



Ref. No. IVL [002/08/2019]

8 August 2019

The President

The Stock Exchange of Thailand

**Subject: Submission of Quartely Review of Financial Statements and the Management Discussion and Analysis of Indorama Ventures Public Company Limited for second quarter ended June 30, 2019**

We are pleased to submit:

1. Consolidated and Company only Quarterly Review of Financial Statements for for the second quarter of 2019 (a copy in Thai and English)
2. Management Discussion and Analysis (MD&A) for the second quarter of 2019 (a copy in Thai and English)
3. Company's performance report, Form F45-3 for the second quarter of 2019 (a copy in Thai and English)

Please be informed accordingly.

Sincerely yours,

(Mr. Alope Lohia)

Group CEO

Indorama Ventures Public Company Limited

Company Secretary

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*Indorama Ventures Public Company Ltd*  
*Management Discussion and Analysis*  
*2nd Quarter 2019*

*Breaking News;*

IVL announces acquisition of a significant downstream business in Integrated Oxides and Derivatives based out of advantaged Gulf Coast USA.

## 2Q 2019 Summary Financials

**Table 1: Core Financials of Consolidated Business**

\$million (except where stated otherwise)	Quarterly				Last Twelve Months		
	2Q19	1Q19	2Q18	2Q19	LTM	LTM	LTM
				YoY	2Q19	2Q18	YoY
<b>Production Volume (kt)</b>	<b>3,148</b>	<b>2,966</b>	<b>2,546</b>	<b>24%</b>	<b>11,662</b>	<b>9,564</b>	<b>22%</b>
Consolidated Revenue <sup>1,2</sup>	2,930	3,030	2,618	12%	11,668	9,341	25%
<b>Core EBITDA<sup>2,3</sup></b>	<b>361</b>	<b>304</b>	<b>388</b>	<b>(7)%</b>	<b>1,392</b>	<b>1,262</b>	<b>10%</b>
PET	169	145	180	(6)%	606	471	29%
Fibers	62	77	58	9%	266	216	23%
Feedstock	138	78	148	(7)%	530	569	(7)%
<i><u>New Segments</u></i>							
Integrated PET	262	192	222	18%	882	592	49%
Fibers	59	69	49	20%	242	190	27%
Packaging	19	16	13	43%	59	44	34%
Integrated Oxides and Derivatives	26	3	57	(55)%	130	227	(43)%
Specialty Chemicals	3	19	44	(94)%	88	203	(56)%
Core EBIT	231	178	288	(20)%	892	871	2%
<b>Core Net Profit after Tax and NCI<sup>4</sup></b>	<b>159</b>	<b>128</b>	<b>234</b>	<b>(32)%</b>	<b>666</b>	<b>664</b>	<b>0%</b>
Core Net Profit after Tax and NCI (THBm)	5,027	4,042	7,463	(33)%	21,566	21,477	0%
<b>Core EPS after PERP Interest (THB)</b>	<b>0.85</b>	<b>0.67</b>	<b>1.31</b>	<b>(35)%</b>	<b>3.67</b>	<b>3.86</b>	<b>(5)%</b>
<b>Core EBITDA/ton (\$)</b>	<b>115</b>	<b>102</b>	<b>153</b>	<b>(25)%</b>	<b>119</b>	<b>132</b>	<b>(10)%</b>
<b>Operating Cash Flow<sup>5</sup></b>	<b>385</b>	<b>261</b>	<b>222</b>	<b>73%</b>	<b>1,172</b>	<b>855</b>	<b>37%</b>
<b>Net Debt to Equity (times)</b>	<b>0.94</b>	<b>0.92</b>	<b>0.64</b>	<b>48%</b>	<b>0.94</b>	<b>0.64</b>	<b>48%</b>

\*Core Financials exclude IRSL

\*\* 'Integrated Oxides and Derivatives' was previously called Olefins and the new nomenclature better reflects our sector especially post Huntsman assets.

<sup>1</sup>Consolidated financials are based upon elimination of intra-company or intra-business segment transactions

<sup>2</sup>Total of each segment may not always tally with consolidated financials due to holding segment

<sup>3</sup>Core EBITDA is Reported EBITDA less Inventory gains/losses

<sup>4</sup>Core Net Profit is Reported Net Profit less Inventory gains/losses one-time extraordinary items

<sup>5</sup>Operating Cash Flow is after change in net working capital and cash tax, before maintenance capex

## **Summary 2Q19 results**

IVL's performance for the first half and ongoing progress give us the confidence that our major segments of Integrated PET and Fibers are unique and have limited impact from the heightening trade wars. The continuing attention on plastic waste is helping the industry move towards a circular economy, in which PET, due to its recyclability and recycling infrastructure is getting positive traction. The resilient nature of these core segments enable us to achieve visible, diversified and steady cash flows, growing with a combined EBITDA of 18% YoY and 44% LTM 2Q19.

The Integrated Oxides & Derivatives segment was negatively impacted by the extended shutdown into 2Q19 following from the 1Q19 catalyst turnaround at our EO-EG facility in USA and due to the plummeting MEG margins in Asia although cushioned by the lower cost USGC economics. On the other hand, our Purified EO (PEO) business continues to outperform helping this segment deliver healthy an overall EBITDA of \$26 million during its shortened quarter.

Our Specialty Chemical segment had its weakest quarterly performance due to surplus capacity in of IPA post the spike profitability in 2017. This segment was further impacted by the unplanned shutdown of our Spartanburg site which also impacted our Specialty Fibers operations in USA. This facility will gradually recover in 3Q19. On the other hand, our NDC business continues to perform as per plan.

Our Packaging segment continues to outperform, growing at double digits, an indication of the strong demand for recyclable PET. 2Q19 core EBITDA grew 43% YoY and 34% LTM 2Q19.

The overall core EBITDA in 2Q19 and LTM 2Q19 was \$361 million and \$1,392 million respectively, a decrease of 7% YoY and increase of 10% LTM 2Q19. Three of our five segments, namely Integrated PET, Fibers and Packaging, which constitute around 89% of capacity, contributed to 94% of the core EBITDA. The remaining two segments, Integrated Oxides & Derivatives and Specialty Chemicals are expected to resume their earnings from unplanned shutdowns, except IPA which we believe will recover over the next 12-18 months.

## **Key Post Period Development**

The strategic acquisition of Integrated EO and PO derivatives business of Huntsman for \$2.0 billion in cash and pension liabilities of upto US\$76 million will enhance IVL segments of the higher-margin Integrated Oxides and Derivatives and Speciality Chemicals. This acquisition is the largest in the history of IVL. We believe this to be yet again another game changing transaction in line with our strategic direction highlighted in the 2019 Capital Markets Day. On a proforma basis, this acquisition adds 25% to IVL's 2018 core EBITDA and also adds 23% of additional manufacturing capacity in higher-margin businesses. The deal accelerates IVL's ability to achieve its goal to double its core EBITDA every 5 years. The nature of IVL's business model enables it to achieve visible, diversified and steady cash flows making it a unique world-class chemical company. This acquisition will be funded by cash and debt and there is no equity dilution anticipated. IVL balance sheet was strengthened over last 2 years with record earnings and conversion of warrants into equity.

In early 2019 as part of our Capital Market Day, we had identified our Integrated Oxides and Derivatives segment and Speciality Chemicals segment to be growth segments. The acquired business is fully integrated downstream in Surfactants (used in personal and home care) and in Propylene Oxides (used in insulation and foam materials) where global demand is increasing at around 5%. With the acquisition of these leading downstream businesses consisting of both Ethylene Oxide and

Propylene Oxide platforms, we are now well on our way to make this our core platform for continuous growth in selective upstream & downstream integration over the next 5 to 10 years, similar to how we grew our 'Integrated PET' segment. We will have the new management team and employees consisting of some 1200 individuals who will augment and broaden our segment knowledge in operations, products and R&D initiatives. To be clear, we differ from an over-supplied olefin industry since the acquired business synergizes well with our existing Integrated Oxides business. The excess ethylene capacity being built in USA would be a welcome boost to our downstream Integrated Oxides business as we will remain a net buyer and the base demand of MEG produced as part of our Oxides vertical provides a ready captive market in our Integrated PET providing us value chain integration and the ability to be of scale, yet remaining the most differentiated among petrochemical companies. This segment serves everyday necessities, quite similar to Integrated PET, and will propel us towards our aspirations in a prudent manner.

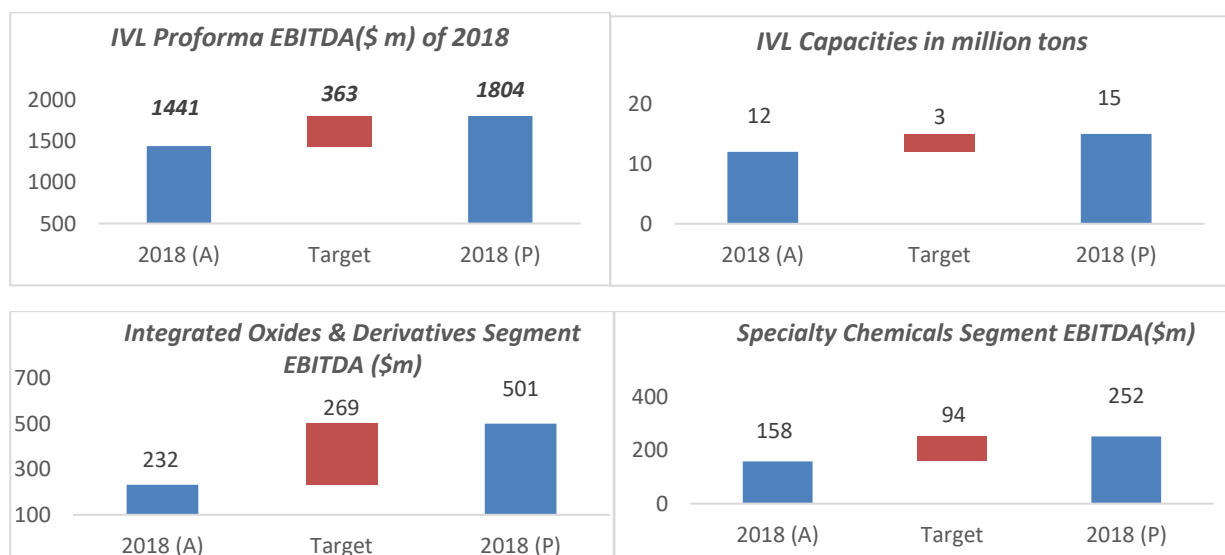
## ***The transaction will broaden IVL's expertise in operational excellence, global scale, differentiated formulations, technologies and geographic reach for EO, EODs and Specialty Chemicals***

This acquisition is a natural extension to IVL's existing shale gas-based assets in USGC and it enables us to deliver higher earnings through business cycles. On completion, this end-to-end integrated chain will allow us to address several new, high-growth markets like home and personal care, agrochemicals, fuels additives/lubricants and intermediate chemicals for polyurethane manufacturers.

In addition to acquiring the manufacturing assets, IVL is also getting the exclusive global license and the right to sub-license proprietary technology that helps manufacture Propylene Oxide, cleaner burning Oxifuels, Ethylene Oxide derivatives, Ethanolamine and Propylene Glycol in a highly cost competitive manner. All these products are being produced at the Port Neches, Texas USA.

By leveraging our proven track record in operational and business excellence, this expanded portfolio will deliver sizeable incremental earnings thereby creating sustainable value for all our shareholders.

Proforma 2018 Financials (inclusive of target earnings) :



## Operational Highlights:

- Five manufacturing sites in USA, India and Australia
- 3 Million MT of petrochemical capacities along with access to proprietary technology
- Professionally managed team along including R&D & Technical services professionals
- 269 active patents and 191 pending approvals
- Offers attractive technology for strategic license-out opportunities

## 2Q19 Performance Highlights

**Table 2: Segment Results (New segment)**

\$million (except where stated otherwise)	Quarterly				Last Twelve Months		
	2Q19	1Q19	2Q18	2Q19 YoY	LTM 2Q19	LTM 2Q18	LTM YoY
<b>Production Volume (kt)</b>	<b>3,148</b>	<b>2,966</b>	<b>2,546</b>	<b>24%</b>	<b>11,662</b>	<b>9,564</b>	<b>22%</b>
Integrated PET	2,451	2,333	1,910	28%	8,977	7,122	26%
Fibers	382	357	312	22%	1,418	1,174	21%
Packaging	55	52	39	41%	194	130	49%
Integrated Oxides and Derivatives	103	30	129	(20)%	386	559	(31)%
Specialty Chemicals	156	193	156	0%	688	578	19%
<b>Operating rate (%)</b>	<b>87%</b>	<b>85%</b>	<b>92%</b>	<b>-521bps</b>	<b>86%</b>	<b>89%</b>	<b>-333bps</b>
Integrated PET	89%	88%	93%	-331bps	87%	90%	-320bps
Fibers	93%	91%	97%	-410bps	92%	92%	44bps
Packaging	80%	76%	61%	1,968bps	70%	59%	1,918bps
Integrated Oxides and Derivatives	75%	22%	94%	-1,885 bps	70%	102%	-3,093bps
Specialty Chemicals	57%	78%	83%	-2,598bps	76%	77%	-133bps
<b>Consolidated Revenue<sup>1,2</sup></b>	<b>2,930</b>	<b>3,030</b>	<b>2,618</b>	<b>12%</b>	<b>11,668</b>	<b>9,341</b>	<b>25%</b>
Integrated PET	2,026	2,102	1,698	19%	7,929	5,892	35%
Fibers	771	790	634	22%	3,028	2,395	26%
Packaging	95	85	60	59%	317	206	54%
Integrated Oxides and Derivatives	55	68	112	(51)%	338	482	(30)%
Specialty Chemicals	234	269	286	(18)%	1,019	995	2%
<b>Core EBITDA<sup>3</sup></b>	<b>361</b>	<b>304</b>	<b>388</b>	<b>(7)%</b>	<b>1,392</b>	<b>1,262</b>	<b>10%</b>
Integrated PET	262	192	222	18%	882	592	49%
Fibers	59	69	49	20%	242	190	27%
Packaging	19	16	13	43%	59	44	34%
Integrated Oxides and Derivatives	26	3	57	(55)%	130	227	(43)%
Specialty Chemicals	3	19	44	(94)%	88	203	(56)%
<b>Core EBITDA Margin(%)</b>	<b>12%</b>	<b>10%</b>	<b>15%</b>	<b>-250bps</b>	<b>12%</b>	<b>14%</b>	<b>-158bps</b>
Integrated PET	13%	9%	13%	-13bps	11%	10%	107bps
Fibers	8%	9%	8%	-8bps	8%	8%	6bps
Packaging	20%	19%	22%	-224bps	19%	21%	-274bps
Integrated Oxides and Derivatives	47%	4%	51%	-359bps	39%	47%	-858bps
Specialty Chemicals	1%	7%	15%	-1,414bps	9%	20%	-1,168bps

<b>Core ROCE%</b>	<b>12%</b>	<b>9%</b>	<b>20%</b>	<b>-837bps</b>	<b>12%</b>	<b>16%</b>	<b>-375bps</b>
Integrated PET	20%	12%	20%	-2bps	16%	15%	125bps
Fibers	4%	7%	7%	-369bps	5%	7%	-209bps
Packaging	23%	20%	26%	-284bps	18%	20%	-280bps
Integrated Oxides and Derivatives	11%	(8)%	32%	-2,109bps	15%	29%	-1,430bps
Specialty Chemicals	(5)%	6%	32%	-3,720bps	8%	38%	-3,041bps

\*Core Financials exclude IRSL

<sup>1</sup>Consolidated financials are based upon elimination of intra-company (or intra-business segment) transactions

<sup>2</sup>Total of each segment may not always tally with consolidated financials due to elimination of Intra-company

<sup>3</sup>Core EBITDA is Reported EBITDA less Inventory gains/(losses)

## 2Q19 Segment Analysis

### Integrated PET (PX, PTA, PET and Recycling)

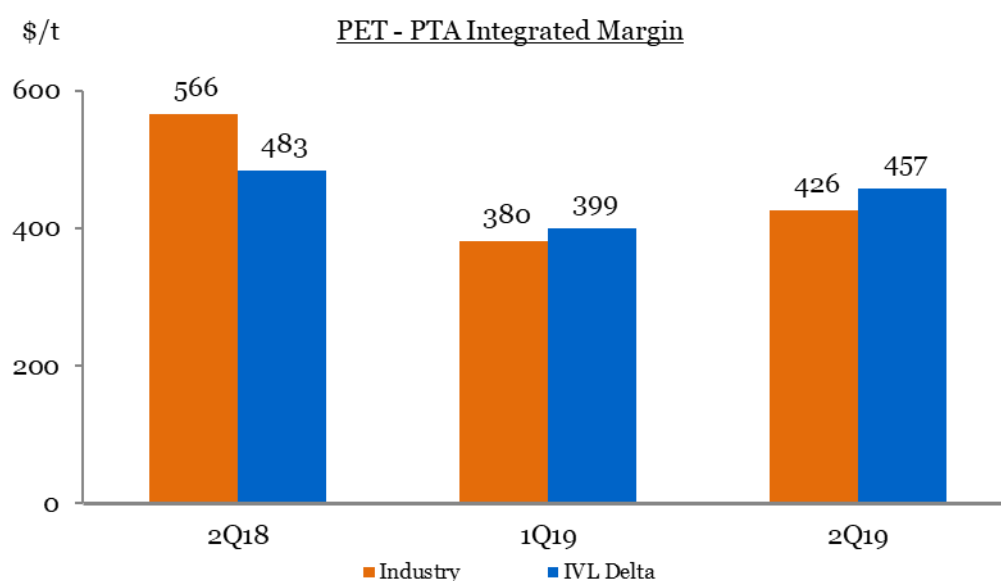
- Production of 2.5 million tons (+28% YoY; +5% QoQ)
- Core EBITDA of \$262 million (+18% YoY; +37% QoQ),
- Core EBITDA margin was 13% (0% YoY; +4% QoQ).
- Operating rate of 89%

This segment accounts for 78% of overall production and contributed to 73% of core EBITDA. Consolidation of the JVs in Indonesia (PTA) and India (PET) and higher volume from assets acquired in 2018 (PET – Brazil & Egypt; PTA – Portugal & Rotterdam expansion) and an operating rate of 89%. Overall production volume was lower as a result of partial shutdown in India (59 days) due to supply disruption by a raw material supplier (PTA) resulting in volume loss of 75 K Tons. This facility has since restarted.

Higher volume, synergies in procurement and improved annual contracts in the Western markets resulted in higher core EBITDA of \$ 262 million an increase of 18% on a YoY basis and an increase of 37% on a QoQ basis. Earnings from this segment could have been higher by approximately \$ 17 million had there been no unplanned shutdowns.

Going forward, expected increase in PTA and PET capacities are likely to be absorbed in line with ongoing demand growth (expansion in PTA demand due to China's ban of waste plastics and onwards demand for polyester products and expansion in PET demand due to its unique recyclability and sustainable manufacturing footprint as compared to other packaging materials).

The Integrated PET segment will benefit from expansion in production capacity as a result of ongoing brownfield expansions in Thailand (PET) and Mexico (Recycling), debottlenecking in Rotterdam (PTA) and the greenfield joint venture PTA/PET project in Corpus Christi, Texas, USA. These are expected to commence production in phases starting 2020 and onwards till 2021.

**Figure 1: PTA-PET Integrated Margin (\$/MT)**

Note: Based on 100% integration assumption

## Fibers

- Production of 382 thousand tons (+22% YoY; +7% QoQ)
- Core EBITDA of \$59 million (+20% YoY; -14% QoQ)
- Core EBITDA margin was 8% (-0% YoY; -1% QoQ)
- Operating rate of 93%

This segment accounts for 12% of production and contributed to 16% of core EBITDA. Production volume in this segment increased by 22% on a YoY basis and 7% on a QoQ basis. Operating rate for the segment was at 93%. On a YoY basis, core EBITDA increased by 20% but was lower by 14% on a QoQ mainly due to difficult market conditions temporarily influenced by trade uncertainties.

The fibre business made a significant strategic move by establishing its presence in India by acquiring controlling stake in Indorama Synthetics Limited in 2Q19 (605 KTA). This facility is currently under normalisation. This follows acquisitions of M&G Fibras in Brazil and UTT (Airbag fabric in EU and Mexico) in 1Q19, thus strengthening our strategy of domestic supplies to global customers. In a world looking for shorter and smart supply chains, IVL has uniquely integrated with global customers actively engaged in re-shoring.

During 2Q19, the business integrated its 16 units in 8 countries into a focussed Mobility Group with over \$ 1.0 billion revenue to serve global Mobility customers (tire cord, auto interiors and airbag. Production volume for this vertical is up 15% and core EBITDA was higher by 40% on a YoY basis, benefitting from the entry into downstream airbag weaving from UTT and Kordarna. Volume on a QoQ basis was higher by 5 % due to full quarter impact of UTT.



Following the successful launch of Mobility vertical we have reorganised the remaining Fibre business into two distinct verticals by reorganising 24 sites in 10 countries into a \$ 1.5 billion Lifestyle vertical that will serve the home and apparel value chains and a \$1.3 billion Hygiene vertical respectively. This reorganization will help transform the fiber business into market-focussed verticals and will leverage our scale and management depth to further improve quality of earnings.

The Lifestyle vertical serves global home and apparel business outside China from its large manufacturing assets in South East Asia, India, Europe and Latin America. This opens up more avenues for IVL as our global clients shift their sourcing to alternate destinations. This vertical is also expected to enhance its margin through diversified product offerings and growing demand for fibres made from recycled PET. Volumes are higher by 33% YoY driven by entry in to Brazil and India and higher by 34% QoQ due to entry in to India.

The Hygiene business is relatively secure as IVL has already positioned for local supplies. Hygiene business volumes are higher by 62% YoY primarily by our entry into downstream nonwoven fabrics business and strong demand for Bico fibers in North America.

The business continues its thrust on growth and margins expansions with the bi-component line in USA in 2020. The JV with Huvis in low melt fibers in USA is also on track for commissioning in 2020.

The reorganisation of the Fibre business into these three verticals has been well received by global customers and we expect it will further unleash competitive advantage to IVL.

The segment earned a core EBITDA of \$ 59 million, an increase of 20% on a YoY basis due to higher volumes. On a YoY basis, EBITDA margin has been under pressure due to lower operating rate (and consequent higher fixed costs).

## **Packaging**

- Production of 55 thousand tons (+41% YoY; +7% QoQ)
- Core EBITDA of \$19 million (+43% YoY; +15% QoQ),
- Core EBITDA margin was 20% (-2% YoY; +1% QoQ).
- Operating rate of 80% (1Q19 76%)

The packaging segment accounted for 2% of total production and 5% of total core EBITDA.

Seen from a short term time horizon, the increase in volume supported increase in demand due to seasonal summer demand resulting in higher utilization rate and the acquisition of assets in Egypt. On a structural basis, demand for PET, a 100% recyclable, low cost and light weight material is growing at a strong 5% CAGR as demand for safe drinking water continues to rise unabated and PET is by far the most preferred material for this necessity.

The segment earned a core EBITDA of \$ 19 million, an increase of 43% on a YoY basis and an increase of 15% on a QoQ basis due to higher volumes. EBITDA margin for this high-growth segment remains at a robust 20%.

### **Integrated Oxides and Derivatives (Ethylene, PEO, MEG and related derivatives)**

- Production of 103 thousand tons (-20% YoY; +242% QoQ)
- Core EBITDA of \$26 million (-55% YoY; 912% QoQ),
- Core EBITDA margin was 47% (-4 YoY; +43% QoQ).
- Operating rate of 75% ( 1Q 19 22 % )

Integrated Oxides and Derivatives segment accounted for 3% of total production and 7% of total core EBITDA.

Production from the segment was adversely impacted due to the extended shutdown of the EO-EG plant; continuing from 1Q19. The plant commenced commercial production on 02 May 2019 thereby losing production and commensurate earnings for over a month for 2Q19 and for a further 2 months in 1Q19 thereby impacting both quarters and the YoY performance.

Consequently, earnings for 2Q19 earnings was impacted by lower contributions from a high-margin EO vertical and lower margins in the EG vertical due to ongoing weakness in MEG in Asia partly cushioned by low USGC costs.

The US gas cracker, which will provide ethylene feedstock has achieved mechanical completion on 02 May 2019 has not been commercialized due mainly to implementation of technical improvements discovered during the testing phase since spot ethylene availability at low cost can meet our captive needs. We foresee start up of this facility on a permanent basis starting Jan 2020.

The segment earned a core EBITDA of \$ 26 million, a decline of 55% on a YoY basis and an increase of 9 times on a QoQ basis. EBITDA margin for this segment was at 47%. The Integrated Oxides and Derivatives portfolio of the announced Huntsman acquisition will transform this segment with incremental volume and provides the ability to enhance the portfolio with high value-added, high margin downstream growth engines. The transaction will also broaden IVL's expertise in operational excellence, global scale, differentiated formulations, technologies and geographic reach for integrated EO and EO Derivatives. A second site for this segment also will support client needs in terms of dependability.

### **Specialty Chemicals (NDC, IPA and Specialty PET)**

- Production of 156 thousand tons (+0% YoY; -19% QoQ)
- Core EBITDA of \$3 million (-94% YoY; -86% QoQ),
- Core EBITDA margin was 1% (-14 YoY; -6% QoQ).
- Operating rate of 57% ( 1Q 19 78 % )

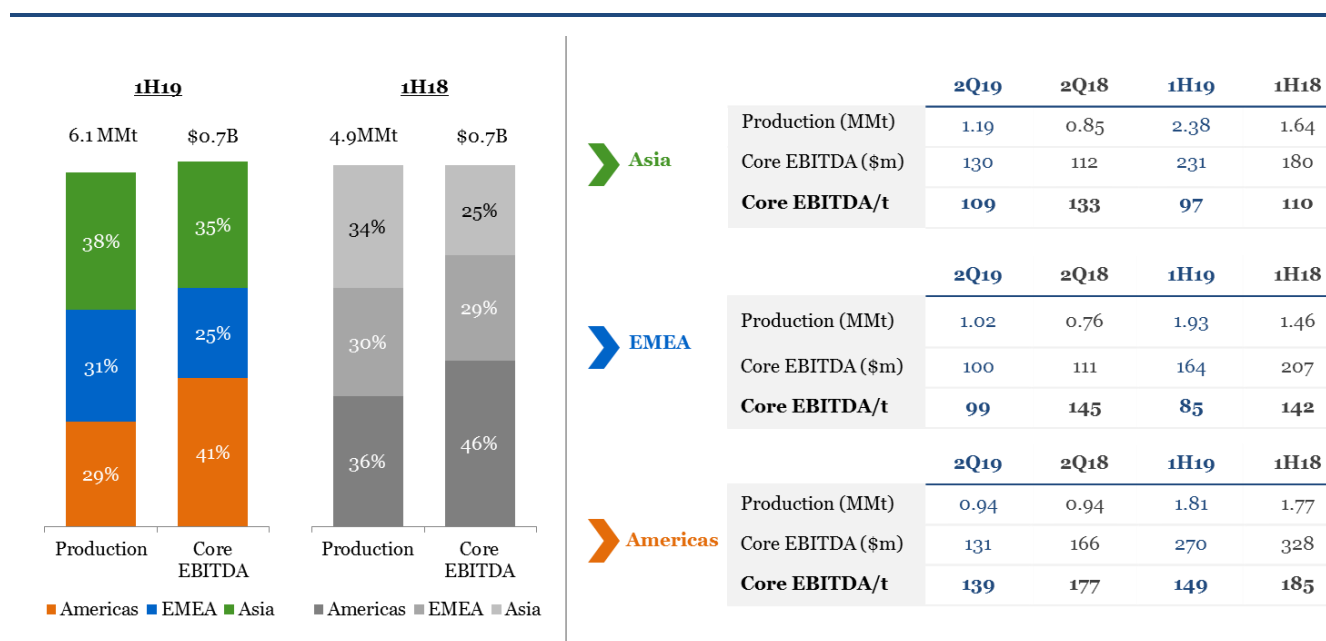
The segment accounted for 5% of total production and a contributed 1% to core EBITDA.

Production was 156 thousand tons as a result of acquisition of Invista Germany (PET HVA) completed in 1Q19 and start-up of IPA (220 thousand tons) facility in USA. IVL continues to be sole producer of NDC and continues to serve its demand. IPA margins remain very weak in this quarter as supplies exceed demand and further being squeezed by higher feedstock (mixed-xylene) prices. We expect supply / demand to start improving in 2020 as new end-users switch to IPA due to lower prices. Specialty PET continues to contribute positively to the segment earnings. Contribution from this segment was also adversely impacted due to an unplanned shutdown in USA. This facility has since resumed production.

The Speciality Chemicals portfolio of the recently announced Huntsman acquisition will enhance the segment with incremental Oxyfuel volume, a high value-added, high margin downstream chemical. The acquisition reinforces IVL's stated plan of investing in this segment in order to capture higher margins and create a more diversified chemicals portfolio.

## Regional Highlights

Figure 2 :Regional Performance



\*Core Financials exclude IRSL

\*\*Internal reclassified region of Egypt

### Asia

- Production in Asia went up 41% YoY and 0% QoQ primarily on account of India PET consolidation & Indonesia PTA consolidation.
- The EBITDA increase was 16% YoY and 29% QoQ on account of the volume increase as well as improved margins.
- On a LTM 2Q2019 basis, the absolute EBITDA increase is 50% and EBITDA/ton increase is

13% over LTM 2Q2018 (higher than quarterly YoY) due to continuous improvement in margin from 2Q 2017 to 2Q 2019.

- In the context of the nature of business dynamics, Egypt has been reclassified under Asia.

### Europe

- Production in Europe went up 33% YoY primarily on account of Egypt PET & Portugal PTA volumes which came on stream from Q2/Q3 2018 and are still ramping up. Relatively smaller volume additions also came from fiber assets acquired in 2018 & 2019 (Avgol, Kordana, Schoeller, UTT).
- The EBITDA however decreased 9% YoY due to depressed margins in IPA business and lower Rotterdam production.
- On a LTM 2Q2019 basis, the absolute EBITDA decrease is 28% and EBITDA/ton decrease is 44% over LTM 2Q2018 (higher than quarterly YoY) due to continuous improvement in margin from 2Q 2017 to 2Q 2019.

### Americas

- Production in Americas was up 1% YoY, lower than expected despite Brazil PET addition due to loss of volumes in Integrated Oxides and Derivatives business & Auriga PET .
- The EBITDA however decreased 21% YoY primarily due to loss of higher margin Integrated Oxides and Derivatives business.
- On a LTM 2Q19 basis, the absolute EBITDA increase is 17% and EBITDA/ton increase is 10% due to structural improvements seen in Integrated PET business over the last eight quarters.

## Capital Expenditure Program

We continue to invest in the business to enhance overall production, vertical integration and quality of earnings. IVL balance sheet and cash flow generation are strong, allowing us to invest significantly in our growth engines, through selective growth and turnaround opportunities, leveraging our strengths in core markets and in further enhancing our offering.

**Table 3: Pipeline of ongoing projects 2019-2021**

Project	Business	Year	Total Installed Capacity (MMt)
Corpus Christi PET/PTA	Integrated PET	2020 - 2021	PET: 1.1, PTA: 1.3
Debottlenecking projects : On going			

## Outlook for 2019

The strength in our core businesses of Integrated PET, Fibers and Packaging are reflecting desired performances and is expected to remain on track for the rest of 2019 with respect to volume growth, higher operating rates and commensurate EBITDA contributions.

Low feedstocks prices for Paraxylene and MEG and shift in chain margins towards PTA and PET are expected to be the main drivers for strong performance of Integrated PET chain.

In the Fibers & Packaging segment, we expect higher utilization rates and improved earnings on account of lower feedstock prices but are cautious with respect to trade wars impact especially in the mobility vertical.

Earnings from the Integrated Oxides and Derivatives segment will show a significant improvement over 1H19 although the lower margin in MEG will partially impact results YoY. Our Specialty Chemicals businesses are expected to recover partially for the rest of 2019 especially in Speciality PET.

Growing demand for 100% recyclable PET is also being addressed through a series of additional initiatives in the Company's recycling strategies and offerings.

IVL started paying quarterly interim dividend since 3Q18 and is continuing this practice.

Overall, we believe that with promising opportunities in new growth engine segment, supported by well-established existing businesses, IVL portfolio is poised for growth and remain confident of our goal to double our EBITDA every 5 years.

Our Core EBITDA guidance for 2019 is likely to be impacted by the shortfall in the first half of the year. 2H19 is expected to remain on plan.

## ***Forward-looking Statements***

The statements included herein contain “forward-looking statements” of Indorama Ventures Public Company Limited (the “Company”) that relate to future events, which are, by their nature, subject to significant risks and uncertainties. All statements, other than statements of historical fact contained herein, including, without limitation, those regarding the future financial position and results of operations, strategy, plans, objectives, goals and targets, future developments in the markets where the Company participates or is seeking to participate and any statements preceded by, followed by or that include the words “target”, “believe”, “expect”, “aim”, “intend”, “will”, “may”, “anticipate”, “would”, “plan”, “could”, “should”, “predict”, “project”, “estimate”, “foresee”, “forecast”, “seek” or similar words or expressions are forward-looking statements.

Such forward-looking statements involve known and unknown risks, uncertainties and other important factors beyond the Company’s control that could cause the actual results, performance or achievements of the Company to be materially different from the future results, performance or achievements expressed or implied by such forward-looking statements. These forward-looking statements are based on numerous assumptions regarding the Company’s present and future business strategies and the environment in which the Company will operate in the future and are not a guarantee of future performance. 2019 and 2021 projections are based on historical 2017-2018 performance and management forecast. The predicted volume is based on legacy and new assets already committed, planned and announced.

Such forward-looking statements speak only as at the date of this document, and the Company does not undertake any duty or obligation to supplement, amend, update or revise any such statements. The Company does not make any representation, warranty or prediction that the results anticipated by such forward-looking statements will be achieved.

## ***Definitions***

**Core EBITDA** is after excluding inventory gains/losses from reported EBITDA.

**Inventory gains/losses** in a period result from the movement in prices of raw materials and products from the end of the previous reported period to the end of the current reported period. The cost of sales is impacted by inventory gains/losses wherein inventory gains decrease the cost of sales and inventory losses increase the cost of sales.

**Core Net Profit** is the Reported Net Profit less extraordinary items less tax adjusted inventory gain/loss.

**Net Operating Debt** is Net Debt (total debt less cash and current investments) less cash outflow for the various projects underway which are not yet completed and have not yet started contributing to the earnings.

## ***Notes***

We recommend that investors always read the MD&A together with the published financial statements to get complete details and understanding.

The consolidated financials are based on the elimination of intra-company (or intra-business segment) transactions. For this reason, the total of each segment may not always tally with consolidated financials. Similarly segments total may not always match to total due to holdings segment.

The Polyester Chain businesses are generally traded in US\$ and therefore the Company believes in helping its readers with translated US\$ figures. The Company’s reporting currency is THB. THB results are translated into US\$ at the average exchange rates and closing exchange rates where applicable.

The Company has presented the analysis in the MD&A in US\$ as it believes that the business can be explained better in US\$ terms. However THB numbers are also given where needed. Readers should rely on the THB results only.

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**Table 4: Segment Results (Old segment)**

\$million	Quarterly				Last Twelve Months		
	2Q19	1Q19	2Q18	2Q19	LTM	LTM	LTM
(except where stated otherwise)				YoY	2Q19	2Q18	YoY
<b>Production Volume (k tons)</b>	<b>3,148</b>	<b>2,966</b>	<b>2,546</b>	<b>24%</b>	<b>11,662</b>	<b>9,564</b>	<b>22%</b>
PET	1,330	1,337	1,066	25%	4,920	3,918	26%
Fibers	450	413	377	19%	1,668	1,419	18%
Feedstock	1,369	1,216	1,103	24%	5,074	4,226	20%
West Feedstock	952	797	775	23%	3,506	2,982	18%
Asia PTA	417	420	328	27%	1,568	1,244	26%
<b>Operating rate (%)</b>	<b>87%</b>	<b>85%</b>	<b>92%</b>	<b>-521bps</b>	<b>86%</b>	<b>89%</b>	<b>-333bps</b>
PET	83%	89%	92%	-935bps	86%	90%	-379bps
Fibers	93%	89%	97%	-380bps	91%	91%	6bps
Feedstock	89%	80%	90%	-137bps	85%	89%	-392bps
West Feedstock	89%	75%	88%	78bps	83%	88%	-511bps
Asia PTA	89%	91%	96%	-696bps	90%	91%	-109bps
<b>Core EBITDA (\$m)</b>	<b>361</b>	<b>304</b>	<b>388</b>	<b>(7)%</b>	<b>1,392</b>	<b>1,262</b>	<b>10%</b>
PET	169	145	180	(6)%	606	471	29%
Fibers	62	77	58	9%	266	216	23%
Feedstock	138	78	148	(7)%	530	569	(7)%
West Feedstock	104	62	130	(20)%	428	541	(21)%
Asia PTA	35	15	18	92%	101	28	264%
<b>Core EBITDA/ton (\$)</b>	<b>115</b>	<b>102</b>	<b>153</b>	<b>(25)%</b>	<b>119</b>	<b>132</b>	<b>(10)%</b>
PET	127	109	169	(25)%	123	120	2%
Fibers	139	186	153	(9)%	160	152	5%
Feedstock	101	64	134	(25)%	104	135	(22)%
West Feedstock	109	78	168	(35)%	122	181	(33)%
Asia PTA	83	36	55	51%	65	22	189%
<b>Core EBITDA Margin (%)</b>	<b>12%</b>	<b>10%</b>	<b>15%</b>	<b>-250bps</b>	<b>12%</b>	<b>14%</b>	<b>-158bps</b>
PET	10%	8%	13%	-241bps	9%	10%	-18bps
Fibers	7%	9%	8%	-64bps	8%	8%	-6bps
Feedstock	12%	7%	14%	-200bps	11%	15%	-433bps
West Feedstock	13%	8%	16%	-344bps	12%	19%	-667bps
Asia PTA	10%	4%	7%	305bps	7%	3%	406bps

\*Core Financials exclude IRSL



**Table 5 : Reconciliation of Core Profit After Tax and NCI to Reported Net Profit**

\$million (except where stated otherwise)	Quarterly				Last Twelve Months		
	2Q19	1Q19	2Q18	2Q19	LTM	LTM	LTM
				YoY	2Q19	2Q18	YoY
<b>Core Net Profit after Tax and NCI</b>	<b>159</b>	<b>128</b>	<b>234</b>	<b>(32)%</b>	<b>666</b>	<b>664</b>	<b>0%</b>
Inventory gains (losses) and others	(92)	(38)	9	(1111)%	(141)	49	(389)%
Total tax on Inventory gains(losses)	11	3	(1)	(851)%	11	(5)	(340)%
<b>Net profit, before extraordinary items</b>	<b>78</b>	<b>93</b>	<b>242</b>	<b>(68)%</b>	<b>536</b>	<b>708</b>	<b>(24)%</b>
Add: Non Operational/Extraordinary income(expenditure)	(6)	24	17	(136)%	29	138	(79)%
Acquisition cost and pre-operative expense,	(5)	(7)	(11)	(59)%	(30)	(28)	5%
Gain on Bargain Purchases, impairments and feasibility study (Net) <sup>1</sup>	(0)	26	28	(100)%	56	69	(19)%
Other Extraordinary Income(Expense)	(1)	6	(0)	976%	3	97	(97)%
<b>= Net Profit after Tax and NCI</b>	<b>72</b>	<b>117</b>	<b>259</b>	<b>(72)%</b>	<b>565</b>	<b>846</b>	<b>(33)%</b>

\*Core Financials exclude IRSL

<sup>1</sup>A gain on bargain purchase needs to be accounted for on completion of any acquisition under Thai Accounting Standards

**Table 6 : Cash Flow Statement**

\$million (except where stated otherwise)	Quarterly				Last Twelve months		
	2Q19	1Q19	2Q18	2Q19	LTM	LTM	LTM
				YoY	2Q19	2Q18	YoY
<b>Core EBITDA</b>	<b>361</b>	<b>304</b>	<b>388</b>	<b>(7)%</b>	<b>1,392</b>	<b>1,262</b>	<b>10%</b>
Net working capital and others <sup>1</sup>	69	(0)	(149)	(146)%	(59)	(338)	(83)%
Income tax	(45)	(42)	(17)	160%	(161)	(68)	135%
<b>Operating Cash Flow</b>	<b>385</b>	<b>261</b>	<b>222</b>	<b>73%</b>	<b>1,172</b>	<b>855</b>	<b>37%</b>
Net growth and investment capex <sup>2</sup>	(278)	(363)	(541)	(49)%	(2,147)	(965)	122%
Net working capital on acquired / sold assets	(8)	(91)	(35)	(77)%	(158)	(57)	177%
Maintenance capex	(39)	(60)	(26)	53%	(163)	(103)	59%
<b>Cash Flow After Strategic Spending</b>	<b>60</b>	<b>(253)</b>	<b>(379)</b>	<b>(116)%</b>	<b>(1,297)</b>	<b>(270)</b>	<b>380%</b>
Net financial costs	(72)	(33)	(42)	71%	(194)	(129)	50%
Dividends and PERP interest	(134)	(10)	(106)	27%	(341)	(202)	69%
Proceeds from issue of ordinary shares due to warrants exercised	-	-	183	(100)%	81	866	(91)%
<b>Increase/(Decrease) in Net Debt on cash basis<sup>3</sup></b>	<b>(147)</b>	<b>(296)</b>	<b>(345)</b>	<b>(57)%</b>	<b>(1,750)</b>	<b>265</b>	<b>(760)%</b>

\*Core Financials exclude IRSL

<sup>1</sup> Includes inventory gains/ (losses)

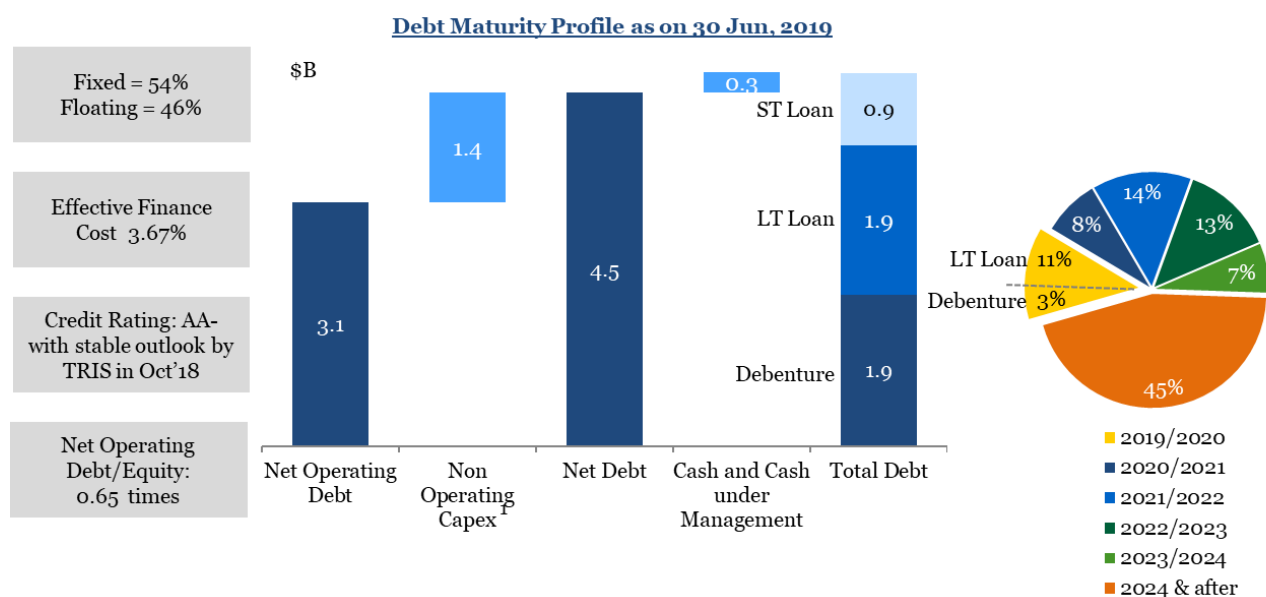
<sup>2</sup> Includes net proceeds from disposals of PPE, other non-current investments and assumed net debt on acquisitions

<sup>3</sup> Includes effect of FOREX changes on balance held in foreign currencies and on the net debt changes over the period of cash flow, due to the increase/decrease in net debt as per statement of financial position might be different

**Table 7 :Debt Profile**

\$million (except where stated otherwise)	30-Jun-19	31-Dec-18
<b>Total Debt</b>	<b>4,727</b>	<b>4,215</b>
Bank overdraft and short-term loans	919	964
Long term debt (Current portion)	409	269
Debentures (Current portion)	105	93
Long term debt (Non-current portion)	1,480	1,083
Debentures (Non-current portion)	1,814	1,806
<b>Cash &amp; Cash under management</b>	<b>250</b>	<b>165</b>
Cash and cash equivalents	267	172
Current investments and loans given	(17)	(7)
<b>Net Debt</b>	<b>4,476</b>	<b>4,050</b>
Non-operating Debt (Project Debt)	1,388	1,220
<b>Net Operating Debt<sup>1</sup></b>	<b>3,089</b>	<b>2,830</b>
Net debt to equity (times)	0.94	0.87
Net operating debt to equity (times)	0.65	0.60
Debts with fixed interest %	54%	49%
Credit Rating by TRIS	AA-	AA-

\*Core Financials exclude IRSL

<sup>1</sup>Net debt after debt for capex and investments in progress that are not generating revenue and earnings as on date given**Figure 3 :Repayment Schedule of Long Term Debt**

\*Core Financials exclude IRSL

<sup>1</sup> Includes various projects underway which are not yet completed and have not yet started contributing to the earnings**Table 8 :Joint Ventures Performance**

\$million (except where stated otherwise)	Quarterly				Last twelve Months		
	2Q19	1Q19	2Q18	2Q19	LTM	LTM	LTM
				YoY	2Q19	2Q18	YoY
<b>Joint Ventures Income /(Loss)</b>	<b>(0)</b>	<b>(0)</b>	7	<b>(103)%</b>	<b>13</b>	<b>5</b>	<b>143%</b>
Polyprima, Indonesia <sup>1</sup>	-	-	0	(100)%	9	(10)	(188)%
India PET JV	-	-	7	(100)%	4	13	(72)%
Others (FiberVisions, PHP China, Mexico)	(0)	(0)	(0)	19%	1	2	(71)%

<sup>1</sup>74% PTA JV, IVL started consolidating Polyprima Indonesia result since 4Q18. IVL has 100% ownership since January 3rd, 2019

**Table 9 :IVL Consolidated Statement of Income**

THBm	Quarterly				Last Twelve Months		
	2Q19	1Q19	2Q18	2Q19 YoY	LTM 2Q19	LTM 2Q18	LTM YoY
<b>Reported Financials</b>							
Net sales	94,895	95,810	83,591	14%	378,142	302,755	25%
Other income (expense), net <sup>1</sup>	671	319	303	122%	1,703	2,056	(17)%
Total Revenue	95,566	96,130	83,893	14%	379,845	304,812	25%
Cost of sales <sup>2</sup>	82,276	83,548	68,009	21%	323,507	250,741	29%
Gross profit	13,291	12,582	15,885	(16)%	56,338	54,071	4%
Selling and administrative expenses <sup>2</sup>	8,806	8,274	6,770	30%	31,984	24,907	28%
Foreign exchange gain (loss)	(179)	99	355	(150)%	(63)	621	(110)%
<b>EBITDA</b>	<b>8,616</b>	<b>8,393</b>	<b>12,688</b>	<b>(32)%</b>	<b>40,586</b>	<b>42,479</b>	<b>(4)%</b>
Depreciation and amortization	4,309	3,986	3,218	34%	16,295	12,694	28%
<b>Operating income</b>	<b>4,306</b>	<b>4,407</b>	<b>9,470</b>	<b>(55)%</b>	<b>24,291</b>	<b>29,784</b>	<b>(18)%</b>
Share of profit/(loss) from JV	(5)	(0)	206	(103)%	416	166	150%
Extraordinary income/ (expenses) <sup>3</sup>	(193)	770	534	(136)%	922	4,659	(80)%
Net interest	(1,494)	(1,341)	(796)	88%	(5,164)	(3,446)	50%
<b>Profit before tax</b>	<b>2,614</b>	<b>3,836</b>	<b>9,414</b>	<b>(72)%</b>	<b>20,465</b>	<b>31,164</b>	<b>(34)%</b>
Income tax expense	442	103	1,145	(61)%	2,332	3,479	(33)%
Current tax expense/(income)	312	179	1,353	(77)%	2,495	3,931	(37)%
Deferred tax expense	131	(77)	(208)	(163)%	(163)	(452)	(64)%
<b>Profit/(loss) for the period</b>	<b>2,172</b>	<b>3,733</b>	<b>8,269</b>	<b>(74)%</b>	<b>18,133</b>	<b>27,685</b>	<b>(35)%</b>
Non-controlling interests (NCI)	(95)	25	26	(465)%	(250)	109	(330)%
<b>Net profit/(loss) after NCI</b>	<b>2,267</b>	<b>3,708</b>	<b>8,243</b>	<b>(72)%</b>	<b>18,384</b>	<b>27,576</b>	<b>(33)%</b>
Interest on subordinated capital debentures (PERP) <sup>4</sup>	(262)	(259)	(262)	0%	(1,050)	(1,050)	0%
<b>Net profit/(loss) after NCI &amp; PERP interest</b>	<b>2,005</b>	<b>3,449</b>	<b>7,981</b>	<b>(75)%</b>	<b>17,334</b>	<b>26,526</b>	<b>(35)%</b>
Weighted average no. of shares (in Millions)	5,615	5,615	5,500	2%	5,590	5,287	6%
<b>EPS (in THB)</b>	<b>0.36</b>	<b>0.61</b>	<b>1.45</b>	<b>(75)%</b>	<b>3.10</b>	<b>5.02</b>	<b>(38)%</b>
<b>Core Financials</b>							
EBITDA	8,616	8,393	12,688	(32)%	40,586	42,479	(4)%
Less: Inventory gain/(loss) and others	(2,803)	(1,212)	294	(1,055)%	(4,342)	1,587	(374)%
<b>Core EBITDA</b>	<b>11,419</b>	<b>9,604</b>	<b>12,394</b>	<b>(8)%</b>	<b>44,928</b>	<b>40,891</b>	<b>10%</b>
Net profit/(loss) after NCI	2,267	3,708	8,243	(72)%	18,384	27,576	(33)%
Less: Inventory gain/(loss) – tax adjusted and others	(2,566)	(1,105)	246	(1,143)%	(4,104)	1,440	(385)%
Less: Extraordinary income/(expenses)	(193)	770	534	(136)%	922	4,659	(80)%
<b>Core net profit after NCI</b>	<b>5,027</b>	<b>4,042</b>	<b>7,463</b>	<b>(33)%</b>	<b>21,566</b>	<b>21,477</b>	<b>0%</b>
Interest on subordinated capital debentures (PERP) <sup>4</sup>	(262)	(259)	(262)	0%	(1,050)	(1,050)	0%
<b>Core net profit after NCI &amp; PERP interest</b>	<b>4,765</b>	<b>3,784</b>	<b>7,201</b>	<b>(34)%</b>	<b>20,516</b>	<b>20,427</b>	<b>0%</b>
<b>Core EPS (THB)</b>	<b>0.85</b>	<b>0.67</b>	<b>1.31</b>	<b>(35)%</b>	<b>3.67</b>	<b>3.86</b>	<b>(5)%</b>
Net Operating Core ROCE (before JV's and M&A Annualized) %	12.3%	9.2%	19.6%	-730bps	12.6%	15.4%	-281bps

\*Core Financials exclude IRSL

<sup>1</sup> As per internal classification and includes insurance claim for business interruption loss of profit<sup>2</sup> As per internal classification and includes depreciation and amortization expenses<sup>3</sup> As per internal classification and includes gain on bargain purchase on new acquisitions and their related transaction costs and pre-operative expenses<sup>4</sup> Interest net of tax on THB 15 billion Perpetual Debentures<sup>5</sup> M&A earnings are annualized for ROCE calculation to appropriately represent the ratio based on restated historical numbers. ROCE calculation is based on THB currency which may not match with other graphs where the calculation is on \$ basis. Including PTA Portugal in 2Q18 while in 2Q18 MD&A has shown ROCE excluding PTA Portugal.

**Table 10: IVL Consolidated Statement of Financial Position**

THBm	30-Jun-19	31-Dec-18	30-Jun-19 vs 31-Dec-18
<b>Assets</b>			
Cash and current investments	8,505	5,713	49%
Trade accounts receivable	41,098	37,637	9%
Inventories	67,604	70,085	(4)%
Other current assets	13,628	10,850	26%
<b>Total current assets</b>	<b>130,836</b>	<b>124,284</b>	<b>5%</b>
Investment	2,313	5,294	(56)%
Property, plant and equipment	214,739	205,182	5%
Intangible assets	41,263	40,349	2%
Deferred tax assets	3,034	2,714	12%
Other assets	3,117	1,371	127%
<b>Total assets</b>	<b>395,302</b>	<b>379,195</b>	<b>4%</b>
<b>Liabilities</b>			
Bank OD and short-term loans from financial institutions	28,305	31,272	(9)%
Trade accounts payable	62,532	54,565	15%
Current portion of long-term loans	12,581	8,627	46%
Current portion of debenture	3,308	3,013	10%
Current portion of finance lease liabilities	104	110	(6)%
Other current liabilities	14,763	16,113	(8)%
<b>Total current liabilities</b>	<b>121,593</b>	<b>113,700</b>	<b>7%</b>
Long-term loans from financial institutions	46,317	34,640	34%
Debenture	55,769	58,604	(5)%
Finance lease liabilities	853	498	71%
Deferred tax liabilities	17,278	15,788	9%
Other liabilities	5,487	4,109	34%
<b>Total liabilities</b>	<b>247,296</b>	<b>227,339</b>	<b>9%</b>
Shareholder's equity			
Share capital	5,615	5,615	0%
Share premium	60,331	60,331	(0)%
Retained earnings & Reserves	57,225	64,018	(11)%
<b>Total equity attributable to shareholders</b>	<b>123,171</b>	<b>129,964</b>	<b>(5)%</b>
Subordinated perpetual debentures	14,874	14,874	0%
<b>Total equity attributable to equity holders</b>	<b>138,045</b>	<b>144,838</b>	<b>(5)%</b>
Non-controlling interests (NCI)	9,961	7,018	42%
Total shareholder's equity	148,006	151,855	(3)%
<b>Total liabilities and shareholder's equity</b>	<b>395,302</b>	<b>379,195</b>	<b>4%</b>

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