

### III. Value Enhancement, Estimating Growth

#### Economic Value Added (EVA) and Market Value Added (MVA): OISHI

- (From the table below) What are the reasons for the improvement in OISHI's EVA in 2014?
- Despite the higher EVA in 2014, explain why MVA declined in the year.

<u>Economic Value Added (EVA) &amp; Market Value Added (MVA)</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>Formula</u>	<u>Calculation: 2014</u>
Economic Value Added (EVA)	262.7	1.4	46.8	$EVA = (ROIC - WACC) \times \text{Capital invested}$	
Return on invested capital (ROIC)	15.5%	10.5%	10.3%	$ROIC = [NOPAT] / [\text{Invested Capital}]$	
Net operating profit after tax (NOPAT)	701.4	548.8	622.3	$NOPAT = EBIT (1 - \text{tax rate})$	
EBIT	673.7	512.4	596.0	$EBIT = \text{Net income} + \text{interest expenses} + \text{tax} = EBT + \text{interest expenses}$	
tax rate	-4.1%	-7.1%	-4.4%	$\text{tax rate} = \text{Income tax expense} / EBT$	
Invested capital	4,955.5	5,464.9	6,573.7	$\text{Invested capital} = [\text{BV of interest-bearing liabilities} + \text{BV of equity} - \text{Excess Cash}]$	
BV of interest-bearing liabilities	1,836.3	2,063.0	2,939.6	$\text{Interest bearing liabilities} = \text{Short-term loans} + \text{Current portion of long-term loan} + \text{Long-term}$	
BV of equity	3,121.2	3,408.4	3,626.8		
BV of non-controlling interest	0.0	0.0	7.3		
Excess cash (Current investment)	2.0	6.5	0.0		
Weighted average cost of capital (WACC)	10.21%	10.51%	9.63%	$WACC = [(D/V) * (kd * ((1-t)))] + [(E/V) * ke]$	
MV of debts	4,139	4,499	5,497	approximately equal to BV of total liabilities	
MV equity (market capitalization of equity)	20,344	22,547	15,141	Market capitalization = share price x number of shares	
Share price (average)	108.5	120.3	80.8		
Number of shares (mn)	187.5	187.5	187.5	Paid-up capital / Par Value	
Par value (Bt)	2.0	2.0	2.0		
Cost of debt (kd)	3.03%	4.47%	3.88%	$kd = \text{Finance cost} / \text{Interest-bearing liabilities}$	
Tax rate (t)	-4.1%	-7.1%	-4.4%	$\text{Tax rate} = \text{Income tax expense} / EBT$	
Cost of equity (ke)	11.65%	11.65%	11.65%		
Market Value Added (MVA)	25,472.6	13,091.6	10,154.5		
Market Value Added (MVA) (Bt/share)	135.9	69.8	54.2	$MVA = \text{share price} - \text{BV of equity per share}$	
Share price (year end)	152.50	88.00	73.50		
BV of equity per share (year end)	16.6	18.2	19.3		