Module 3

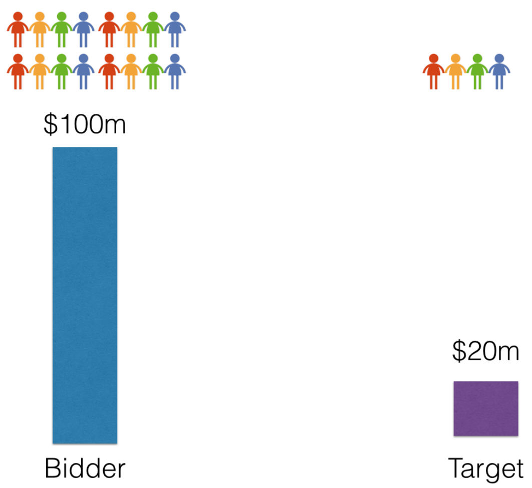
Corporate Financial Decision-Making for Value Creation

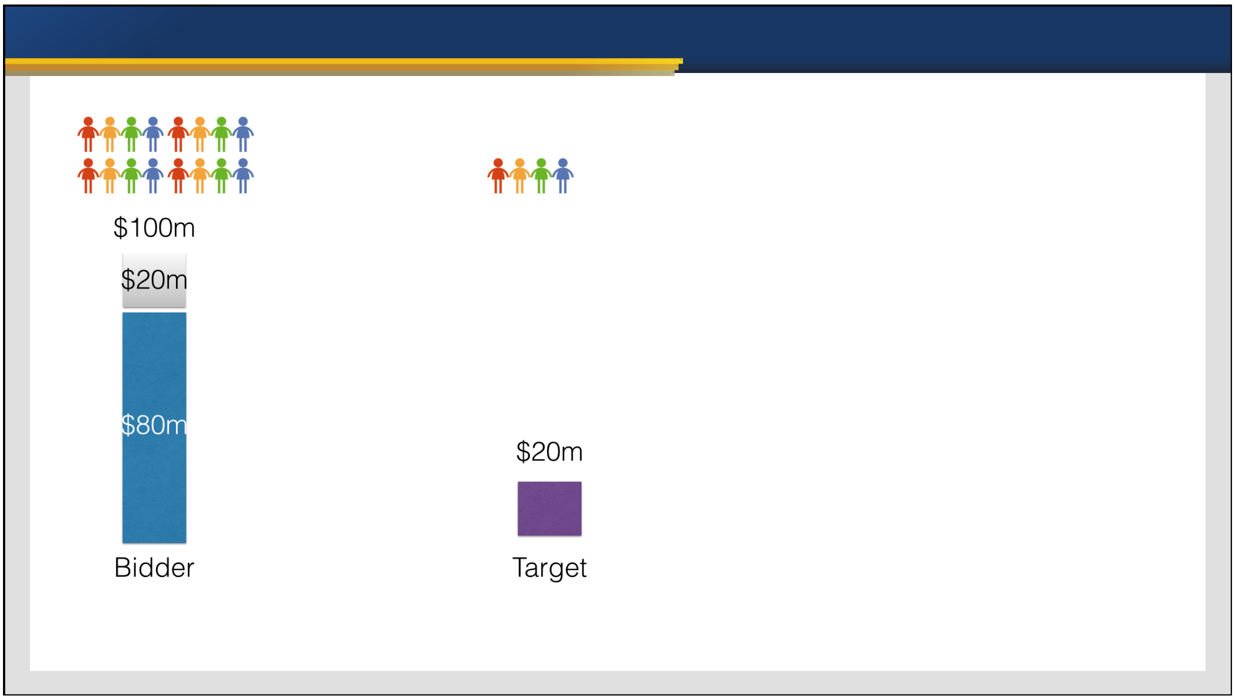
The Financial Evaluation of a Takeover (How much is "too much" to pay for a target company?)

Presenter: Sean Pinder

THE UNIVERSITY OF MELBOURNE

BNY MELLON

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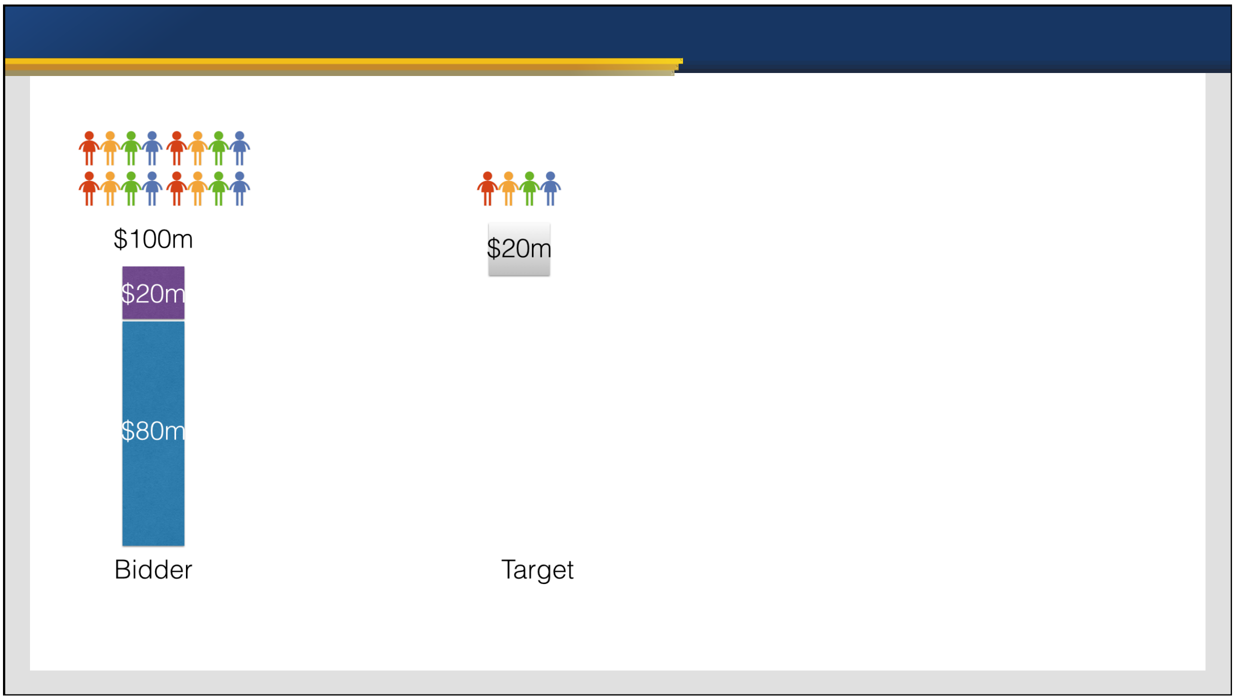
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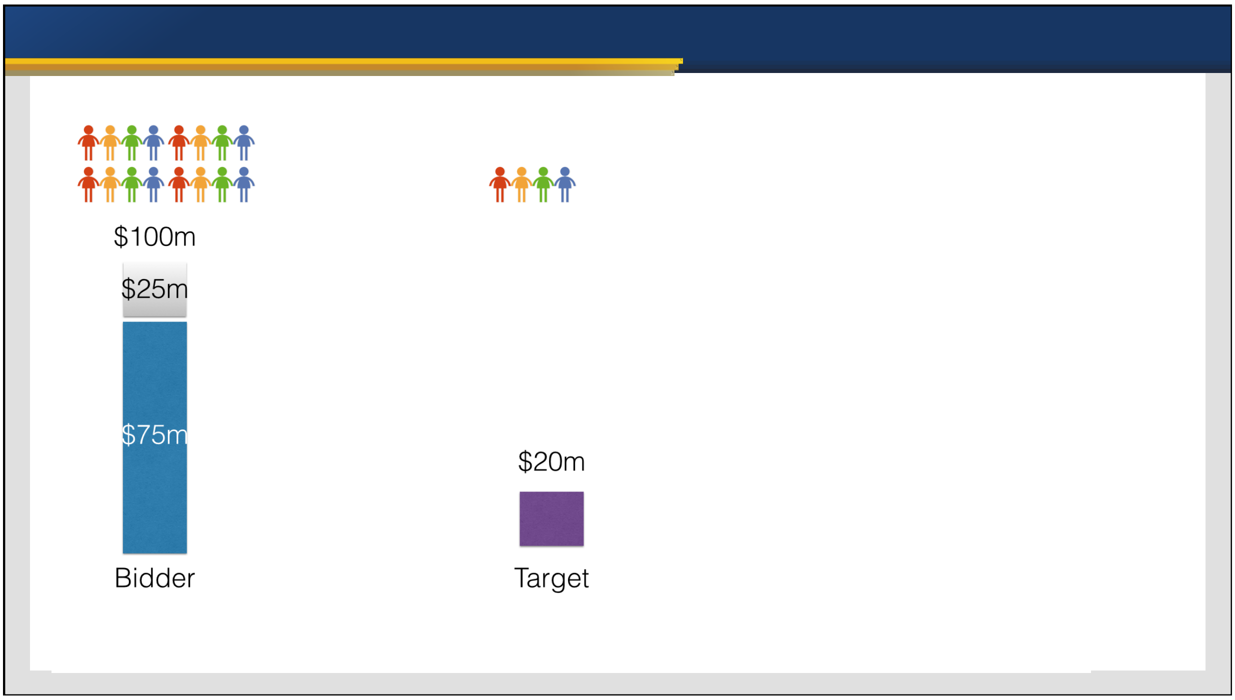
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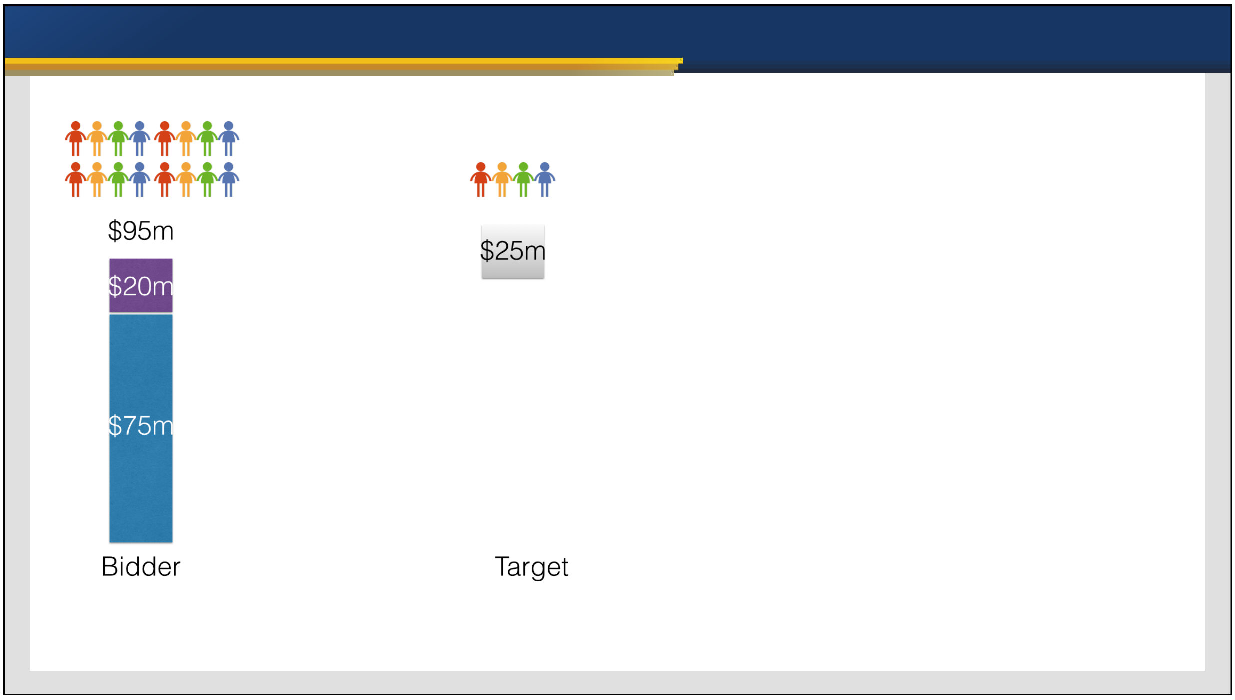
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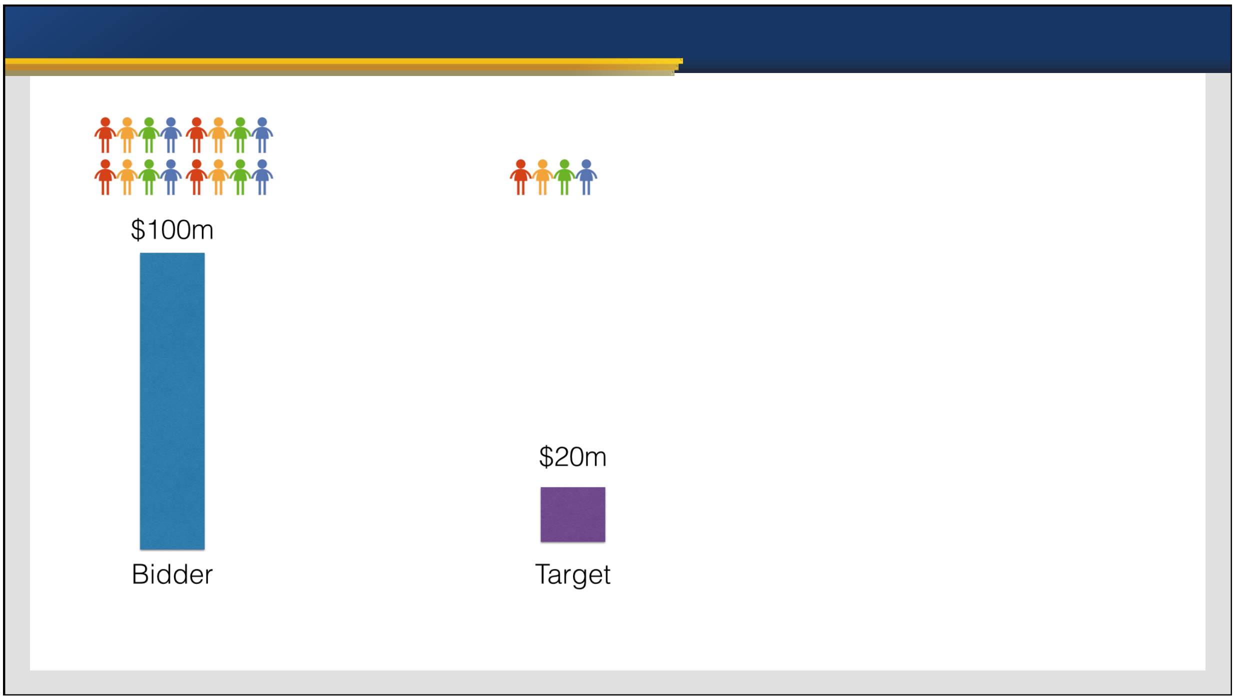
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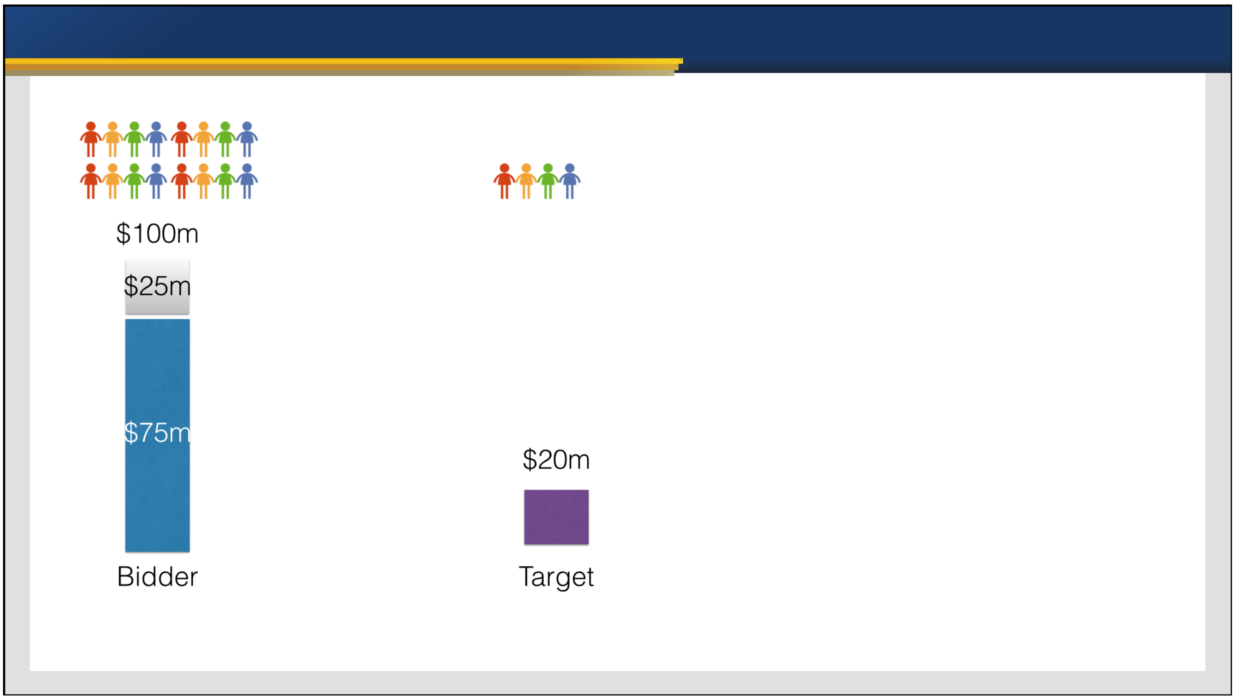
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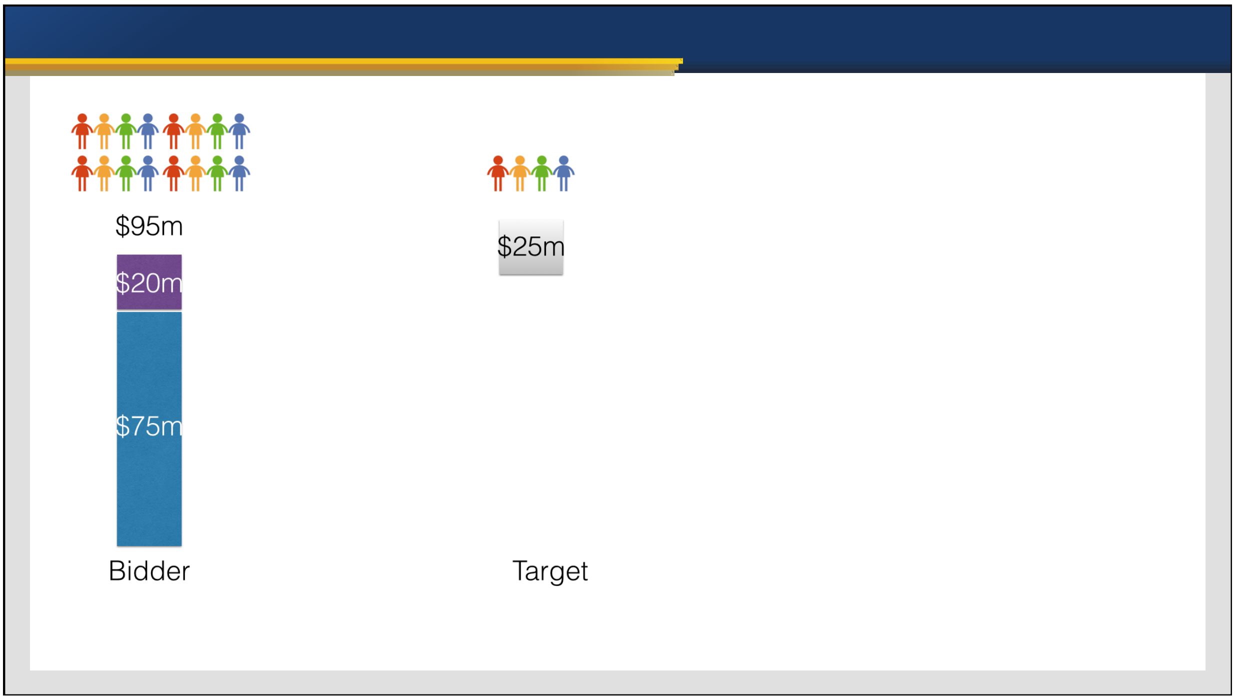
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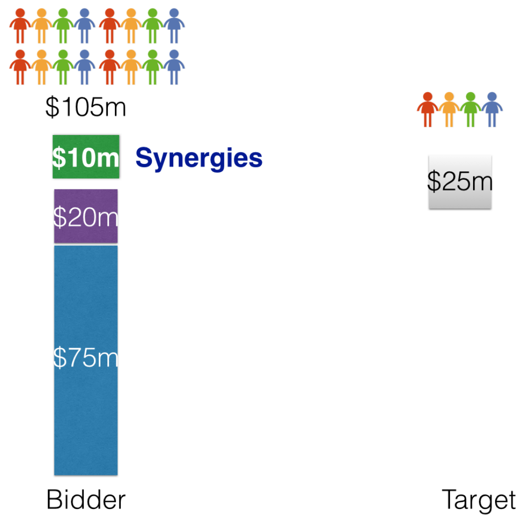


Definitions

V_B = the present value of the bidding firm's cash flows in the absence of the acquisition

V_T = the present value of the target firm's cash flows in the absence of the acquisition

V_{BT} = the present value of the merged firms' cash flows following the acquisition

GAIN = Synergistic benefits from acquisition

$= V_{BT} - (V_B + V_T)$

Definitions

$COST_{Cash}$= Price × Number of target shares

$COST_{Share}$= $\alpha \times V_{BT}$, where α represents the proportion of the combined company owned by target shareholders

$NET\ COST_{Cash} = COST_{Cash} - V_T$

$NET\ COST_{Share} = COST_{Share} - V_T$

NPV_B= GAIN − NET COST

Example: Some preliminary facts

In 5 years time your New York based firm Cafebike (CBK) is a hit and you decide to expand into Chicago.

You identify a potential target company; Brews-are-us (BAU) to takeover and collect the following information:

	CBK	BAU
Share price	$80	$20
Number of shares	100,000	40,000
Market capitalization	$8,000,000	$800,000

You conduct an analysis and work out that there are synergistic benefits – derived mainly from cost efficiencies – that have a present value of $400,000.

Example: Cash offer

Let's assume that you are willing to make a cash offer of $24 per share to BAU shareholders. Now let's estimate:

1. Net cost of acquisition

$\text{NET COST}_{Cash} = \text{COST}_{Cash} - V_T = (\$24 \times 40{,}000) - \$800{,}000 = \$160{,}000$

2. NPV to CBK if offer is accepted

NPV_{CBK}= GAIN – NET COST = $400,000 − $160,000= $240,000

3. The maximum price that we would be willing to pay (i.e. where $NPV_{CBK}=0$)

For what offer price will NET COST = GAIN = $400,000?
$(Price_{Max} \times 40{,}000) - \$800{,}000 = \$400{,}000$
When $Price_{Max} = \$30$

Example: Share offer

Let's say instead you opt for a share offer under the following terms;
3 CBK shares for every 10 BAU shares. It is **very tempting** to say the following:

	Calculation	Total
We are giving:	3 shares worth $80 each	$240
In return for:	10 shares worth $20 each	$200
Net Cost (per 10 BAU shares)		$40
Net Cost (per share)		$4
Net Cost (overall)	40,000×$4 per share	$160,000

But… this confuses what we are promising the shareholders of BAU. They will become shareholders in the merged entity (CBK_{POST}) and not shareholders in our firm as it was prior to the acquisition (CBK_{PRE}).

Why would the price change from CBK_{PRE} to CBK_{POST}?

Example: Share offer

Let's redo the analysis with the same terms; *3 CBK shares for every 10 BAU shares.*

	Calculation	**Result**
$V_{BT}= V_B+V_T+\text{Gain}$	\$8m+\$0.8m+\$0.4m	\$9.2m
Number of shares	100,000+ (3/10×40,000)	112,000
Share price	\$9.2m/112,000	\$82.14

$$COST_{Share}= \alpha \times V_{BT}= (12000/112000) \times \$9.2m = 0.1071 \times \$9.2m = \$985{,}714$$

$$NET\ COST = COST_{Share} - V_T = \$985{,}714 - \$800.000 = \$185{,}714$$

$$NPV_B = GAIN - NET\ COST = \$400{,}000 - \$185{,}714 = \$214{,}286$$

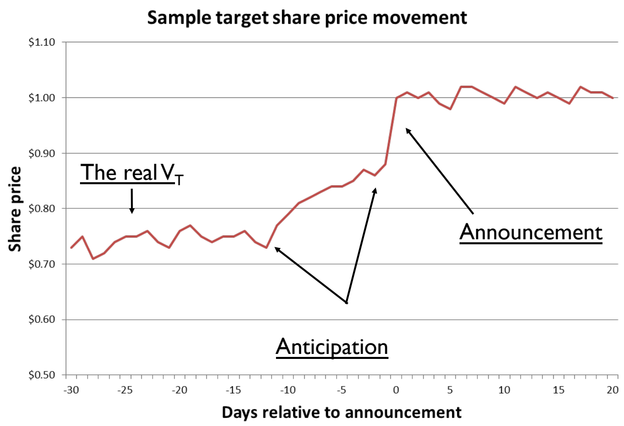
...which divided amongst the 100,000 shares in CBK is equal to a gain of \$2.14 per share!!

Possible challenges

The value proposition for bidders is:

NPV_B= GAIN – NET COST

NPV_B= GAIN – (COST − V_T) ← **Relies on this!**



Recap: How is value created via M&A?

We have established:

1. How to estimate the value of an acquisition to a target firm (*Net Cost*)
2. How to estimate the maximum price that you should be willing to offer a target firm
3. How to estimate the value of an acquisition to a bidding firm – for both a cash and share offer (NPV_B).

Next up … which of the common justifications for takeover activity hold water?

Source list

Slides 2 to 11:
Animation © The University of Melbourne. Prepared Peter Mellow.

Slide 18:

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