Management's Discussion and Analysis (MD&A) and operating results for the three-month and ninemonth periods ended Sep 30, 2013

1. PTT and its subsidiaries' performance

Global economic growth in the third quarter of 2013 (Q3/2013) was slower than anticipated as concerns on the US the tapering of Quantitative Easing (QE) program, and also slower than expected GDP growth from China, as well as, weaker economic performance in developing and emerging Economies. While, the Eurozone economy continued to show the improvement signs. The International Monetary Fund (IMF), in October 2013, revised down its global growth prediction for 2013 to 2.9%, compared with its last forecasted in July of 3.1%.

The average Dubai crude oil price in Q3/2013 surged to US\$ 106.3 per barrel compared with US\$ 100.8 per barrel in Q2/2013. However, Dubai price in Q3/2013 unchanged from Q3/2012 due to political tension in Middle East intensified from situation in Syria, Egypt, Libya and Iraq. Furthermore, hurricane season in the US and higher demand in both OECD and Non-OECD are supporting oil price. The International Energy Agency (IEA) reported in October 2013 that the global oil demand in Q3/2013 was 91.7 million barrels per day (MBD), an increase of 1.1 MBD and 1.3 MBD from Q2/2013 and Q3/2012 respectively.

Most of petroleum product prices in Singapore spot market also increased in parallel to crude oil prices. The average price of diesel and jet in Q3/2013 were higher than Q2/2013 from the European traveling season and unplanned maintenance shutdowns of refineries in Taiwan and India. While gasoline prices were stable owing to soften demand in Vietnam and Indonesia, as well as, sufficient supply from high inventory. However, fuel oil price was still under pressure as there was a surplus supply from the western into the region as well as high fuel oil inventory in Singapore.

Olefins product prices in Q3/2013 rose in line with the higher feedstock Ethylene and Propylene prices due to petrochemical plants turnaround season in Asia coupled with improving demand. For Aromatics product, Paraxylene price increased along with increasing crude oil and naphtha prices as well as high PTA demand. While, Benzene price was lower due to soften demand in the US and a major turnaround of Styrene Monomer (SM) plants.

National Energy Policy Committee (NEPC) resolved to raise the retail price of LPG in the household sector by Baht 0.50 per kilogram per month for 12 months starting September 1, 2013. The increasing in retail price will be collected to oil fund.

Thailand posted weaker-than-expected economic growth in Q3/2013 on the back of a slowdown in private sector consumption, due to the rising household debt, delayed in government investment, and contraction in exports. These factors indicated the slowdown in Thai economic recovery. As of August 2013, the Office of the National Economic and Social Development Board (NESDB) has projected the Thai economy to grow in range of 3.8% - 4.3%, decreasing from previously projected in May 2013 of 4.2% - 5.2%.

As a result of the factors mentioned above, PTT and its subsidiaries' financial performance of Q3/2013 compared with Q3/2012 and Q2/2013 as well as 9M/2013 compared with 9M/2012 as follows:

				% Increase/(Decrease)			%Increase/
	Q3/2012	Q2/2013	Q3/2013	YoY	QoQ	9M/2012	9M/2013	(Decrease)
Dubai crude price (US\$/bbl)	106.3	100.8	106.3	0.0%	5.5%	109.6	105.1	(4.1%)
Sales & services	686,025	669,609	723,152	5.4%	8.0%	2,060,947	2,092,694	1.5%
: Exploration & Production	56,228	54,396	57,100	1.6%	5.0%	154,879	166,182	7.3%
: Natural gas ^{1/}	130,914	131,382	132,844	1.5%	1.1%	374,988	395,980	5.6%
: Oil ^{2/}	147,302	152,994	150,642	2.3%	(1.5%)	457,118	459,337	0.5%
: International Trading 3/	395,630	376,245	429,002	8.4%	14.0%	1,205,315	1,207,651	0.2%
: Petrochemical 4/	22,764	20,639	23,296	2.3%	12.9%	61,434	67,366	9.7%
: Coal ^{5/}	8,451	5,555	6,465	(23.5%)	16.4%	21,700	17,709	(18.4%)
: Others ^{6/}	1,041	976	1,039	(0.2%)	6.5%	3,266	2,969	(9.1%)
: Elimination	(76,305)	(72,578)	(77,236)	(1.2%)	(6.4%)	(217,753)	(224,500)	(3.1%)
EBITDA	56,305	55,919	56,691	0.7%	1.4%	174,527	169,989	(2.6%)
: Exploration & Production	40,193	40,016	40,804	1.5%	2.0%	112,435	121,145	7.7%
: Natural gas	12,062	9,010	11,076	(8.2%)	22.9%	43,005	32,717	(23.9%)
: Oil	3,055	3,250	3,034	(0.7%)	(6.7%)	12,659	11,273	(10.9%)
: International Trading	(2,195)	273	(217)	90.1%	n.m.	(2,255)	(1,593)	29.4%
: Petrochemical	890	224	562	(36.9%)	n.m.	2,108	1,532	(27.3%)
: Coal	2,323	1,213	1,043	(55.1%)	(14.0%)	6,109	3,503	(42.7%)
: Others	379	1,711	201	(47.0%)	(88.3%)	743	765	3.0%
: Elimination	(402)	222	188	n.m.	(15.3%)	(277)	647	n.m.
EBIT	38,680	38,630	37,629	(2.7%)	(2.6%)	126,165	115,976	(8.1%)
: Exploration & Production	28,530	28,798	27,887	(2.3%)	(3.2%)	80,761	85,379	5.7%
: Natural gas	8,693	5,600	7,571	(12.9%)	35.2%	32,999	22,435	(32.0%)
: Oil	2,411	2,603	2,353	(2.4%)	(9.6%)	10,758	9,305	(13.5%)
: International Trading								
- Excluding Effect of FX	(2,199)	270	(220)	90.0%	n.m.	(2,265)	(1,601)	29.3%
- Including Effect of FX	513	510	797	55.4%	56.3%	2,364	3,620	53.1%
: Petrochemical	689	(81)	236	(65.8%)	n.m.	1,515	595	(60.7%)
: Coal	986	(77)	(158)	n.m.	n.m.	2,995	(284)	n.m.
: Others	(29)	1,293	(228)	n.m.	n.m.	(323)	(502)	(55.4%)
: Elimination	(401)	224	188	n.m.	(16.1%)	(275)	649	n.m.
Depreciation and	17,625	17,290	19,062	8.2%	10.3%	48,362	54,013	11.7%
amortization expenses								
Finance costs	4,978	5,070	5,073	1.9%	0.1%	14,241	15,080	5.9%
Gain (loss) on foreign	3,212	(3,473)	2,047	(36.3%)	n.m.	3,898	5,318	36.4%
exchange								
Income taxes	8,935	15,500	9,321	4.3%	(39.9%)	34,061	34,331	0.8%
Net income (loss)	35,827	12,278	30,877	(13.8%)	n.m.	81,930	79,261	(3.3%)
Earnings per share	,	,	, , , , , , , , , , , , , , , , , , ,	, ,		· ·	, , , , , , , , , , , , , , , , , , ,	, ,
(Baht/share) ^{7/}	12.54	4.30	10.81	(13.8%)	n.m.	28.68	27.75	(3.2%)

Notes: /1 Including the natural gas business, the consolidation of PTT Natural Gas Distribution Co., Ltd. (PTTNGD), PTT LNG Co., Ltd (PTTLNG), Combined Heat and Power Producing Company Limited (CHPP) and the proportionate consolidation of Trans Thai-Malaysia (Thailand) Co., Ltd. (TTM (T)), Trans Thai-Malaysia (Malaysia) Sdn. Bhd. (TTM (M)), District Cooling System and Power Plant Co., Ltd. (DCAP) and Thai Solar Renewable Co., Ltd. (TSR) (In Q2/2013, the status of TSR changed from other investment to a jointly controlled entity with 40% shareholding held by PTT.)

/2 Including the oil marketing business, the consolidation of PTT (Cambodia) Co., Ltd. (PTTCL), Subic Bay Energy Co., Ltd. (SBECL), PTT Tank Terminal Co., Ltd. (PTT TANK), PTT Retail Business Co., Ltd. (PTTRB) and the consolidated Thai Lube Blending Company Limited (TLBC) due to the 100% TLBC's shareholding acquisition by PTTRB and PTT, and PTT Oil Myanmar CO., Ltd. (PTTOM)(100% shareholding held by PTT).

/3 Including the international trading business and the consolidation of PTT International Trading Pte Ltd (PTTT).

/4 Including the consolidation of PTT Polymer Marketing Co., Ltd. (PTTPM), PTT Polymer Logistics Co., Ltd. (PTTPL) and PTT PMMA Co., Ltd. (PTTPMMA) (100% shareholding held by PTT) and the proportionate consolidation of PTT Asahi Chemical Co., Ltd. (PTTAC), HMC Polymers Co., Ltd. (HMC) and PTT MCC BioChem Co., Ltd. (PTTMCC)

/5 Including Sakari Resources Ltd. (SAR) and International Coal Holding Limited (ICH) (94.58% and 100% shareholdings, respectively, held by PTT Mining Limited (PTTML), a 100% shareholding subsidiary of PTT International Company Limited (PTTI)).

/6 Including the consolidation of Energy Complex Co., Ltd. (EnCo), Business Services Alliance Co., Ltd. (BSA), PTT Green Energy Pte Ltd (PTTGE), PTT International Company Limited (PTTI), and PTT Regional Treasury Center Pte. Ltd. (PTTRTC)(100% shareholding held by PTT).

/7 Basic earnings per share is calculated by dividing net income attributable to ordinary shareholders by the weighted average number of ordinary shares which are held by third parties during the periods.

1.1 Overall performance of PTT and its subsidiaries

Third quarter of 2013 compared with Third quarter of 2012

In the third quarter of 2013 (Q3/2013), sales revenue of PTT and its subsidiaries was Baht 723,152 million, increasing from the third quarter of 2012 (Q3/2012) by Baht 37,127 million or 5.4%. The average Dubai crude oil price in Q3/2013 was US\$ 106.3 per barrel, same as Q3/2012. Earnings before finance costs, income taxes, depreciation and amortization expenses, and other non-operating income and expenses (EBITDA) slightly increased by Baht 387 million or 0.7% principally due to the better performance of the international trading and petroleum exploration and production businesses. In Q3/2013, share of gain from investments in associates of PTT and its subsidiaries was Baht 10,492 million, decreased by Baht 2,623 million from Baht 13,115 million in Q3/2012, resulting from the lower performance of petrochemical and refinery associates. The performance of Olefins petrochemical associates decreased, resulting from the lightning strike incident on the Waste Heat Recover Unit (WHRU) of Gas Separation Plant Unit 5 (GSP#5) of PTT, which caused lower utilization for PTTGC's plants, despite the increase of olefins product price due to maintenance shutdowns of many plants in Asia and Europe, and higher demand from the easing Euro Zone debt crisis concern. On the other hand, the performance of Aromatics petrochemical associates improved due to higher spread margin of both Benzene and Paraxylene. Moreover, the performance of refinery associates declined due to lower spread margin of refined products in almost all products due to the depreciation of regional currencies, leading to lower import and higher export of refined products. The foreign exchange gains of PTT and its subsidiaries was Baht 2,047 million decreasing from Q3/2012 by Baht 1,165 million or 36.3% due to the Baht depreciation against \$US. The income taxes of PTT and its subsidiaries in Q3/2013 was Baht 9,321 million, increasing from Q3/2012 by Baht 386 million or 4.3%. Consequently, the net income of PTT and its subsidiaries decreased by Baht 4,950 million or 13.8% from Baht 35,827 million in Q3/2012 (or Baht 12.54 per share) to Baht 30,877 million in Q3/2013 (or Baht 10.81 per share).

Third quarter of 2013 compared with Second quarter of 2013

In Q3/2013, sales revenue of PTT and its subsidiaries was Baht 723,152 million, increasing from the second quarter of 2013 (Q2/2013) by 8.0%. The average Dubai crude oil price increased from US\$ 100.8 per barrel in Q2/2013 to US\$ 106.3 per barrel in Q3/2013. EBITDA increased by Baht 772 million or 1.4% principally due to the better performance of the natural gas and petroleum exploration and production businesses. In Q3/2013, share of gain from investments in associates of PTT and its subsidiaries was Baht 10,492 million, increasing by Baht 9,145 million compared with Q2/2013 due to better performance of all business units, mainly from refinery and petrochemical associates. The refinery associates had higher Gross Refining Margin (GRM), especially from the spread margin of aviation fuel, diesel due to unplanned maintenance shutdowns of refineries in Taiwan and India, together with higher demand of aviation fuel in relation to travelling season in Europe and stock gain. Furthermore, the performance of Aromatics petrochemical associates increased as, in Q3/2013, the Paraxylene price was driven as PTA plants in China retain high utilization rate due to high PTA-Paraxylene spread margin, as well as lower Paraxylene supply owing to an unplanned Aromatics plant shutdown in Japan. Moreover, the performance of olefins petrochemical associates decreased as a result of the unplanned shutdown of PTT's GSP#5 and 52-day planned shutdown of PTTGC's I4-1 plant, despite the higher HDPE price. The gain on foreign exchange of PTT and its subsidiaries increasing from Baht 3,473 million foreign exchange losses in Q2/2013 to Baht 2,047 million foreign exchange gain in Q3/2013. The income taxes of PTT and its subsidiaries in Q3/2013 was Baht 9,321 million, decreasing from Q2/2013 by Baht 6,179 million or 39.9%, mainly due to lower petroleum income taxes of PTTEP. Consequently, the net income of PTT and its subsidiaries in Q3/2013 increased by Baht 18,599 million from Baht 12,278 million in Q2/2013 (or Baht 4.30 per share) to Baht 30,877 million in Q3/2013 (or Baht 10.81 per share).

First nine months of 2013 compared with First nine months of 2012

In the first nine months of 2013 (9M/2013), sales revenue of PTT and its subsidiaries was Baht 2,092,694 million, increased by 1.5% from Baht 2,060,947 million in the first nine months of 2012 (9M/2012) despite the average Dubai crude oil price decreased from US\$ 109.6 per barrel in 9M/2012 to US\$ 105.1 per barrel in 9M/2013. EBITDA in 9M/2013 declined by Baht 4,538 million or 2.6% from Baht 174,527 million to Baht 169,989 million principally due to the lower performance of the gas business, even the performance of PTTEP improved. However, in 9M/2013, share of gain from investments in associates of PTT and its subsidiaries was Baht 21,990 million, increased by Baht 2,880 million or 15.1% compared with 9M/2012 due to the better performances of all businesses, especially refinery and petrochemical associates. The performance of refinery associates improved from higher GRM and stock gain. The performance of petrochemical associates improved in both Aromatics and Olefins. Aromatics improved due to higher spread margin of Benzene and Paraxylene, especially Benzene, as a result of higher import from China, due to high spread margin of Benzene and Styrene Monomer (SM) in 9M/2013 leading to higher SM production rates. In addition, the performance of olefins petrochemical associates increased due to higher spread margin in almost all products. The foreign exchange gain of PTT and its subsidiaries was Baht 5,318 million, increased by Baht 1,420 million from 9M/2012. The income taxes of PTT and its subsidiaries in 9M/2013 was Baht 34,331 million, increasing from 9M/2012 by Baht 270 million or 0.8%. The net income of PTT and its

subsidiaries decreased by Baht 2,669 million or 3.3% from Baht 81,930 million in 9M/2012 (or Baht 28.68 per share) to Baht 79,261 million in 9M/2013 (or Baht 27.75 per share), even though, in 9M/2012, PTT International Company Limited (PTTI) recognized impairment loss from its investment in EMG amounting to Baht 3,972 million while PTT Exploration and Production Company Limited (PTTEP) reported impairment loss on Montara assets amounting to Baht 3,455 million.

1.2 Segmentation performance of PTT and its subsidiaries

1.2.1 Upstream Petroleum and Natural Gas Business Group

Petroleum Exploration and Production Business: PTT Exploration and Production Public Co., Ltd. (PTTEP)

Third quarter of 2013 compared with Third quarter of 2012

In Q3/2013, sales revenue of PTTEP, a subsidiary of PTT, was Baht 57,100 million, increased by Baht 872 million or 1.6% from Q3/2012, mainly due to the higher average selling price, which rose by 2.7% from US\$ 64.0 per barrel of oil equivalent (BOE) in Q3/2012 to US\$ 65.7 per BOE in Q3/2013. Despite, the average sales volume decreased from 292,228 barrels of oil equivalent per day (BOED) in Q3/2012 to 286,578 BOED in Q3/2013, resulting mainly from the Bongkot project and the B8/32 & 9A project due to production shutdowns in Q3/2013. Moreover, the sales volume of the Vietnam 16-1 was lowered because of FPSO production sharing with a Joint Operation Company in Vietnam from May 2013 onwards; even though, the average sales volume of the PTTEP Australasia project and the S1 project increased because of Montara's commercial operation in August 2013 and increasing new wells and artificial lift techniques of S1 respectively.

EBITDA in Q3/2013 was Baht 40,804 million, increased by Baht 611 million or 1.5% from Q3/2012 due to an increase in average selling prices as aforementioned.

EBIT in Q3/2013 was Baht 27,887 million, decreasing by Baht 643 million or 2.3% from Q3/2012 mainly due to an increase in the depreciation and amortization expenses from an increase in completed assets of the PTTEP Australasia, Bongkot project and the Contract 4 project and from an increase in the completed assets and production rates of MTJDA-B17 project. However, depreciation and amortization expenses from the Vietnam 16-1 project decreased due to higher proved reserves and proved developed reserves revision in 2013 and lower production volume.

Third quarter of 2013 compared with Second quarter of 2013

In Q3/2013, sales revenue of PTTEP was Baht 57,100 million, increased by Baht 2,704 million or 5.0% from Q2/2013, mainly due to higher average selling prices, which rose by 0.8% from US\$ 65.2 per BOE in Q2/2013 to US\$ 65.7 per BOE in Q3/2013. However, average sales volume decreased from 292,721 BOED in Q2/2013 to 286,578 BOED in Q3/2013, mainly due to the Vietnam 16-1 project from FPSO production sharing with a Joint Operation Company in Vietnam. Moreover, there were the planned shutdowns of the Bongkot project and B8/32 & 9A project in Q3/2013 while the average sales volume increased from the PTTEP Australasia project owing to the start-up in August 2013.

EBITDA in Q3/2013 was Baht 40,804 million, increased by Baht 788 million or 2.0% from Q2/2013 due to an increase in average selling prices as aforementioned, even though the exploration expenses increased by Baht 612 million in Q3/2013.

EBIT in Q3/2013 was Baht 27,887 million, decreasing by Baht 911 million or 3.2% from Q2/2013, while EBITDA increased as aforementioned, due to an increase in the depreciation and amortization expenses, mainly resulted from the PTTEP Australasia, which began offloading crude oil for sales in August 2013, and the Arthit project in relation to an increase in completed assets and production rates. However, the depreciation and amortization expenses decreased mainly from the Oman44 project due to higher proved reserves and proved developed reserves revision.

First nine months of 2013 compared with First nine months of 2012

In 9M/2013, sales revenue of PTTEP was Baht 166,182 million, increased by Baht 11,303 million or 7.3% from 9M/2012, mainly due to both the higher average sales volume and average selling price. The average sales volume increased from 269,776 BOED in 9M/2012 to 290,240 BOED in 9M/2013 mainly from the Bongkot project, the S1 project and the PTTEP Australasia project. Bongkot South project started its production as required by the Gas Sales Agreement in June 2012. However, the average sales volume of the Arthit project decreased due to lower nomination and a shutdown for pipeline maintenance in January 2013 of the MTJDA-B17 project. In addition, the average selling price rose by 2.6% from US\$ 64.3 per BOE in 9M/2012 to US\$ 66.0 per BOE in 9M/2013.

EBITDA in 9M/2013 was Baht 121,145 million, increased by Baht 8,710 million or 7.7% from 9M/2012 due to an increase in average sales volume and average selling price as aforementioned, together with the decrease in the petroleum exploration expenses by Baht 986 million. However, the petroleum royalties and remuneration expenses increased by Baht 738 million in relation to the higher sales revenue.

EBIT in 9M/2013 was Baht 85,379 million, increased by Baht 4,618 million or 5.7% from 9M/2012 mainly due to an increase in EBITDA as aforementioned. However, the depreciation and amortization expenses escalated mainly due to an increase in the number of completed assets and production rates of the Bongkot, the S1 and the Contract 4 projects, while the depreciation and amortization expenses of the Arthit project decreased in relation to the decrease in production volume.

• Natural Gas Business Group

Third quarter of 2013 compared with Third quarter of 2012

Sales revenue of Natural Gas Business was Baht 132,844 million in Q3/2013, increased by Baht 1,930 million or 1.5% from Q3/2012 due to the followings:

- The average natural gas sales volume decreased by 73 million cubic feet per day (mmcfd) or 1.6% from 4,611 mmcfd in Q3/2012 to 4,538 mmcfd in Q3/2013 (calculated at heating value of 1,000 BTU per cubic foot). The demand of natural gas declined mainly from EGAT, IPP and gas separation plants.
- The sales volume of all products from gas separation plants (including NGL derived from Dew Point Control Units) decreased by 13.3% from 1,666,859 tons in Q3/2012 to 1,445,991 tons in Q3/2013, mainly due to an accident from the thunder storm and lightning strike on Waste Heat Recover Unit (WHRU) of Gas Separation Plant Unit 5 on August 14, 2013.
- The product prices of the gas separation plants increased in relation to the global selling petrochemical prices.

EBITDA and EBIT of Natural Gas Business in Q3/2013 was Baht 11,076 million and Baht 7,571 million, respectively, decreasing from Q3/2012 by Baht 986 million and Baht 1,122 million, or 8.2% and 12.9%, respectively. The main reason was the higher feed costs in relation to higher fuel oil reference prices, led to lower profit from natural gas sold to industrial customers. Furthermore, the loss from NGV business increased in relation to higher sales volume and feed cost.

Third quarter of 2013 compared with Second quarter of 2013

Sales revenue of Natural Gas Business was Baht 132,844 million in Q3/2013, increased by Baht 1,462 million or 1.1% from Q2/2013 although;

- The average natural gas sales volume decreased by 137 mmcfd or 2.9% from 4,675 mmcfd in Q2/2013 to 4,538 mmcfd in Q3/2013 (calculated at heating value of 1,000 BTU per cubic foot) due to the lower demand of natural gas of EGAT and gas separation plants.
- The sales volume of all products from gas separation plants (including NGL derived from Dew Point Control Units) decreased by 11.0% from 1,625,503 tons in Q2/2013 to 1,445,991 tons in Q3/2013, mainly due to an accident from the thunder storm and lightning strike on WHRU of Gas Separation Plant Unit 5 on August 14, 2013.
- However, all product prices of the gas separation plants increased in relation to the global selling petrochemical prices.

EBITDA and EBIT of Natural Gas Business in Q3/2013 was Baht 11,076 million and Baht 7,571 million, respectively, increasing from Q2/2013 by Baht 2,066 million and Baht 1,971 million or 22.9% and 35.2%, respectively. The main reason was from higher profit from gas separation plants, despite higher loss from NGV business in relation to the increasing sales volume and cost of sales.

First nine months of 2013 compared with First nine months of 2012

Sales revenue of Natural Gas Business was Baht 395,980 million in 9M/2013, increased by Baht 20,992 million or 5.6% from 9M/2012 due to the followings:

- The average natural gas sales volume increased by 169 mmcfd or 3.8% from 4,467 mmcfd in 9M/2012 to 4,636 mmcfd in 9M/2013 (calculated at heating value of 1,000 BTU per cubic foot). This resulted from higher demand of natural gas mainly from SPP.
- The sales volume of products from gas separation plants (including NGL derived from Dew Point Control Units) slightly declined by 0.3% from 4,719,606 tons in 9M/2012 to 4,703,717 tons in 9M/2013, particularly LPG. This was caused by the lower utilization rates of the gas separation plants as a result of an accident from the thunder storm and lightning strike on WHRU of Gas Separation Plant Unit 5 on August 14, 2013.
- Almost all product prices of the gas separation plants increased in relation to the global selling petrochemical prices.

EBITDA and EBIT of Natural Gas Business in 9M/2013 was Baht 32,717 million and Baht 22,435, respectively, decreasing from 9M/2012 by Baht 10,288 million and Baht 10,564 million or 23.9% and 32.0%, respectively. The main reason was the lower profit of gas separation plants due to higher feed costs. Additionally, profit from natural gas sold to industrial customers decreased due to lower selling prices relative to fuel oil reference prices. Furthermore, the loss from NGV business increased in relation to an increase in

sales volume, whereas the government had ceased the subsidy of NGV's retail price since April 16, 2012. As of September 30, 2013, the NGV retail price was Baht 10.50 per kilogram, except public transportation receiving Baht 2.00 per kilogram compensation from PTT.

The details of all product sales volume from gas separation plants are as follows:

Unit: Ton Q3/2012	Q2/2013	Q3/2013	Inc.(Dec.)	9M/2012	9M/2013	Inc.	
	Q2/2013	Q3/2013	YoY	QoQ	9101/2012	9101/2013	(Dec.)	
LPG	712,473	764,955	601,753	(15.5%)	(21.3%)	2,136,936	2,042,722	(4.4%)
Ethane	530,878	523,314	489,196	(7.9%)	(6.5%)	1,528,330	1,564,960	2.4%
Propane	231,176	150,192	179,642	(22.3%)	19.6%	515,740	549,828	6.6%
NGL	192,332	187,042	175,400	(8.8%)	(6.2%)	538,600	546,207	1.4%
Total	1,666,859	1,625,503	1,445,991	(13.3%)	(11.0%)	4,719,606	4,703,717	(0.3%)

The details of reference product prices for the calculation of GSPs' products selling prices are as follows:

Unit: USD per Ton	Q3/2012	Q2/2013	Q3/2013 -	Inc. (Dec.)	9M/2012	9M/2013	Inc.
	Q3/2012			YoY	QoQ	9141/2012	9101/2013	(Dec.)
LPG 1/, 4/	774	775	825	6.6%	6.5%	889	840	(5.5%)
Ethylene 2/	1,195	1,262	1,325	10.9%	5.0%	1,210	1,327	9.7%
Propylene 2/	1,252	1,297	1,336	6.7%	3.0%	1,272	1,313	3.2%
High Density	1,343	1,443	1,489	10.9%	3.2%	1,375	1,471	7.0%
Polyethylene ^{2/}								
Polypropylene 2/	1,443	1,473	1,516	5.1%	2.9%	1,439	1,509	4.9%
Naphtha 3/	835	780	837	0.2%	7.3%	863	835	(3.3%)

Note:

- 1/ Contract price (CP)
- 2/ South East Asia Spot Price
- 3/ MOP Singapore (MOP'S)
- 4/ LPG price is controlled by the Government via the Committee on Energy Policy Administration ("the Committee").

 LPG ex-refinery price was fixed at Baht 10.996 per kilogram. However, on August 27, 2009, the Committee approved the new LPG ex-refinery price to be capped at US\$ 332.7549 per ton with floating foreign exchange rate. The adjustment of the exchange rate will be based on the average exchange rate in the previous month.

1.2.2 Downstream Petroleum Business Group

Oil Business Group

Third quarter of 2013 compared with Third quarter of 2012

Sales revenue of oil business in Q3/2013 was Baht 150,642 million, increased by Baht 3,340 million or 2.3% from Q3/2012 because the sales volume increased by 475 million liters or 8.4% from 5,665 million liters or equivalent to 387,288 barrels per day in Q3/2012 to 6,140 million liters or equivalent to 419,770 barrels per day in Q3/2013. It increased mainly from the sales volume of gasoline and aviation, despite the average Dubai crude oil price in Q3/2013 was flatted.

EBITDA in Q3/2013 was Baht 3,034 million which decreased by Baht 21 million or 0.7% from Q3/2012. Additionally, EBIT in Q3/2013 was Baht 2,353 million, decreased by Baht 58 million or 2.4% as a result of lower EBITDA as aforementioned mainly from a decrease in diesel margins.

Third quarter of 2013 compared with Second quarter of 2013

Sales revenue of oil business in Q3/2013 was Baht 150,642 million, decreased by Baht 2,352 million or 1.5% from Q2/2013 because the sales volume in this quarter increased by 132 million liters or 2.2% from 6,008 million liters or equivalent to 415,297 barrels per day in Q2/2013 to 6,140 million liters or equivalent to 419,770 barrels per day in Q3/2013, mainly from higher LPG and aviation sales volume. While, the average Dubai crude oil price increased from US\$ 100.8 per barrel in Q2/2013 to US\$ 106.3 per barrel in Q3/2013.

EBITDA in Q3/2013 was Baht 3,034 million which decreased by Baht 216 million or 6.7% from Q2/2013. Furthermore, EBIT in Q3/2013 was Baht 2,353 million which decreased by Baht 250 million or 9.6% because of lower diesel margins, while gasoline margin increased.

First nine months of 2013 compared with First nine months of 2012

Sales revenue of oil business in 9M/2013 was Baht 459,337 million, increased by Baht 2,219 million or 0.5% from 9M/2012 because the sales volume increased by 908 million liters or 5.3% from 17,195 million liters or equivalent to 394,717 barrels per day in 9M/2012 to 18,103 million liters or equivalent to 417,118 barrels per day in 9M/2013, mainly from higher sales volume of gasoline, aviation, and LPG. Nonetheless, the average Dubai crude oil price decreased from US\$ 109.6 per barrel in 9M/2012 to US\$ 105.1 per barrel in 9M/2013.

EBITDA in 9M/2013 was Baht 11,273 million which decreased by Baht 1,386 million or 10.9% from 9M/2012. In addition, EBIT was Baht 9,305 million which decreased by Baht 1,453 million or 13.5% as a result of the drop in EBITDA, as aforementioned, mainly from the decrease in diesel and gasoline margins as well as continuously increasing in Ethanol cost.

International Trading Business Group

Third quarter of 2013 compared with Third quarter of 2012

Sales revenue of international trading business was Baht 429,002 million in Q3/2013, increased by Baht 33,372 million or 8.4% from Q3/2012 which resulted from the rise in average selling prices of crude oil and condensate from the out – out transaction. However, the sales volume in this quarter decreased by 807 million liters or 4.6% from 17,591 million liters or equivalent to 1,202,678 barrels per day in Q3/2012 to 16,784 million liters or equivalent to 1,147,470 barrels per day in this quarter because the decrease in sales volume of crude oil and condensate from the out – in transaction.

EBITDA in Q3/2013 was Baht 217 million losses, whereas EBIT, which included effect on foreign exchange, in this quarter, was Baht 797 million gains, increased by Baht 284 million or 55.4% which resulted from the rise in domestic condensate margin.

Third quarter of 2013 compared with Second quarter of 2013

Sales revenue of international trading business was Baht 429,002 million in Q3/2013, increased by Baht 52,757 million or 14.0% from Q2/2013 which resulted from the rise in selling prices in accordance with global oil market prices. The average Dubai crude oil price increased from US\$ 100.8 per barrel in Q2/2013 to US\$ 106.3 per barrel in Q3/2013. Nonetheless, the sales volume in this quarter slightly decreased by 204 million liters or 1.2% from 16,988 million liters or equivalent to 1,174,215 barrels per day in Q2/2013 to 16,784 million liters or equivalent to 1,147,470 barrels per day in this quarter, mainly due to the drop in sales volume of crude oil and condensate from the out – in transaction following a tight supply from Middle East tension.

EBITDA in Q3/2013 had Baht 217 million losses, which decreased from Baht 273 million gains in Q2/2013. Nonetheless, EBIT, which included effect on foreign exchange, in this quarter, was Baht 797 million gains, increased by Baht 287 or 56.3% which resulted from the rise in the domestic condensate margin.

First nine months of 2013 compared with First nine months of 2012

Sales revenue of international trading business was Baht 1,207,651 million in 9M/2013 which increased by Baht 2,336 million or 0.2% from 9M/2012 because sales volume in this quarter increased by 558 million liters or 1.1% from 49,825 million liters or equivalent to 1,143,782 barrels per day in 9M/2012 to 50,383 million liters or equivalent to 1,160,828 barrels per day in 9M/2013, mainly from the rise in sales volume of crude oil and condensate from the out – out transaction. While, the oil selling prices dropped in accordance with global oil market prices.

EBITDA in 9M/2013 had Baht 1,593 million losses, which decreased from 9M/2012 by Baht 662 million. However, EBIT, which included effect on foreign exchange, in this period, was Baht 3,620 million gains, increasing from 9M/2012 by Baht 1,256 or 53.1% resulted from the rise in the condensate margin.

Petrochemical Business Group

Third quarter of 2013 compared with Third quarter of 2012

Sales revenue of petrochemical subsidiaries and jointly controlled entities of PTT in Q3/2013 was Baht 23,296 million, increased by Baht 532 million from Q3/2012 or 2.3% mainly due to the commercial production of PTTAC, a jointly controlled entity that produces and distributes AN and MMA products, since January 1, 2013. In addition, petrochemical sales volume and average selling price of PTTPM (PTT's subsidiary in polymer marketing business) increased, the average selling price and sales volume increased by 8.5% and 18.1% from Q3/2012, respectively.

EBITDA in Q3/2013 was Baht 562 million, decreased by Baht 328 million from Q3/2012 or 36.9%. EBIT in Q3/2013 was Baht 236 million, decreased by Baht 453 million from Q3/2012 or 65.8% which was resulted from a rise in depreciation and amortization expenses of PTTAC owing to the production start-up in Q1/2013.

Third quarter of 2013 compared with Second quarter of 2013

Sales revenue of petrochemical subsidiaries and jointly controlled entities of PTT in Q3/2013 was Baht 23,296 million, increased by Baht 2,657 million from Q2/2013 or 12.9% mainly due to the rise in both

petrochemical sales volume and average selling price of PTTPM. The average selling price and sales volume increased by 7.2% and 5.7% from Q2/2013, respectively.

EBITDA in Q3/2013 was Baht 562 million, increased by Baht 338 million from Q2/2013. Moreover, EBIT in Q3/2013 was Baht 236 million, increased by Baht 317 million from Q2/2013 which had losses Baht 81 million. This was resulted from planned maintenance shutdowns of HMC and PTTAC in Q2/2013, leading to higher maintenance expenses.

First nine months of 2013 compared with First nine months of 2012

Sales revenue of petrochemical subsidiaries and jointly controlled entities of PTT in 9M/2013 was Baht 67,366 million, increased by Baht 5,932 million from 9M/2012 or 9.7%. This was resulted from the rise in petrochemical average selling price and sales volume of PTTPM by 15.6% and 12.4%, respectively, compared with 9M/2012, as well as the production start-up of PTTAC since January 1, 2013.

EBITDA in 9M/2013 was Baht 1,532 million, decreased by Baht 576 million from 9M/2012 or 27.3%. EBIT was Baht 595 million, decreased by Baht 920 million from 9M/2012 or 60.7%. This was resulted from an increase in depreciation and amortization expenses from PTTAC production start-up in since January 1, 2013.

Coal Business

Third quarter of 2013 compared with Third quarter of 2012

In Q3/2013, sales revenue of coal business was Baht 6,465 million, decreased by Baht 1,986 million or 23.5% from Q3/2012 because the average selling price decreased by 16.4% from US\$ 83.7 per ton in Q3/2012 to US\$ 70.0 per ton in Q3/2013. In addition, the sales volume decreased by 9.4% from 3.2 million tons in Q3/2012 to 2.9 million tons in Q3/2013, mainly from a decrease in sales volume of Jembayan mine by 18.4%.

EBITDA in Q3/2013 was Baht 1,043 million, decreased by Baht 1,280 million from Q3/2012 or 55.1%. EBIT in Q3/2013 had Baht 158 million losses, decreased by Baht 1,144 million from Q3/2012 which had gains Baht 986 million as a result of the decrease in gross profit from declining coal prices and an increase in depreciation and amortization expenses.

Third quarter of 2013 compared with Second quarter of 2013

In Q3/2013, sales revenue of coal business was Baht 6,465 million, increased by Baht 910 million or 16.4% from Q2/2013 mainly because the sales volume increased by 16.0% from 2.5 million tons in Q2/2013 to 2.9 million tons. This was mainly from the higher sales volume of Sebuku mine by 74.1% from the start-up of new pits operation in Northern Lease, while the average selling price decreased by 5.8% from US\$ 74.3 per ton in Q2/2013 to US\$ 70.0 per ton in Q3/2013.

EBITDA in Q3/2013 was Baht 1,043 million, decreased by Baht 170 million or 14.0% from Q2/2013. EBIT in Q3/2013 had Baht 158 million losses, increased by Baht 81 million from Q2/2013.

First nine months of 2013 compared with First nine months of 2012

In 9M/2013, sales revenue of coal business was Baht 17,709 million, decreased by Baht 3,991 million or 18.4% from 9M/2012 mainly due to the drop in both sales volume and average selling price. The average selling price decreased by 19.1% from US\$ 91.0 per ton in 9M/2012 to US\$ 73.6 per ton in 9M/2013. Furthermore, the sales volume decreased by 1.3% from 8.0 million tons in 9M/2012 to 7.9 million tons in 9M/2013 mainly due to a decrease in sales volume of Jembayan mine by 2.9%.

EBITDA in 9M/2013 was Baht 3,503 million, which decreased by Baht 2,606 million or 42.7% from 9M/2012 due to the decrease in gross profit from the drop in both sales volume and average selling price as aforementioned. In addition, there were expenses from the start-up of new pits operation in Sebuku in 9M/2013. Moreover, EBIT in 9M/2013 had Baht 284 million losses, which decreased by Baht 3,279 million from same period last year which had gains for Baht 2,995 million as a result of the decrease in EBITDA as aforementioned and the rise in depreciation and amortization expenses due to the start-up of production from Northern Lease in Sebuku mine since June 2012.

1.3 Share of Net Income from Investment in Associates and Net Income

Third quarter of 2013 compared with Third quarter of 2012

- : Net income of PTT and its subsidiaries in Q3/2013 was Baht 30,877 million, decreasing from Q3/2012 by Baht 4,950 million or 13.8% due to the performance of each business group of PTT, subsidiaries and jointly controlled entities as mentioned, and the following reasons:
- : In Q3/2013, the share of net income from investments in associates decreased by Baht 2,623 million from Baht 13,115 million in Q3/2012 to Baht 10,492 million in Q3/2013, mainly caused by the followings:
- The performance of refining business associates decreased as PTT Group refineries' GRM (including stock gain/loss and hedging gain/loss, excluding PTTGC's refining unit) decreasing from US\$ 9.16 per barrel in Q3/2012 to US\$ 7.39 per barrel in Q3/2013. This resulted from the drop in crack spreads of almost all products owing to local currency depreciation; causing refined product imports cut by many countries, while exporter expediting oil volume.
- The performance of Olefins petrochemical associates decreased mainly from the lightning strike incident on the Waste Heat Recover Unit (WHRU) of Gas Separation Plant Unit 5 (GSP#5) of PTT, which caused lower utilization for PTTGC's plants, despite the increase in olefins product price due to maintenance shutdowns of many plants in Asia and Europe, and the easing Euro Zone debt crisis concern. On the other hand, the performance of Aromatics petrochemical associates improved due to higher spread margin of both Benzene and Paraxylene.
- : In Q3/2013, PTT and its subsidiaries had a gain on foreign exchange of Baht 2,047 million, which decreased from Baht 3,212 million by 36.3% in Q3/2012.
- : In Q3/2013, PTT and its subsidiaries' finance costs slightly increased by Baht 95 million or 1.9% from Baht 4,978 million in Q3/2012 to Baht 5,073 million in Q3/2013.
- : The corporate income taxes in Q3/2013 were Baht 9,321 million, increased by Baht 386 million or 4.3% from Q3/2012.

Third quarter of 2013 compared with Second quarter of 2013

- : Net income of PTT and its subsidiaries in Q3/2013 was Baht 30,877 million, increased by Baht 18,599 million from Baht 12,278 million in Q2/2013, due to performance of each business group of PTT, subsidiaries and jointly controlled entities as mentioned, and the following reasons:
- : In Q3/2013, the share of net income from investments in associates increased by Baht 9,145 million from Baht 1,347 million in Q2/2013 to Baht 10,492 million, mainly caused by the followings:
- The performance of refining business associates increased as PTT Group refineries' GRM (including stock gain/loss and hedging gain/loss, excluding PTTGC's refining unit) increased from US\$ 2.37 per barrel in Q2/2013 to US\$ 7.39 per barrel in Q3/2013, especially spread margin between aviation fuel, diesel and Dubai crude price. This resulted from unplanned maintenance shutdowns of refineries in Taiwan and India, as well as the higher demand of aviation fuel due to travelling season in Europe and stock gain.
- The performance of Aromatics petrochemical associates increased as, in Q3/2013, the Paraxylene price was driven as PTA plants in China retain high operating rate due to high PTA-Paraxylene spread margin, as well as lower Paraxylene supply owing to an unplanned Aromatics plant shutdown in Japan. While, the performance of olefins petrochemical associates decreased as a result of the unplanned shutdown of PTT's GSP#5 and 52-day planned shutdown of PTTGC's I4-1 olefins plant, despite the higher HDPE price.
- : In Q3/2013, the gain on foreign exchange of PTT and its subsidiaries was Baht 2,047 million, which increased from Baht 3,473 million losses on foreign exchange in Q2/2013.
- : In Q3/2013, PTT and its subsidiaries' finance costs slightly increased by Baht 3 million or 0.1% from Baht 5,070 million in Q2/2013 to Baht 5,073 million in Q3/2013.
- : The corporate income taxes in Q3/2013 were Baht 9,321 million, decreasing by Baht 6,179 million or 39.9% from Q2/2013 mainly due to the declining in PTTEP's corporate income taxes.

First nine months of 2013 compared with First nine months of 2012

- : Net income of PTT and its subsidiaries in 9M/2013 was Baht 79,261 million, decreasing from 9M/2012 by Baht 2,669 million or 3.3% due to a decrease in performance of PTT's natural gas business in relation to higher feed costs and loss from the NGV business. Nonetheless, the performance of PTTEP and the share of net income from investments in associates still increased.
- : In 9M/2013, the share of net income from investments in associates increased by Baht 2,880 million or 15.1% from Baht 19,110 million in 9M/2012 to Baht 21,990 million, mainly caused by the followings:
- The performance of refining business associates increased as PTT Group refineries' GRM (including stock gain/loss and hedging gain/loss, excluding PTTGC's refining unit) increased from US\$ 4.36 per barrel in 9M/2012 to US\$ 5.07 per barrel in 9M/2013 due to the rise in crack spreads compare with 9M/2012, despite a decrease in the average selling price. Furthermore, refining business associates had stock gains in 9M/2013, while there was stock loss in 9M/2012.
- The performance of petrochemical associates improved in both Aromatics and Olefins. Aromatics improved due to higher spread margin of Benzene and Paraxylene, especially Benzene, as a result of higher import from China, due to high spread margin of Benzene and Styrene Monomer (SM),

leading to higher SM production rates. In addition, the performance of olefins petrochemical associates increased due to higher spread margin in almost all products.

- : In 9M/2013, there was no recognition of impairment losses on investments and assets. Nevertheless, in 9M/2012, PTTI recognized impairment losses of its investment in East Mediterranean Gas S.A.E. (EMG) amounting to Baht 3,972 million and PTTEP recognized impairment loss on Montara assets amounting to Baht 3,455 million.
- : In 9M/2013, PTT and its subsidiaries had the gain on foreign exchange of Baht 5,318 million, increased by Baht 1,420 million from Baht 3,898 million in 9M/2012.
- : In 9M/2013, PTT and its subsidiaries' finance costs slightly increased by Baht 839 million or 5.9% from Baht 14,241 million in 9M/2012 to Baht 15,080 million.
- : The corporate income taxes in 9M/2013 were Baht 34,331 million, slightly increased by Baht 270 million or 0.8% from 9M/2012.

Details of net income from investments in associates are as follows:

Haite million Dalet			Q3/2013	% Inc	c.(Dec.)			% Inc.
Unit: million Baht	Q3/2012	Q2/2013		YoY	QoQ	9M/2012	9M/2013	(Dec.)
Refining associates	6,722	(1,237)	5,439	(19.1%)	n.m.	6,500	8,028	23.5%
Petrochemical associates	6,070	2,294	4,690	(22.7%)	n.m.	11,734	12,821	9.3%
Oil associates	132	128	159	20.5%	24.2%	437	450	3.0%
Gas associates	161	132	154	(4.3%)	16.7%	332	585	76.2%
Other associates	<u>30</u>	<u>30</u>	<u>50</u>	66.7%	66.7%	<u>107</u>	<u>106</u>	(0.9%)
Total	<u>13,115</u>	<u>1,347</u>	<u>10,492</u>	<u>(20.0%)</u>	<u>n.m.</u>	<u>19,110</u>	<u>21,990</u>	<u>15.1%</u>

2. The analysis of PTT and its subsidiaries' consolidated financial position as of September 30, 2013, compared with December 31, 2012.

Financial position of PTT and its subsidiaries as of September 30, 2013, compared with December 31, 2012, are as follows:

Unit: million Baht

	C	onsolidated Finar	ncial Statements	
Assets	30-Sep-13	31-Dec-12	Inc./(Dec.)	%Change
Current Assets	480,353	472,146	8,207	1.7
Available-for-sales investment, investment in				
associates and other long-term investments	254,507	250,813	3,694	1.5
Property, plant and Equipments, net	701,020	650,561	50,459	7.8
Other non-current assets	258,528	255,991	2,537	1.0
Total Assets	1,694,408	1,629,511	64,897	4.0
Liabilities				
Current Liabilities	304,907	341,060	(36,153)	(10.6)
Long-term loans (including current portion)	464,806	437,344	27,462	6.3
Other non-currrent liabilities	136,684	121,211	15,473	12.8
Total Liabilities	906,397	899,615	6,782	0.8
Equity				
Total equity attributable to equity holders of the				
company	656,038	604,016	52,022	8.6
Non-controlling interests	131,973	125,880	6,093	4.8
Totol Equity	788,011	729,896	58,115	8.0
Total Liabilities and equities	1,694,408	1,629,511	64,897	4.0

Assets

As of September 30, 2013, total assets of PTT and its subsidiaries were Baht 1,694,408 million, increased by Baht 64,897 million or 4.0% compared with December 31, 2012. This increase was mainly from the net effect of the following:

An increase of Baht 50,459 million or 7.8% in property, plant and equipment was primarily from an increase in petroleum exploration and production assets of PTTEP in Bongkot, Zawtika and PTTEP Australasia projects. In addition, PTT has invested in the fourth transmission pipeline and the Power Generation and Heat Recovery Unit 3 projects.

An increase of Baht 8,207 million or 1.7% in current assets was mainly from cash and cash equivalent, increased by Baht 25,137 million. This was primarily from the net effect of cash provided by operating activities of PTT and PTTEP and cash outflow from the additional investment in petroleum exploration and production assets of PTTEP. Moreover, inventory and current investments increased by Baht 2,560 and 1,306 million, respectively, while accounts receivable and other receivable decreased by Baht 20,032 and 583 million, respectively.

An increase of Baht 3,694 million or 1.5% in available-for-sale investments, investments in associates and other long-term investments was mainly from share of gain from investments in associates for

the nine month performances of 2013 by Baht 21,990 million. However, there was dividend received from associates by 15,217 million and the disposal on investment of PPCL, a 40% shareholding associate of PTT, to PTTGC amounting to Baht 4,621 million.

An increase of Baht 2,537 million or 1.0% in other non-current assets was mainly from the additional investment in petroleum exploration and production assets which was in exploration projects of PTTEP.

Liabilities

As of September 30, 2013, PTT and its subsidiaries had total liabilities of Baht 906,397 million, increased by Baht 6,782 million or 0.8%, mainly from the followings:

Long-term loans (including the current portion within 1 year) were Baht 464,806 million, increased by Baht 27,462 million or 6.3%. The increase was mainly from the issuance of the Baht debentures of Baht 10,000 million and the foreign currency debentures of US\$ 310 million, equivalent to Baht 9,100 million, of PTT. In addition, PTTEP had the debentures issuance of US\$ 500 million, equivalent to Baht 15,196 million. However, there were redemptions of Baht 5,000 million of Baht bonds. The maturities of long-term loans and debentures are as follows:

Unit: million Baht

Maturity	PTT	PTTEP	PTTI	TTM(T)	PTTAC	HMC	EnCo	TSR	PTTPL	DCAP	TTM(M)	PTTNGD	Total
(since Sep 30, 2013)													
Within 1 year	40,950.67	11,698.09	2,652.51	706.29	665.82	561.29	450.00	256.72	300.00	130.81	56.56	100.80	58,529.56
(September 30, 2014)													
Over 1 year - 2 years	33,927.21	21,894.98	2,943.82	376.69	668.06	561.19	450.00	176.72	300.00	130.81	26.71	100.80	61,556.99
Over 2 years - 5 years	82,155.22	48,809.54	-	1,852.47	2,015.43	3,238.15	1,350.00	530.15	300.00	392.43	80.12	-	140,723.50
Over 5 years	149,102.43	45,423.63	-	4,427.33	1,688.57	-	1,512.50	882.47	-	221.73	135.11	-	203,393.77
Total	306,135.53	127,826.24	5,596.33	7,362.78	5,037.88	4,360.63	3,762.50	1,846.06	900.00	875.78	298.50	201.60	464,203.83

Note: Excluding liabilities under finance leases of Baht 602.87 million.

The outstanding loans (including long-term loans, debentures and bonds due within one year and later than one year) as of September 30, 2013 consisted of loans in Baht currency and foreign currencies. Details of which are as follows:

Unit: million Baht

Long-term loans	PTT	PTTEP	PTTI	TTM(T)	PTTAC	HMC	EnCo	TSR	PTTPL	DCAP	TTM(M)	PTTNGD	Total
Baht currency	195,949.28	19,194.60				2,241.00	3,762.50	1,846.06	900.00	875.78	-	201.60	224,970.82
Foreign currency	110,186.25	108,631.64	5,596.33	7,362.78	5,037.88	2,119.63	-	-	-	-	298.50	-	239,233.01
Total	306,135.53	127,826.24	5,596.33	7,362.78	5,037.88	4,360.63	3,762.50	1,846.06	900.00	875.78	298.50	201.60	464,203.83
Proprotion of long-term foreign													
currency loans to total long -	35.99%	84.98%	100.00%	100.00%	100.00%	48.61%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	51.54%
term loans (%)													

As of September 30, 2013, the loans amounting to Baht 6,000 million were guaranteed by the Ministry of Finance.

The decrease of Baht 36,153 million or 10.6% of current liabilities was primarily from decreases in accounts payable and income tax payable by Baht 35,654 and 6,522 million, respectively. The decrease was mostly from payment of income tax for the year 2012 of PTTEP in May 2013. However, other payable increased by Baht 11,878 million mainly due to accrued dividend of PTT for the first half-year performances of 2013.

Other non-current liabilities increased by Baht 15,473 million or 12.8% mainly from an increase in provision for remuneration for the renewal of petroleum production of Bongkot project of PTTEP.

Equity

As of September 30, 2013, PTT and its subsidiaries had total shareholders' equity of Baht 788,011 million, increased by Baht 58,115 million or 8.0% principally from an increase in retained earnings of Baht 42,303 million which resulted from an increase of Baht 79,261 million in net income of PTT and its subsidiaries for the nine-month performance of 2013. However, there were payments of dividends for the second half-year performances of 2012 and the first half-year performances of 2013 amounting to Baht 37,127 million and other comprehensive income and non-controlling interests increased by Baht 9,718 million and Baht 6,093 million, respectively.

Liquidity

For the nine-month period ended September 30, 2013, PTT and its subsidiaries had net increase in cash and cash equivalents amounting to Baht 25,137 million, while cash and cash equivalents at the beginning of the period was Baht 136,924 million. As a result, cash and cash equivalents at the end of the period was Baht 162,061 million. Details of cash flow by activities are as follows:

	Amount (million Baht)
Net cash provided by operating activities	123,932
Net cash used in investing activities	(70,226)
Net cash used in financing activities	(31,183)
Effects of exchange rates on cash and cash equivalents	1,348
Currency translation differences	1,266
Net increase in cash and cash equivalents during the period	25,137
Cash and cash equivalents at the beginning of the period	136,924
Cash and cash equivalents at the end of the period	162,061

Net cash provided by operating activities of Baht 123,932 million was derived from Baht 79,261 million of net income attributable to equity holders of the company, adjusted by net income to net cash provided (used in) by operating activities. The main transactions resulting to an increase in net cash flow operations were Baht 54,013 million of depreciation and amortization expenses, Baht 34,331 million of income taxes expenses, Baht 17,563 million of net income attributable to non-controlling interests and Baht 13,628 million of interest expenses. However, the main transactions resulting to a decrease in net cash flow operations was Baht 21,990 million of share of net income from investments in associates. In addition, the net changes in net operating assets decreased by Baht 15,172 million as well as Baht 41,583 million of the payment of income taxes.

Net cash used in investing activities was Baht 70,226 million resulting mainly from;

: The cash outflow of investments in property, plant and equipment and intangible assets amounting to Baht 87,837 million mainly due to the additional investments of PTTEP in petroleum exploration and production and intangible assets amounting to Baht 65,265 million mainly from the investment in Myanmar Zawtika, PTTEP Australasia, and Arthit projects. In addition, there were investments in various projects of

PTT amounting to Baht 15,067 million mainly from the fourth transmission pipeline project and the on-shore compressor station 4 project in Rayong.

: The payment of investment in subsidiaries, joint controlled entities, associates and others amounting to Baht 1,430 million was mainly from Baht 236 million of the investment in solar cell power plant of Thai Solar Renewable Co,.Ltd. (TSR), Baht 756 million payment of additional shareholdings in Xayaburi Power Company Limited (XPCL), an associate of NCS which is a subsidiary of PTTI, and Baht 226 million payment of the 0.95% additional shareholdings in Sakari Resources Ltd. (SAR), which resulted to a totally 94.58% shareholding subsidiary of SAR, by PTTML, a 100% shareholding subsidiary of PTTI.

: The proceeds of a long-term investment was Baht 4,645 million from the disposal of investment in PPCL, 40% shareholdings held by PTT, to PTTGC.

Net cash used by financing activities was Baht 31,183 million, resulting mainly from the repayment of short-term loans of PTT amounting to Baht 26,275 million and of PTTI amounting to Baht 5,622 million, the repayment of long-term loans, debentures, and bonds of PTT amounting to Baht 3,509 million, the repayment of long-term loan of PTTI amounting to Baht 2,635 million, the redemption of Baht bonds of PTTEP amounting to Baht 5,124 million. Moreover, there were the payments of interest expenses and dividends by Baht 14,141 million and 31,571 million, respectively. However, there were the proceeds from bill of exchanges of PTT amounting to Baht 21,275 million, from short-term loans of PTTI amounting to Baht 7,294 million, from debentures and long-term USD loan of PTT amounting to Baht 19,135 million, and from debentures of PTTEP amounting to Baht 15,196 million.

Financial ratios and earnings per share of PTT and its subsidiaries are as follows:

Financial ratios and earnings per share	Unit	Q3/2012	Q2/2013	Q3/2013	9M/2012	9M/2013
Profitability ratios						
Gross Profit Margin	%	8.50	8.25	7.72	8.50	7.94
Net Profit Margin	%	5.10	1.82	4.19	3.91	3.73
Interest Coverage Ratio	Time	13.44	7.82	14.94	9.55	11.49
Earnings Per Share	Baht/share	12.54	4.30	10.81	28.68	27.75

Financial ratios	Unit	Dec 31, 2012	Mar 31, 2013	Jun 30, 2013	Sep 30, 2013
<u>Liquidity ratios</u>					
Current Ratio	Time	1.24	1.29	1.30	1.32
Quick Ratio	Time	1.02	1.05	1.05	1.08
Debt to Equity Ratio	Time	1.23	1.21	1.16	1.15

3. Economic and Petroleum/Petrochemical Price Outlook in the Fourth quarter of 2013

Global economic growth is expected to accelerate in the fourth quarter of 2013 (Q4/2013) as developing and emerging economies, especially China is expected to maintain their growth rate at 7.5 percent according to government policy. In addition, the Eurozone economic situation is expected to improve further as rising investor confidence stimulates private sector investment. Meanwhile, the US economy has been hampered by the federal government shut down partially for 17 days as the Congress could not conclude a temporary spending budget bill by September 30, 2013. Moreover, this political brinkmanship together with a debt-ceiling standoff had led to a downgrade of the US credit rating by Fitch Ratings from Stable to Negative, although the Congress did come together and passed the bill to fund the federal government until January 15, 2014 and to lift the debt ceiling until February 7, 2014. Notwithstanding, key risk factors that should be monitored including the US long-term fiscal challenges, the Federal Reserve's QE tapering, the search for expansionary fiscal contraction in the Eurozone, progress towards the Eurozone banking union, and China's shadow banking problem could lead to the economic bubble.

Average Dubai crude oil price in Q4/2013 is expected to be stable at US\$106.0 per barrel. Despite a healthy demand for winter, there are concerns over the US economy driven by a debt-ceiling problem coupled with easing tensions in the Middle East and robust Non-OPEC supply. While, the petroleum product prices are expected to be higher than Q3/2013, especially Diesel from winter demand for heating oil as well as fuel oil from strong bunker demand.

Dubai crude cracking in Singapore in Q4/2013 is forecasted to be stable in the range of US\$ 5.0-6.0 per barrel resulting from an increase in petroleum products demand. However, additional supply from Jubail refinery in Saudi Arabia will limit refinery margin.

Olefins price in Q4/2013 is likely to rise along with an upward trend of Naphtha price as many plants in Thailand, Singapore, and Malaysia are entering into a turnaround season leading to lower supply. While Aromatics price, both Paraxylene and Benzene are projected to decrease as a result of higher supply from new petrochemical plants in this region as well as lackluster demand in China compare with the same period of last year.

Thailand economic growth in Q4/2013 is expected to remain the same as in Q3/2013, with growth mainly driven by recovery of export sector despite a weak private sector consumption and investment. However, there are downside risks to be monitored including political conflicts, global economic slowdown in particular China's slowdown, capital flows and exchange rate volatility, high level of household debt, delays in government investment projects.