

SAMPLE CASH FLOW TEMPLATE

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Maize Medical Supply (MMS) is a leader in the production and sales of X-ray machines. At the end of this year, the company expects to post \$35 million (M) in revenue with a cost of goods sold of \$22M and SG&A expenses of \$2M. They are projecting a growth of these numbers of 8%, 6%, and 2%, respectively, over the next four years. When considering their short term assets and obligations, MMS has \$4M in accounts receivable, \$3M in accounts payable and \$5 of inventory. The company's revenue growth will be largely driven by spending \$20M today on an equipment upgrade, which will also lead to a \$2M increase in accounts receivable at the end of the year. The expenditure for the equipment upgrade can be depreciated using the straight line method over the next 5 years. MMS faces a 35% tax rate, a 14% discount rate and they are projected to be worth \$30M at the end of our valuation horizon of 5 years. What is the value of MMS today?

Information given in the problem (all dollar figures in millions)

Initial Firm Conditions		Future Firm Conditions		Rates	
Revenue	\$ 35.00	Revenue Growth	8%	tax rate	35%
COGS	\$ 22.00	COGS Growth	6%	disc rate	14%
SG&A	\$ 2.00	SG&A Growth	2%		
Accounts Receivable	\$ 4.00	One-time AR increase	\$ 2.00	Capital Expenditure	
Inventory	\$ 5.00	Terminal Value	\$ 30.00	Initial investment	\$ 20.00
Accounts Payable	\$ 3.00	Terminal Value Year	5	Expected life	5

Calculations

Annual depreciation during equipment life \$ 4.00

Time	0	1	2	3	4	5
Working Capital	6	8	8	8	8	8 AR + Inv - AP
Change in WC		2	0	0	0	0 WC(this period) - WC(last period)

Time	0	1	2	3	4	5	
Revenue	\$ -	\$ 35.00	\$ 37.80	\$ 40.82	\$ 44.09	\$ 47.62	(Last Year's Revenue) * (1 + Revenue Growth)
COGS	\$ -	\$ (22.00)	\$ (23.32)	\$ (24.72)	\$ (26.20)	\$ (27.77)	(Last Year's COGS * (1 + COGS Growth)
SG&A	\$ -	\$ (2.00)	\$ (2.04)	\$ (2.08)	\$ (2.12)	\$ (2.16)	(Last Year's SG&A * (1 + SG&A Growth)
Less Dep		\$ (4.00)	\$ (4.00)	\$ (4.00)	\$ (4.00)	\$ (4.00)	Investment / Expected Life [if applicable]
Operating Profit	\$ -	\$ 7.00	\$ 8.44	\$ 10.02	\$ 11.77	\$ 13.68	Sum of the above four items
Tax	\$ -	\$ (2.45)	\$ (2.95)	\$ (3.51)	\$ (4.12)	\$ (4.79)	(Operating Profit) * (Tax Rate)
NOPAT	\$ -	\$ 4.55	\$ 5.49	\$ 6.52	\$ 7.65	\$ 8.89	Sum of the above two items
Plus Dep		\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	\$ 4.00	
Change in Working Capital	\$ -	\$ (2.00)	\$ -	\$ -	\$ -	\$ -	Less INCREASES in WC from earlier calculation
CAPX	(\$20.00)	\$ -	\$ -	\$ -	\$ -	\$ -	
Free Cash Flow	\$ (20.00)	\$ 6.55	\$ 9.49	\$ 10.52	\$ 11.65	\$ 12.89	Sum of the above four items
PV(FCF)	\$ (20.00)	\$ 5.75	\$ 7.30	\$ 7.10	\$ 6.90	\$ 6.69	each year's FCF discounted to today's dollars
PV(Terminal Value)						\$ 15.58	terminal value discounted to today's dollars

Total NPV \$ 29.31 Summing present values of the free cash flows and the present value of the terminal value
Total NPV \$ 29.31 Computing the NPV with help from Excel's NPV function