Business Studies

L2 - Money and Tools to Manage it

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2. Money and Tools for it's management

- Introduction to accounting
  - Profit and Loss
  - Cash flow
  - Balance Sheet
  - Budgets
- Sources of finance
- Stocks, Shares, Futures and Options

Introduction to accounting

- Why have accounts?
  - Instruments on the dashboard of the company
  - To control, you must first measure
  - Statutory duty

  - DO THE BUDGET
  - COMPARE WITH REALITY

Legal requirements;

- Keep proper books of account
- Annual audit
- Solvency

Double entry

- TERMS “Debits and Credits”
  - Debit: to receive. Income Owed to the company
  - Credit: to give. Outgoings. Owed by the company
- Ledgers and balances
- Accountancy programs e.g. Sage, Xero

Date	Description	Amount	Date	Description	Amount
	DEBIT SIDE			CREDIT SIDE	

Vertical Format

Income
- Sales
- Interest
- TOTAL Income

Expenditure
- Cost of goods
- Salaries
- Overheads
- Marketing
- TOTAL Expenditure
- Profit

if you form a limited company

the business is not you and you are not the business

so your money is not the business’s

and the business’s money is not yours

Accounts

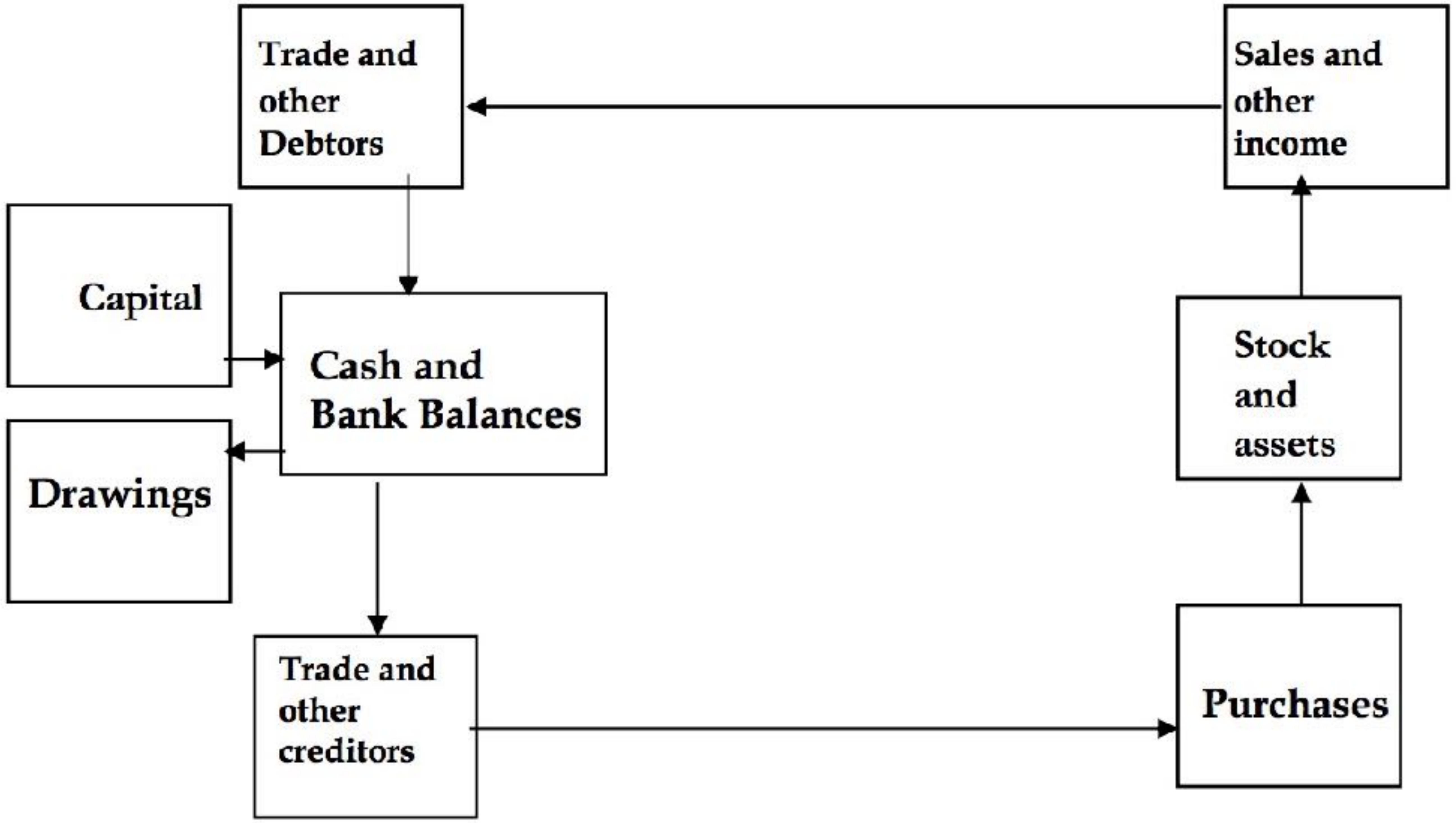
Profit & Loss Account

Debit	Credit
Cost of Goods Sold (all goods for resale minus any stock left at the time)	Sales (invoices raised etc)
Expenses (all the costs including wages)	
Profit (always a balancing figure)	

Balance Sheet

Debit	Credit
Fixed Assets (eg Computer, Car)	Creditors (people you owe money)
Debtors (people who owe you money)	Loans (banks you owe money)
Stock (goods for resale)	Capital (the money you put in)
Bank (assuming a positive balance)	Retained Profit (the profit made so far)

Interlinking of Accounts



Account Example 1

Open a bank account with £1,000 to start your business

- Debit: Bank £1,000
- Credit: Capital £1,000

Go to market and write a £600 cheque for some Mushrooms

- Debit: Stock £600
- Credit: Bank £600 [We could say Debit: Bank -£600 but instead we copy what real Accountants do with minus numbers and change Debit to Credit]

Quick check on the bank

- We put in £1,000 in and spend £600 leaves £400

In accounting speak Debit £1,000 then Credit £600 leaves Debit £400

Account Example 2

Door to door we sell half the Mushrooms for £700 which we pay into the bank

- Debit: Cost of Goods Sold £300 (half of £600)
- Credit: Stock £300 (reducing stock for what we sold)
- Debit: Bank £700
- Credit: Sales £700

We can do some accounts

Profit and Loss Account

Cost of Goods Sold	£	300	Sales	£	700
Profit (=balance)	£	400			
	£	700		£	700

Balance Sheet

Stock	£	300	Capital	£	1000
Bank	£	1100	Retained Profit	£	400
	£	1400		£	1400

Account Example 2

The mushrooms are looking old - We sell the remainder to a caterer for £350

- Debit: Cost of Goods Sold £300 (the remainder of the stock)
- Credit: Stock £300
- Debit: Bank £350
- Credit: Sales £350

We can do some accounts

Profit and Loss Account

Cost of Goods Sold	£	600	Sales	£	1050
Profit (=balance)	£	450			
	£	1050		£	1050

Balance Sheet

Stock	£	0	Capital	£	1000
Bank	£	1450	Retained Profit	£	450
	£	1450		£	1450

Principles of Accounting 1

- Boundaries
  - Entity
  - Periodicity
  - Going concern
  - Quantative
- Ethics
  - Prudence - if in doubt, understate profts, overstate losses
  - Consistent - use the same rules thoughout
  - Objective - avoid personal preference
  - Relevance “True and fair”

Principles 2

- Measurement
  - Money
  - Consistent cost basis
  - Realisation
  - Consistent time basis
  - Double entry
  - Materiality

Example P&L Budget

Month	1	2	3	4	5	6	7	12	Total
Income									
	30,000		30,000			30,000		10,000	100,000
Expenditure									
Programmers	5,000	5,000	5,000	5,000	5,000	5,000			30,000
Overheads	5,000	5,000	5,000	5,000	5,000	5,000			30,000
Total Costs	10,000	10,000	10,000	10,000	10,000	10,000	0	0	60,000
Profit in the month	20,000	-10,000	20,000	-10,000	-10,000	20,000	0	10,000	40,000
Profit to date	20,000	10,000	30,000	20,000	10,000	30,000	30,000	40,000	40,000

Example Cashflow

Month	1	2	3	4	5	6	7	8	12	Total
Income										
			30,000			30,000		30,000	10000	100,000
Expenditure										
Programmers	5,000	5,000	5,000	5,000	5,000	5,000				30,000
Overheads		5,000	5,000	5,000	5,000	5,000	5,000			30,000
Total Costs	5,000	10,000	10,000	10,000	10,000	10,000	5,000	0	0	60,000
Profit in the month	-5,000	-10,000	20,000	-10,000	-10,000	20,000	-5,000	30,000	10,000	40,000
Profit to date	-5,000	-15,000	5,000	-5,000	-15,000	5,000	0	30,000	40,000	40,000

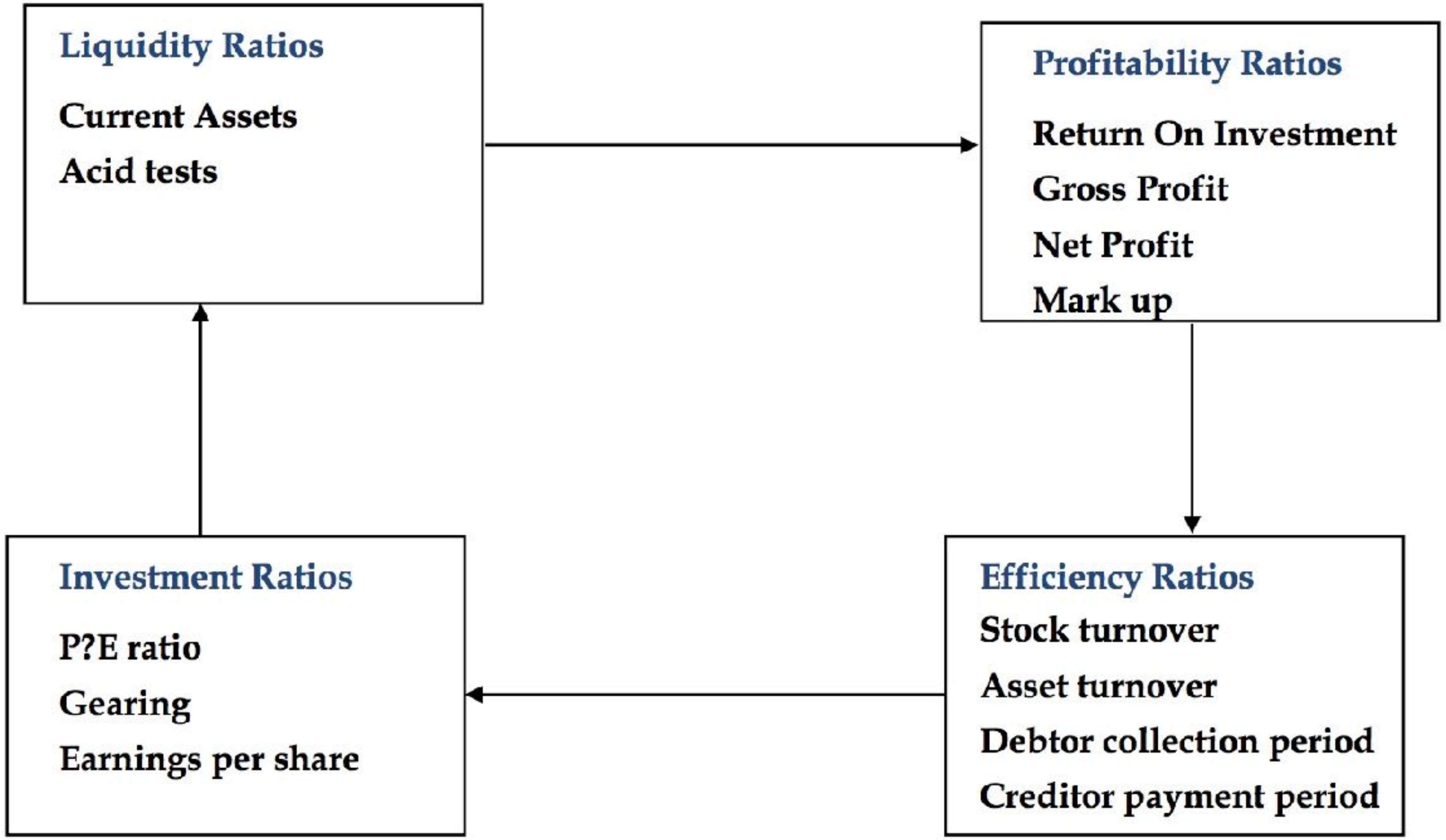
Revised Cashflow

Month	1	2	3	4	5	6	7	8	9	10	16	Total
Income												
			30,000				30,000			30000	10,000	100,000
Expenditure												
Programmers	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000				40,000
Overheads		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000			40,000
Total Costs	5,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	5,000			80,000
Profit in the month	-5,000	-10,000	20,000	-10,000	-10,000	-10,000	20,000	-10,000	-5,000	30,000	10,000	20,000
Profit to date	-5,000	-15,000	5,000	-5,000	-15,000	-25,000	-5,000	-15,000	-20,000	10,000	20,000	20,000

Example Balance Sheet as at the beginning of Month 9

Fixed Assets					
Computers				10,000	
Furniture				3,000	
Current Assets					
Work-in-Progress		10,000			retainer, not yet invoiced
Trade Debtors		30,000			Amount invoiced, but not yet paid
Cash		0			Normally there would be some petty cash
Less: Current Liabilities					
Trade Creditors		5,000			
Bank Overdraft		15,000			
Net current assets				33,000	
Representing					
Proprietors Capital				13,000	The proprietor paid for the computers etc.
Plus: Accumulated Profit				20,000	

Tests


Liquidity Ratios
Current Assets
Acid tests
Profitability Ratios
Return On Investment
Gross Profit
Net Profit
Mark up
Investment Ratios
P?E ratio
Gearing
Earnings per share
Efficiency Ratios
Stock turnover
Asset turnover
Debtor collection period
Creditor payment period

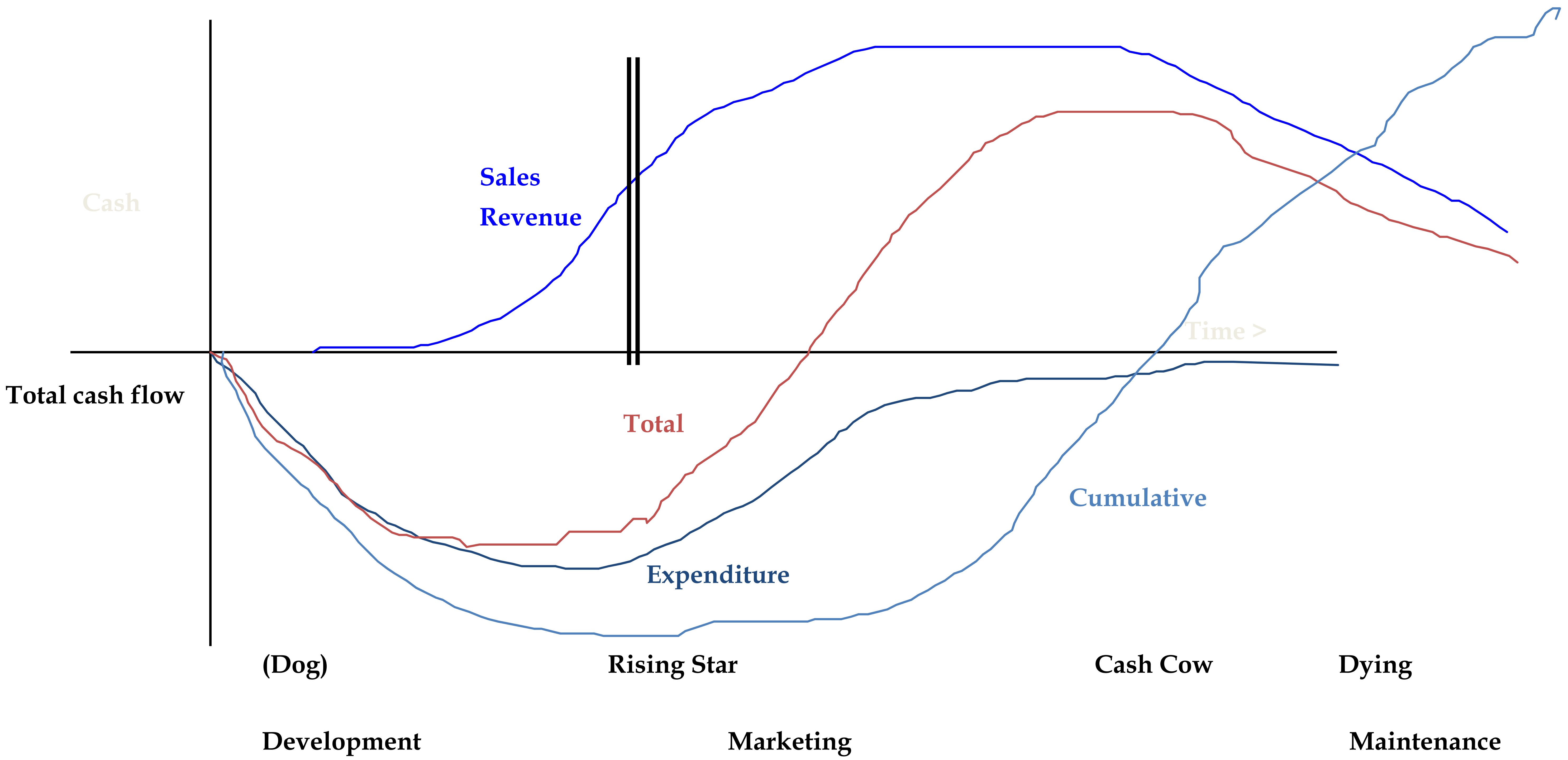
Ratios

- Current ratio
  - Current Assets / Current Liabilities
    - Measures liquidity
    - < 1 indicates potential cash flow problems
- Acid test (Quick Health check)
  - (Current Assets-Stocks) / Current liabilities
    - Stocks may not be able to be sold quickly
    - Similar to Current Ratio, but shorter term
- Gearing
  - Net Borrowings / Shareholders' Funds
    - Reliance on borrowings
    - Vulnerability to interest rate rises
- Return on Investment
  - Profit before Tax / Shareholders Funds
    - Efficiency - 40% for sustainable high growth

Budgeting

- Assumptions
  - “Pessimistic realism”
  - Tell the truth - know the worst
- Sensitivity analysis
- Comparison with actual
- Update!!

Product stages



Debt and Equity

- Debt
  - – Loan
    - Credit card, Overdraft, Mortgage, Student Loan, Debenture, Bond etc
    - Interest rates, term, conditions, collateral
    - Repay the same amount regardless performance
- Equity
  - – Share of the company
  - – Return depends on the performance of the company
    - Can be expensive money
    - Can be valueless if the company folds
    - Only valuable on an exit (sale, IPO etc)
      - – Preference shares may have other conditions such as liquidation ratios attached
- Convertible Debentures
- Redeemable Preference Shares

How much will I need?

- DO THE BUDGET
- Working assumption no income for 1st year
  - One man band, working from home £100,000
  - 5 people, office etc £1M
  - 20 people, small factory £5M

  - Game, software package $5M
  - New complex chip $100M

Hard Times

Michael Beckwith, Sequoia Capital

OUR TAKE

MANAGE WHAT YOU CAN CONTROL

- SPENDING
- GROWTH ASSUMPTIONS
- EARNINGS ASSUMPTIONS

FOCUS ON QUALITY

LOWER RISK

REDUCE DEBT

Early revenue

Low hanging fruit, Quick wins

Cash flow positive first, expansion later

Lightweight Companies

- Many computer companies need little capital to start
  – Virtual office
  – Spare time or labour for shares
  – Advanced payment from customers
    - Development clubs, Government/EU grants
    - Crowd funding

- Fail early, Fail often
  – Find the market

Sources of finance

- Family and friends £50K
  - Banks
    - Security
- Angels £500K

- Venture Capitalists £5M
  - VCA
  - VCB $25M
  - Mezzanine

- Stock Market floatation $250M
  - Acquisition
  - Exit

FAIRY GODMOTHERS ARE NOW EXTINCT!

Why stages?

- Risk/Reward profile differ
- Successive dilution
- Typically 30% dilution each stage
  - Investment = pre-money valuation/2
  - “Squeeze the Angels”

Round	Investment	Pre-money	Post-money	Founders	FFF	Angel	VCA	VCB
				and staff options				
FFF	50	100	150	67%	33%			
Angels	500	1000	1500	44%	22%	33%		
VCA	5000	10000	15000	30%	15%	22%	33%	
VCB	10000	20000	30000	20%	10%	15%	22%	33%
Total	15650							
Exit	100000			20000	10000	15000	22000	33000
All	15550	100		0.64%				

UK Company types

- Sole Trader
- Partnership
- Private company
- Limited Private Company (Ltd)
- Public limited company (plc)
- Listed company
- Special cases (e.g. Trusts, Societies)

Stocks and Shares

- Shares
  - Ordinary and preference
  - Voting and dividend rights
  - Critical amounts (for normal Table A companies)
    - 25+% Blocks “Substantive” resolutions
    - 50+% Day-to-day control
    - 75+% Total control
    - Other trigger points for public companies
  - Other rights and Coupons
  - Directors accountable to shareholders

Buying and Selling Shares

- Illegal to advertise unless a member of an SRO (e.g Broker),
- Private company usually requires Board approval
  - Stamp Duty 0.5%
- Public company:
  - Primary market: Floatation
  - Shares traded on a public exchange
    - Listing: admitted to the Official List (UK: LSE)
  - Secondary market
    - Settlement
    - Illegal to use or divulge inside knowledge
  - Bull market: upward trend
  - Bear market: downward trend
- Capital Gains Tax

Options and Futures

- Contracts to buy or sell at a fixed price at some future date
  - Typically 10%
  - Futures: Must complete as specified
  - Options: Completion optional
    - Option and future contracts can be traded
- Gambling - leave it to the professionals
  - Spread-betting www.igindex.com
- Markets are largely stochastic - no system
  - Frauds:
    - Ponzi
    - Boiler room

Fraud?

Cambs firm slated over share hike

BAD PRESS has hit Cambridgeshire varicose veins firm DioMed.

The company, which is listed on the U.S. Nasdaq exchange, has become a target for the *New York Post*.

The paper claims the company, originally a spin-out from Generics Group at Harston, is enjoying an unwarranted hike in its share price following the efforts of a stock promoter who has a large holding stashed away in the Cayman Islands.

"DioMed is exactly the sort of stock that should send any normal person fleeing the room at the mere mention of its name: suspect auditor (Andersen in the U.S.), offshore accounts, weird product, teeny-weeny revenues, board members with back stories -- this stock's got it all, the complete package," the New York Post says.

DioMed's share price has risen more than 200 per cent to $7 this year, the greatest gain of any listed stock on Wall Street in this period.

CEN 27th Mar 2002

Hewlett-Packard agrees deal to buy Autonomy for £7.1bn

19 August 2011 | Business

Share

Hewlett-Packard is to buy UK software firm Autonomy for £7.1bn ($11.7bn).

The offer, which has been accepted by Autonomy's board, is 64% above the firm's market value.

It came as the US company announced a massive strategic shake-up, involving stopping making hardware in order to refocus on software.

Shares in HP spiked as rumours of the various news - **now confirmed by HP** - broke, but the firm eventually ended the day down 7.6%.

That came on top of a 3.9% fall on Tuesday that was prompted by a warning from rival Dell that it expected demand in the US market to weaken in the coming months.

'Positive for UK'

Autonomy was set up by researchers at Cambridge University and specialises in pattern-recognition technologies.

Founder Mike Lynch, whose 8.2% stake could be worth several hundred million dollars, has pledged to vote for the deal, told the BBC: "HP understands the special culture we have. This is about building Autonomy. It will be a positive thing for Cambridge and the UK."

HP will pay 2,550 pence per share, compared with a closing price in London on Wednesday of 1,558p.

The implied valuation of the company is equivalent to 47 times the pre-tax profits earned by Autonomy in the 12 months to June this year.

http://www.bbc.co.uk/news/business-14582489

Hewlett-Packard unveils details of $5bn Autonomy fraud case

US firm claims Mike Lynch inflated revenues by $700m, but Autonomy founder says HP has failed to produce 'smoking gun'

Of particular interest to Hewlett-Packard are 37 deals with small IT contractors that bought Autonomy's software. Photograph: Jim Young/Reuters

Hewlett-Packard has unveiled full details of its $5bn (£3.3bn) fraud case against the founder of the UK software company Autonomy, claiming that Mike Lynch inflated the revenues of his business by about $700m over a two-and-a-half-year period.

HP, which bought Autonomy in 2011 for $11bn, has filed a claim against Lynch and his finance director, Sushovan Hussain, in the high court in London, alleging

https://www.theguardian.com/business/2015/may/05/hewlett-packard-unveils-details-of-5bn-autonomy-case

Autonomy founder Mike Lynch sues HP for $160m over fraud claims

HP has accused Mike Lynch and Autonomy's chief financial officer of accounting fraud that forced it to write down the value of the deal by $8.8bn

15 | 0 | 11 | 26 | Email

HP accused Dr Lynch and the British software company's chief financial officer, Sushovan Hussain, of accounting fraud Photo: Reuters

By Christopher Williams, in San Francisco
9:17PM BST 01 Oct 2015

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Mike Lynch, the founder of Autonomy, has sued Hewlett-Packard for more than $160m over the allegations of massive fraud it has levelled against him.

He challenged Meg Whitman, the Silicon Valley giant's chief executive, to a High Court showdown over the disastrous takeover of the FTSE 100 software company.

In his counterpunch to HP's own $5.1bn damages claim, Dr Lynch accused

http://www.telegraph.co.uk/finance/newsbysector/mediatechnologyandtelecoms/electronics/11905834/Autonomy-founder-Mike-Lynch-sues-HP-for-160m-over-fraud-claims.html

Crowd Funding

- Preselling
  - Street Performer
  - Need a prototype or good mockup

- Kickstarter, Indiegogo
  - https://www.kickstarter.com/
  - https://www.indiegogo.com/

- Up to £1m
  - Elite Dangerous https://www.kickstarter.com/projects/1461411552/elite-dangerous

How much is it worth?

- Market value
  - What someone will pay
  - Comparisons
- Utility value
  - Customers, lock in, staff, technology
  - Cost to reproduce
- Asset Value
  - Often small for startups
    - Not what it cost
  - IPR
- NPV
  - Net present value of future profit
  - EBITDA
- DCF
  - Discounted cash flow – maybe easier to estimate
- Statistical models
  - Black – Scholes