

1.

$$a) k_x = 0.10 + 1.0(0.06) = 0.16$$

$$V_x = \frac{\$0.64m}{0.16} = \$4m$$

b) The extra \$150,000 is being generated by assets with unchanged systematic risk and thus can be discounted at 16%

$$\text{Gain} = \frac{\$150,000}{0.16} = \$937,500$$

$$NPV_{\text{yam}} = \$937,500 - \$500,000 = \$437,500$$

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Only answers to **Part B questions** are to be submitted by 10:00 am on Monday of the tutorial week. Please note the following:

1. Only **handwritten** work on this hand-in sheet will be marked for reasonable effort. You can either write your answers on this hand-in sheet or write your answers on a piece of paper with your name and student ID written on the top of the page.
2. Only **one** submission per student will be marked. Please make sure that you upload only one file either as a scanned **PDF file** or as a **JPG/PNG picture file**. Other formats will not be accepted by the system.
3. Please fill out all the information before submission.

2.

$$a) \text{Gain} = 10 + 5 + \frac{250,000}{0.1} - (10 + 5) = \$2.5m$$

$$b) \text{Net Cost} = 7m - 5m = \$2m$$

$$c) \text{Net Cost} = \frac{5}{17.5} \times (15 + 2.5) - 5 = 0m$$

$$d) i) \text{NPV} = 2.5m - 2m = \$0.5m \text{ or } \$500k$$

$$ii) \text{NPV} = 2.5m - 0 = \$2.5m$$

3.

$$a) \text{Gain} = 400m + 19.2m + \frac{2m}{1.12^2} + \frac{0.9m}{0.12} \left(1 - \frac{1}{1.12^5}\right) + \frac{0.3m}{0.12} \left(1 - \frac{1}{1.12^5}\right) - (400m + 19.2m) = \$5.92m$$

$$b) b = x \times 8m / (100m + x \times 8m)$$

$$0.5 = 8x / (100 + 8x)$$

$$0.5(100 + 8x) = 8x$$

$$50 + 4x = 8x$$

$$50 = 4x$$

$$x = 12.5 \text{ shares}$$

12.5 Bidder Ltd shares for each share in Target Ltd