

IB Business Management: Finance Practice Worksheet #2

Stay in Touch

Stay in Touch is a well-known national company with a good reputation. It manufactures and markets mobile phones.

To be more competitive in both international and domestic markets the management of *Stay in Touch* is considering the possibility of contracting out the production of the mobile phones. They are in discussions with Speedy which is a specialized manufacturing company, located in a developing country. Speedy manufactures similar types of mobile phones for various companies around the world and is looking for more business as it currently operates below full capacity. The contracting-out option will enable *Stay in Touch* to concentrate on both research and development and the marketing of their machines. *Stay in Touch's* target profit is \$15 million.

Stay in Touch currently produces 1 million units per year. Variable costs are \$10 per unit with total fixed costs of \$5 million.

Each mobile phone is sold for \$25 per unit.

In the event of contracting out, *Stay in Touch* will save \$5 million fixed costs as a result of closing down production. Speedy will charge *Stay in Touch* \$13 for each phone.

Speedy's current production level is 10 million units per year, two million less than their full capacity. Their variable costs of production are \$12 per unit with fixed costs of \$60 million. They sell the phones to other companies at \$20 per unit.

Please note: Clearly show all your working when calculations are required.

1.
 - (i) Calculate the break-even level of output for *Stay in Touch*. (2)
 - (ii) Calculate the number of phones that *Stay in Touch* will have to sell to achieve their target level of profit of \$15 million. (2)

(Total 4 marks)

2.
 - (a) Using appropriate calculations, evaluate whether *Stay in Touch* should contract out production to Speedy. (8)
 - (b) Using appropriate calculations, evaluate whether Speedy should accept the order from *Stay in Touch*. (8)

(Total 16 marks)

Sport's investment

Lev Yashin and Alexi Kirov are partners and racehorse owners. They are looking to expand into new sports' ventures. Business contacts have suggested that ownership of a football team would provide opportunities for commercial success. An agent working on their behalf has identified two public limited companies, which may provide investment opportunities. She has prepared financial estimates of returns for each of these potential investments:

Football Club A

A European club, which won national titles three times in the last ten years. It has qualified for the Champions League, which is the most important and profitable football competition in Europe. It presently has substantial debt, but there is considerable interest from sponsors. If the club makes progress in the Champions League it is likely to be able to repay at least 50% of its debt. The cost of a takeover would be approximately \$200 million.

Football Club B

An Asian club, which is the most successful team in the region. It has consistently been in the top three in its league. It has a new ground built for a recent world athletic event. The stadium is rarely full, but the club is well run and profitable. There is the opportunity to develop shopping, leisure and entertainment facilities surrounding the ground. The cost of a takeover would be approximately \$70 million.

Expected Incomes

Figures in millions of \$	Football club A	Football club B
Year 1	-30	15
Year 2	-2	18
Year 3	76	21
Year 4	96	24
Year 5	150	30

Lev Yashin is looking for a quick, low-risk return. Alexi Kirov is prepared to accept a higher level of risk. The estimates presented rely on the two teams, performing well in leagues and competitions.

3. For each investment opportunity, using the information on expected incomes, calculate (*to 2 decimal places*) the

(i) payback period;

(3)

(ii) accounting rate of return;

(3)

(iii) net present value using the discount factors for 6% below.

Year 1	0.9434
Year 2	0.89
Year 3	0.8396
Year 4	0.7921
Year 5	0.7473

(4)

(Total 10 marks)

4. Based on your calculations and on any other relevant factors, advise the partners on the advantages and disadvantages of each investment opportunity.

(Total 8 marks)

Wholeheart Bakery

Wholeheart Bakery has been manufacturing breakfast cereals since 1976. Their best-selling product has always been wheat flakes. However, as competition increased during the years 1988 to 1998, sales of *Wholeheart* wheat flakes fell 45% to 75 000 boxes per week, despite additional promotion and improved quality. *Wholeheart Bakery* was now producing at only 50% of the capacity of their Falconwood factory, which only made wheat flakes. Closure of the factory was suggested. Fortunately that year *Wholeheart Bakery* accepted an approach by a national supermarket chain, *Max-Mart*, to manufacture 50 000 wheat flakes boxes per week for them to be sold under the supermarket's own brand, "M-Power". The wheat flakes were identical, but with different packaging design. By 2000, sales of the *Wholeheart* brand had declined further to 60 000 boxes per week, but *Max-Mart's* purchase order had increased to 60 000 units to supply newly opened shops.

In March 2004, *Max-Mart* acquired another large supermarket chain and asked *Wholeheart Bakery* if they could now supply them with 150 000 boxes of wheat flakes per week. The production manager met the board of directors and presented the following summary:

- accepting the *Max-Mart* order would mean *Wholeheart Bakery* would no longer manufacture their own *Wholeheart* brand of wheat flakes, as acquiring a new factory was not financially viable.
- there may be problems producing at full capacity at the Falconwood factory. To justify the change, profit levels should increase 30% over present levels.

Present output and financial data

	Wholeheart wheat flakes	Max-Mart wheat flakes
Weekly production	60 000 units	60 000 units
Unit price received	\$1.30	\$1.10
Variable cost per unit	\$0.40	\$0.40

Fixed Costs of the Falconwood factory = \$56 000 per week

8. (i) Showing full working, calculate the total weekly profit/loss being made by *Wholeheart Bakery* at the present levels of output. (3)
- (ii) Calculate the change in profit/loss if *Wholeheart Bakery* accepts the offer to manufacture exclusively for *Max-Mart*. (1)
- (iii) What price per box would *Wholeheart Bakery* need to charge *Max-Mart* to achieve the required 30% increase in profits over present levels? Show your working. (3)

(Total 7 marks)

Ashley Gardener Limited

Ashley Gardener Limited is a family-run business producing a range of catering equipment. Ashley is keen to expand his business and is negotiating with his bank manager the terms of a loan. Ashley's children have warned him that many economists are forecasting an economic recession and higher interest rates. They are also concerned that Ashley often finds it difficult to pay his suppliers on time and that this is causing some of them to demand payment by cash.

Appropriate information is given in Tables 1 and 2.

Table 1

(as at 31st January 2002)

	\$000
Machinery	360
Stock	12
Cash at bank	22
Land and buildings	420
Fixtures and fittings	53
Debtors	38
Creditors	68
Share capital	600
Reserves	237

Table 2

(for the year ending 31st January 2002)

	\$000
Net profit before interest and tax	100
Sales	1300

9. From the data given in Table 1 construct a balance sheet for *Ashley Gardener Ltd.*

(Total 6 marks)

Gunwale Surfboards

A surfboard company, *Gunwale Surfboards*, advertised its professional “Slider X6” boards in its January catalogue at \$220 each. These boards are produced in small batches of between 20 and 25 by local suppliers, who make by hand to order. Each batch has a different design to keep up with current fashion and sometimes incorporates new technology or materials. The suppliers’ prices vary according to raw material costs. The quality, although excellent, varies according to the craftsman involved. Supplies are sometimes delayed by the personal circumstances of the individual supplier. *Gunwale Surfboards* had twelve boards in stock at the beginning of 2003, that had cost \$156 each to purchase. The following are stock purchases and sales for the first six months of the year:

Date (2003)	Purchases (units)	Cost per unit (\$)	Sales (units)
January	140	165	86
February	60	162	93
March	160	170	110
April	60	168	108
May	150	173	125
June	100	170	146

Gunwale Surfboards is concerned about the rising purchase cost of the boards. It has been approached by a large overseas supplier, *Johanssons*, which is prepared to supply boards more cheaply at \$150 each, provided *Gunwale Surfboards* purchases batches of 250 boards at a time. Prices fall further if batches are larger. The boards are mass-produced, but *Johanssons* is prepared to brand the boards with a *Gunwale Surfboards* logo. *Gunwale Surfboards* is concerned about maintaining quality, but *Johanssons* is willing to discuss joint quality control measures to ensure high standards and is investing significant amounts into new production equipment. *Johanssons* have even suggested taking a minority shareholding in *Gunwale Surfboards*.

10. (a) Using the information in the table calculate the value of closing stock as at the end of June 2003:
- (i) if the method of valuation is first in, first out (FIFO).
 - (ii) if the method of valuation is last in, first out (LIFO).

(8)

N.B Calculations should be shown for each month.

- (b) Calculate the gross profit on the “Slider X6” for the six-month period January to June, using the two methods of stock valuation.

(3)

(Total 11 marks)