

ACCT 321 Intermediate Accounting for Finance
Instructions - Working Capital Case Study [30 points]

ABC has cash totaling \$3,525 at the end of year 1. ABC needs to generate additional cash and your job is to make ABC cash flow in both years 2 and 3 (**positive ending cash balances on the balance sheets**); using the cash 3 factors (Volume, Margin and Working Capital). **YOU MUST DETERMINE ABC'S SALES INCREASE** (Volume) for years 2 and 3 **and the RELEVANT days in accounts receivables, days in inventory and days in accounts payable** (Working Capital) in order for ABC to cash flow. You must use the Margin Information given to you in the case study (gross profit % and operating expense %). You will need to try several different combinations until ABC cash flows in both years 1 and 2. Other than that, use the other information given in the case below.

ABC Company is a start-up brain and neurological testing company. ABC developed a device that eliminates 96.25% of the protein beta-amyloid, known as plaques, in the brain. The build up of these brain plaques are suspected of causing Alzheimer's disease.

In year 1 ABC initial financing consisted of founders' (shareholders') equity investment totaling \$369,074 and a \$4,500,000 bank loan, totaling \$4,869,074.

In year 1 ABC generated a small net profit of \$108 on total sales of \$3,000,000, a gross margin of 41% and operating expenses of 30%. At the end of year 1 ABC's cash balance was \$3,525, which means they spent most of their initial financing in year 1. ABC's year 1 cash conversion cycle totaled 41 days, which consisted of days in accounts receivable of 37 days, days in inventory of 49 days and days in accounts payable of 45 days. The founders (shareholders) do not have any more cash to invest in the company, the company does not qualify for additional debt financing and ABC cannot raise additional equity financing.

ABC believes it can reasonably achieve a 42% gross margin for years 2 and 3 and reduce operating expenses to 19% and 14% of sales for years 2 and 3, respectively. Furthermore, in order to increase sales ABC must invest \$75,000 and \$950,000 in capital expenditures (property, plant and equipment) in years 2 and 3, respectively. Also, ABC must pay the principal and interest payments on the original \$4,500,000 debt obligation in years 2 and 3.

Attached are schedules of ABC's additional information, balance sheets, income statements and cash flows. Based on the given information **you must determine** ABC's annual sales increase, days in accounts receivable, days in inventory and days in accounts payable for years 2 and 3. Based on those days you must also compute ABC's accounts receivable, inventory and accounts payable for years 2 and 3 in order to compute ABC's cash flows. Additionally, based on your results, you must complete ABC's balance sheets, income statements and schedule of cash flows for years 2 and 3.

I recommend you begin with the attached excel spreadsheets, but develop the appropriate formulas to automatically change the balance sheet, income statement and schedule of cash flows when you change your inputs. For example, you should design your spreadsheet so that when you change days, excel will compute accounts receivable, inventory and accounts payable on the balance sheet and schedule of cash flows. Furthermore, I suggest you design your spreadsheet so that when you change the percentage increase in sales it will also automatically update the sales line in the income statement and net income or loss line on the cash flows (this is what we did in our entire semester balance sheet, income statement and statement of cash flow assignments earlier in the semester).

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You are not required to prepare a statement of cash flows, but I recommend you prepare it anyway to avoid circular excel references. In other words, the cash line on the balance sheets should automatically populate with the ending cash line on the statement of cash flows. This way the schedule of cash flows won't have circular references to the balance sheets.

I DO NOT WANT YOUR STATEMENT OF CASH FLOWS. I WANT THE BALANCE SHEETS, INCOME STATEMENTS, SCHEDULE OF CASH FLOWS AND THE ADDITIONAL (INPUT) SHEET. THE ENDING CASH BALANCE ON THE SCHEDULE OF CASH FLOWS MUST AGREE WITH THE CASH LINE ON THE BALANCE SHEETS.

No handwritten answers will be accepted.