New Heritage Doll Case – Additional Information to compute cash flows – Helpful Hints

I. Compute the initial outlay

For Exhibit #1, use table 2:

- Upfront R&D = $625 plus Upfront marketing = $625 => $1,250
- Capital Expenditure => $1,470

Using the Free Cash flow equation; where operating profit is "revenues – costs – depreciation"

Operating profit (1-T)
+ Depreciation
- Δ net working capital
- Capital expenditures

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= FCF

So for 2010, the initial outlay is: - $1250 (1-T)+ 0 - $800 - $1,470 = ($3,020)

NOTE: it is not uncommon for a project to have negative cash flows in out years (beyond year zero)

II. Compute net working capital

Recall: net working capital equals current assets minus current liabilities

Use the ***working capital assumptions*** to compute net working capital for each year. For year 2011:

- ***Cash*** =>**3%** of sales or revenue = $135
- ***Account receivables***:
  - Days sales in receivable = 365 / receivable turnover =>**59.2** = 365/receivable turnover
  - Account receivable = Sales/ receivable turnover => $4,500/6.17
  - So, Account receivable = $729
- ***Inventory:***

- Inventory = COGS (use total production cost)/inventory =>**7.7** = $2,762/ inventory
- So, Inventory = $359

- ***Accounts payable*** (note: this is a liability which will be subtracted):
  - DPO = 365/payable turnover =>**30.8** = 365/payable turnover
  - Payable turnover = Cost of Sales (use total operating costs minus depreciation)/ accounts payable => 11.85 = (3,917 – 152)/accounts payable
  - Accounts payable = $318

Net working capital = $135 + $ 729 + $359 - $318 = $905

III. Compute *Change* in net working capital – NOTE: the FCF equation uses "change in net working capital"

- For 2011, Δ net working capital => look at difference between years; so, for year 2011, the difference is between Year 2010 and Year 2011;
- So, Δ net working capital in 2011 is $905-$800 = $105

IV. Compute Terminal Cash Flows

Use the following formula to compute terminal cash flows in 2020: where 2020 is the end of project

$TV_{2020} = FCF_{2020} (1+ g)/ (r – g)$

If we using the following : g = 3%; computed FCF_{2020}= $857; and if project risk of medium is used, then r = 8.4%, then:

$TV_{2020} =$ $857 (1.03)/ (.084- .03) = $16.35 mil

NOTE: both the TV_{2020} cash flow plus the FCF_{2020}must be included in the NPV, IRR, PI, and payback period computations.

Therefore, for year 2020, the total cash flow (FCF, plus TV) would be $16.35 mil + $857 or $17,202. Of course, if you use different growth rates (g) and different required returns (r), the value will be different.