Finance and accounts

IB DP Business Management Unit 3 Finance and accounts full package

Customers liked it. The cash ran out.

> A business with a product people like can still fail when cash runs out.

- 2017: ofo had millions of yellow bikes and billions of dollars from investors.
- End of 2018: over ten million users queued online for their deposits.
- How a business plans its money, reads its accounts and judges a project.

Capital or revenue expenditure?

Capital expenditure

Buys **non-current assets**: a workshop, a machine, a van.

Needs long-term finance.

Revenue expenditure

Pays day-to-day running: wages, parts, rent, electricity.

Short-term finance can fit.

Where the money comes from

External source	The trade-off
share capital	never repaid - owners lose some control
loan	large sums - interest even in a bad year
overdraft	flexible - expensive, can be ended any time
trade credit	free for 30-60 days - late payment hurts
leasing	no large payment - costs more in total

Financing the second workshop

1. **Workshop, 120,000** Half **retained profit**, half a five-year bank loan.
2. **Monthly parts bill Trade credit** from suppliers.
3. **Eleven days in December** The **overdraft**, while wages went out before customers paid.

Decision

Long-term needs, long-term finance; short gaps, short-term finance.

Costs and revenue

Cost	**At the repair business**
fixed	rent, salaries, insurance
variable	car parts, paint, machine energy
semi-variable	a phone contract: monthly charge plus per call
direct	the parts used in one repair
indirect (**overhead**)	the manager's salary, shared by all repairs

The income statement

Income statement	**$**
sales revenue	600,000
cost of sales	(360,000)
gross profit	240,000
expenses	(150,000)
profit before interest and tax	90,000
profit after interest and tax	60,000
retained profit, after dividends	40,000

The statement of financial position

On 31 December	**$**
non-current assets	320,000
current assets	80,000
current liabilities	(40,000)
working capital	40,000
non-current liabilities	(160,000)
net assets	200,000
equity	200,000

Depreciation two ways

1. **Straight line** (22,000 - 2,000) / 4 = 5,000 every year.
2. **Units of production** 20,000 tests in its life: (22,000 - 2,000) / 20,000 = 1 per test.
3. **A busy year** 6,000 tests: **depreciation** 6,000.

Decision

Units of production suits machines used more in some years than others.

Profitability ratios

1. **Gross profit margin** 240,000 / 600,000 x 100 = 40%.
2. **Profit margin** 90,000 / 600,000 x 100 = 15%.
3. **ROCE Capital employed** 160,000 + 200,000 = 360,000; 90,000 / 360,000 x 100 = 25%.

Decision

ROCE of 25% is far above the 6% loan interest - borrowing to invest has paid off.

Liquidity ratios

1. **Current ratio** 80,000 / 40,000 = 2.0.
2. **Acid test** (80,000 - 30,000) / 40,000 = 1.25.
3. **Improve** Sell old stock, collect debts faster, swap an **overdraft** for a loan.

Decision

Both are healthy - but far above the range means money sitting idle.

Efficiency ratios

Ratio	Working	Result
stock turnover	360,000 / 24,000	15 times (24.3 days)
debtor days	45,000 / 600,000 x 365	27.4 days
creditor days	25,000 / 360,000 x 365	25.3 days

Gearing

1. **Calculate** 160,000 / 360,000 x 100 = 44.4%.
2. **Risk** Interest is due even when sales fall; banks may refuse more loans.
3. **Advice** Close to the line: fund the next project with shares or **retained profit**.

Profit is not cash

> A profitable business can fail without cash; a business with cash can survive a loss.

- A repair finished on 28 December is December revenue; if paid in February, the cash arrives then.
- Cash is held for bills, a safety reserve and opportunities.

The forecast that saw April coming

> Seen in January, the April shortfall leaves three months to arrange an **overdraft**.

- Net **cash flow** = cash in - cash out; closing = opening + net.
- April: insurance and a big parts order together - closing balance -5,000.

Three ways to fix a cash problem

Approach	**Examples**	**Drawback**
reduce cash out	delay equipment; lease; longer supplier credit	old kit may break
improve cash in	faster payment; cash discounts; sell old stock	discounts cut profit
find more finance	**overdraft**; short-term loan; sell an asset	interest costs

Payback and ARR

1. **Payback** 3 x 40,000 = 120,000: paid back in 3 years.
2. **ARR** (160,000 - 120,000) / 4 = 10,000 a year; 10,000 / 120,000 x 100 = 8.3%.
3. **Compare** 8.3% beats the 6% loan interest.

Net present value

Year	Cash flow	Factor (6%)	Present value
1	40,000	0.943	37,720
2	40,000	0.890	35,600
3	40,000	0.840	33,600
4	40,000	0.792	31,680
total			138,600
NPV	138,600 - 120,000		+18,600

Budgets and variances

Workshop 3	Budget	Actual	Variance
repairs	520 at 25	560 at 24	
revenue	13,000	13,440	440 F
parts	4,160	4,760	600 A
wages	5,000	4,900	100 F
profit	3,840	3,780	60 A

Check yourself

Your turn

Without notes, for the repair business,

A. Calculate the profit margin and the acid test ratio.
B. Calculate gearing and say what it means for the next project.
C. Explain how a profitable business can run out of cash.
D. Find the payback, ARR and NPV for the third workshop.