Management's Discussion and Analysis

Overall Group Performance

Hana Microelectronics Group 'Hana' Sales Revenue increased 5% year on year at THB 6.0 billion for the third quarter of 2018 from THB 5.7 billion for the third quarter 2017. Sales Revenue in USD terms increased 6% to USD 182m for Q3 2018 from USD 172m in Q3 2017. Operating Profits increased 32% to THB 835m in Q3 2018 from THB 632m in Q3 2017. Net Profit increased 18% to THB 905m in Q318 from THB 769m in Q317, due to higher sales revenue and operating profits in Q318.

	<u>Quarter</u>		<u>Quarter</u>			<u>%</u>
THB '000	<u>Q318</u>		<u>Q317</u>		Q318-Q317	Q318-Q317
PCBA (Lamphun, Thailand)	2,302,595	38%	2,029,010	36%	273,585	13%
PCBA (Jiaxing, China)	960,153	16%	920,196	16%	39,957	4%
PCBA (Cambodia)	16,082	0%	24,733	0%	(8,651)	-35%
IC (Ayutthaya, Thailand)	2,115,779	35%	2,153,521	37%	(37,742)	-2%
IC (Jiaxing, China)	348,936	6%	376,840	7%	(27,904)	-7%
HMT (Ohio, USA)	274,527	5%	244,614	4%	29,913	12%
Total Revenue	6,018,072	100%	5,748,914	100%	269,158	5%

Sales Revenue Analysis

Year on Year Sales Revenue Analysis

Quarter 3 2018 sales revenue for the group increased 6% year-on-year in USD terms to USD 182m from USD 172m in Q317. The average exchange rate for Q318 was 1% stronger at THB/USD 33.0 from THB/USD 33.4 in Q317. As a result the sales revenue in THB terms increased 5% year on year for the quarter.

Year-on-year, in USD terms, the microelectronics divisions sales increased by 12%. Sales in Lamphun increased 15% whilst Jiaxing increased by 6%. The IC divisions sales revenues decreased 1% in Q318, with revenues of the IC division in Ayutthaya being similar and Jiaxing decreasing by 6%. "HMT" the Microdisplay/RFID operation in Ohio sales revenue increased 13%.

Quarter on Quarter Sales Revenue Analysis

Quarter-on-Quarter, in USD terms, sales for the group increased 7% to USD 182m in Q318 from USD 171m in Q218. In THB equivalent the group sales were up 10% in Q318 compared to Q218 due to the average THB/USD exchange rate being 3% weaker at 33.0 in Q318 from 31.9 in Q218. Sales in the microelectronics divisions increased 3% with Lamphun increasing 7% and Jiaxing decreasing 4%. Sales revenues from the IC divisions were 11% higher in Q318 with Ayutthaya sales increasing 11% and Jiaxing IC sales increasing by 13%. The Microdisplay division sales increased 9% in Q318 compared to Q218.

Sales Revenue Split

	<u>Q3 2018</u>	<u>Q2 2018</u>	<u>Q1 2018</u>	<u>Q4 2017</u>	Q3 2017
PCBA (Lamphun, Thailand)	38%	39%	43%	39%	36%
PCBA (Jiaxing, China)	16%	18%	16%	18%	16%
PCBA (Cambodia)	0%	0%	0%	0%	0%
IC (Ayutthaya, Thailand)	35%	34%	31%	32%	37%
IC (Jiaxing, China)	6%	5%	6%	6%	7%
HMT (Ohio, USA)	5%	4%	4%	5%	4%
•	100%	100%	100%	100%	100%

Gross Profit / Cost of Sales Analysis and Sales and Administration Analysis

The Gross Profit margin was 3 percentage points higher at 18% in Q318 up from Q317 at 15% due to change in product mix amongst customers in the divisions.

Operating Profit Analysis

Year-on-year operating profits, excluding R&D expenses, were 32% higher at THB 835m in Q318 compared to THB 632m in Q317. The Operating margin was 3 percentage points higher at 14% in Q318 up from 11% in Q317. SG&A expenses were 8% higher in Q318 from Q317 due to higher expenses office depreciation and salaries. R&D expenses were THB 18m in Q318. SG&A expenses in Q318 were 3% higher than in Q218.

Foreign Exchange Rates

Each week's sales and purchases are booked based on the exchange rate at the close of the previous week. The average exchange rate for Q318 was Baht/USD 32.97, Q317 was Baht/USD 33.39 (and Q218 was Baht/USD 31.92).

The offshore subsidiaries income statements are translated at the average rate for the quarter, (for their respective currencies). The Balance sheets of the offshore companies were translated at the closing rate of Baht/USD 32.41 at 30/09/18, and Baht/USD 33.39 at 30/09/17 (33.17 at 30/06/18) or the respective rate applicable to each offshore subsidiary's base currency.

Payout Analysis

No dividends were paid out during the quarter.

Financial Status

The group currently has no interest bearing debt. Cash reserves and financial investments at the 30th September 2018 were THB 9.3 billion down from THB 10.5 billion at 30th September 2017.

Asset Quality

Accounts Receivable

Most of customers are well known and have good reputation in the IC, and electronics industry. Provision is made of amounts outstanding over 90 days and amounts which the management believe may be doubtful. Accounts receivable days were 61 days in Q318 and 59 days in Q317.

Trade Receivables	30-Sep-18	30-Sep-17	THB '000
Less than 3 months	3,932,726	3,670,625	
3 - 6 months	19,661	9,149	
6 - 12 months	1,629	3,322	
More than 12 months	3,354	13,327	
Total accounts receivable - other companies	3,957,370	3,696,423	=
Less : Allowance for doubtful accounts	(8,525)	(14,378)	
•	3.948.845	3.682.045	-

Inventory

In general, Hana's production is based on clients' orders, consequently, the majority of inventory are raw materials, expendable tools and work in process with little finished goods pending for customer delivery. The group companies normally write-off out-of-date inventory, and make provision for aged inventory and depletion in the value of fixed assets, if material, each quarter. Inventory days were 85 days as at 30th September, 2018 and 70 days as at 30th September, 2017.

Liquidity

Liquidity ratios are high at approximately 4 times current liabilities. Operating Cashflow (Recurring EBITDA) in Q3 2018 was THB 1,100m which was 22% higher than Q3 2017 was THB 901m.

Capital Expenditure

Net Capital Expenditure was THB 812m in Q3 2018, and THB302m in Q3 2017. Generally, capital expenditure for production equipment will follow the increase in sales, particularly in the IC division. However, there is a 3 to 6 month time lag due to the ordering lead time. Plant expansion will depend on the current building utilisation and lead time to construct new plant or expand in an existing plant.

Source of Financial Capital

As the group as no net interest bearing debt and operating working capital is positive the groups funding is from the shareholders equity.

Major Factors which could have an Impact on the Company's Performance

The company business is that of an electronics manufacturing service company. The company manufactures products on behalf of its customers for shipment to them or their customers. Therefore, the company's performance is mostly affected by its ability to win and retain business from the existing and new customers. In turn, customer demand is affected by world economic growth and the customer's sales growth.

The groups sales revenue are in foreign currency (primarily USD) and USD currency costs are approximately 60% of sales revenues. The Group operating profit sensitivity to change in the Thai Baht/USD and Chinese CNY/USD exchange rates is currently about Baht 200m per quarter for every 10% change in the average Baht/USD and CNY/USD rates (i.e. (1- 0.60) x Sales Revenue x 10%). Out of the groups foreign exchange exposure, USD 140m is hedged, Foreign exchange contracts are used to buy THB and Sell USD on a rolling 3 or 6 months basis.

Whilst the book value of the offshore companies are represented in foreign currency, the effect of the change in the exchange rate is shown by the movement of the foreign currency 'Translation Adjustment' in the shareholders funds section of the balance sheet. There is no cash affect concerning its movement.

Exceptional Items

None

Subsequent Event

None

CONSOLIDATED STATEMENT OF EARNINGS

	Quarter		Quarter			%
'000 Baht	Q318	_	Q317		Q318-Q317	Q318-Q317
REVENUES		_		•		
Sales	6,018,072		5,748,914		269,158	5%
consisting of:						
PCBA (Lamphun, Thailand)	2,302,595	38%	2,029,010	36%	273,585	13%
PCBA (Jiaxing, China)	960,153	16%	920,196	16%	39,957	4%
PCBA (Cambodia)	16,082	0%	24,733	0%	(8,651)	-35%
IC (Ayutthaya, Thailand)	2,115,779	35%	2,153,521	37%	(37,742)	-2%
IC (Jiaxing, China)	348,936	6%	376,840	7%	(27,904)	-7%
HMT (Ohio, USA)	274,527	5%	244,614	4%	29,913	12%
	6,018,072	100%	5,748,914	100%	269,158	5%
Other Income	61,147		87,138		(25,991)	-30%
Other Income - non operating	383		-		383	0%
TOTAL OPERATING REVENUES	6,079,602	-	5,836,052	-	243,550	4%
EXPENSES						
Cost of Sales	4,932,036	82%	4,914,400	85%	17,636	0%
Selling & Admin. Expenses	311,923	5%	289,727	5%	22,196	8%
R&D Expenses	18,227	0%	-	0%	18,227	0%
TOTAL EXPENSES	5,262,186	87%	5,204,127	91%	58,059	1%
OPERATING EARNINGS	817,416	13%	631,925	11%	185,491	29%
Interest	44,939		48,679		(3,740)	-8%
Interest Expenses	(1,747)		(1,942)		195	
EARNINGS before Income Tax	860,608	14%	678,662	12%	181,946	27%
Corporate Income Tax	(27,287)	0%	(30,845)	-1%	3,558	-12%
Earnings before Exch. & Exceptional Items	833,321	-	647,817	•	185,504	29%
Exchange Gain (Loss)	71,449		121,705		(50,256)	
Exceptional Items	-		-		-	
NET EARNINGS for the Period	904,770	15%	769,522	13%	135,248	18%
EARNINGS % of SALES	15%		13%		2%	
Average number of shares (1 Baht par)	804,879		804,879		-	
EARNINGS per SHARE (baht) before exch. & exceptionals	1.04		0.80		0.24	
EARNINGS per SHARE (baht) after exceptionals	1.12		0.96		0.16	
Operating Profit (EBIT) (excl. R&D Expenses)	835,260		631,925		203,335	32%
Operating Profit Margin	14%		11%			
Depreciation	283,102		269,378		13,724	
EBITDA (excl exchange gain/loss)	1,100,135		901,303		199,215	22%
EBITDA % of Sales Revenue	18%		16%			

CONSOLIDATED STATEMENT OF EARNINGS

	YTD		YTD		YTD	YTD %
'000 Baht	30-Sep-18	_	30-Sep-17		Q318-Q317	Q318-Q317
REVENUES		_		_	_	
Sales	16,663,169		16,218,979		444,190	3%
consisting of:						
PCBA (Lamphun, Thailand)	6,630,528	41%	5,992,271	38%	638,257	11%
PCBA (Jiaxing, China)	2,744,428	16%	2,670,388	16%	74,040	3%
PCBA (Cambodia)	26,775	0%	68,457	0%	(41,682)	
IC (Ayutthaya, Thailand)	5,561,348	33%	5,617,930	35%	(56,582)	-1%
IC (Jiaxing, China)	953,931	6%	983,772	6%	(29,841)	-3%
HMT (Ohio, USA)	746,159	4%	886,161	5%	(140,002)	-16%
	16,663,169	100%	16,218,979	100%	444,190	3%
Other Income	231,932		199,885		32,047	16%
Other Income - non operating	1,690	_	-		1,690	
TOTAL OPERATING REVENUES	16,896,791	-	16,418,864		477,927	3%
EXPENSES						
Cost of Sales	14,278,002	86%	13,775,577	85%	502,425	4%
Selling & Admin. Expenses	910,001	5%	884,320	5%	25,681	3%
R&D Expenses	43,088	0%	-	0%	43,088	0%
TOTAL EXPENSES	15,231,091	91%	14,659,897	90%	571,194	4%
OPERATING EARNINGS	1,665,700	10%	1,758,967	11%	(93,267)	-5%
Interest	142,466		155,883		(13,417)	-9%
Interest Expenses	(5,206)		(5,564)		358	
EARNINGS before Income Tax	1,802,960	11%	1,909,286	12%	(106,326)	-6%
Corporate Income Tax	(98,151)	5%	(63,727)	3%	(34,424)	54%
Earnings before Exch. & Exceptional Items	1,704,809	-	1,845,559	_	(140,750)	-8%
Exchange Gain (Loss)	23,483		417,110		(393,627)	
Exceptional Items	-		-		-	
NET EARNINGS for the Period	1,728,292	10%	2,262,669	14%	(534,377)	-24%
EARNINGS % of SALES	10%		14%		-4%	
Average number of shares (1 Baht par)	804,879		804,879		-	
EARNINGS per SHARE (baht) before exch. & exceptionals	2.12		2.29	-	0.17	
EARNINGS per SHARE (baht) after exceptionals	2.15		2.81	-	0.66	
Operating Profit (EBIT) (excl. R&D Expenses)	1,707,098		1,758,967		(51,869)	
Operating Profit Margin	10%		11%			
Depreciation	810,941		816,654		(5,713)	
EBITDA (excl exchange gain/loss)	2,474,951		2,575,621		(100,670)	
EBITDA % of Sales Revenue	15%		16%			

HANA MICROELECTRONICS GROUP CONSOLIDATED Balance Sheet

	Quarter	Quarter	
'000 Baht	30-Sep-18	30-Sep-17	Q318-Q317
ASSETS			
CURRENT ASSETS Cash in Hand & at Banks	4,485,217	6,513,162	(2,027,945)
Financial Investments	4,860,712	3,967,555	(2,027,943) 893,157
Accounts Receivable - trade	4,100,302	3,797,034	303,268
Amounts due from Related Companies	-,100,302	3,737,034	303,200
Inventories	4,653,648	3,835,543	818,105
Other Current Assets	146,040	174,585	(28,545)
other current Assets			
TOTAL CURRENT ASSETS	18,245,919	18,287,879	(41,960)
Fixed Deposit	145,927	-	145,927
FIXED ASSETS (net)	6,869,371	6,241,704	627,667
OTHER ASSETS	223,412	302,319	(78,907)
TOTAL ASSETS	25,484,629	24,831,902	652,727
LIABILITIES			
CURRENT LIABILITIES			
Bank Overdrafts & Loans	-	-	
Accounts & Notes Payable	3,425,551	3,065,725	359,826
Corporate Income Tax Payable	-	-	
Accrued Expenses	324,066	333,684	(9,618)
Other Current Liabilities	124,914	59,658	65,256
TOTAL CURRENT LIABILITIES	3,874,531	3,459,067	415,464
LONG TERM LIABILITIES	354,710	485,641	(130,931)
TOTAL LIABILITIES	4,229,241	3,944,708	284,533
SHAREHOLDERS EQUITY			
Share Capital	804,879	804,879	
Treasury Shares	-	-	
Share Premium	1,723,219	1,723,219	
Retained Earnings			
Appropriated Statutory Reserve	443,691	428,706	14,985
Unappropriated	18,427,642	17,545,903	881,739
Translation adj. & Investment revaluation	(144,043)	384,487	(528,530)
Unrealised gain(loss) on change in investments	-	-	
Excess Cost over Net Book Value of Subsidiary Investments	-	-	
TOTAL SHAREHOLDERS EQUITY	21,255,388	20,887,194	368,194
TOTAL LIABILITIES & SHAREHOLDERS EQUITY	25,484,629	24,831,902	652,727

CONSOLIDATED Summary Statement of Cashflows

'000 Baht	Quarter 30-Sep-18	Quarter 30-Sep-17
Cashflow from Operating Activities		
Net Earnings before tax	932,057	800,367
Adjustments to reconcile net earnings to net cash provided		
by operating activities		
Non Cash items		
Depreciation	283,102	269,378
Unrealised (gain) Loss on exchange	(201,637)	62,824
Increase (Decrease) in allowance for doubtful debts	(749)	(8,189)
Increase (Decrease) in allowance for obsolete inventories	6,934	(8,654)
Change in other provisions	(18,217)	(64,241)
	69,433	251,118
Working Capital (increase) decrease		
Trade accounts receivable	(68,091)	(154,551)
Inventories	(294,881)	108,861
Trade accounts payable	108,477	28,500
Other	8,541	2,553,589
	(245,954)	2,536,399
Net Cashflow from Operating Activities	755,536	3,587,884
Cashflow from Investing Activities		
(Increase) decrease in short term investment	(1,207,521)	59,312
Increase in property, plant and equipment	(493,820)	374,929
Proceeds from sale of fixed assets	2,866	(7,012)
Increase (decrease) in translation adjustment	(353,643)	352,697
Revaluation deficit on investments	6,826	(2,027,503)
Other	0,020	(2,027,303)
	(2,045,292)	(1,247,577)
Cashflow from Financing Activities		
Cash received from increase in share capital	-	-
Dividend paid	_	_
Other	_	_
Net cash (used in) from financing activties	-	-
Net Cash, equivalents and short term liquid investments increase (decrease)	(1,289,756)	2,340,307
Cash and Equivalents at the beginning of the period	5,296,558	6,645,019
Cash and Equivalents at the end of the period	4,006,802	8,985,326

Financial Ratios

	Quarter	Quarter		
'000 Baht	30-Sep-18	30-Sep-17	Q318-Q317	
Profitability Ratios				
Gross Profit Margin (%)	18%	15%	3%	
Operating Profit Margin (%)	14%	11%	3%	
Net Profit before Exceptional Margin (%)	14%	11%	3%	
Net Profit after Exceptional Margin (%)	15%	13%	2%	
EBITDA margin (%)	18%	16%	2%	
Return On Equity (%) pa	17%	15%	2%	
Return On Assets (%) pa	14%	12%	2%	
Return On Operating Capital Employed (%) pa	27%	23%	4%	
Efficiency Ratios				
Working Capital turnover	5	5		
Account Receivable days	61	59	2	
Inventory days	85	70	15	
Accounts Payable days	63	56	7	
Liquidity Ratios				
Current Ratio	5	5		
Quick Ratio	3	4	- 1	
Financial Capital Ratios	0	0		
Debt / Equity	0	0		
Net Debt to Equity	0	0		
Interest Coverage	n/a	n/a		