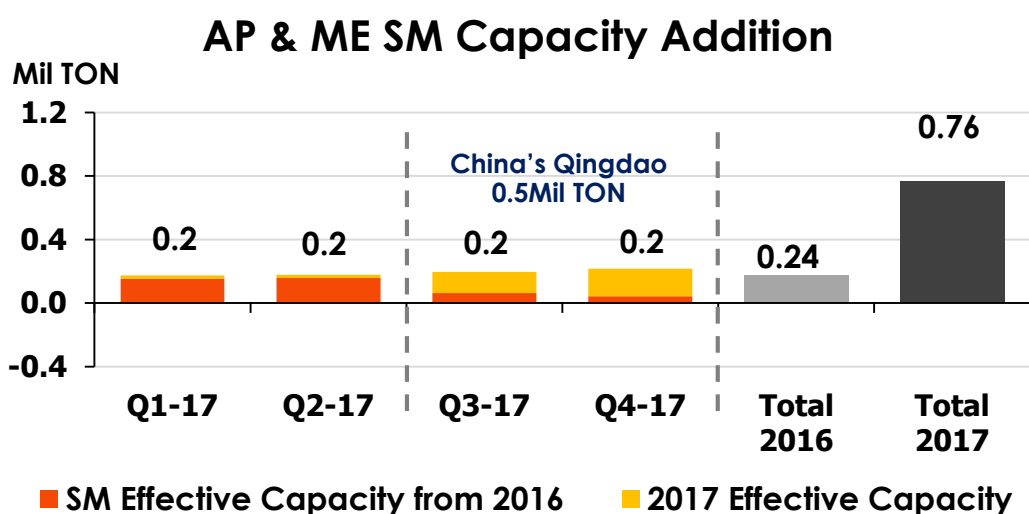
A Lower Capacity Addition in Q4-17 to Support Market



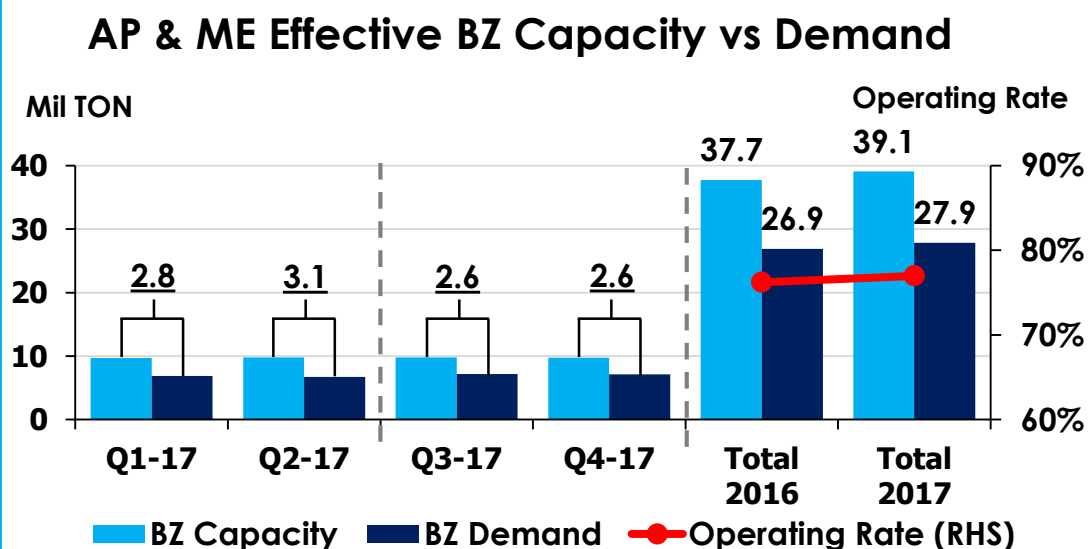
B Supply Pressure due to Low Plant Maintenance in Q4-17



C Stable SM Capacity Addition to Maintain BZ Demand



D Stable Net Surplus (Capacity-Demand) in Q4-17



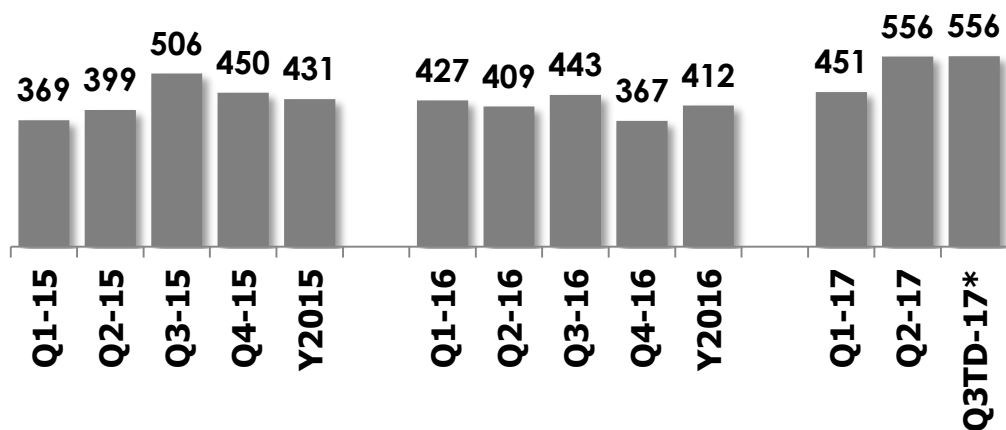


BASE OIL & BITUMEN



Softer Base Oil Market due to Lower Plant Maintenance

500SN – HSFO (\$/TON)



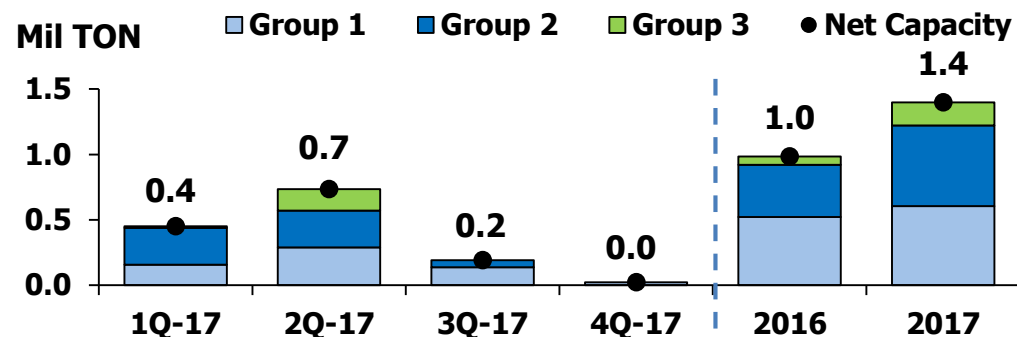
| (\$/TON) | Q2-16 | Q3-16 | Q4-16 | 2016 | Q1-17 | Q2-17 | Q3TD-17* |
|-------------|-------|-------|-------|------|-------|-------|----------|
| 500SN -HSFO | 409 | 443 | 367 | 412 | 451 | 556 | 556 |

Remarks: *Q3TD-17 as of 10 Aug 17

Key Highlights in Q4-17

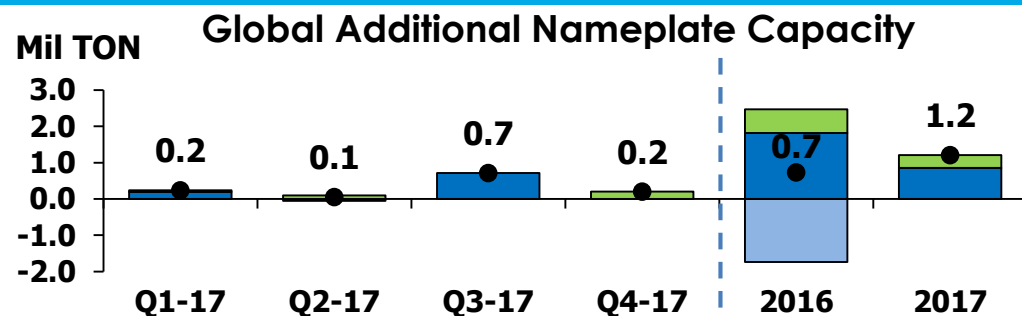
- 1 Increasing Supply due to Lower Base Oil Plant Maintenance
- 2 No New Base Oil Additional Capacity in Asia Pacific

A AP Plant Maintenance (Effective Capacity)

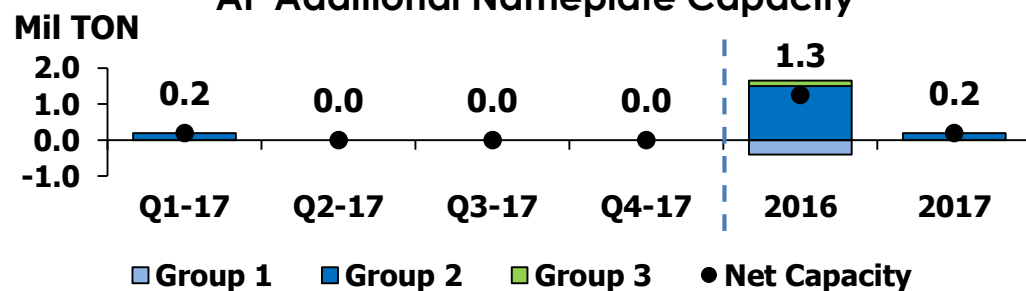


Sources: Argus Aug'17 and TOP's Estimate

B Base Oil Capacity Addition



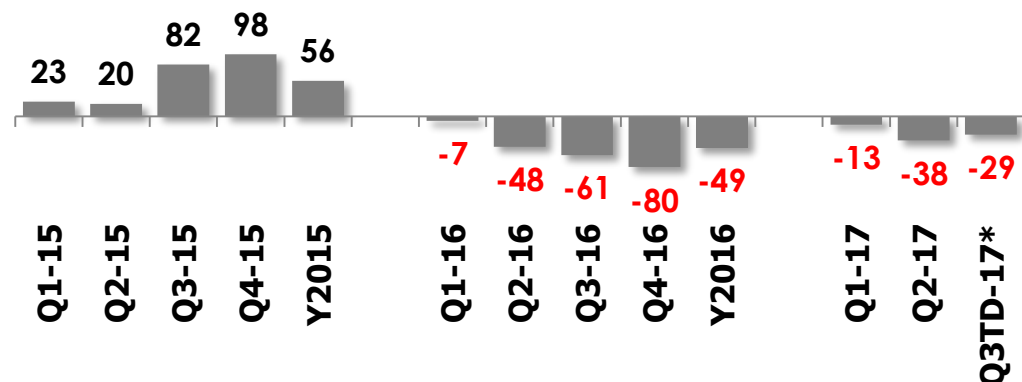
AP Additional Nameplate Capacity



Sources: Argus Aug'17 and TOP's Estimate

Stable Bitumen Market on Firm Demand

Bitumen-HSFO (\$/TON)



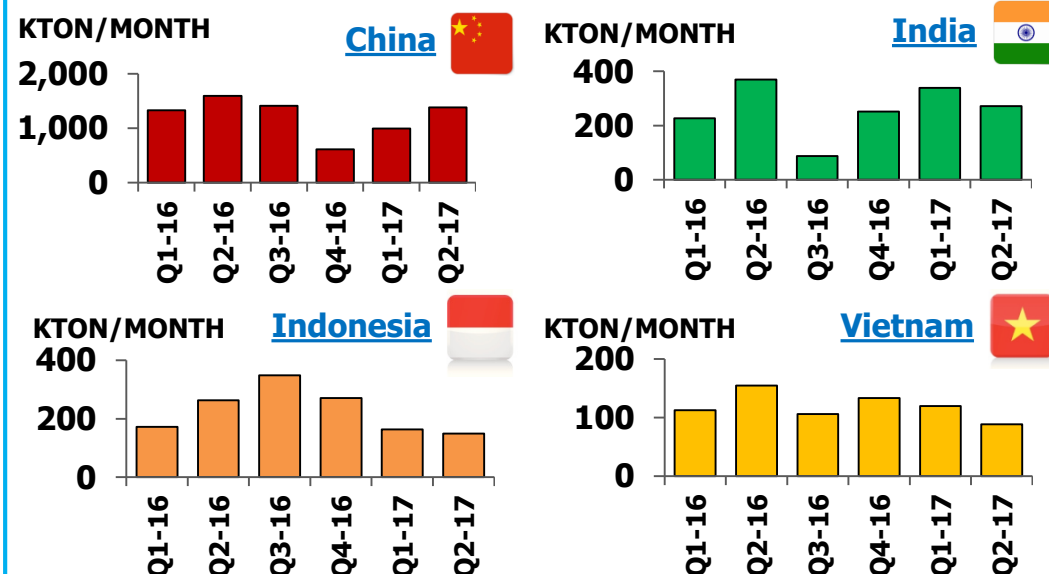
| (\$/TON) | Q2-16 | Q3-16 | Q4-16 | 2016 | Q1-17 | Q2-17 | Q3TD-17* |
|---------------|-------|-------|-------|------|-------|-------|----------|
| Bitumen -HSFO | (48) | (61) | (80) | (49) | (13) | (38) | (29) |

Remarks: *Q3TD-17 as of 10 Aug 17

Key Highlights in Q4-17

- 1 Recovering Regional Demand after Rainy Season except Indonesia
- 2 Firm Demand for Maintenance of Thai Road after Facing Flood in Northeastern Part

A Bitumen Import of Major Asian Players



Source: Bitumart (Aug'17) and Argus (Aug'17)

B Expected Firm Thai Demand



- Increasing paving activities in Northeastern of Thailand after floods with the budget of 2.1 billion Baht



- The approval of 4.6 billion Baht to fund the construction for Bang Yai – Kanchanaburi Motorway project

Source: Department of Highways and Maintenance Bureau Aug'17



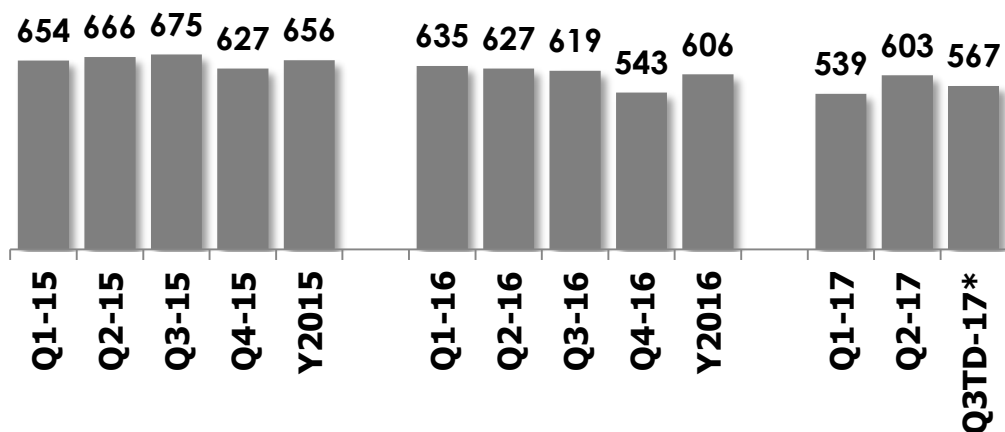
Linear Alkyl Benzene (LAB)



Steady LAB Market on Stable Maintenance and Better Demand after Rainy Season

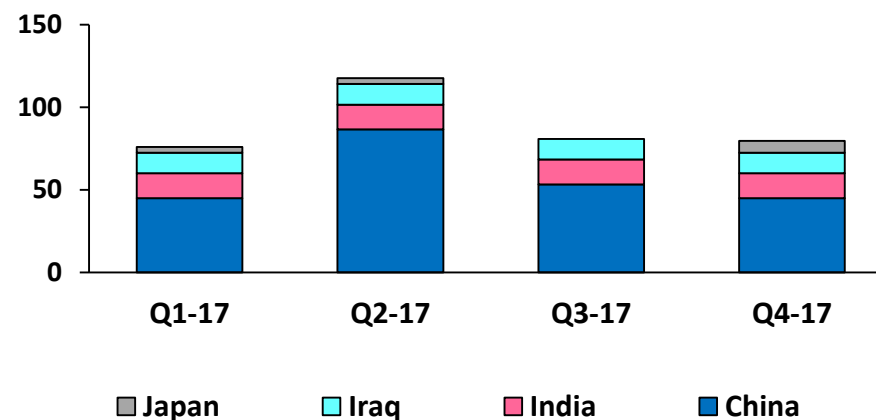
LAB Market

LAB Spread** (\$/TON)



AP/ME Effective Maintenance/Closure*

KTA



*Temporary

Key Highlights in Q4-17

- 1 Stable Maintenance in AP/ME
- 2 Better Demand after Rainy Season
- 3 Slow Demand in Dec to Keep Low Inventories before Year-end

| (\$/TON) | Q2-16 | Q3-16 | Q4-16 | 2016 | Q1-17 | Q2-17 | Q3TD-17* |
|------------|-------|-------|-------|------|-------|-------|----------|
| LAB Spread | 627 | 619 | 543 | 606 | 539 | 603 | 567 |

Remarks: *Q3TD-17 as of 10 Aug 17

**Estimated indicator

CONCLUSION



Q4-17 Market Outlook Conclusion

(vs. Q3-17)



Crude Oil

Stable-to-Firm Crude Oil Price from Growing Demand amid Rising Supply



Refinery

Still-High Margins from Demand Outpacing Supply Addition



Aromatics

Stable-to-Firm Aromatics Market on Lower Capacity Addition



Lube Base

Softer Base Oil Market due to Lower Plant Maintenance
Stable Bitumen Market on Firm Demand



LAB

Steady LAB Market on Stable Maintenance and Better Demand after Rainy Season

Thank You

Any queries, please contact:



at email: ir@thaioilgroup.com

Tel: 662-797-2999 / 662-797-2961

Fax: 662-797-2976

APPENDIX

- Strategic Investment Plan
- 2016 Dividend Payment
- Optimized & Flexible Operations...Superior Performance
- CDU Addition VS Additional Demand – AP & ME
- World GRM / Inventories
- Thailand petroleum demand by products



Strategic Investment Plan Approved by Board of Directors



CAPEX Plan (Unit US\$ million)

| Projects | Planned capital investment | | | |
|---|----------------------------|------------|------------|-----------|
| | 2016 | 2017 | 2018 | 2019 |
| Reliability, Efficiency and Flexibility Improvement | 32 | 48 | 18 | 8 |
| Benzene Derivatives – LAB | 41 | 11 | 13 | |
| Power – 2 SPPs | 43 | | | |
| Infrastructure Improvement | | | | |
| - Lorry Expansion | 26 | 18 | 3 | |
| - Jetty 7&8 / Improvement | | 10 | 50 | 66 |
| - Office Relocation & New Crude Tank | | 51 | 72 | 17 |
| Other Investments | 12 | 8 | | |
| Total | 154 | 146 | 156 | 91 |





Notes: Excluding approximately 40 M\$/year for annual maintenance

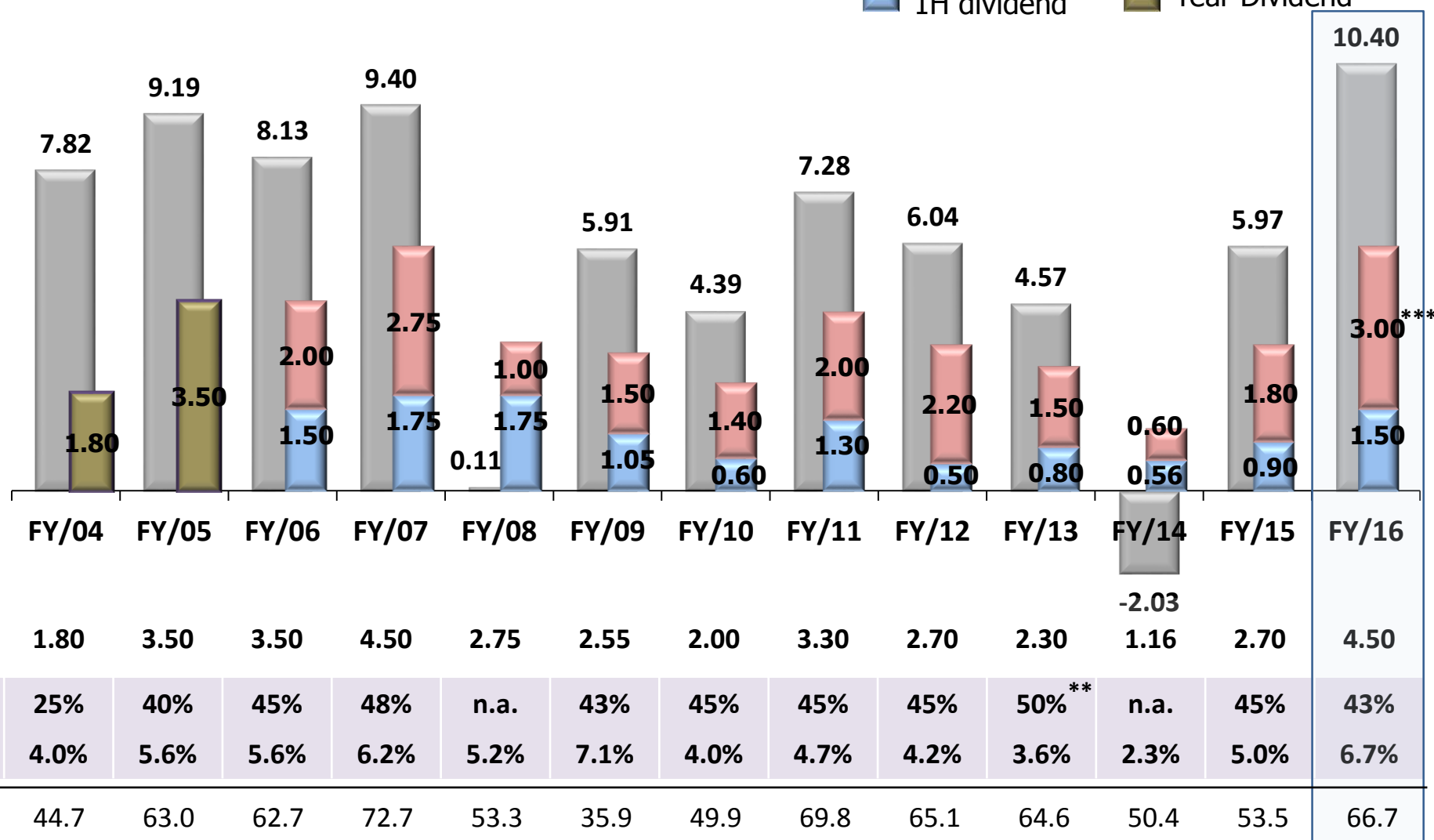
\$393m

2016 Dividend Payment

Dividend Policy :
Not less than 25% of consolidated net profit after deducting reserves, subject to cash flow and investment plan

Unit : THB/Share

 EPS^R
 2H dividend
 1H dividend
  Year Dividend



^R Based on restated financial statement (year 2013 – 2014)

* Based on average TOP share price in each year

** Dividend payout before restated = 45%

*** Subject to AGM Approval on Apr 7, 2017

Optimized & Flexible Operations...Superior Performance

Crude Assays based on
TOP configuration*



Sources of
Crude

Product
output

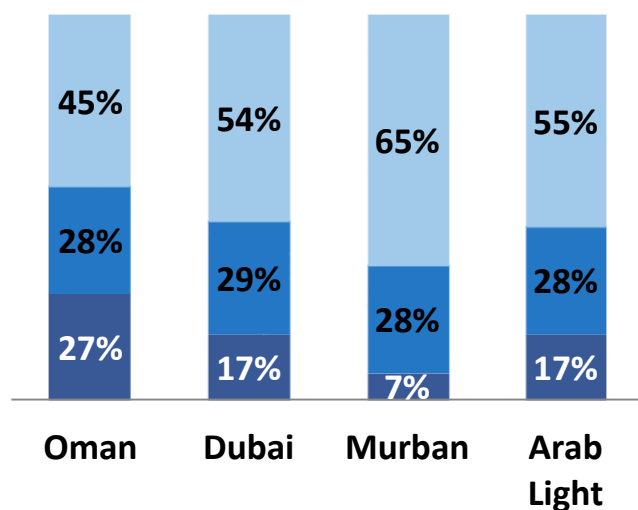
Reference Price



Domestic demand for
petroleum products**

| | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|
| % S = 1.43 API = 32.0 | % S = 2.52 API = 31.2 | % S = 0.78 API = 39.4 | % S = 1.97 API = 32.8 |
|--------------------------|--------------------------|--------------------------|--------------------------|

■ Short Residue ■ Waxy ■ Gas/Distillates



Others***

Far East

Local

Middle
East

8%

9%

7%

76%

4%

12%

17%

21%

34%

7%

5%

SAUDI
ARAMCO

MOPS ULG 95
FOB SG

MOPS Jet
Kerosene FOB
SG

MOPS Gasoil
0.05% Sulfur
FOB SG

MOPS Fuel Oil
180 CST 3.5%
Sulfur FOB SG

21%

20%

12%

43%

4%

LPG

PLATFORMATE

GASOLINE

JET

DIESEL

FUEL OIL

LONG RESIDUE

Q2/17

Q2/17

Thai Oil is able to diversify its type of crude intake and product outputs to maximize demand and margin

- Flexibility in crude intake allows diversification of crude types to source cheaper crude
- Flexibility in product outputs by maximizing middle distillates (jet and diesel) by adjusting production mode to capture domestic demand and price premium
- Maximize Platformate production to capture higher margin on aromatics
- Minimize fuel oil output to avoid lower margin products

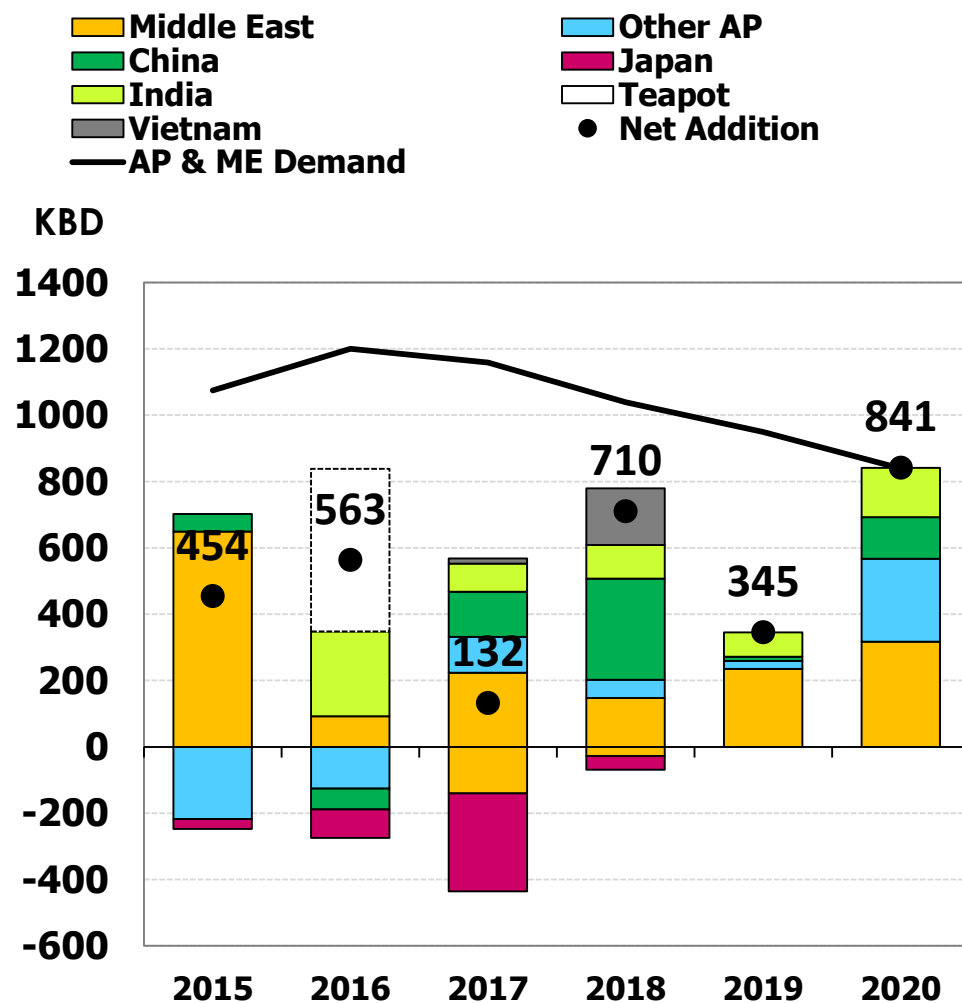
*Crude yield as per assay in Spiral as of Feb 2016

**Source: Energy Policy and Planning Office, Ministry of Energy Thailand

*** Including Nigeria, Russia and others

Asia Pacific and Middle East Refinery Addition

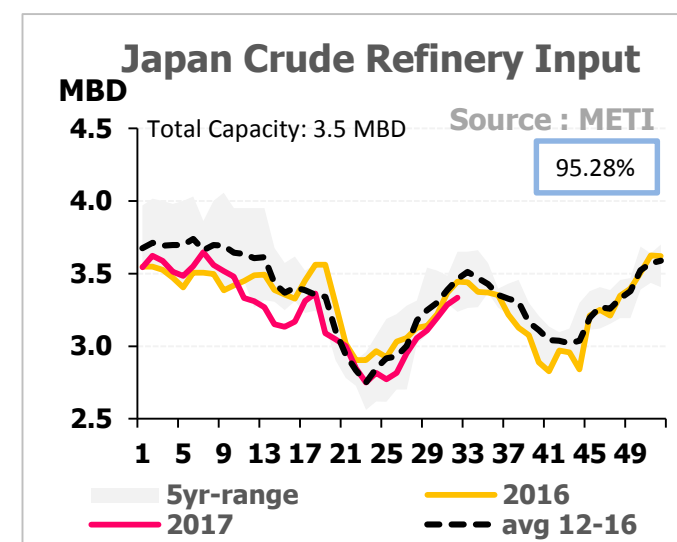
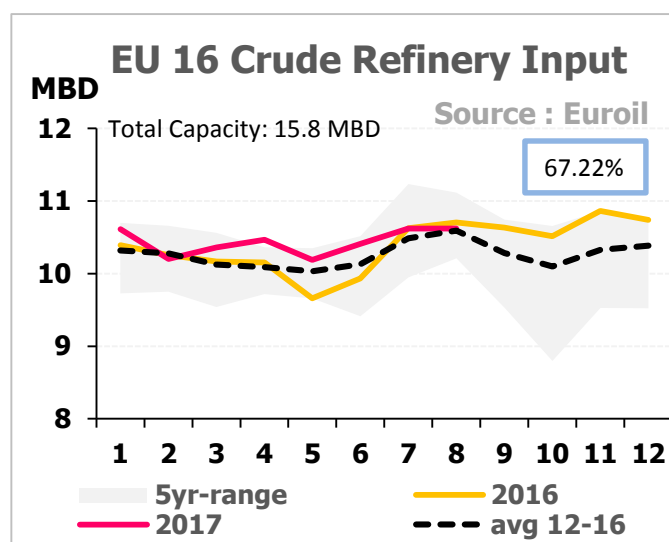
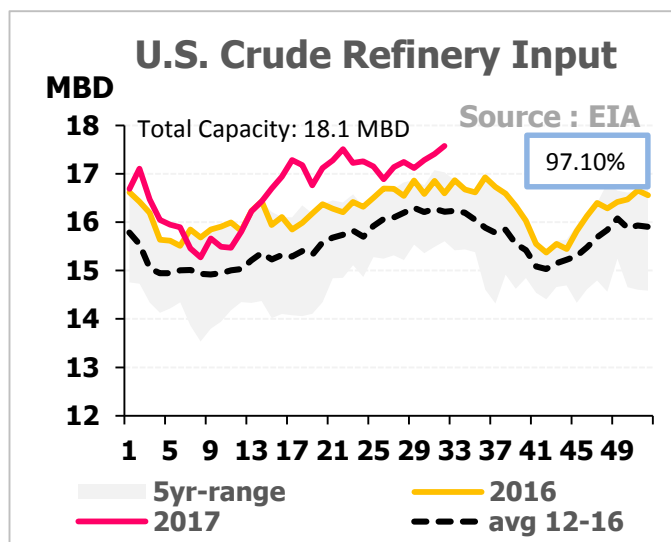
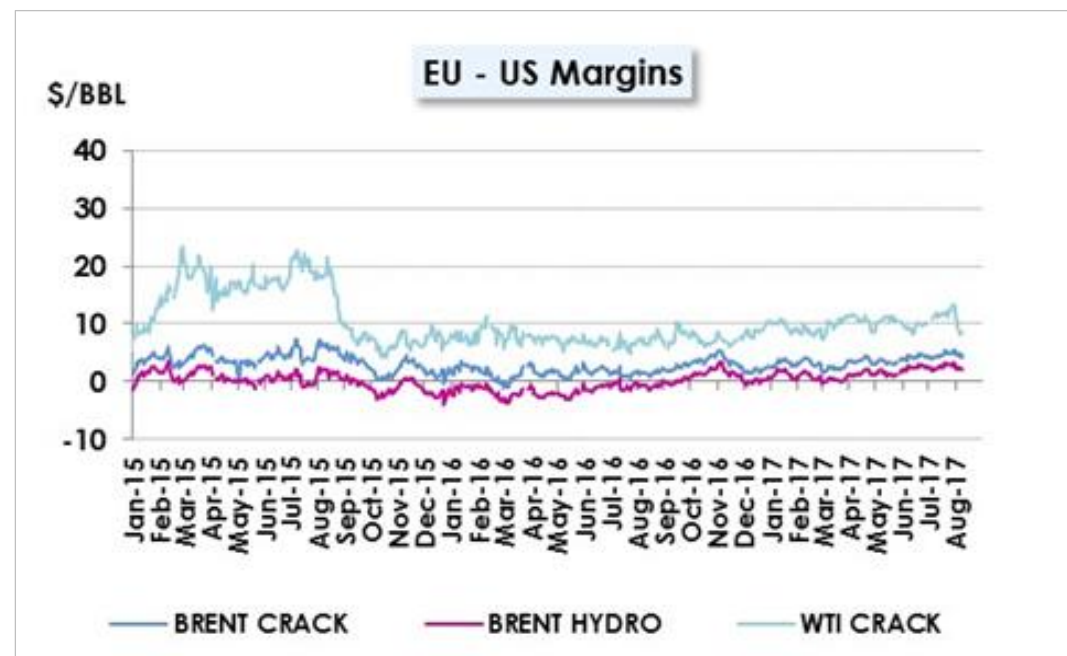
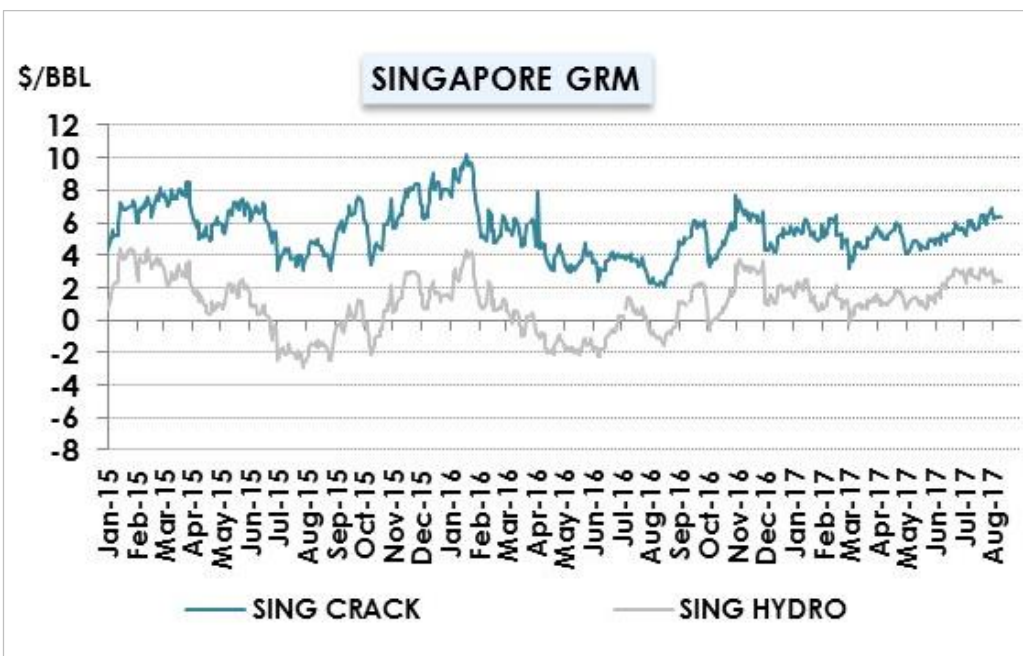
CDU Addition VS Additional Demand – AP & ME



Note: Adjusted capacity based on start-up period (effective additional capacity)

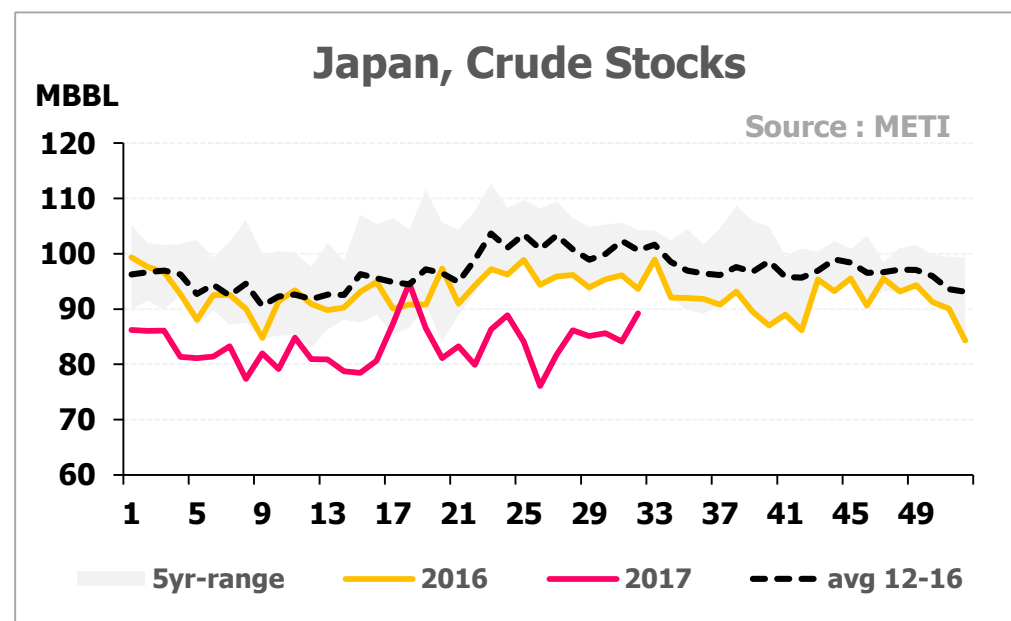
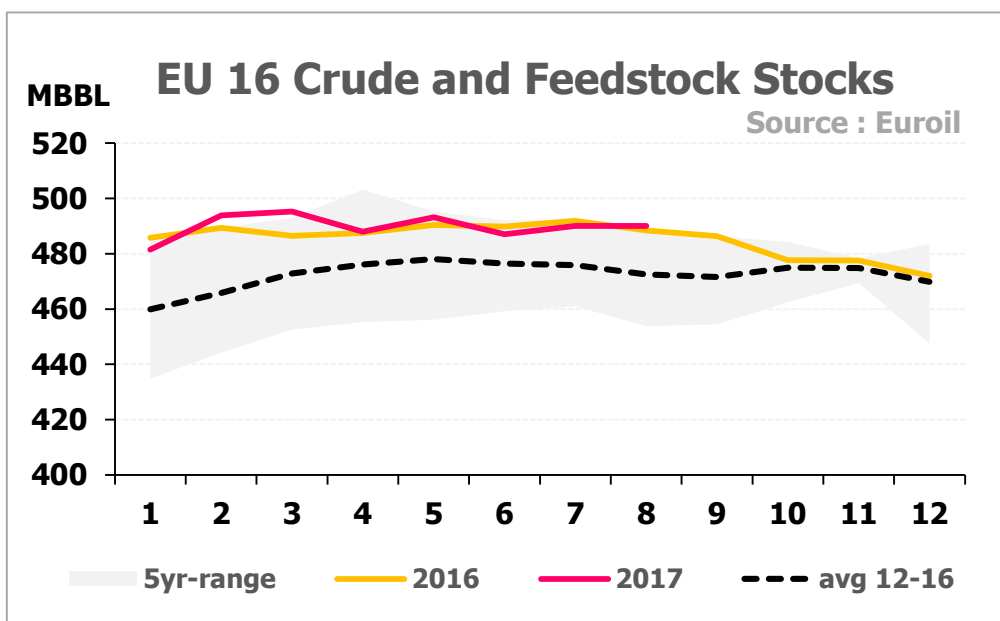
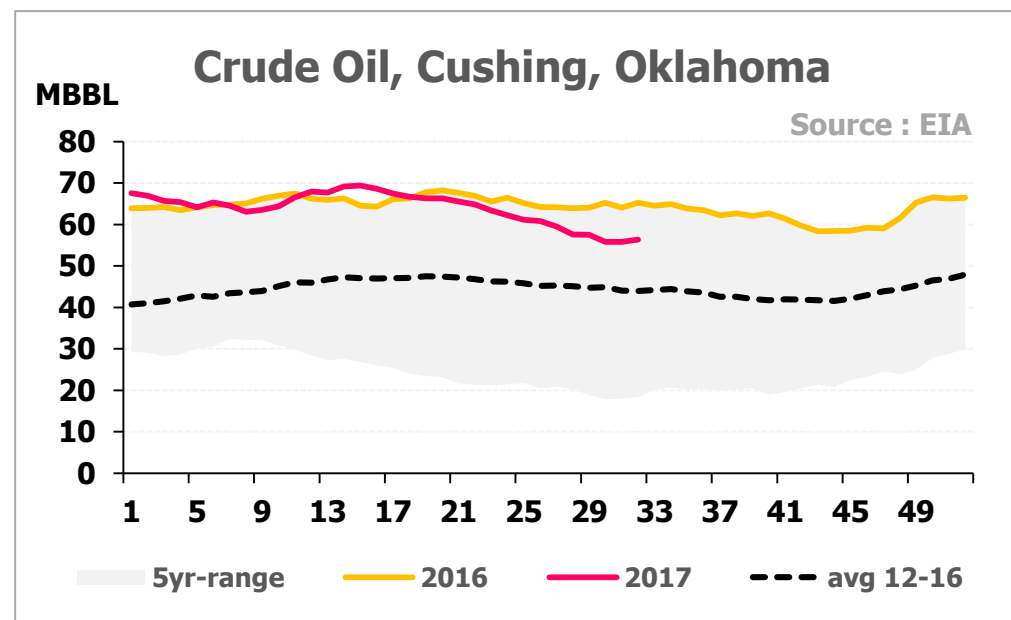
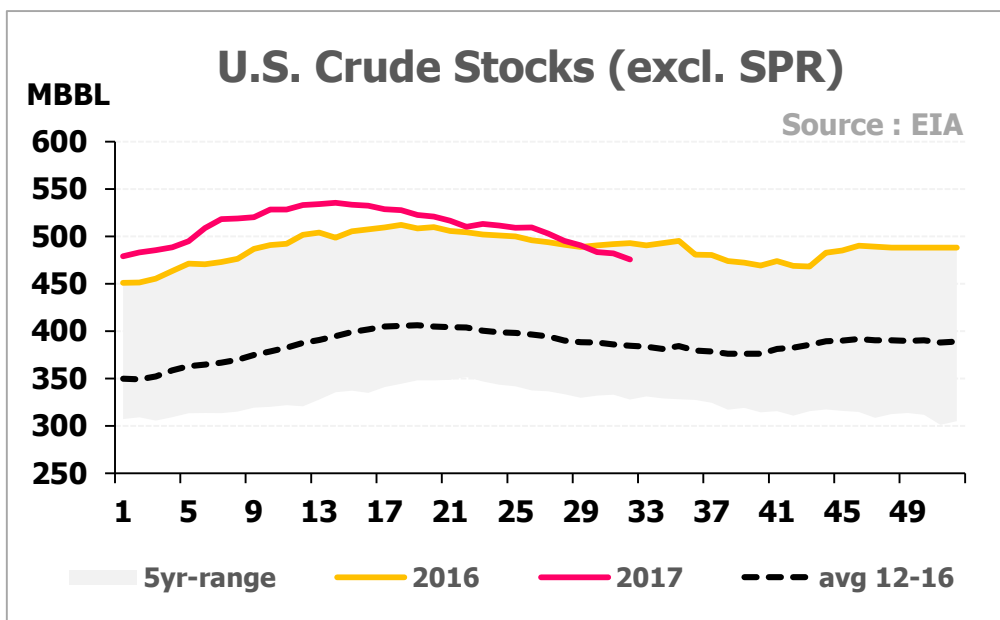
| Start-up period) | Country | Nameplate (KBD) | Company |
|------------------|---------------------------|-----------------|--|
| Q1-17 | Iran | 120 | Bandar Abbas - PGSOC/1 |
| Q2-17 | Oman | 109 | Sohar Bitumen/Orpic |
| Q3-17 | India | 42 | HPCL Bhatinda |
| | China (Feb'17 > Jul'17) | 200 | CNOOC Huizhou |
| | China (Oct'16 > Aug'17) | 260 | CNPC/SA Anning |
| | China | 100 | Petrochina Huabei |
| | India (May'16 > Sep'17) | 120 | BPCL - Kochi |
| Q4-17 | Taiwan (May'17 > Oct'17) | 47 | CPC Talin |
| | Vietnam (Jun'18 > Dec'17) | 200 | Nghi Son |
| | China | 100 | Local Zhuhai Huafeng |
| Q1-18 | Iran | 120 | Bandar Abbas - PGSOC/1 |
| Q3-18 | Kuwait | 171 | KPC - Mina Abdullah |
| | India | 36.1 | Bharat - Bina |
| Closures | | | |
| Q1-17 | Japan | -252 | Cosmo Oil/ JX Nippon / Tonen General/ Taiyo Oil Shaowa Shell |
| | Kuwait (Mar'18 > Apr'17) | -186 | KPC - Shuaiba |
| Q4-17 | China | -100 | Local refineries |
| Q3-18 | Kuwait | -112 | KPC - Mina Al-Ahmadi |

Asian Margin Vs. US-EU margin



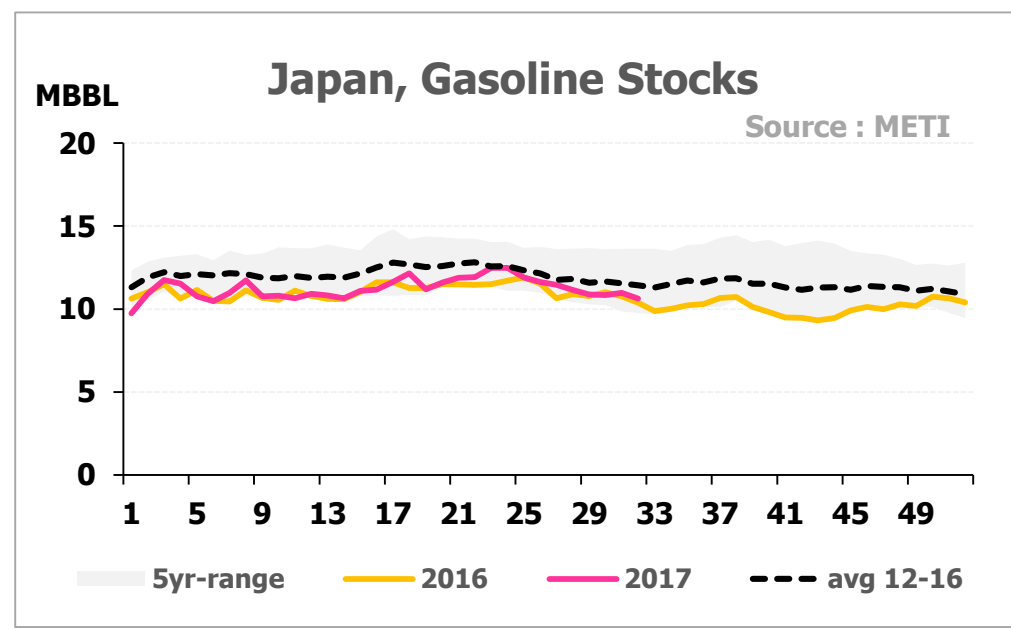
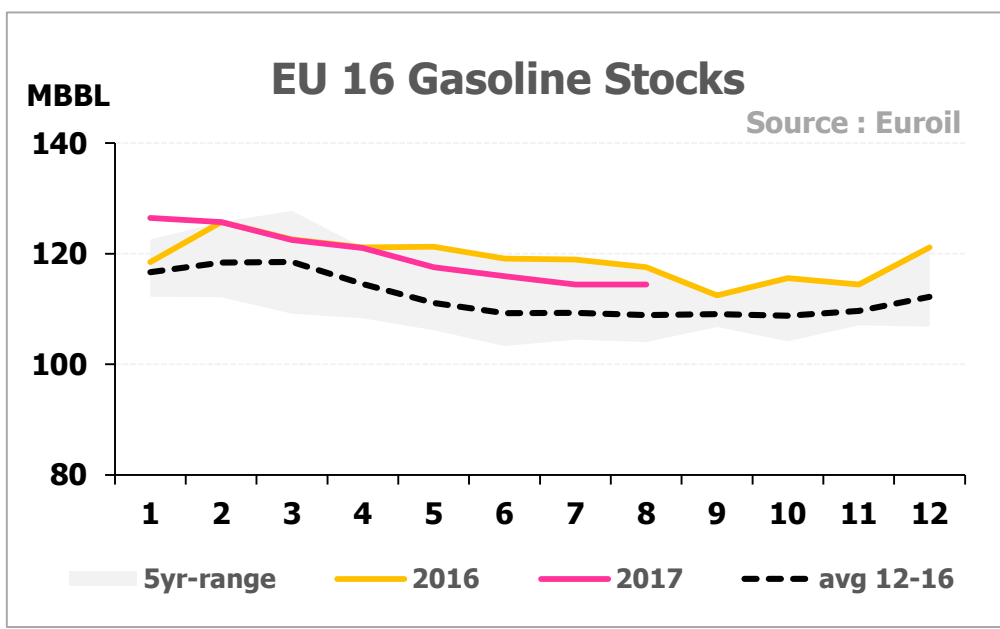
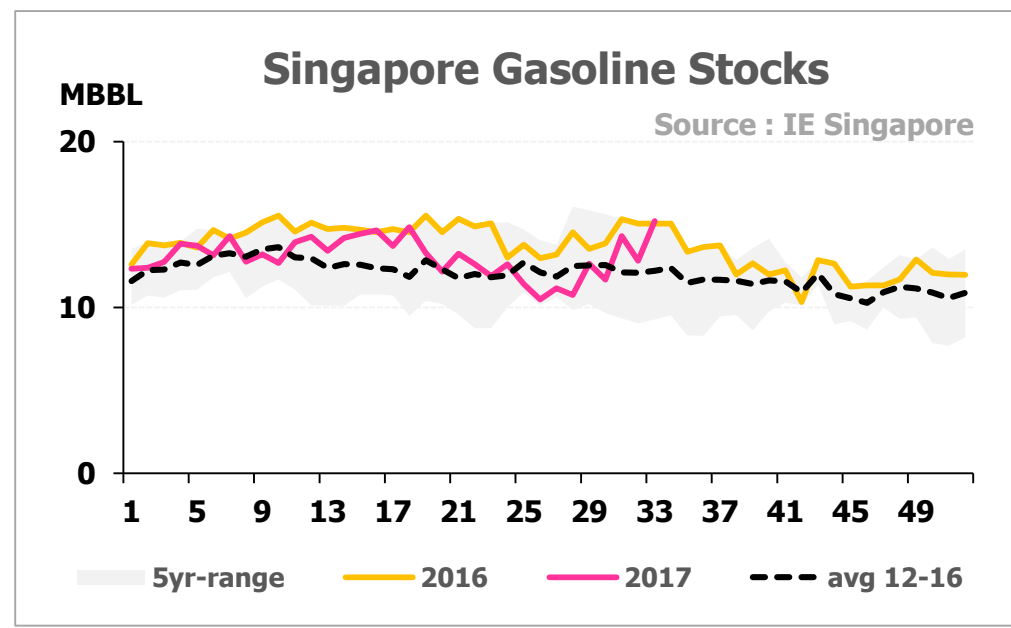
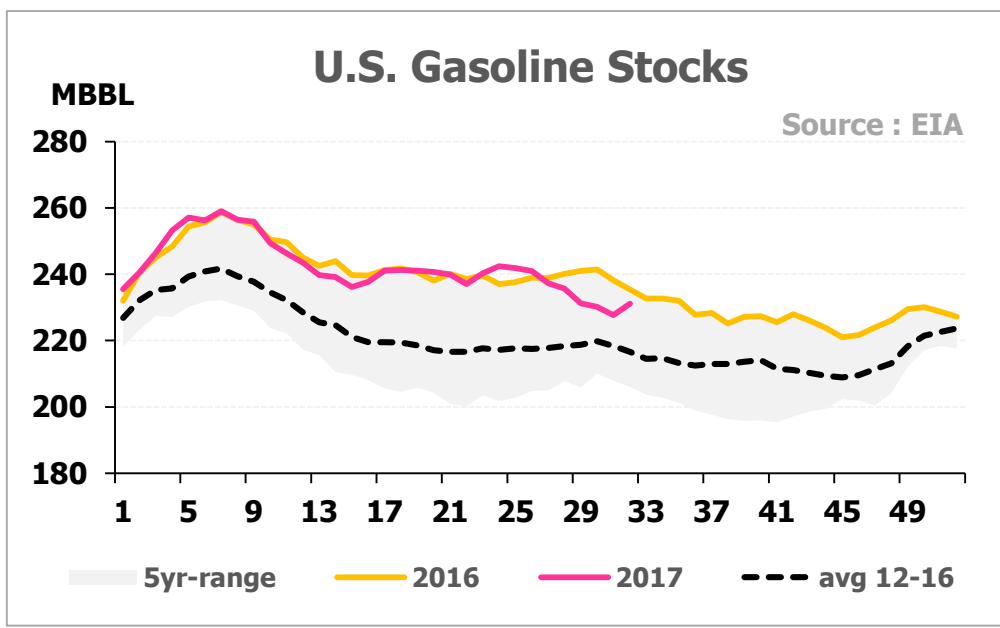


Global Crude Oil Inventories



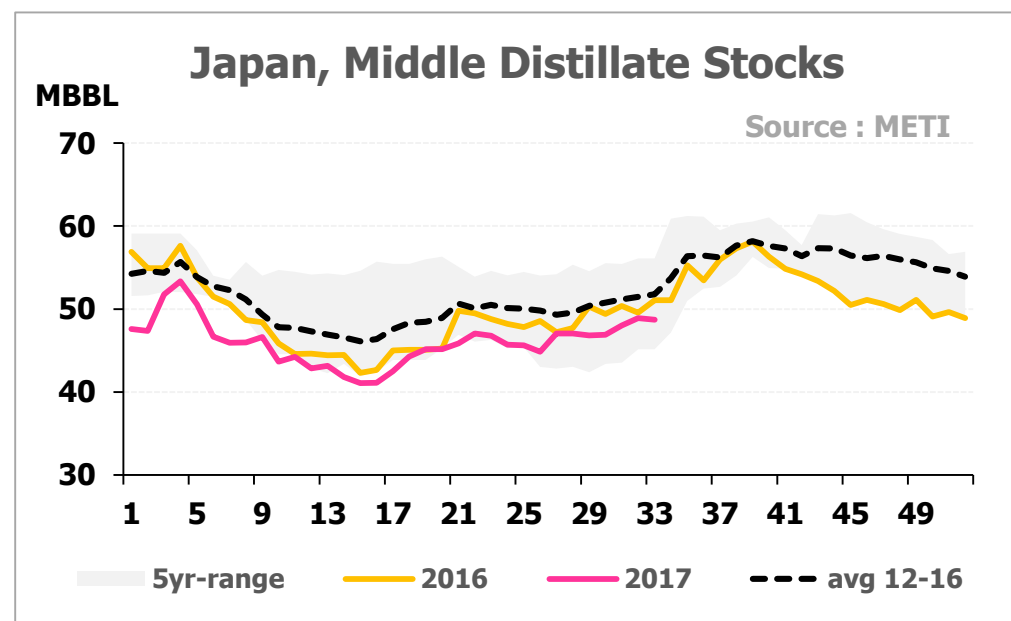
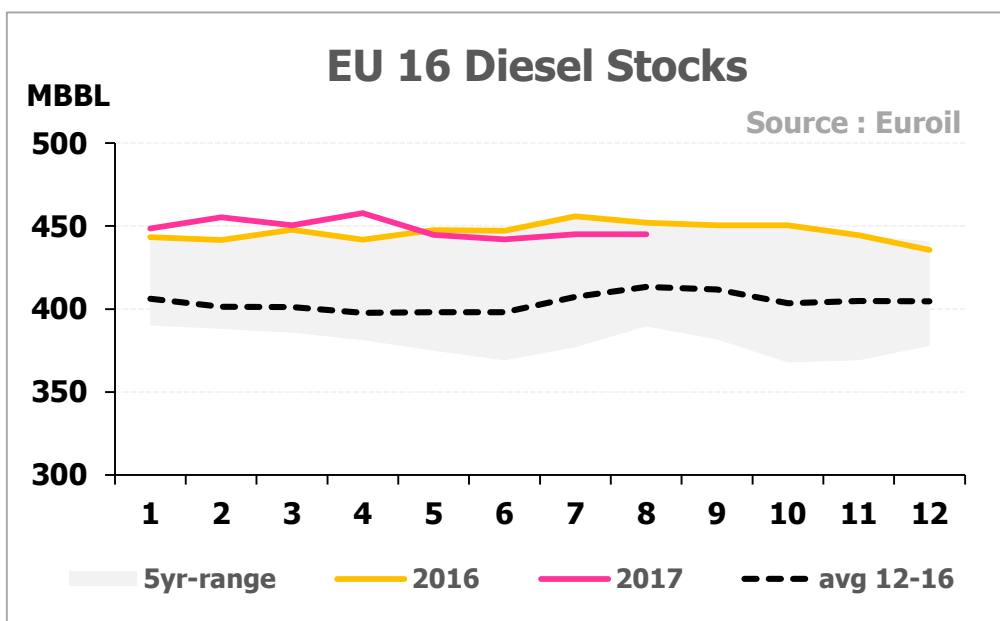
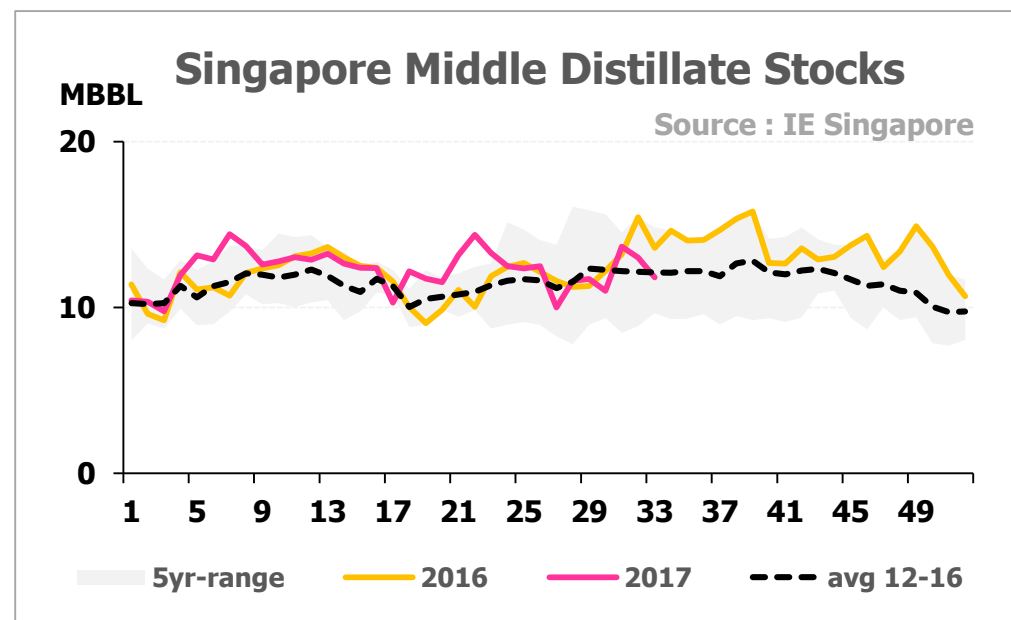
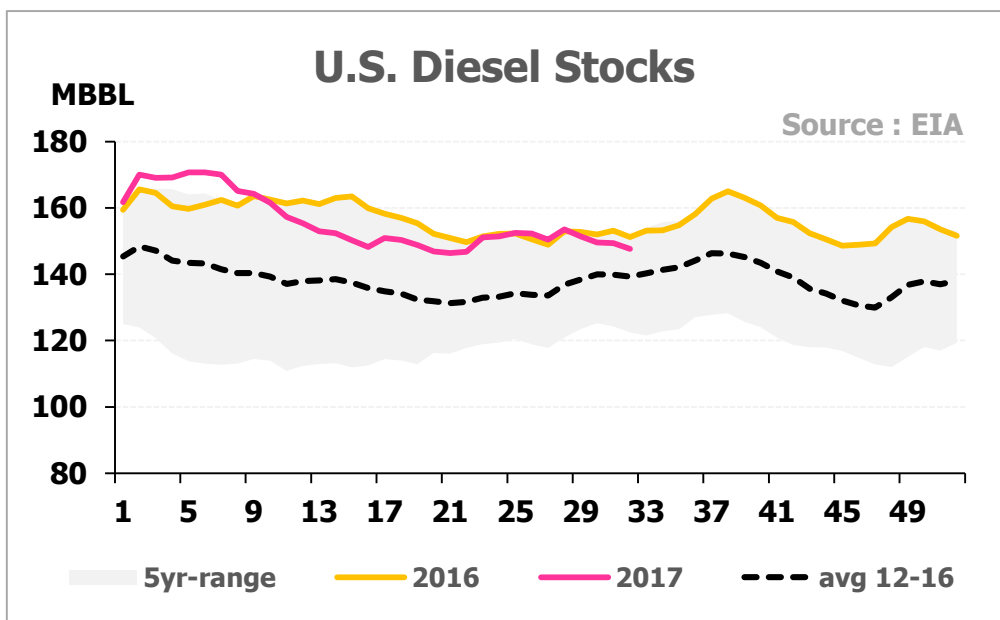


Global Gasoline Inventories

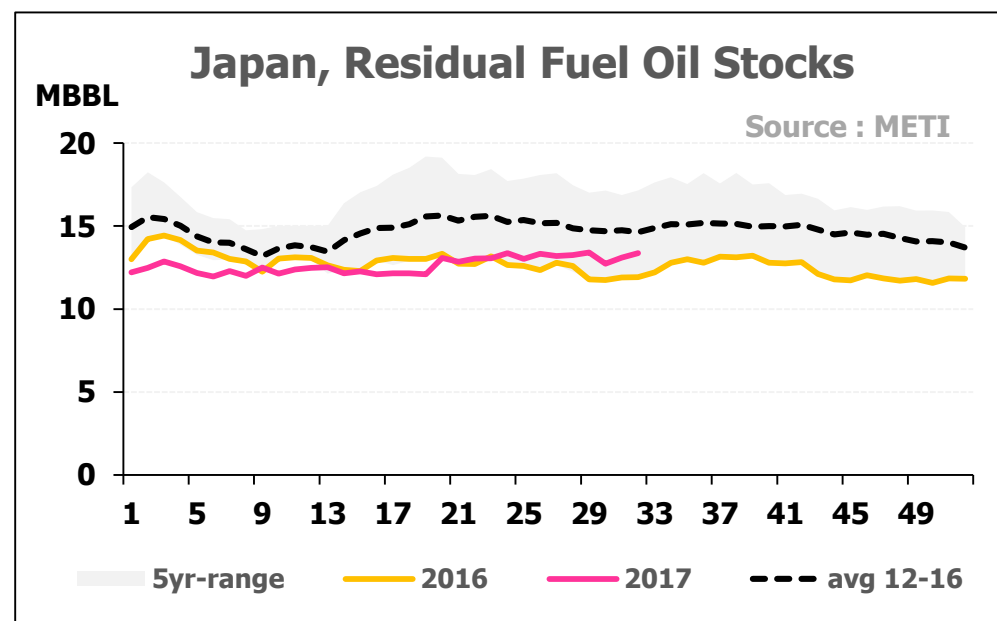
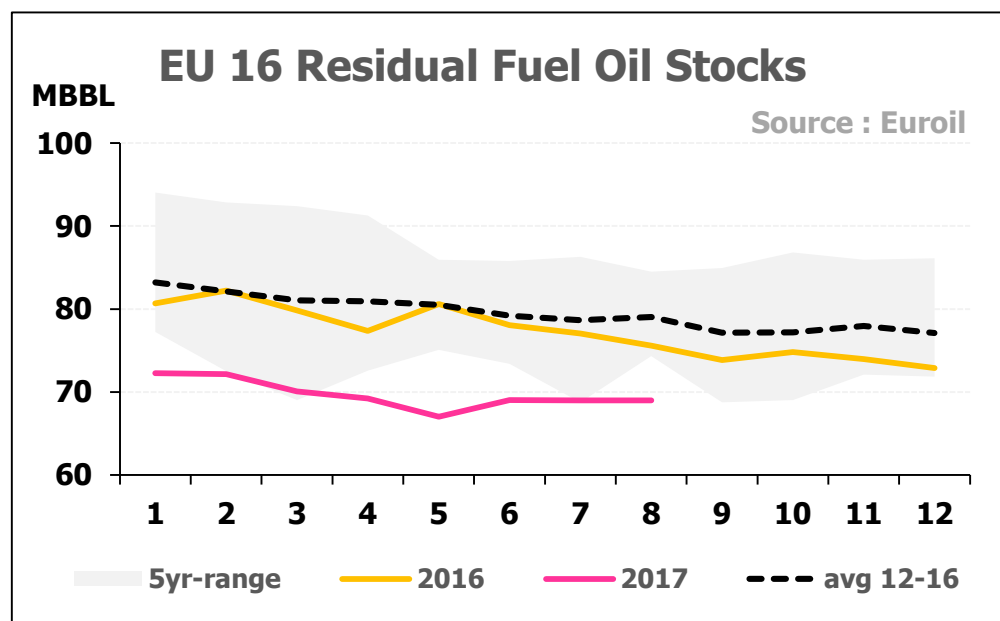
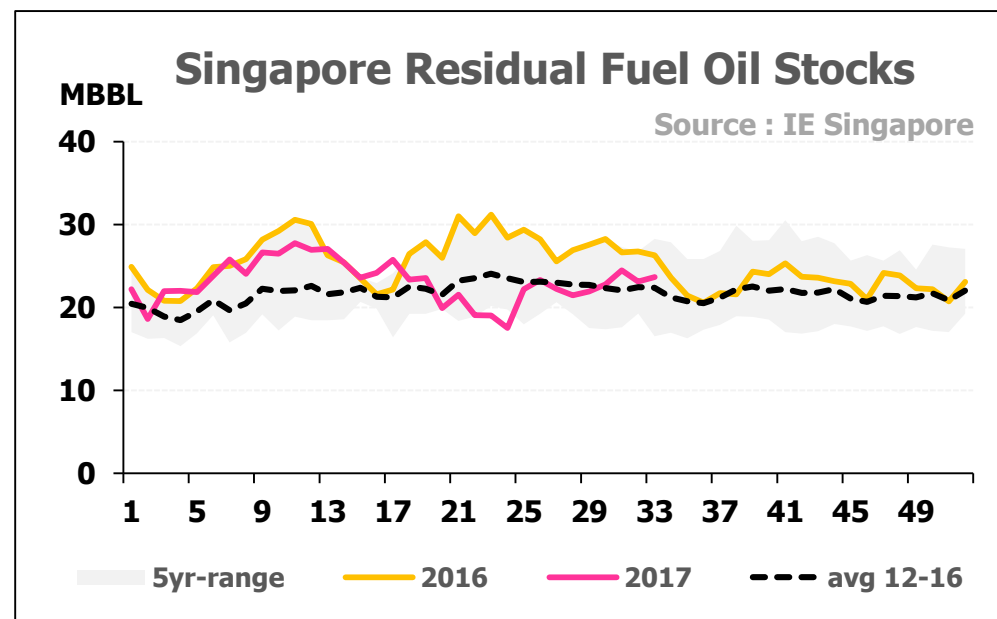
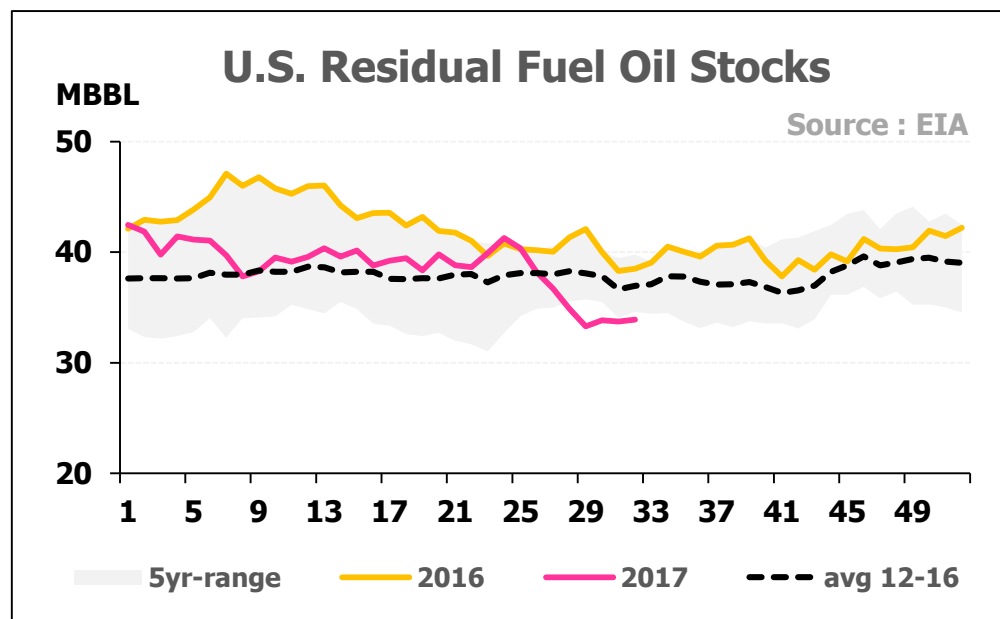




Global Middle Distillate Inventories



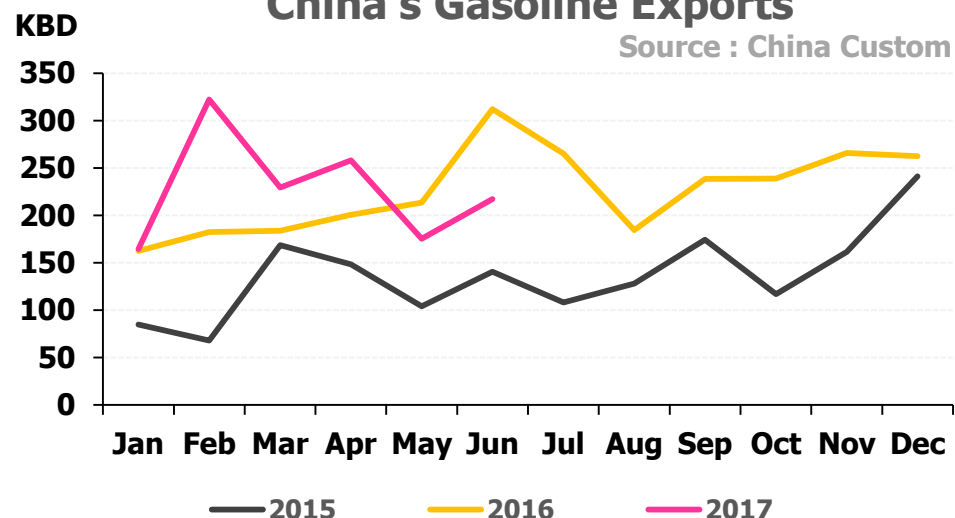
Global Fuel Oil Inventories



China's Refined Product Exports

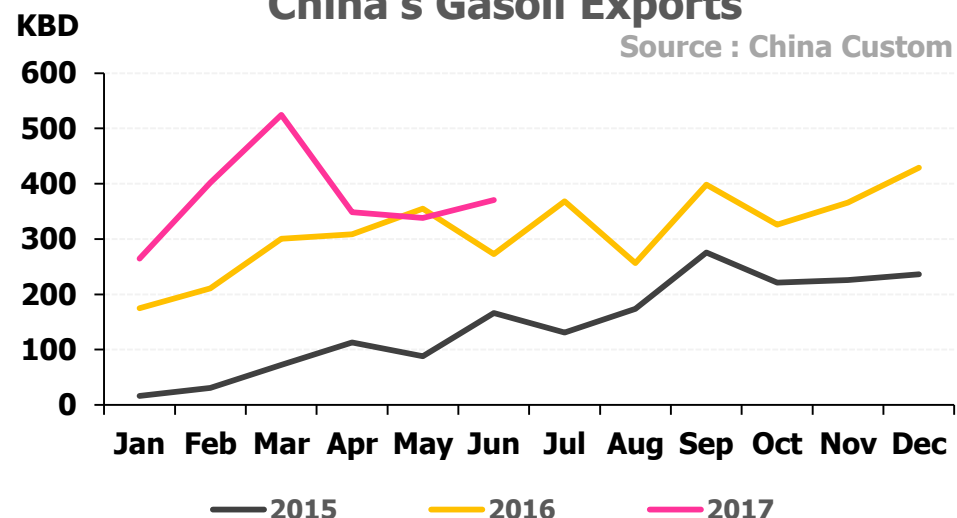
China's Gasoline Exports

Source : China Custom



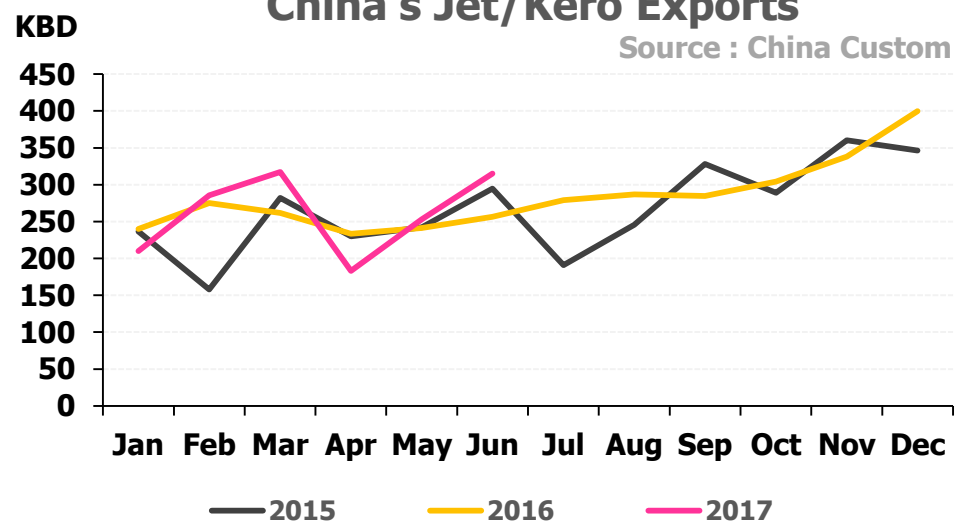
China's Gasoil Exports

Source : China Custom



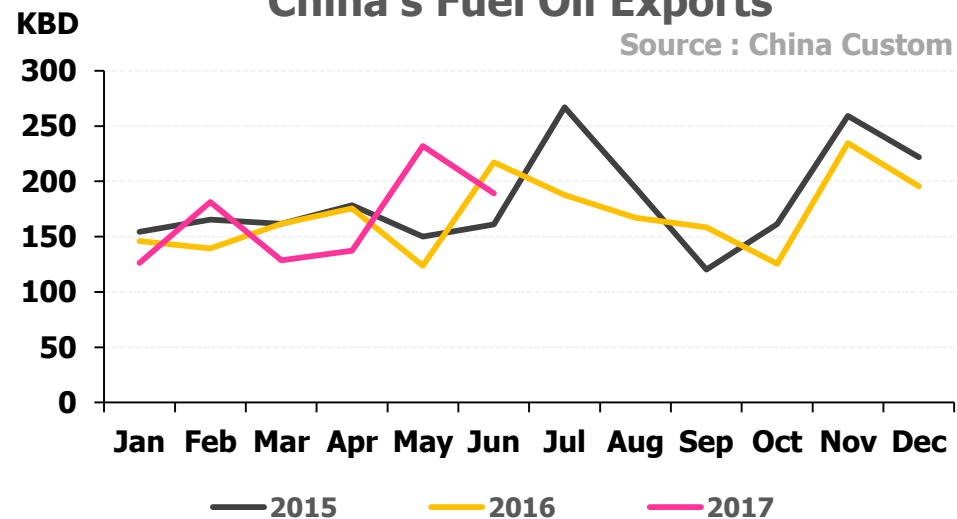
China's Jet/Kero Exports

Source : China Custom



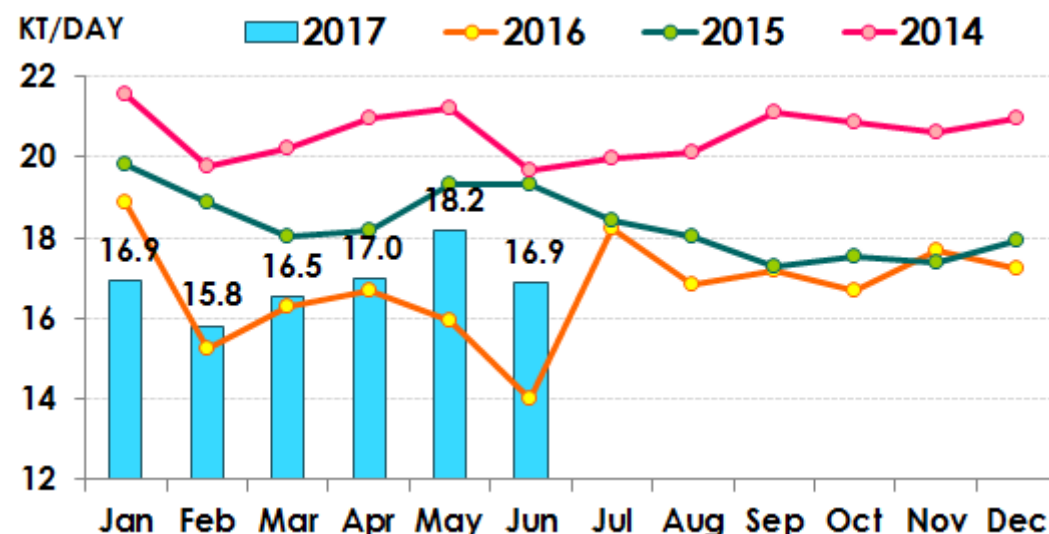
China's Fuel Oil Exports

Source : China Custom



Domestic LPG Demand

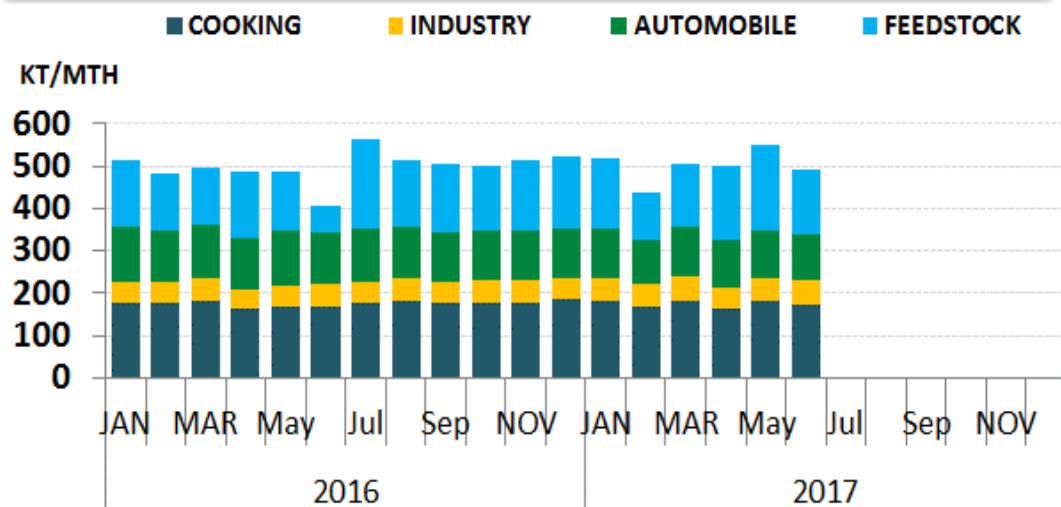
Thailand LPG Demand



Remark : LPG demand includes Petrochemical and own used consumption

* Jun-17 data estimated from DOEB data

LPG Demand by Sector



LPG Demand Highlight

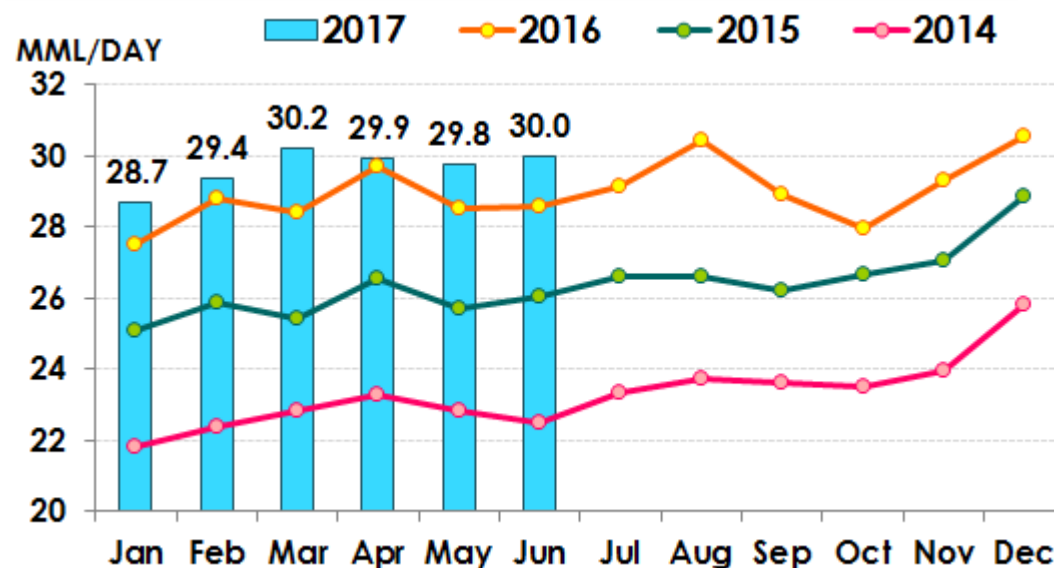
- In H1/17, LPG demand increased significantly by 4.4%YoY on account of 21.7%YoY higher demand from petrochemical sector, as a result of PTTGC major shutdown in May16-Jun16. Moreover, LPG demand was also supported by 2.5%YoY, and 5.1%YoY higher demand of cooking sector, and industrial sector, respectively. However, LPG demand in automobile sector fell by 9.3%YoY, according to low level of oil price.

Outlook for 2017

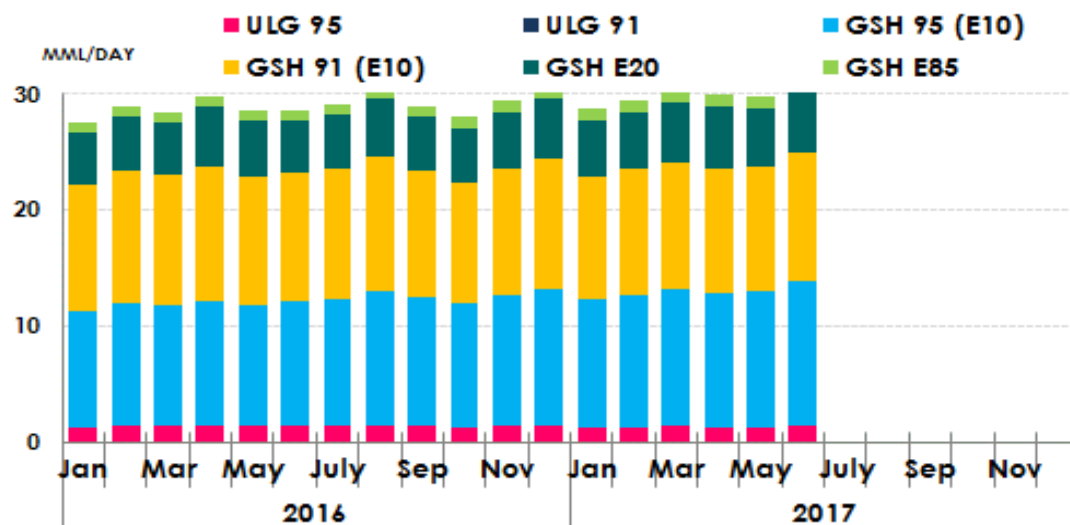
- LPG demand is expected to dropped by 2.1% YoY pressured by the expectation of more fuel switching from LPG to Mogas, due to low oil price.
- However, the slowdown of LPG demand was expected to be limited by higher usage in industry sector as a result of persistent low level of LPG price.

Domestic Gasoline/Gasohol Demand

Thailand Gasoline/Gasohol Demand



Gasoline/Gasohol Demand by Grade



GASOLINE/Gasohol Demand Highlight

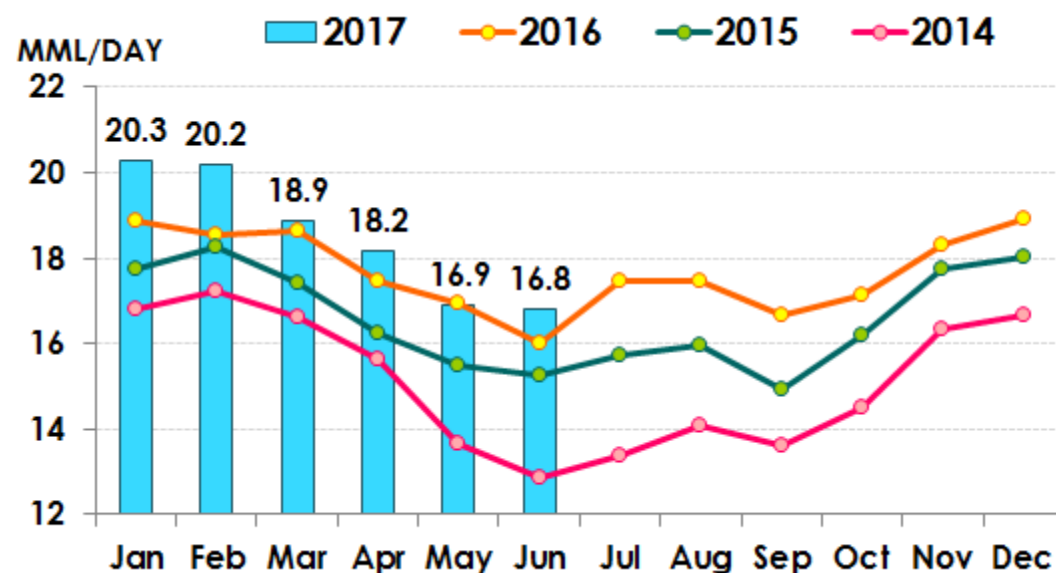
- In H1/17, Mogas demand rose moderately by 3.8%YoY to an average 29.7 ML/day. Although, the retail price of Mogas is higher, Mogas demand was still supported by consumers' intimation that using their personal cars in their routine. Moreover, Mogas demand is also supported by better Private consumption, according to 25.0%YoY higher passenger car sale in this year.
- The level of domestic ethanol demand, in 2017, rose significantly by 8.1%YoY from 3.60 mml/day to 3.89 mml/day following the rising of Mogas demand. Additionally, this was also because of higher demand in GSH-95, E20, and E85 which increased by 11.4%YoY, 8.0%YoY, and 23.1%YoY, respectively, backed by increasing in the number of new E20 vehicle, E20 gas station, wider GSH95-E20, and E20-E85 price gap.

Outlook for 2017

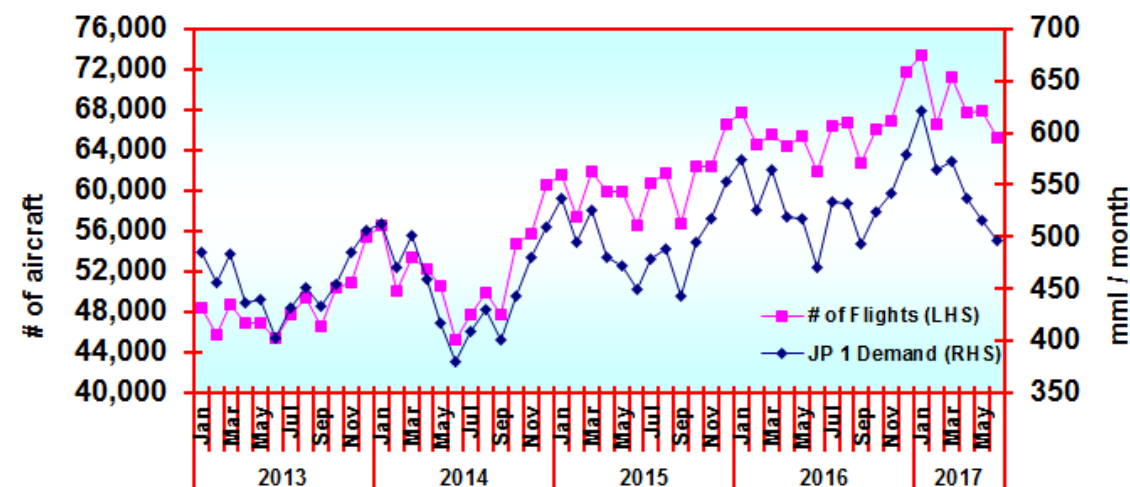
- Mogas consumption is predicted to grow by 2.7% YoY supported by expectation of growing of new passengers cars from return of private consumption. However, the demand is limited by high growth level in 2016 and higher oil price.

Domestic Jet Demand

Thailand JET-A1 Demand



JET-A1 demand and # of flights



JET Demand Highlight

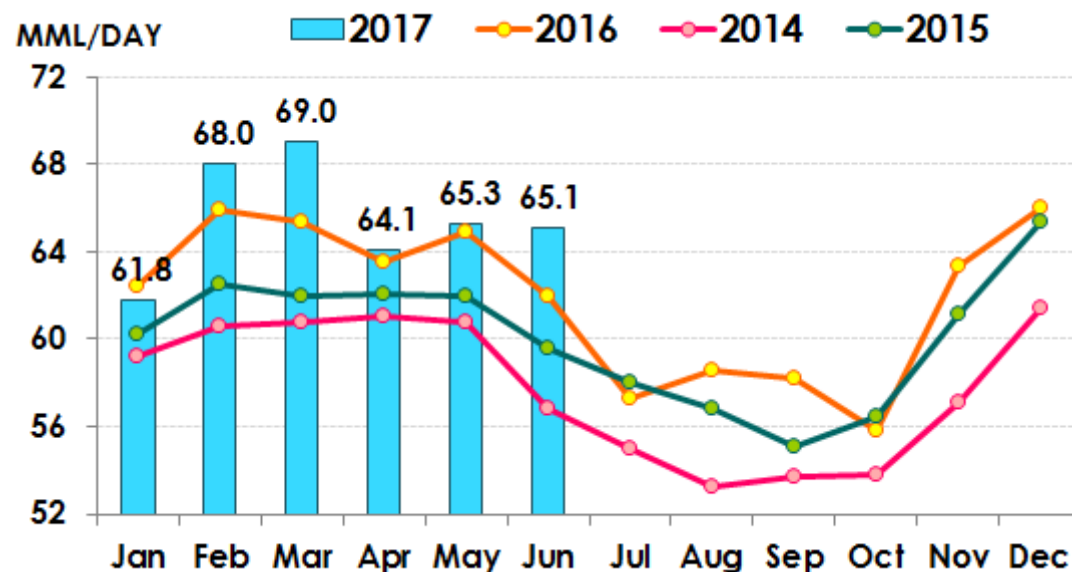
- In H1/17, Jet consumption increased significantly by 4.4% over the corresponding period last year mainly owing to booming tourism industry, leading to 5.7%YoY higher aircraft movement. The expansion in tourism sector was a result of increasing number of Chinese, Indian and European tourists, pushing the number of flight movements higher both international and domestic aircrafts. However, Jet demand was pressured by new domestic excise tax which implemented since Feb-17.

Outlook for 2017

- Jet demand growth is expected to grow by 3.6%YoY as a result of rapid tourist number growth, especially from China and ASEAN, which supported by expansion of Phuket and other international airports. Furthermore, the demand is also supported by the return of European and Russian tourists.

Domestic Gasoil and NGV Demand

Thailand Gasoil Demand



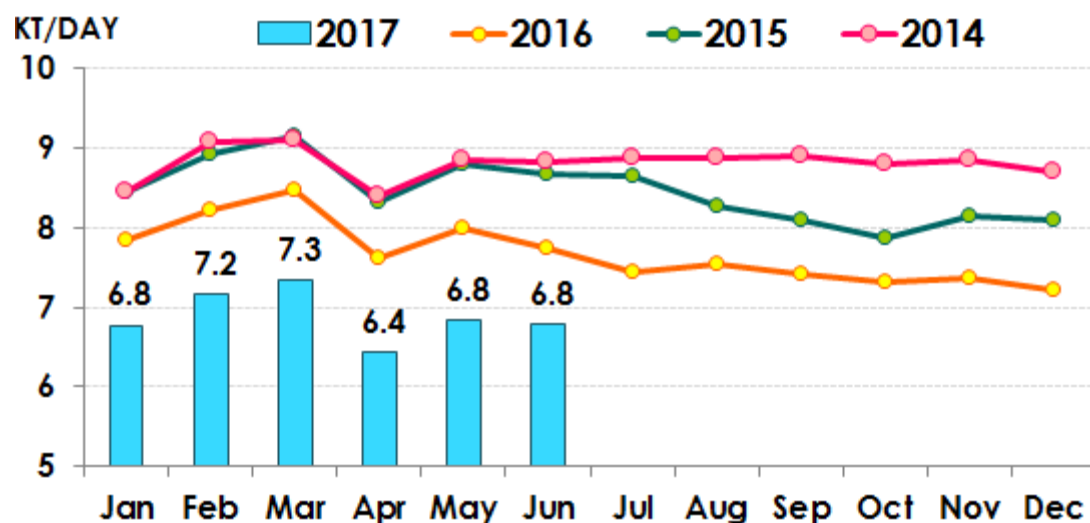
Diesel Demand Highlight

- In H1/17, Diesel demand rose moderately by 2.3% YoY as a result of Thai economic recovery. However, Diesel demand was still pressured by flooding situation in Southern part of Thailand which lower agricultural activity and goods transportation. Meanwhile, in 2016, Diesel demand in Southern part of Thailand took approximately 12.5% of total Diesel demand in Thailand.

Outlook for 2017

- Diesel demand in 2017 is expected to expand by 1.4% YoY supported by Thailand economic improvement.

NGV Demand

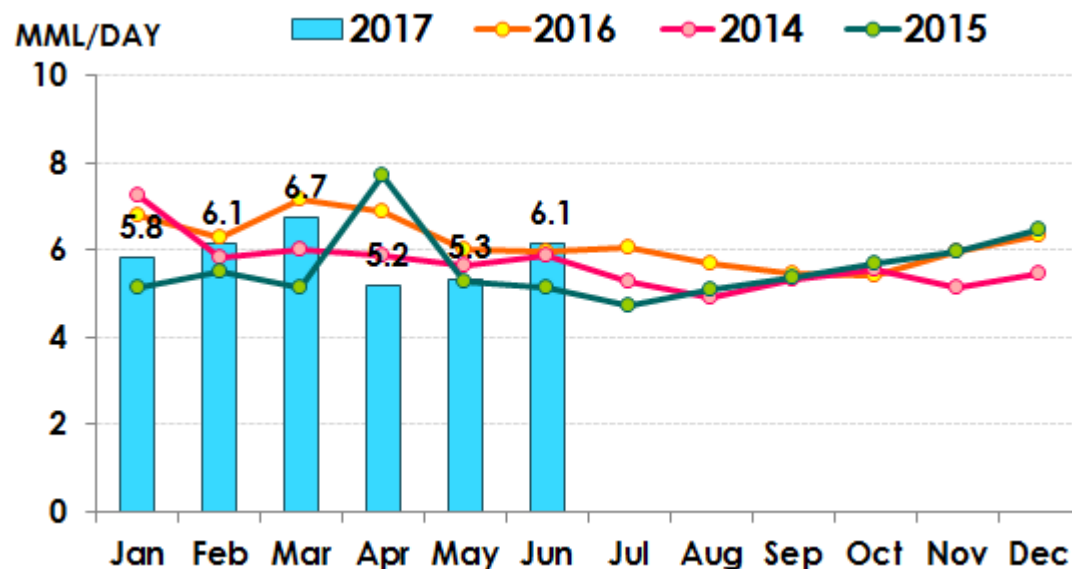


NGV Demand Highlight

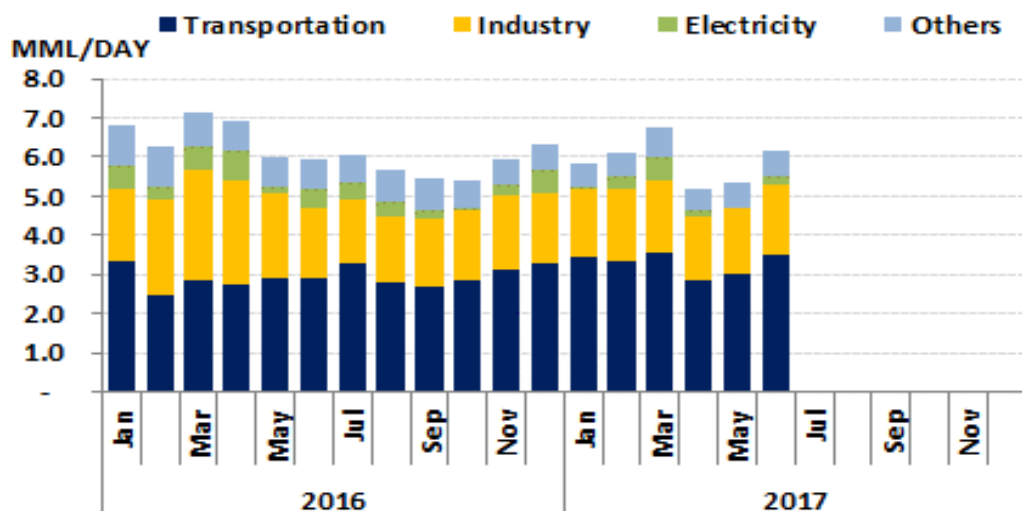
- In H1/17, NGV demand fell significantly by 13.7%YoY. This was mainly because of consumers' intimation that still prefer to consume oil. Moreover, the low oil price level in 2016 has pressed the fuel switching from old cars, whereas the new cars which is available for NGV was lower recently.

Domestic Fuel Oil Demand

Thailand Fuel Oil Demand



Thailand Fuel Oil Demand by Sector



Fuel Oil Demand Highlight

- In H1/17, Fuel Oil consumption fell sharply by 9.6%YoY, as a result of sharply falling by 53.9%YoY of electricity sector demand which pressured by fewer day of Myanmar gas field maintenance. Furthermore, the demand in industrial sector also decreased by 22.6%YoY, as a result of higher price of fuel oil, comparing to other fuel. However, the demand in transportation sector rose by 13.7%YoY.

Outlook for 2017

- Fuel oil demand is expected to decrease by 10.9%YoY, as a result of switching to alternative fuel in industrial sector due to higher price of Fuel Oil in this year.

Thank You

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