

## BUSI 2505 Winter 2010

### Group Assignment 1 (max 3 persons per group)

**Deadline: submit typed assignment at the beginning of class during week of February, 29.  
Late assignments will NOT be accepted.**

Zabnemurph (TSX ticker name: ZNM), an upstart Ottawa technology firm, is contemplating the purchase of \$75M worth of data network infrastructure equipment to add to the existing pool of similar equipment. They expect that this equipment will have a useful life of 10 years, at which point they estimate its salvage value to be \$2M. The new equipment will generate sales of 100,000 units this year, which are expected to increase by 12% per year for the next 2 years, after which the growth rate will decrease by 1% per year for the remainder of the life of the project. The price per unit is going to be \$250 this year, increasing at a projected rate of 3% per year, and the variable costs are estimated to be at 50% of the sales price. Fixed costs are \$3M this year; they are also expected to increase by 3% per year. It is also expected that the new purchase will require an immediate increase in inventories of \$2M, an immediate increase in accounts receivable of \$1.5M., and an immediate increase in accounts payable of \$1.25M. Subsequently, total net working capital at the end of each year will be 10% of the dollar value of sales for that year. The net working capital amounts will be recaptured at project termination.

It is expected that ZNM will finance this purchase with 25% debt and the remainder with equity. As it presently has no debt, it is expecting to offer debt for the duration of the project with a coupon of 5%, and it is projected to sell for 99.4% of par. Flotation costs on debt are expected to be 1.25%. It is expected that the additional equity amount will have a systematic risk component based on its exposure to the S&P500, and that the risk free rate is expected to be the 3-month T-bill rate, presently at 2% annual. Prices for ZNM and values for S&P500 are included below, and are also on WebCT in a file titled "Group Assignment 1 Data". Please note that these are monthly return figures, not annual. Flotation costs on equity are expected to be 1.5%. ZNM's historical earnings are show in the table below.

Year	2003	2004	2005	2006	2007	2008
Earnings, mln. \$	1.2	1.5	1.7	2.0	2.2	2.3

Currently, ZNM has 2 million shares of stock outstanding. It has a tradition of paying half of its earnings as dividends. ZNM falls into the 34% corporate tax bracket and cannot carry losses forward.

1. What are the cash flows to assets from the project in years 1-10?
2. What is ZNM's cost of capital for this project?
3. Prepare an executive report on whether ZNM should proceed with this project. Support your conclusions with all investment criteria you can calculate given the information contained herein.

Date	ZNM	S&P500
01/02/03	7.18	855.7
02/03/03	7.51	841.15
03/03/03	7.07	848.18
04/01/03	7.11	916.92
05/01/03	8.98	963.59
06/02/03	9.53	974.5
07/01/03	10.54	990.31
08/01/03	11.31	1008.01
09/02/03	10.36	995.97
10/01/03	11.44	1050.71
11/03/03	10.45	1058.2
12/01/03	10.69	1111.92
01/02/04	11.28	1131.13
02/02/04	11.96	1144.94
03/01/04	13.52	1126.21
04/01/04	12.89	1107.3
05/03/04	14.03	1120.68
06/01/04	16.27	1140.84
07/01/04	16.17	1101.72
08/02/04	17.25	1104.24
09/01/04	19.38	1114.58
10/01/04	26.2	1130.2
11/01/04	33.53	1173.82
12/01/04	32.2	1211.92
01/03/05	38.45	1181.27
02/01/05	44.86	1203.6
03/01/05	41.67	1180.59
04/01/05	36.06	1156.85
05/02/05	39.76	1191.5
06/01/05	36.81	1191.33
07/01/05	42.65	1234.18
08/01/05	46.89	1220.33
09/01/05	53.61	1228.81
10/03/05	57.59	1207.01
11/01/05	67.82	1249.48
12/01/05	71.89	1248.29
01/03/06	75.51	1280.08
02/01/06	68.49	1280.66
03/01/06	62.72	1294.87
04/03/06	70.39	1310.61
05/01/06	59.77	1270.09
06/01/06	57.27	1270.2
07/03/06	67.96	1276.66
08/01/06	67.85	1303.82
09/01/06	76.98	1335.85
10/02/06	81.08	1377.94
11/01/06	91.66	1400.63
12/01/06	84.84	1418.3
01/03/07	85.73	1438.24
02/01/07	84.61	1406.82
03/01/07	92.91	1420.86

04/02/07	99.8	1482.37
05/01/07	121.19	1530.62
06/01/07	122.04	1503.35
07/02/07	131.76	1455.27
08/01/07	138.48	1473.99
09/04/07	153.47	1526.75
10/01/07	189.95	1549.38
11/01/07	182.22	1481.14
12/03/07	198.08	1468.36