

Tonka Inc Harvard Case Solution & Analysis

Risks

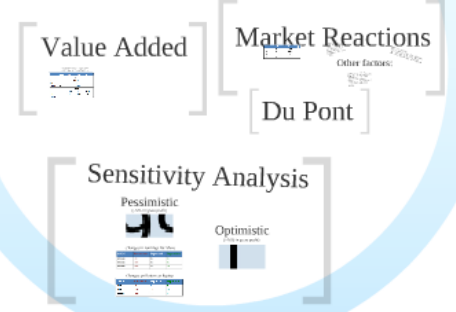


Tonka

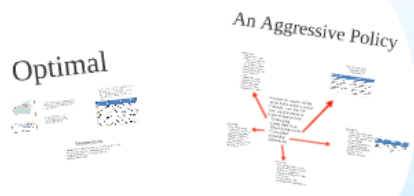
- 5th largest toy company in the US
- Exceptional profitability in 1985 & 1986
- Conservative management
- Utilize financial resources effectively
- Meeting business objectives
 1. Diversify product line
 2. Expand internationally



Leveraging Up



Capital Structures



Recommendations



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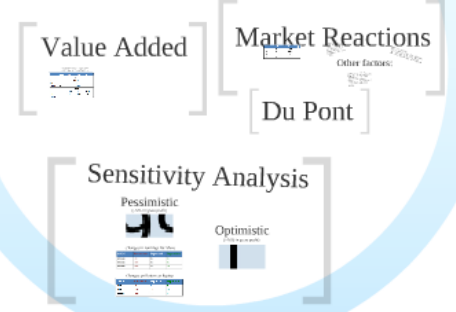


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Risks

Business Risk

- Part of Total Corporate Risk
- Risk associated with company's operations
- Uncertainty about demand
- Uncertainty about input prices
- Uncertainty about costs
- Operating leverage: use of fixed cost rather than variable costs
- Factors: seasonal demand, short product life cycle, high-variability inventory

- Leverage/Cost of Equity
- $RE = 7.95\% + (1.1)(10\% - 7.95\%) = 10.14\%$
- $RE = 1.1(10\%) = 11\%$
- $WACC = 0.7(10.14\%) + 0.3(7.95\%) = 9.32\%$

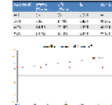
- Unlevered Cost of Equity
- $RE = RD + DE(1 - T_c)(RD - RE)$
- $10\% = 0.3(7.95\%) + 0.7(10.14\%) - 0.49(10\% - RE)$
- $RE = 10.14\%$

- Harada Equity/Unlevered Cost of Equity
- $RE = (RE_U + D/E)(1 - T_c)$
- $11 = (10 + 10/100)(1 - 0.45)$
- $10 = 10.45\%$

Financial Risk

- Additional risk associated with certain distributions at a level of financial leverage, in case of default or preferred stock
- $RE = RD + (D/E)(1 - T_c)(RD - RE)$
- Associated with debt, $D/E = 10/100$
- $RE = 10.45\%$

Financial Risk: Different D/E ratios



Times Interest Earned (TIE) = EBIT Interest Exp

D/E Ratio	TIE
0	1.00
0.2	1.10
0.4	1.20
0.6	1.30
0.8	1.40
1.0	1.50

Current Ratio = Current Assets/Current Liabilities

D/E Ratio	Current Ratio
0	1.00
0.2	1.10
0.4	1.20
0.6	1.30
0.8	1.40
1.0	1.50

Business Risk

- Part of Total Corporate Risks
- Risks associated with company's operations
 - Uncertainty about demand
 - Uncertainty about output prices
 - Uncertainty about costs
 - Operating leverage: use of fixed costs rather than variable costs.
- Tonka: Seasonal demand, short product life cycle, hit-or-miss nature, inventory

- Levered Cost of Equity
- $RF = 7.08\%$ (10-Yr Treasuries Bond)
- $\beta_E = 1.1$ (given)
- RM (S&P 87'Jan & 86'Jan stock prices) = $246.45 - 208.19/208.19 = 18.4\%$

- $RE = RF + \beta_E (RM - RF)$
= $7.08 + 1.1(18.4 - 7.08)$
= 19.532%

- Unlevered Cost of Equity
- $RE = R_0 + D/E (1 - TC)(R_0 - R_D)$
- $0.19532 = R_0 + (16.7/155.5)(1 - 0.45)(R_0 - 0.075)$
- $R_0 = 18.86\%$

- Hamada Equation to find Unlevered Beta
- $\beta_E = \beta_0 [1 + D/E(1 - TC)]$
- $1.1 = \beta_0 [1 + 16.7/155.5 (1 - 0.45)]$
- $\beta_0 = 1.039$

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- $RE = R0 + D/E (1 - TC)(R0 - RD)$
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 $(R0 - 0.075)$
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- Hamada
Unlevered
- $\beta_E = \beta_0$
- $1.1 = \beta_0$
- $\beta_0 = 1.0$