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HKICPA QP Module B

Module Preparation Seminar
(for Jun 2018 Exam)

APP: "HKCA Exam" Demo Lectures

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Lecturer: Anson Yu

Agenda

1. • Introduction on HKCA
2. • About the Lecturer
3. • Financial analysis and strategy
   • Performance measurement
   • Dividend policy
4. • How to pass!

MASTER GUIDE

Module B: CORPORATE FINANCING

Lecturer: Anson Yu

MB

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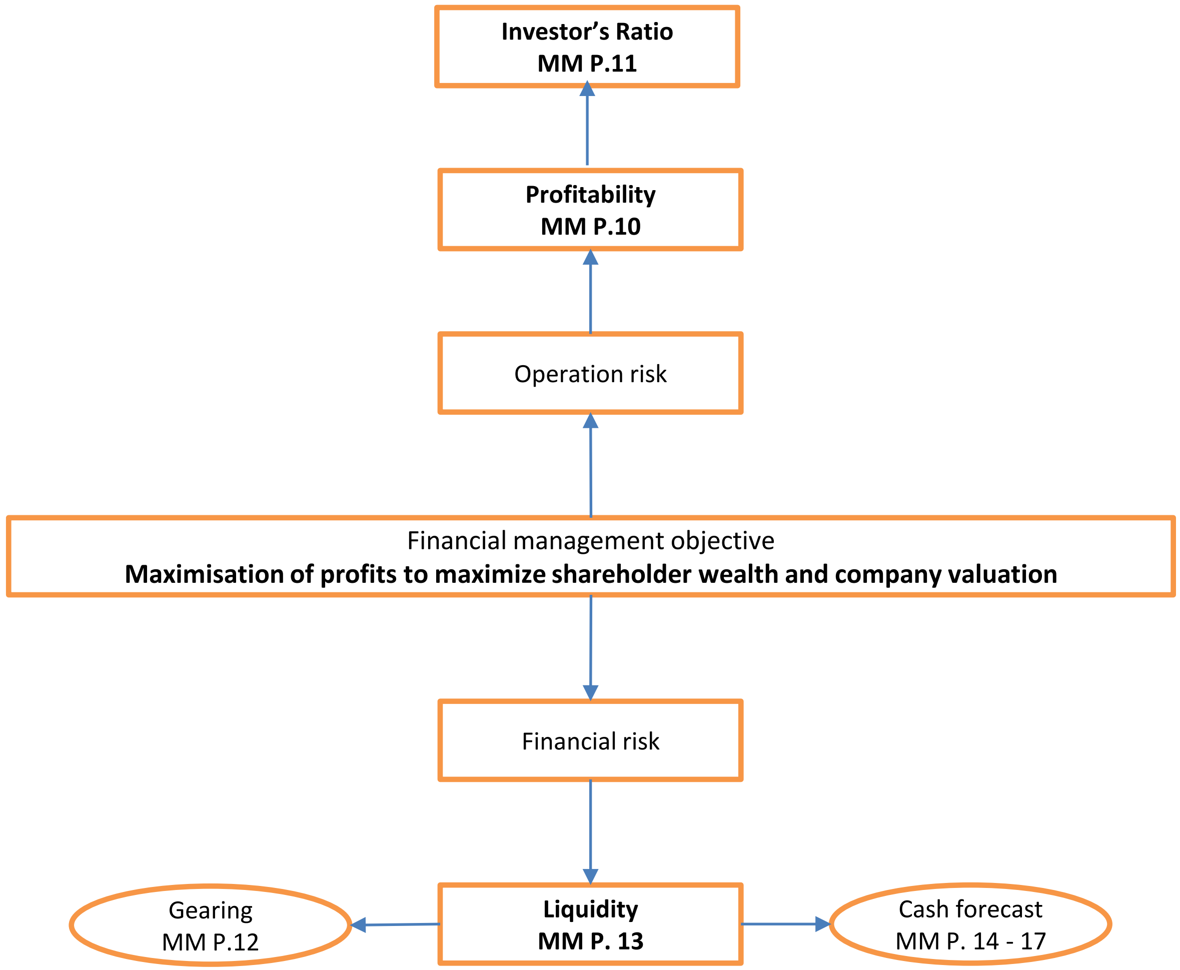
Master Guide

LP 3 Financial management



MM=Mindmap

Chapter 3: Financial strategy and management (LP 3, p.93)

What is financial management (LP 3.1.1, p.95)

- Management of the finance of an organisation to achieve the financial objectives to **maximize shareholder's wealth** (very important concept in MB)

What is financial planning (LP 3.1.3, p.96)

- Short term: Purchase of inventory, balancing the receivables, payables and cash to meet the **working capital requirements (LP8)**
- Long term: purchase of non-current assets such as plant and equipment

What is financial control (LP 3.1.4, p.96)

- Management should compare data on actual performance with forecast performance.

Financial objectives (LP 3.2, p.97) – very important concept in MB

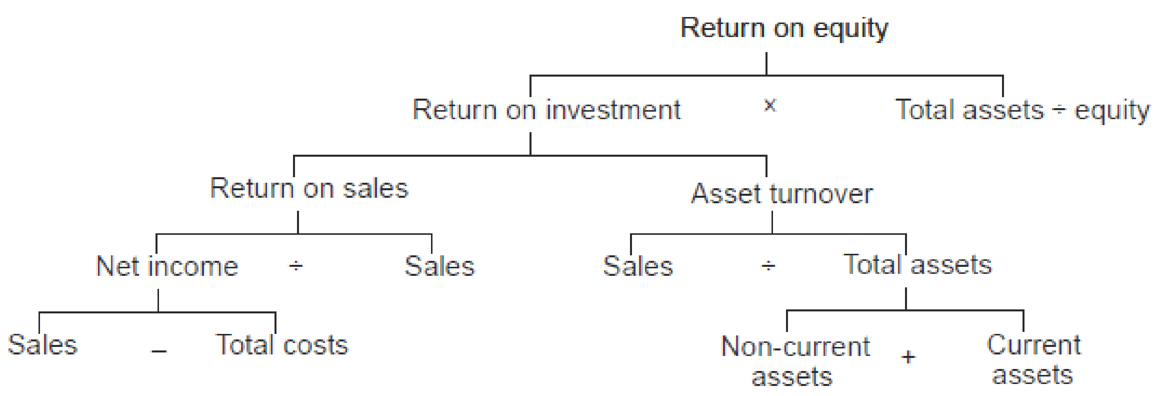
1. Profitability - to provide the shareholders with the required rate of return
2. Liquidity - to have sufficient cash to meet financial commitments when they become due

Overall objective: to obtain the required return under financial and operational risk
- **Operational risk** is the uncertainties inherent in running a business and the volatility of its operating income
- **Financial risk** is the additional volatility of profits result from high financial leverage

Financial targets (LP 3.2.1, p.97)

1. **Earnings per share (EPS) -** investors expects a growth of EPS from year to year
2. **A restriction on the level of gearing**
   - specific ratio of debt to equity (e.g. less than 1)
   - specific amount on borrowing, which will affect interest payment
3. **A target profit retention**
   - specific ratio of dividend coverage
4. **A target operating profitability**
   - specific profit/sales ratio
   - specific ROCE

Ratio pyramids (LP 3.3, p.99) – [DuPont Method – need to know the name]



Profitability (LP 3.3.4, p.100)

1. **Return on capital employed**

$= \frac{PBIT}{Capital\ Employed}$

Capital employed = Shareholders' fund + payables due more than one year + long term provisions for liabilities and charges = Total asset - current liabilities

2. **Secondary ratios – breakdown of ROCE/ROI**

Profit margin x asset turnover = ROCE

$\frac{\boldsymbol{PBIT}}{\boldsymbol{Sales\ Revenue}}$ x $\frac{\boldsymbol{Sales\ Reveune}}{\boldsymbol{Capital\ employed}}$ = ROCE

3. **Return on equity** $= \frac{Earnings\ attributable\ to\ ordinary\ shareholders}{Shareholders'Equity}$
   - Represents the earning power of the shareholders' investment
   - High ROE represents a good management of expenses and ability to invest in profitable projects
   - High ROE also represents a higher level of gearing → exposed to higher financial risk
   - We have to compare with **same industry [Apples to apples]**

4. **Gearing ratio**
   a. Represents the amount of debt finance vs equity finance
   b. High gearing → the company is heavily in debt → lenders refuse further borrowing → liquidity problem
   c. High gear → the company's profitability decrease → high interest charges payment

5. **Investor's ratios (LP 3.3.7, p.102)**

Dividend yield	=	$\frac{Dividend\ per\ share}{Market\ price\ per\ share}$ x 100% Or $\frac{Total\ dividend}{Total\ market\ value}$ x 100%	**Low dividend yield**: reinvest into the company investment projects which will generate more on the future **High dividend yield**: less investment opportunities, provide stable income for the investors
EPS	=	$\frac{Profit\ distributable\ to\ ordinary\ shareholders}{Weighted\ average\ number\ of\ ordinary\ shareholders}$	
P/E	=	$\frac{Market\ share\ price}{EPS}$ Or $\frac{Total\ market\ value\ of\ equity}{Total\ earnings}$	Appraisal of share's future prospects **High PE**: Higher confidence the company will have a future growth (e.g. technology shares) **Low PE**: Lower expectation on future earnings (e.g. Manufacturing stock)

Dividend cover	=	$\frac{EPS}{DPS}$ Or $\frac{Profit\ after\ tax}{Total\ dividend}$	High dividend cover: Paying less dividend to investors and reinvest more on investment projects → expected to have a higher growth rate Low dividend cover: Paying more dividend to investors → expected to have a slower growth rate

<u>Practice Question: Dividend yield</u>

Both company A and B are listed on the Hong Kong Stock Exchange. The average dividend yield for publicly traded companies on the Hong Kong Stock Exchange is 2.8%. Shares in company A trade at 346c and dividends are paid of 19c per share. Shares in company B trade at 429c and dividends are paid of 4c per share. Calculate the dividend yield for the two companies and consider the possible reason for the difference in yields.

<u>Solution</u>

Company A
19/346 ×100% = 5.49%

Company B
4/429 ×100% = 0.93%

<u>Comment (Very important to learn the skills in the exam)</u>
- Company A has a high dividend yield relative to the average and company B has a low dividend yield. (Per case, it provides you with the average → use it to compare → easy mark!)
- Investors hold shares in order to receive the overall return comprised of dividends and capital growth from a rising share price. (Definition of dividend)

Company A offers a high dividend yield to compensate for lower expected growth. It could be a mature company in a low growth industry such as utilities or fixed line telecommunications.

Company B therefore must offer high growth to compensate for its low dividend yield. Hence B is likely to be a younger, faster growing company, perhaps a technology company in a fast growing market or a rapidly growing tourism business.

Refer to Q3.1 for practice question

Factors to consider for relocation [Learn this skill for all the cost & benefit analysis]
When we have face such question, please try to use PESTEL, SWOT, Porter's generic to brainstorm the points to answer.

1. **Cost factor**
   - Availability of skilled labour in the relocating country and the respective cost and quality
   - Availability of suppliers and the quality, price and financial viability of them
   - The environmental framework on health and safety laws requirement
   - The economic environment such as inflation rates, GDP, level and imports and exports
   - The taxation system (whether the system is complex or simple)
2. **Risk factor PESTEL (refer to Ch2)**
   - Legal framework (whether there are any statutory requirements)
   - Political stability
   - Government policies
   - Financial framework like interest rates, FX, currency stability
   - Cultural difference
   - Management control on different geographical locations
   - Morale
   - Risk of dealing with different currencies

Refer to Q3.2 for practice question

Business and financial planning (LP 3.4, p.104)

Business planning
- Describe the goals, strategies and resources of a business
- Assist the management in providing shareholders with the highest possible return

Development of business planning (LP 3.4.2, p.105)
1. The business
2. Financial data
3. Other supporting documents

The financial plan (LP 3.5, p.107)
- Summarize the business plan in financial terms
- Examines financial consequences in profit and cash flow terms

Advantage of financial plan
- Advance warning concerning future anticipated events
- Progressive comparison of actual performance to plan with corrective action required to take
- Meeting pre-investment requirements of financial institutions

Master budget (LP 3.5.1, p.108)
- It is an annual plan, a management commitment, of what the organisation would like to happen and what it has seen as a target for longer term
- It should be realistic and challenging and it will be based on certain budget parameters

Management behaviour if the actual outcome was different from the master budget
- As the actual events progress and the situation develops and changes, new forecast might be prepared that differ from the original budget targets
- Management might be required to take control actions to bring forecast back into line with the budget
- Management might accept that the budget is not achievable depending on what the current forecast includes

Role of cash flow and profitability projections (LP 3.5.2, p.108)
- Used to estimate cash receipts, cash payments and net cash flows in the period
- The cash flows in the period of time (e.g. one year) will be analysed into smaller time periods (e.g. months) for control purpose
- The importance of a cash forecast lies in the fact that a company may be operating profitably, but may still be running short of cash
- A cash shortage would threaten the company with a liquidity problem
- It is essential in forecasting that there will either be a sufficiency of cash or a large enough overdraft facility throughout the forecast period
- Should actual cash flow differ from the forecast in any control period, management is in position to estimate the consequence of this change on liquidity, and to attempt whatever remedial action might be necessary

Sensitivity analysis (LP 3.5.3, p.109)
- To allow for unexpected contingencies, a 'normal' forecast, which shows the 'most likely outcome' and an alternative forecast (or forecasts) that allows for adverse outcomes such as 'worst case' situations should be prepared
- Key parts of the business plan will need to be revised during the year as conditions change

Forecasting (LP 3.6, p.109) (Cross reference to Ch17 - FCFF analysis)

- It is the latest estimate of what might happen within a budget year. There may be sever forecasts within a budget year due to changes in the business environment
- It is prepared by using current information
- Max amount of cash flow forecast is the lowest cash balance of the period

<u>Anson's tips for financial management questions:</u>
1. Always think of profitability/liquidity/management efficiency
2. Use ratios to support your answers
   a. Definition of the ratios (easy mark)
   b. Per case (Find the figures per case, and you should have something to compare – e.g. last year figure, industry benchmark)
3. For analysis question, always think of MG3, 5, 6, 8, 9, 20

Extract from QP MB Jun 2015

Winning Tools Limited was founded in 1966 by two mechanical engineers, Alan Lee and Simon Ho, who both graduated from the same university. They were buddies at the university and then founded the company which was mainly involved in designing and manufacturing a number of machinery parts, including metal industrial presses and plastic molds, which were widely used in farm-equipment. After 20 years, the company had developed a strong reputation as an innovative and quality producer of industrial machinery and machine tools.

After years of strong earnings and predictable dividend growth, Winning Tools Limited's earnings growth has been hitting a wall for the past six years. As a result, the management, mainly comprised of the family members of the founders, implemented extensive business restructuring programmes. To fight the decline in sales and weak profit margins, the company has shifted a larger amount of its research and development budget from machine tool equipment to electrical industrial equipment. In addition, it has sold two unprofitable lines of businesses, eliminated three leased facilities and cut headcounts. These restructuring costs amounted to HK$60 million. However, the financial performance has still resulted in net losses. From 2009 to 2011, dividends per share were higher than earnings per share. In 2012, dividends were paid at a level below earnings. A small dividend was paid in 2013 due to the small profits reported by the company. In 2014, no dividend was declared by the board of directors. Nevertheless, in a special letter to shareholders, the board committed itself to resume dividend payments as early as possible, ideally in 2015.

Angel Chan, Financial Controller of Winning Tools Limited, needs to submit a recommendation to the company's board of directors regarding its dividend policy, which has been the subject of an ongoing debate among senior executives. Compounding her problem has been the overall weakness in the major economies including China, Japan, Europe and the US. The central bank of the US surprised the market by increasing interest rates two months ago (the last time it raised interest rates was 8 years ago). The stock market has had a 20% pullback in the past two months in response to worries over the global recession and increasing interest rates. As a result, the share price of Winning Tools Limited has dropped 36% in the past month to HK$16 a share. In response to the market collapse, some publicly listed companies in the same industry announced plans to repurchase their own stocks. Now Angel Chan's dividend policy decision has been complicated with a stock buyback alternative as well.

Exhibit 1

Consolidated statement of profit or loss for the year ended 31 December

	2014	2013
	$'000	$'000
Revenue	656,638	815,979
Cost of sales	(498,879)	(501,458)
Gross profit	157,759	314,521
Research & development costs	(85,417)	(70,545)
Selling, general & administrative expenses	(231,008)	(223,634)
Restructuring costs	(89,411)	-
Operating profit / (loss)	(248,077)	20,342
Other income / Interest expenses	(3,458)	1,065
Profit / (Loss) before tax	(251,535)	21,407
Income tax expense	750	(8,415)
Profit / (Loss) for the year	(250,785)	12,992

Additional data:

Earnings (loss) per share	$(2.13)	$0.11
Dividend per share	-	$0.03

Consolidated statement of financial position as at 31 December

	2014	2013
	$'000	$'000
ASSETS		
Non-current assets		
Property, plant & equipment	70,004	160,189
Other intangible assets	19,787	25,151
	89,791	185,340
Current assets		
Inventories	203,888	230,342
Trade receivables	187,235	208,541
Other current assets	20,714	22,183
Cash & cash equivalents	22,230	13,917
Prepaid expenses	13,016	14,259
	447,083	489,242
Total assets	**536,874**	**674,582**
EQUITY AND LIABILITIES		
Share capital (common stock)	126,762	126,729
Cumulative translation adjustment	20,208	(6,566)
Retained earnings	40,714	291,498
Less treasury stock at cost	(10,494)	(10,490)
Total shareholders' equity	177,190	401,171
Non-current liabilities		
Long term borrowings	8,775	9,000
Deferred tax	13,769	16,985
Deferred pension costs	64,329	44,790
Other non-current liabilities	5,444	2,318
Total non-current liabilities	92,317	73,093
Current liabilities		
Trade payables	34,239	36,449
Bank loans	71,345	34,195
Current portion of long term borrowings	150	300
Accruals and other payables	161,633	129,374
Total current liabilities	267,367	200,318
Total liabilities	359,684	273,411
Total equity and liabilities	**536,874**	**674,582**

Question 1 **(20 marks – approximately 36 minutes)**

Assume you are Angel Chan, the Financial Controller of Winning Tools Limited. Write a memorandum to the Board of Directors to address the following:

Required:

(a) **Identify and interpret the problems and uncertainties which you as Angel Chan, the Financial Controller of Winning Tools Limited, are facing.**

(6 marks)

(b) **Analyse the financial performance of Winning Tools Limited in 2013 and 2014 by calculating the following ratios: return on investment, debt ratio, current ratio, and asset turnover ratio.**

(11 marks)

Answer to QP MB Jun 2015

Answer 1(a)

To: Board of Directors

From: Angel Chan

Date: xx xxx xxxx

Subject: Finacial performance of Winning Tools Limited and loan covenants

We would need to resolve the dividend payout of Winning Tools Limited.

The company has to decide on a share repurchase programme which is appropriate given the big drop in the stock price recently. The company is facing a financing constraint in dividend payout and share buyback, coupled with signalling the future outlook on the decisions and positioning of the stock's price in the capital market.

There may be a cyclical downturn in the machine tool industry because the global economy is heading into recession. Also, the business restructuring of the company may not yield the expected positive financial results as new products incur a higher level of risk to win market share.

The credibility of forecasts depends largely on the assessment of the management's ability to harvest potential profits. To support the new investment and resume dividend payout will increase the chance of taking on new debt. In an increasing interest rate environment, the risk of bankruptcy and financial distress cost are mounting.

Answer 1(b)

Return on investment (2013) = $12,992 / $674,582 = 1.93%
Return on investment (2014) = -$250,785 / $536,874 = -46.71%

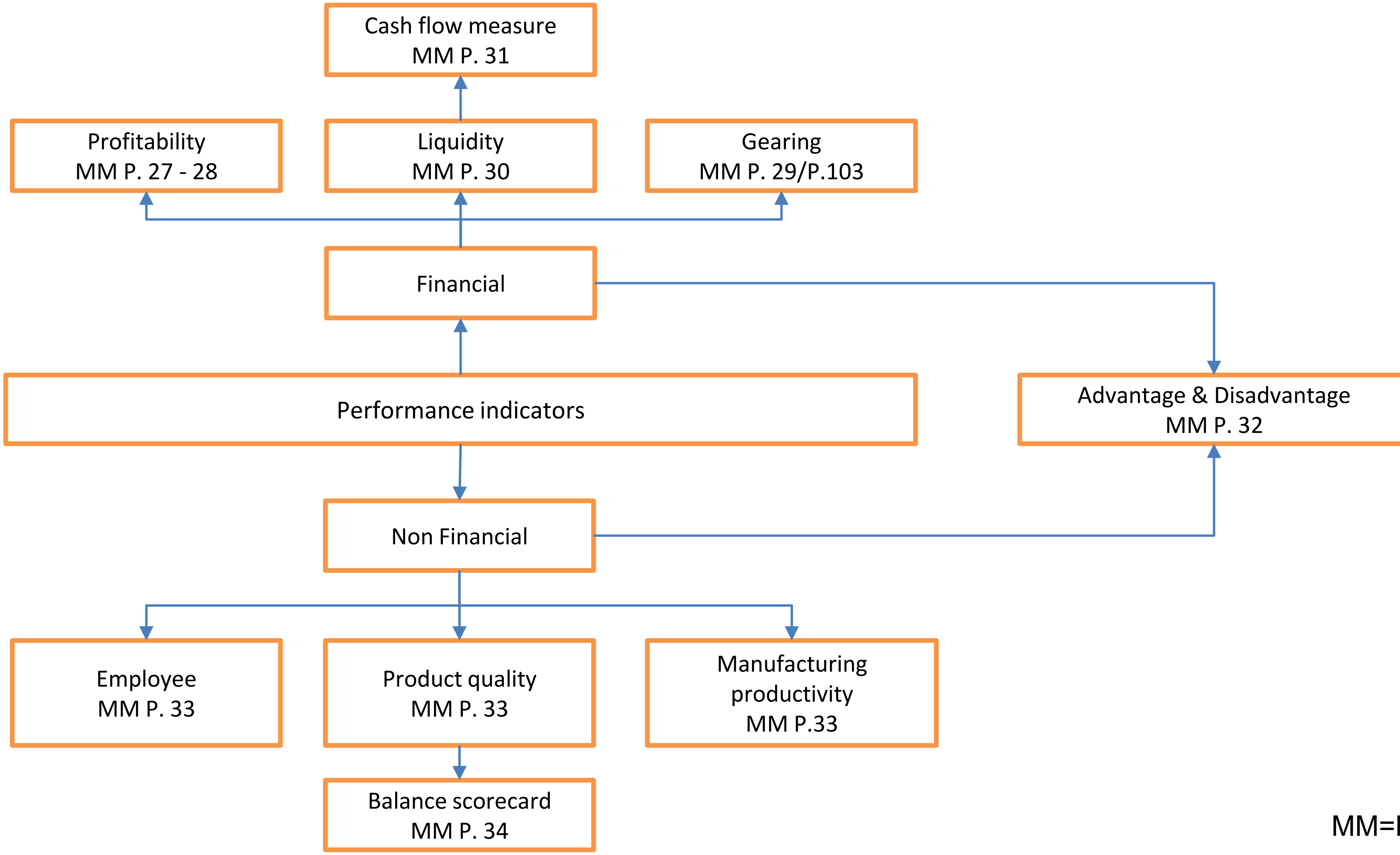
Debt ratio (2013) = $273,411 / $674,582 = 40.5%
Debt ratio (2014) = $359,684 / $536,874 = 67.0%
(Alternative method of calculating debt ratio is acceptable.)

Current ratio (2013) = $489,242 / $200,318 = 2.44x
Current ratio (2014) = $447,083 / $267,367 = 1.67x

Asset turnover ratio (2013) = $815,979 / $674,582 = 1.21x
Asset turnover ratio (2014) = $656,638 / $536,874 = 1.22x

Overall the financial performance is worsening in 2014 compared with 2013, with a negative return on investment, high debt ratio and tightening liquidity.

LP 5 Performance measurement



MM=Mindmap

Chapter 5: Performance measurement systems (LP 5, p.169)

Strategic control (LP 5.1.1, p.169)
The key to strategic control is ensuring that the right things get measured

– False alarm motivate managers to improve areas where there are few benefits to the organisation
– Gaps are important areas that are neglected (e.g. customer satisfaction)

To encourage the measurement of the right things, organisations can institute **formal** or **informal** systems of strategic control. There are four influences on a strategic control system

- The **time-lag** between **strategic control** measures and financial results
- The **linkages** with the other businesses in a group
- The **risks** the business faces
- The **sources** of competitive advantage

Formal systems require strategy review, the identification of **milestones of performance (strategic objectives)**, set target achievement levels, formal monitoring of the strategic process and reward system.

Desirable features of strategic performance measures (LP 5.1.3.1, p.171)

- Focus on what matters in the long term
- Identify and communicate drivers of success
- Support organisational learning
- Provide a basis for reward

Linking strategy and operations (LP 5.1.6, p.172)
The achievement of long-term goals will require strategic planning which is linked to short-term operational planning. If there is no linkage between strategic planning and operational planning the result is likely to be **unrealistic plans, inconsistent goals, poor communication and inadequate performance measurement.**

Strategic planning and control vs operational planning and control (LP 5.1.5, p.172)

Strategic	Operational
'Broad brush' targets	Detailed
Whole organisation	Departmental activities
External input	Mainly internal information
External focus	Internal focus, on actual procedures
Future-orientated feed forward control	More concerned with monitoring current performance against plan
Potential for changing the plan	Performance must change, not the plan

Refer to Q5.7 for practice question

Performance measures (LP 5.2, p.173) – FPI and NFPI [always examined]

Considerations when selecting/ designing measures (LP 5.2.1, p.173)
- Resources required (costs and benefits of measurement)
- Comparisons e.g. targets/objectives, trends, industry
- Relevance
- Short and long term achievement
- Controllability
- Variety of measures
- Realistic use of estimates, e.g. cost of capital
- Ability of managers to respond

Benchmarking (LP 5.2.3, p.175)
A systematic and continuous measurement process; a process continually comparing and measuring an organisation's business processes against business leaders to gain information which will help the organization to take action that will improve its performance

Types of benchmarking (LP 5.2.3.2, p.175)
1. Internal
- Comparing one operating unit or function with another in the same organisation
2. Competitive
   Gathering information about direct competitors using, e.g. reverse engineering
3. Functional
   Comparing an internal function with the best external practitioners, regardless of industry
4. Generic
   Comparing common business functions that are used in most business

Advantages of benchmarking
- Provides basis for establishing standards of performance
- Sets targets that are achievable
- Can stimulate innovation

Disadvantage of benchmarking
- Implies only one best way of doing business
- Depends on accurate information about the comparator companies
- Difficult to decide which activities to benchmark
- Successful practices in one organisation may not transfer successfully to another

Financial performance indicators (FPIs) (LP 5.3, p.177) – very important
Basic principle of comparing figures
- Apples to apples

Profitability (LP 5.3.1, p.177)

Gross profit margin	=	$\frac{Gross\ profit}{Revenue} x\ 100\%$	✓ Increase means wider gap between selling price and COGS × limitations: affected by the inventory valuation method used and fails to take account of differences in organisations' cost structures; not useful for comparing different industries

Operating profit margin	=	$\frac{Operating\ profit}{Revenue} x\ 100\%$	✓ Measure of the **efficiency** with which sales (**input**) has been used to generate profit (**value of output**) × Limitations: affected by different inventory valuation and depreciation
Net profit margin	=	$\frac{Net\ profit}{Revenue} x\ 100\%$	
Percentage of expense to revenue	=	$\frac{Expense}{Revenue} x\ 100\%$	× If increase not in proportion with revenue → poor control on the expense item
PBIT (Profit before interest and tax)			✓ Company earned before paying interest of long term loan
Sale margin	=	Revenue – COGS	- Influenced by level of fixed cost × Lower sales margin indicates a problem in controlling input costs
Earnings per share (EPS)	=	$\frac{PAT - Dividends}{Ordinary\ Shares}$	- EPS must be directly comparable with the EPS of others × Liable to manipulation if the board used this as a management bonus indicator
Return on capital employed (ROCE/ROI)	=	$\frac{Operating\ profit}{Capital\ employed}$	- Measure the return earned on the capital invested in the business - The higher the figure, the better it is for investors
Return on capital employed [Du Pont method] (ROCE/ROI)	=	Profit margin x Asset turnover $\frac{Operating\ profit}{Revenue}$ x $\frac{Revenue}{Capital\ employed}$	✓ Strong sales growth will usually indicate volume growth as well as turnover increase due to price rises × Poor performance is explained by prices setting too low or cost setting too high
Price earning (PE)	= =	$\frac{Market\ price\ after\ dividend}{EPS}$ $\frac{Total\ market\ value}{Total\ earnings}$	
Asset turnover	=	$\frac{Sales}{Avg\ total\ assets}$	

Refer to Q5.1 for practice question

Gearing (LP 5.3.2, p.182)
Gearing measures the relationship between shareholders' capital (including reserves) and borrowings.

Why companies should keep their debt burden under control?
- When a company is heavily in debt, and seems to be getting even more heavily into debt, banks and other would-be lenders are very soon likely to refuse further borrowing and the company might well find itself in trouble
- When a company is earning only a modest profit before interest and tax, and has a heavy debt burden, there will be very little profit left over for shareholders after the interest charges have been paid. And so if interest rates were to go up or the company were to borrow even more, it might soon be incurring interest charges in excess of PBIT. This might eventually lead to the liquidation of the company

A high level of debt creates **financial risk**. Financial risk can be seen from different points of view.
- **The company** as a whole. If a company builds up debts that it cannot pay when they fall due, it will be forced into liquidation
- **Payables**. If a company cannot pay its debts, suppliers are unlikely to recover in full the money they are owed
- **Ordinary shareholders**. They will expect lower or non-existent dividends if high interest payment are made

Gearing	=	$\frac{Debt}{Debt+equity}$ or $\frac{Debt}{Equity}$	- Overdraft **do not** form part of debt in a gearing - High gearing will also have difficulty to raise capital, unless by boosting its shareholder's capital, either by retained profit or new shares issue - High geared company must earn enough profits to covers its interest charge before anything for equity - High geared company increases the financial failure probability - Low geared company is considered less risky
Operational gearing	=	$\frac{Fixed\ cost}{Total\ Cost}$ or $\frac{Contribution}{Operating\ profit}$	- Contribution = Revenue – variable COGS - Test for business risk (risk of making low profits due to the nature of business) - Higher proportion of fixed cost, higher level of gearing
Interest coverage	=	$\frac{PBIT}{Interest\ expense}$	- Indicates whether a company earns enough profit to pay for the interest expense

Liquidity (LP 5.3.3, p.185)
It is the amount of cash a company can obtain quickly to settle its short term financial obligations.

Liquid assets (LP 5.3.3.1, p.185)
- Cash
- Short term investments for which there is a ready market (not intercompany ones)
- Short term fixed term deposit
- Trade receivables
- Bills of exchange receivable

Cash flow performance measurement (LP 5.3.4, p.186)
The management of cash flow is very important due to:
- Ensure enough cash is available to meet the organisation's obligations to prevent insolvent
- Maintain the inventory level and payment to suppliers
- Offer competitive credit terms
- Invest the idle cash to earn interest

Reasons for holding cash (LP 5.3.4.3, p.186)
1. Pay transactions (e.g. expense, inventories)
2. Precautionary (e.g. safety cash for emergency)
3. Speculative (e.g. marketable securities, fixed deposits)

Marginal cash flow (LP 5.3.4.4, p.186)
- **helps to indicate what is likely to happen to cash flow in the future if these fundamental relationships are maintained.**

MCF = contribution margin – change in working capital (decrease in WC → add)
Operating cash flow (LP 5.3.4.4, p.187)
Operating cash outflows are funded by increased borrowings or equity.

OCF = EBIT – change in net operating assets

Net cash flow (LP 5.3.4.4, p.187)
Net cash flow is the operating cash flow less interest, tax, dividends and extraordinary items (if applicable) and changes in equity, provision for tax and provision for dividend (if applicable).

Common size trend analysis and index analysis (LP 5.3.5, p.191)
- is expressed **as a percentage of sales (or total assets).**
- a useful way of comparing the financial results of organisations of different size, because percentage values are more easily compared

A company's performance may be compared to its previous period's performance. Past results may be adjusted for the effects of price changes. This is referred to as trend or vertical analysis.

<u>Weakness of common size analysis</u>
A weakness of this type of comparison is that there are no independent benchmarks to determine whether the chosen company's current year results are good or bad. Just because a company's results are better than its results in the previous financial period - it does not mean the results are good. It may be that its results in the prior year were particularly poor.

Example

Company Zhou

	20X7		20X8		20X9	
	Amount $'000	%	Amount $'000	%	Amount $'000	%
Cash	45	0.88	115	1.94	310	4.08
Receivables	1,515	29.65	1,700	28.66	2,315	30.49
Inventory	1,655	32.38	1,819	30.67	2,267	29.85
Other	145	2.84	138	2.33	141	1.86
Total current assets	3,360	65.75	3,772	63.60	5,033	66.28
Plant and equipment	1,600	31.31	2,000	33.72*	2,400	31.60
Other	150	2.94	159	2.68	161	2.12
Total non-current assets	1,750	34.25	2,159	36.40	2,561	33.72
Total assets	5,110	100.00	5,931	100.00	7,594	100.00
Payables	750	14.68	1,265	21.33	1,505	19.82
Short-term loan	500	9.79	420	7.08	420	5.53
Other	200	3.91	210	3.54	215	2.83
Total current liabilities	1,450	28.38	1,895	31.95	2,140	28.18
Long-term loan	1,000	19.57	1,100	18.55	1,300	17.12
Total non-current liabilities	1,000	19.57	1,100	18.55	1,300	17.12
Share capital	2,360	46.18	2,560	43.16	3,693	48.63
Retained profits	300	5.87	376	6.34	461	6.07
Total equity	2,660	52.05	2,936	49.50	4,154	54.70
Total liabilities and equity	**5,110**	**100.00**	**5,931**	**100.00**	**7,594**	**100.00**

What we can observe in the common size analysis?

1. Asset
- Non current asset decline over time (from 20X8 36.4% to 20X9 33.72%)
- Current asset increased from 63.6% in 20X8 to 66.28% in 20X9
- Cash has increased over the 3 year period
- Receivables decrease for the second year and then increase
- A decline in receivables maybe a good news unless it is written off
- Inventory also decreased slightly relative to total assets – need to check whether sales has increased during the 3 year to get align of the figures. If not → obsolete inventory issue
- Other current assets have remained relatively stable over the three-year period, while investment in non-current assets has decreased relative to total assets from 20X8 to 20X9. **This may be due to accounting or to real economic reasons**.

2. Liabilities and equity
- The mix of how the assets are funded can be seen in the total liabilities and equity section
- Total debt (short and long-term debt) has fallen as a percentage of total assets, with some of this being taken up by share capital.
- Share capital increase in the three year period, representing Zhou Company is financing from the shareholders, no regular payment is required
- Debt, on the other hand means the company must pay interest (and principal) each period regardless of how the company is performing.
- Zhou Company also seems to be making much better use of its accounts payable funding. Accounts payable is interest free so the longer the payment can be deferred the better.
- Relationships with suppliers are very important and they must be nurtured and maintained.

Index analysis (LP 5.3.5.2, p.193)
Index analysis expresses the amounts of a particular income statement or statement of financial position item as a percentage of the amounts of that same item in the base year. The base year is selected by the analyst as the starting point for the trend analysis.

Limitations of financial performance measures [universal answer for all FPI]
- Only concerned with the data recorded in the accounts
- Accounting policies (depreciation, inventory value) adopted by different organisations can distort performance
- Value of money may change over time due to inflation, making comparison more difficult
- Do not take account of other key, non-financial performance indicators
- Can be manipulated and can give misleading signals
- Focus on the short-term

VERY IMPORTANT – How to answer an analysis question?

During the exam, you are always being asked to have ratio anaylsis

- Profitability – Margin & ROCE/ROI (Du Pont Method)
- liquidity (current/quick ratio)
- gearing and security of borrowings (remember definition of gearing)
- management efficiency (days)
- prepare a cash flow statement - if specifically requested

Refer to Q5.2 for practice question

Non-financial performance indicators (NFPIs) (LP 5.4, p.194)

Reasons for increasing importance of NFPIs (We can use this as the extra points of limitations of FPIs)
- Concentration on too few variables
- Lack of information on quality
- Changes in cost structures
- Changes in competitive environment
- Changes in manufacturing environment
- NFPIs are a better indicator of future prospects

Productivity measures (LP 5.4.2, p.195)
Productivity is a measure of output per labour hour or output per machine hour.

Manufacturing cycle efficiency (MCE)	=	$\frac{Value\ added\ processing\ time}{Total\ hours\ worked} x\ 100\%$
Process productivity (PP)	=	$\frac{Total\ unts\ produced, included\ faulty\ units}{Value\ added\ processing\ time} x\ 100\%$
Process quality yield (PQY)	=	$\frac{Good\ units\ produced}{Total\ units\ produced, including\ faluty\ units} x\ 100\%$
Manufacturing productivity	=	MCE x PP x PQY (units per hour/days/weeks/months)

Refer to Q5.3 for practice question

Performance measurement in a TQM environment (LP 5.4.4, p.197) (cross reference to chapter 4)

Three types of non-financial measurement:
1. **Measuring the quality of incoming supplies**. Quality control should include procedures for acceptance and inspection of goods inwards and measurement of rejects
2. **Monitoring work done as it proceeds**. 'In-process' controls include statistical process controls and random sampling, and measures such as the amount of scrap and reworking in relation to good production. Measurements can be made by product, by worker or work team, by machine or machine type, by department, or whatever is appropriate
3. **Measuring customer satisfaction**. Complaints may be monitored in the form of letters of complaint, returned goods, penalty discounts, claims under guarantee, or requests for visits by service engineers. Some companies adopt a more pro-active approach to monitoring customer satisfaction by surveying their customers on a regular basis. They use the feedback to obtain an index of customer satisfaction which is used to identify quality problems before they affect profits

Short termism and manipulation (LP 5.5, p.198)
Short-termism is when there is a **bias towards short-term rather than long-term performance**. It is often due to the fact that managers' performance is measured on short-term results.

Organisations often have to make a trade-off between short-term and long-term objectives.

(a) Postponing or abandoning capital expenditure projects
(b) Cutting R&D expenditure to save operating costs
(c) Reducing quality control and level of customer service to save operating costs (but also adversely affecting reputation and goodwill).
(d) Cutting training costs or recruitment

Methods to encourage a long-term view:
(a) **Making short-term targets realistic**. If budget targets are unrealistically tough, a manager will be forced to make trade-offs between the short and long term.
(b) **Providing sufficient management information** to allow managers to see what trade-offs they are making. Managers must be kept aware of long-term aims as well as shorter-term (budget) targets.
(c) **Evaluating managers' performance** in terms of contribution to long-term as well as short-term objectives.
(d) **Link managers' rewards to share price**. This may encourage goal congruence.
(e) **Set quality based targets** as well as financial targets. Multiple targets can be used.

The balance scorecard (LP 5.6, p.198) – FPI + NFPI [always examined]

Perspective	Question	Explanation
Financial	How should we appear to shareholders?	- Covers traditional measures such as growth, profitability and shareholder value but set through talking to the shareholder or shareholders directly - E.g. Profitability, sales growth, ROI, Cash flow
Customer	What do existing and new customers value from us?	- Gives rise to targets that matter to customers: cost, quality, delivery, inspection, handling - E.g. % sales from new customers, % on time delivery, % orders from enquiries, customer satisfaction analysis
Internal	What process must we excel at to achieve our customer and financial objectives?	- Aims to improve internal processes and decision making - E.g. Unit cost analysis, process time analysis, value chain analysis, efficiency
Innovation and learning	How can we continue to improve and create future value?	- Considers the business's capacity to maintain its competitive position through the acquisition of new skills and the development of new products - E.g. no. of new products introduced, time to market for new products

The cause-and-effect relationship of the various measure in the balanced scorecard are:
1. **Financial measures** are **lagging performance indicators** for the purpose of feedback but not for future-oriented activities and actions
2. **Customer measures** are **leading indicators** of, and thus affect, financial performance
3. **Internal measures** are **leading indicators** of customer-related measures and future financial performance
4. **Innovation and learning measures affect internal processes** which impact customer service which then determines long term financial results.

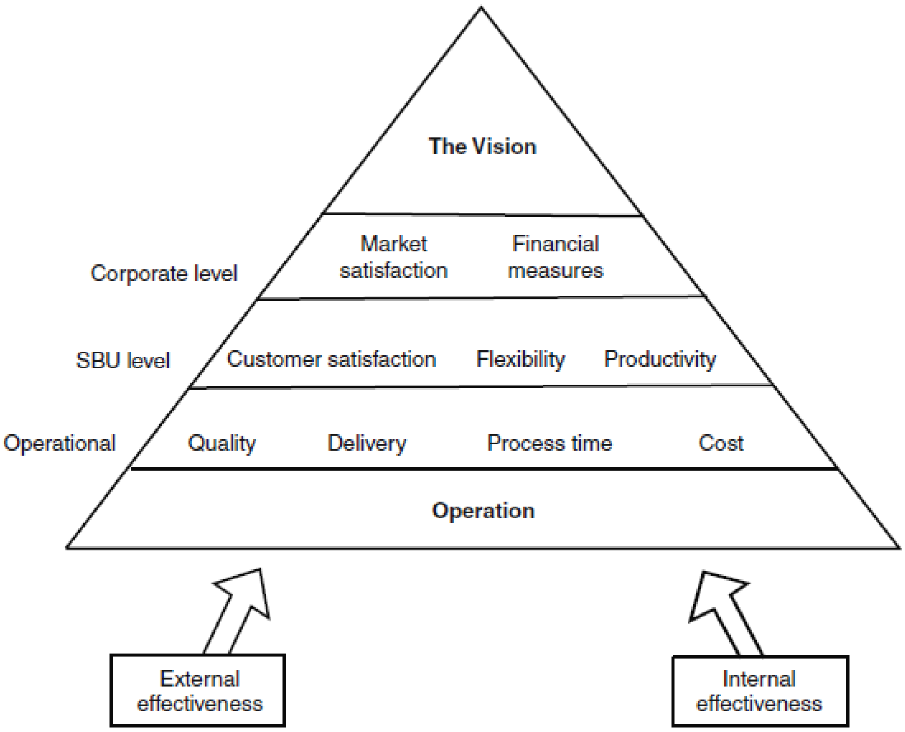
Pros of balance scorecard
- The scorecard **brings together in a single report of four perspectives** on a company's performance that **relate to many of the disparate elements** of the company's competitive agenda
- The approach provides a **comprehensive framework** for **translating** a company's **strategic goals into a coherent set of performance measures** by developing the major goals for the four perspectives and then **translating these goals into specific performance measures**
- It helps managers to **consider all the important operational measures** together to see whether improvements in one area may have been at the expense of another
- It **improves communications within the organization** and **promotes the active formulation and implementation of organizational strategy** by making it highly visible through the linkage performance measures to business unit strategy

Cons of balance scorecard

- The assumption of the **cause-and-effect relationship** on the grounds that they are **too ambiguous** and **lack a theoretical underpinning** or empirical support
- It may **omit other important perspectives**, such as the environmental on society perspective and an employee perspective. However, it should be noted that there is nothing to prevent companies adding additional perspectives to meet their own requirements but they must avoid the temptation of creating too many perspectives and performance measures
- It is not a straight forward analysis which different company may have different application on the 4 perspective

Performance pyramid (LP5.7, p.201)

The performance pyramid links the vision to different objectives internally and externally.

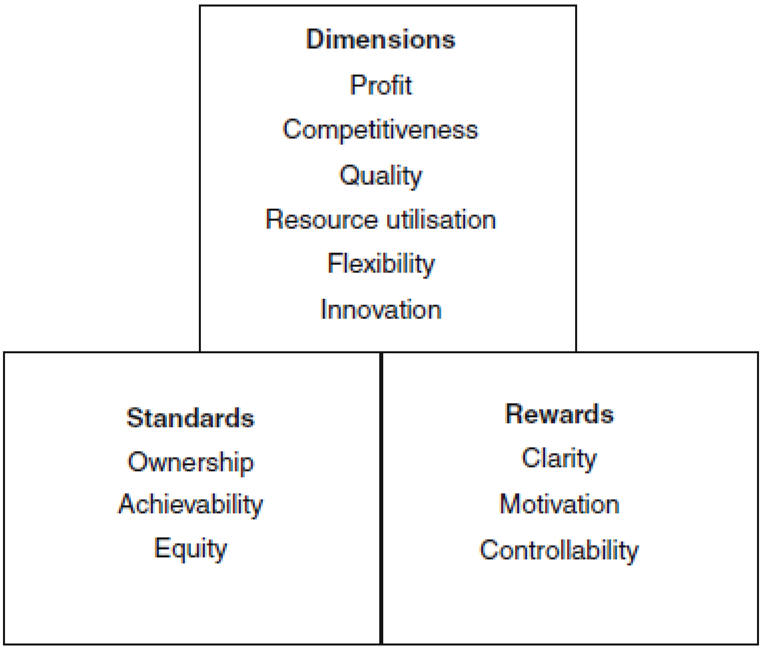


Within the pyramid the corporate vision is articulated by those responsible for the strategic direction of the organisation. The pyramid views a range of objectives for both external effectiveness and internal efficiency. These objectives can be achieved through measures at various levels as shown in the pyramid. These measures are seen to interact with each other both horizontally at each level, and vertically across the levels in the pyramid.

1. At **corporate level**, financial and market objectives are set
2. At **strategic business unit** level, strategies are developed to achieve these financial and market objectives:
- **Customer satisfaction** is defined as meeting customer expectations
- **Flexibility** indicates responsiveness of the business operating system as a whole
- **Productivity** refers to the management of resources such as labour and time
3. These in turn are supported by more specific **operational** criteria:
- **Quality** of the product or service, consistency of product and fit for the purpose
- **Delivery** of the product or service (the method of distribution, its speed and ease of management)
- **Process time** of all processes from cash collection to order processing to recruitment
- **Waste**, meaning the elimination of all non value added activities

Building block model (LP 5.8, p.202)

The model overcomes the problems associated with performance measurement in service business.



The design and analysis of performance measurement systems in service businesses, based on three building blocks:

(a) **Dimensions** — critical success factors for the business. Suitable measures must be developed to measure each performance dimension.
(b) **Standards** — key performance indicators. To ensure success it is vital that employees view standards as achievable, fair and take ownership of them.
(c) **Rewards** — the incentives given to managers who achieve standards. To ensure that employees are motivated to meet standards, targets need to be clear and linked to controllable factors.

Refer to Q5.8 for all in one practice question

External considerations (LP 5.9, p.206)
- Stakeholders (LP 5.9.1, p.206)
- Economic environment (LP 5.9.2, p206)
- Competition (LP5.9.3, p.207)

Behavioural aspects of performance management (LP 5.10, p.207)
- Measuring managerial performance (LP 5.10.1, p.208)
- Controllability principle (LP 5.10.2, p.208)
- Reward schemes and performance measurement (LP 5.10.3, p.208)
- Agency theory and managerial incentive scheme (LP 5.10.3.2, p.208)

<u>Summary</u>
Performance measurement should have the following features:
- be linked to corporate strategy
- include external as well as internal measures
- include non-financial as well as financial measures
- make explicit the trade-offs between different dimensions of performance
- include all important but difficult to measure factors as well as easily measurable ones
- pay attention to how the selected measures will motivate managers and employees

<u>Anson's tips for performance measurement questions:</u>
1. Usually includes calculation + comment/compare & contrast
2. Try to solve it like
    a. Define the equation (very easy mark)
        (i) Profitability → all about sales/profit
        (ii) Liquidity → Think about gearing/current/quick ratio
        (iii) Management efficiency → Think about inventory/asset/AP turnover (all about days)
    b. Calculation
    c. Comments (you must find something to compare – e.g. last year figure/industry average)
3. Check whether the question is also asking some non financial indicators → use BSC
4. Case will always give you some insights for application on the NFPIs
5. Don't focus on one area when doing this kind of question → should equally distributed your time on profitability/liquidity/management efficiency → unless the question EXPLICITLY stated

Extract from QP MB Dec 2011

Boston Garment Limited (BGL), a listed company in Hong Kong, buys and sells sportswear for teenagers in bulk. It uses its own designer silk-screen machines to print specially designed patterns on the sportswear and sells them to a number of retail outlets in Hong Kong and mainland China.

The appeal of the sportswear is largely dependent on the quality of the silk screen, such as the number of colours, use of glitter, and durability of the design.

BGL wishes to be known for its trendsetting designs, and it wants its sportswear to be a "must have" for each and every teenager in Hong Kong and mainland China. The average price for the sportswear is HK$200, higher than the market average price of HK$150.

Operational details for the past five years

Description	2010	2009	2008	2007	2006
Bulk sportswear purchased (unit)	300,000	270,000	250,000	220,000	200,000
Number of sportswear spoiled (unit)	2,900	2,400	2,300	2,000	1,900
Operating margin	40%	38%	38%	37%	36%
Number of retail outlets	150	160	165	150	135
Number of design staff	10	7	7	6	5

At the end of each financial year, the management of BGL determines the quantity of sportswear to be purchased and sold for the coming year, and the amount of the advertising budget to be placed in teenage fashion magazines. The management also determines the number of design staff to support the business activities. The main tasks of the design staff are to develop an eye-catching concept with an easy printing concept in mind and fast delivery to retail and wholesale outlets. There is no direct relationship between the number of bulk sportswear purchased and the number of design staff and its associated costs. However, the success of BGL depends largely on the creativity of the design staff.

Although the business has been running quite well, the Managing Director, Mr. Dickson Chan, is of the view that a set of key performance indicators would be very helpful for him to guide and control the business to achieve the financial targets set by the Board.

At recent Management meeting, he has announced that he is going to implement balanced scorecard (BSC) in the company in order to achieve the financial goal as laid down by the Board. He asks the Financial Controller to consider the applicability of BSC to BGL.

Assume that you are the Managing Director, Mr. Dickson Chan, and you are going to write a memorandum to the Board to explain the following:

Why a balanced scorecard (BSC) is relevant or useful, with examples, to BGL and how it can be designed.

(10 marks)

Answer to QP MB Dec 2011

Date : xx/xx/2011
To : Board of Directors
From : Dickson Chan, Managing Director
Subject : Balanced scorecard

BSC forces the respective responsible managers to set both financial and non-financial targets for their own departments which are supportive of the achievement of BGL's financial goal for the year. BSC also forces the respective responsible managers to work as a team in achieving BGL's goal.

The key measurements of BGL's balanced scorecard, given its product differentiation strategy:

Financial Perspective
The key measurements will indicate whether BGL has been able to charge premium prices and achieve operating income through the product differentiation strategy.
- Increase in operating margin.
- Price premium earned on products

Customer Perspective
The key measurements will indicate whether the product differentiation strategy is succeeding with its customers. These measures are leading indicators of superior financial performance.
- Market share in teenager sportswear.
- Some measures of customer satisfaction
- Number of new customers.
- Number of times the sportswear is mentioned in the leading fashion magazines.

Internal Business Process Perspective
The key measurements will indicate improvements in more distinctive and trendsetting designs delivered to its customer, which will lead to superior financial performance.
- Quality of silk-screening (number of colours, use of glitter, durability of the design).
- Frequency of new designs.
- Time between concept and delivery of design.
- Sportswear spoilage rates.

Learning and Growth Perspective
The key measurements will indicate the capabilities of BGL to produce distinctive designs, which have a cause-and-effect relationship with improvements in internal business processes, which in turn lead to customer satisfaction and financial performance.

- Ability to attract and retain talented designers.
- Investment in advanced technology silk-screening hardware and software.
- Improvements in silk-screening processes.
- Employees training in marketing and sales.
- Some measures of employee satisfaction.

Should the board require more information or have more enquiries, please let me know.
Yours truly,
Dickson Chan
Managing Director

Extract from QP MB Jun 12

The Delicious Pizza Company Limited (DPC) is a subsidiary of ATL Fast Food Group (ATL) listed on the Hong Kong Stock Exchange. DPC operates many pizza restaurants in Hong Kong, Macau and mainland China. The company mission is to deliver hot and fresh pizza to customers on time, with excellent service and at a competitive price.

Pizza Delivery Service

Due to the escalating rental costs, DPC has introduced a pizza delivery service to customers which has received an enthusiastic response. To date, DPC has more than 5,000 dedicated and professional delivery teams located in 100 express delivery centres in the region. Hotline centres take orders from customers and are normally situated at different locations from the kitchens in order to optimise the costs involved. Currently, there are 200 hotline order operators.

The Chief Executive Officer (CEO), Mike Chan, strongly believes in the importance of quality service and on-time delivery to customers. The current operation is that when customers call in for a pizza, they often ask the hotline order operators how long it will take to deliver the pizza to them. If the operators quote too long a time interval, customers will very often turn to other pizza restaurants. If the operators quote too short a time interval, but could not meet it, customers will be upset and DPC will lose potential repeat customers.

Mike is very keen to monitor the delivery time to customers in order to improve the service quality. The industry benchmark for the delivery time to customers is within 45 minutes upon receiving the order ("Benchmark"), and rival pizza restaurants can achieve this Benchmark about 50% of the time (out of the total number of deliveries each month). Mike is unsure whether DPC could quote a delivery time of 45 minutes and achieve an on-time delivery performance of 50% for the past three months.

Delivery performance

DPC pizza delivery schedule		2011		
		Sept	**Oct**	**Nov**
1.	Delivery in 30 minutes or less	10,440	11,780	13,650
2.	Delivery between 31 & 45 minutes	17,400	19,840	22,750
3.	Delivery between 46 & 60 minutes	20,300	21,700	19,500
4.	Delivery between 61 & 90 minutes	9,860	8,680	9,100
Total Pizza deliveries		58,000	62,000	65,000

<u>December Proposal</u>

Mike is also thinking of giving an on-time guarantee for the month of December in order to promote sales. His initial idea is that if a pizza could not be delivered within 30 minutes of placing the order, the customer will get a free pizza. Mike estimates that an extra 25,000 pizzas will be sold while 10,000 pizzas will be given away free. Below is the analysis:

1.	Average price for a pizza	$200
2.	<u>Cost per pizza</u>	
	- Variable costs	$70
	- Fixed costs	50
	Total	$120

Required:

Assume that you are Frank Chan, the CFO, and you are going to write a memorandum to the CEO to explain the past performance and concerns regarding the December proposal. Your memorandum should cover the following areas:

(a) analyzing the past performance of the pizza delivery, including the comment on whether DPC could achieve a delivery time of 45 minutes and on-time delivery performance of 50%;

(6 marks)

(b) the estimated financial impact of the December proposal; (4 marks)

(c) consideration of non-financial indicators for the December proposal; and

(7 marks)

(d) other actions for improving the delivery time. (5 marks)

Answer to QP MB Jun 12

(a)

To: Mike Chan, CEO
From: Frank Chan, CFO
Date: xx/xx/xxxx
Subject: Performance and concerns regarding the December proposal

As requested, I have undertaken an analysis of the performance and proposal as follows:

		Sept		Oct		Nov	
Delivery in minutes		**Orders**	**%**	**Orders**	**%**	**Orders**	**%**
1.	Equal or less than 30	10,440	18	11,780	19	13,650	21
2.	Between 31 & 45	17,400	30	19,840	32	22,750	35
3.	Between 46 & 60	20,300	35	21,700	35	19,500	30
4.	Between 61 & 90	9,860	17	8,680	14	9,100	14
Total		58,000	100	62,000	100	65,000	100

- The industry benchmark is 45 minutes. Improvement in deliveries of less than 30 minutes increased by 3% (up from 18% to 21%).
- Improvement in deliveries of less than 45 minutes increased by 8% (up from 48% to 56%). DPC was slightly below the industry benchmark in the month of September (48%).
- Improvement in deliveries of between 46 and 60 minutes decreased by 5% (down from 35% to 30%).
- Improvement in deliveries of greater than 60 minutes decreased by 3% (down from 17% to 14%).
- In conclusion, with the exception of September, DPC could achieve an on-time delivery performance of 50% during October and November for a delivery time of 45 minutes.

Points to note:

- Provide figures with explanation in order to obtain all the marks in marking scheme

(b)

Financial Impact on the December proposal

Additional income on extra orders (25,000 x $200)	$5,000,000
Less: variable costs (25,000 x $70)	($1,750,000)
Less: variable costs of free meals (10,000 x $70)	($700,000)
Additional profits	$2,550,000

DPC could go ahead with the December proposal.

Points to note:

- Read the case carefully: the case stated that “an extra 25,000 pizzas will be sold while 10,000 pizzas will be given away free”, accordingly, the revenue should be based on the calculation of pizzas sold i.e. 25,000.
- Remember the basics of the marginal costing/contribution approach, fixed costs should not be taken into account in the calculation.

(c)

Non-financial indicators for the December proposal

The non-financial measurement indicators are quality of food, quality of service and human resources.

Quality of food
- Cooking temperature and cooking time within an acceptable level.
- Materials used according to recipe.
- Spoilage rates of pizza.

Quality of service
- Number of rings before taking the call from customer.
- On-time delivery as committed. Log the time of receiving orders and the time of receipt by customers.
- Number of complaints/compliments from customers.
- Number of customers' orders in a month.

Human Resources
- Amount of additional training to kitchen staff and hotline order operators.
- Some measures of employee satisfaction.

Points to note:

- The question required us to provide “non financial indicators”, no numbers are required

(d)

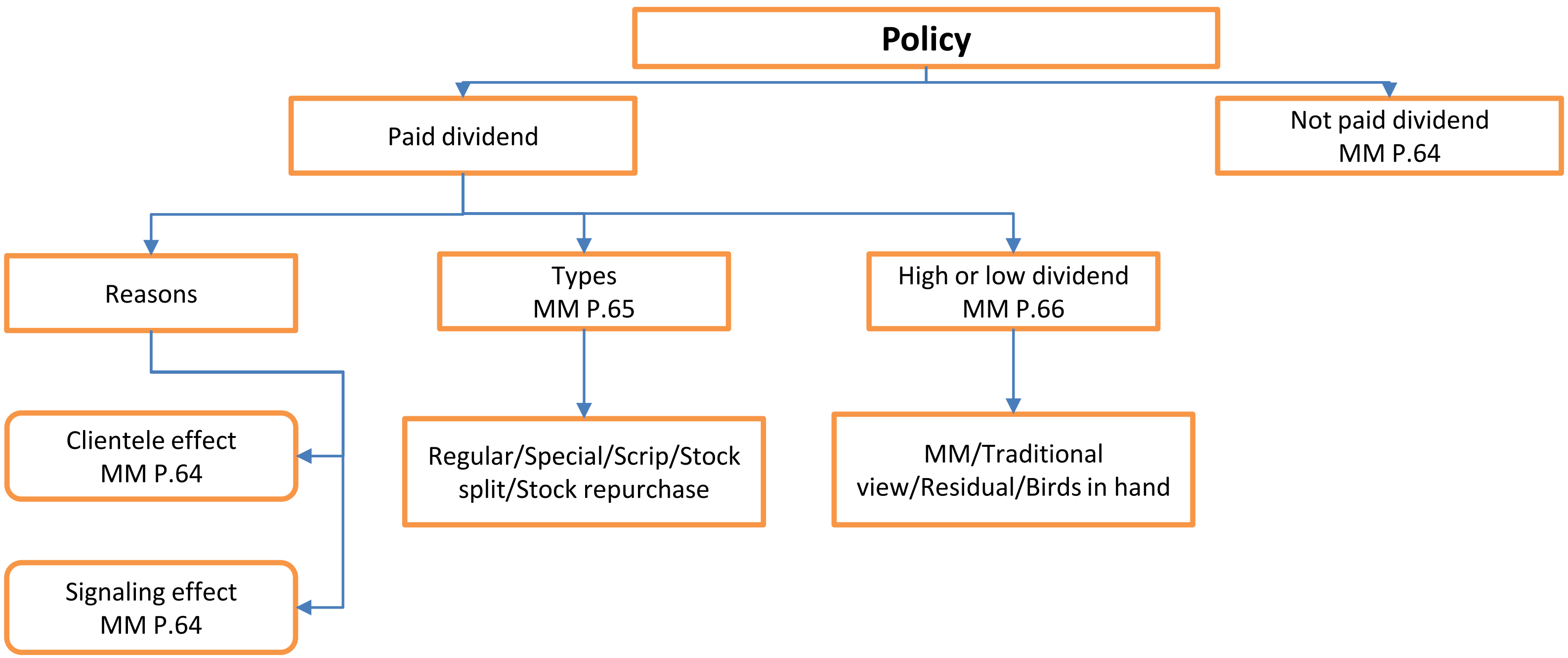
Other actions for improving the delivery time
- Customers' orders are inputted into the electronic ordering system with linkage to the kitchen staff.
- Ensure that adequate labour is available to minimise waiting time before cooking commences.
- Have adequate number of staff available to deliver the pizza.
- Maintain cooking equipment well to avoid down time.
- Ensure no pizza has to be thrown away and replaced due to poor quality.

Should you require more information or have more enquiries, please let me know. Yours truly,
Frank Chan, CFO

Points to note:

- Focus on what questions is asking – actions for improving delivery time!

LP 10 Dividend policy



MM=Mindmap

Chapter 10: Dividend policy (LP 10, p.377)

Relationship between dividend policy and the financing decision (LP 10.2, p.377)
- A company can use the earnings either to pay cash dividends to the shareholders or retain for financing investment projects
- Investors believe a company's dividend policy is important because if a company is able to increase the dividend payout, it represents a confidence of company's future earnings – *Dividend policy is a positive indicator of a company's profit expectations*
- Due to the business plan of a company, some may reinvest their earnings through capital expenditure (e.g. update the IT system), others may wish to build cash reserve in times of economic hardship - *A high profit in a year does not automatically transfer into high dividends for shareholders*
- A lot of companies (e.g. utilities companies) try to payout consistent dividends for managing investors relations

Theories of dividend policy (LP 10.3, p.378)

1. Residual theory – if a company can identify projects with positive NPV, it should invest in them, no dividends will be paid unless there are no investment opportunities

   Features of companies using residual theory
   - High retained earnings
   - Minimum cash dividends
   - More internal financing (Less external financing)

2. Traditional view – focuses on the effects on the share price. The dividends a company pays may treat as a signal to investors.

   Features of companies using traditional view
   - Takes account of different clienteles of shareholders
   - Takes account of the shareholder preference for dividends or capital growth

3. Irrelevancy theory – Opposite to traditional view, Modigliani and Miller (MM) proposed that in a tax-free world, shareholders are indifferent between dividends and capital gains.

   The theory assumes:
   - No tax and transaction cost
   - All relevant information available
   - If a dividend is paid, share will suffer loss in value equal to dividend because of the need to obtain outside finance
   - Shareholder can make their own dividends through selling shares

   Arguments against MM
   - Different tax rates on dividends affect shareholders preference
   - Companies prefer earning retention
   - Imperfect markets induce shareholders prefer higher dividends
   - Transactions costs makes selling shares less attractive
   - Limitation of information makes companies to maintain dividend level to maintain shareholders' confidence

   Features of companies using Irrelevancy theory
   - Management thinks value of the company is determined solely by the earning power and risk of its assets and investment
   - Distribution of dividends does not affect the value of company

Practical factors influencing dividend policy (LP 10.4, p.379)

- The easiness of raising extra finance by the company from sources others than retained earnings
- The company's liquidity position (whether the company has sufficient cashflow for dividend payout)
- The need to repay debt in the near future
- There maybe dividend restraints imposed by the loan agreement
- The company's required gearing level as payment of dividends would reduce equity fund
- The signalling effect of dividends to shareholders and the financial markets in general
- The need to retain some earnings within the business just to counteract the effect of inflation and maintain its operating capability unchanged
- The law on distributable profits, as companies can generally only pay dividends solely out of accumulated net realised profits less net accumulated losses
- The need to remain profitable, as unprofitable company cannot continue for ever paying dividends out of historic retained profits
- Adopting a conservative dividend policy in times of economic instability can improve balance sheet flexibility and provide a source of internal finance when capital markets are volatile and external fundraising is expensive

Advantage of no dividend strategy

- Can maintain the company's liquidity position (Cash kept in bank rather than paying out as dividend)
- Can cope with the need of company's expenditure
- Can invest in profitable projects
- Can give confidence to outside stakeholders (e.g. suppliers, banks)
- Can improved the financial ratios (e.g. current ratios, quick ratios)

Dividend payout ratio

The dividend payout ratio measures the percentage of net income that is distributed to shareholders in the form of dividends during the year.

Calculation

$$\frac{Total\ dividends}{Net\ income} \text{ or } \frac{Dividend\ per\ share\ (DPS)}{Earnings\ per\ share\ (EPS)}$$

Since investors want to see a steady stream of sustainable dividends from a company, the dividend payout ratio analysis is important. A consistent trend in this ratio is usually more important than a high or low ratio.

Since it is for companies to declare dividends and increase their ratio for one year, a single high ratio does not mean that much. Investors are mainly concerned with sustainable trends. For instance, investors can assume that a company that has a payout ratio of 20 percent for the last ten years will continue giving 20 percent of its profit to the shareholders.

Conversely, a company that has a downward trend of payouts is alarming to investors. For example, if a company's ratio has fallen a percentage each year for the last five years might indicate that the company can no longer afford to pay such high dividends. This could be an indication of poor operating performance.

Generally, more mature and stable companies tend to have a higher ratio than newer start up companies.

Refer to Q10.1a,b for practice question

Signalling effect of dividends (LP 10.4.1, p.380)

The ultimate objective in financial management decisions is to maximise shareholders' wealth.

Types of dividend

a. Regular dividend – dividend which will be distributed occasionally
   Benefits: Communicates future prospects to shareholders
   Risk: If there is no actual profits increments, dividend may pose a future cash flow problem

b. Special dividend – dividend which will only be distributed due to some special events (e.g. selling of assets)
   Benefits: Return of extra cash to shareholders without creating an expectation that the dividend will be repeated
   Risk: Share price will not be benefited

Point of view from shareholders
- Expect a consistent dividend policy (either stable dividend or steady dividend growth)
- A large rise or fall in dividends can unduly influence the company's share price
- A dividend cut may signal that future prospects of the company are poor
- Partial sales of the shareholdings may not be able to achieve the same effect as dividend due to transactions cost and minimum trading size
- If the effective tax rate of capital gains are higher, shareholders would prefer dividends
- Bird in the hand theory → current dividend payment reduce investors' uncertainty

Refer to Q10.1c for practice question

Point of view of management
- May use this as a defence for takeover bid by increasing the dividend payout
- Investors may think increasing dividend payout is a good signal for future prospect of the company, therefore driving the share price higher and makes the company's share more expensive for a potential bidder

Assessment whether the dividend policy has been implemented successful
- Direct feedback from shareholders, especially institutional shareholders, stating whether or not they are happy with the current dividend policy
- Full details of the registered shareholders, and size of holdings
- Knowledge of the impact of taxation of dividends on shareholders' attitude, and specifically on their preference between dividends and capital gains
- The amount of capital investment the company wishes to undertake. The use of retained earnings and other internally generated funds avoids issue cost and the information symmetry problems on external financing. The level of dividends paid affects the amount of internal funds that are available for investment
- The impact of dividend payments on liquidity
- Signals provided by dividend payments about the future financial health of the company

Refer to Q10.2 for practice question

Implications of high dividend policy

Pros
- Signalling effect on dividend, it is regarded as a positive view of management of the future prospects of the company
- Share price would react positively to the announcement
- Pension funds and institutional investors favour high dividends due to the tax exemptions features
- Investors may rely on share dividends for income who will prefer high dividends
- For investors applying to agency theory, managers may not always act in the best interest of the company, high dividend means excess cash flow back to them
- Avoiding high cash pool in the company can prevent hostile takeovers

Cons
- If the company requires cash later one, it may require to raise it through right issue, which depends on market conditions and the relative transaction cost
- High dividend may not be sustainable, which may affect shareholders' image on the company
- Some institutional investors (e.g. insurance company) prefer a steady dividend payout policy
- High dividend may indicate that the company has failed to identify investment opportunities for future growth

Practice question
A company currently pays 50% of after-tax profits to shareholders as dividends. It is considering a proposal to increase this dividend pay-out ratio to 70%. The company expects to earn a yield of 8% on all new investments, but has no plans to raise new finance from external sources. All new financing will come from retained profits.

What will be the implication of the proposed new dividend policy for future earnings growth?

Suggested solutions
The growth rate in earnings and dividends can be estimated as the percentage of profits retained multiplied by the return on investment.

So currently the expected growth in annual earnings and dividends is 8% × 50% = 4% per year.

If dividends are increased to 70% of earnings, growth in earnings and dividends will fall to: 8% × 30% = 2.4% per year.

Other forms of dividends (LP 10.5, p.382)

1. Scrip dividends – dividend paid by the issue of additional company shares, rather than in cash.
2. Stock split – each ordinary shares is split into two shares creating a larger number of shares with smaller market value

Pros
- Preserves cash position which will improve liquidity
- Investors may obtain tax advantages due to the form of dividend
- Investors can increase their shareholding without incurring transaction cost
- Share issue decrease the gearing and enhance its borrowing capacity

Cons
- No impact on shareholders' wealth
- Share price tends to fall after the scrip or stock split

3. Share buy-backs – the purchase by a company of its own shares, usually is used when the share price fall significantly and the management believes the share price are undervalued

Pros
- Increase EPS which leads to a higher share price and the company can increase dividends on the remaining shares in issue
- Increase gearing
- Prevent possible takeover bids or enables listed company to be delisted
- Return the surplus cash back to the shareholders
- Readjust a company's equity base to more appropriate levels if its business is decline

Cons
- Difficult to balance the pricing of the shares between the investors who would like to sell and those who do not
- Interpret as a bad management or bad strategic planning on the excess fund of a company
- Some shareholders will be taxed on a capital gain

Refer to Q10.3, Q10.4, Q10.5 for practice question

Example of dividend alternatives [you need to understand the impact on different dividends]

The board of directors of Alligo Company is discussing the level and nature of the company's next dividend payment. Alligo's current share price is $40 cum div. Three options are under consideration:

(1) A cash dividend of $1.50 per share

(2) A 7.5% scrip dividend

(3) The company buys back 10% of the ordinary share capital at the current market price and pays a cash dividend as in (1) above

Calculate the expected effect of each suggestion on a shareholder in Alligo owning 1,000 shares (and whose current wealth cum div is therefore 1,000 shares at $40 = $40,000) explaining how accurate estimates are likely to be. Ignore taxation.

Summary excerpts from the financial statements of Alligo are as follows:

Income statement

	$m
Revenue	1,500
Operating profit	50
Net interest earned	40
	190
Taxation	31
Available to shareholders	159

Statement of financial position

	$m	$m
Non-current assets (net)		600
Current assets		
Inventories	200	
Receivables	200	
Cash and cash equivalents	400	800
Less: current liabilities		(300)
		1,100
Shareholders' equity		
Share capital (40 million shares)		200
Retained earnings		900
		1,100

Solution

The outcomes of the three alternatives being considered are as follows:

(1) A cash dividend of $1.50 per share

After a cash dividend is paid the expected wealth is:

	$
1,000 shares at $38.50	38,500
Cash dividend 1,000 at $1.50	1,500
	40,000

(2) A 7.5% scrip dividend

A 7.5% scrip dividend would mean the issue of three million new shares. The total market value of the company of 40 million shares at $40 or $1,600 million would be unchanged, but would now be split between 43 million shares leading to a new expected share price of:

$$\frac{\$1{,}600\text{m}}{43\text{m shares}} = \$37.21$$

The shareholder would receive 75 new shares, giving 1,075 in total. The expected wealth of the shareholder would be unchanged at 1,075 × $37.21 = $40,000.

(3) The company buys back 10% of the ordinary share capital at the current market price and pays a cash dividend as in (1) above

Buy-back of 10% of the ordinary share capital would cost $1,600m × 10% = $160 million, presumably from the cash at bank. This would reduce the company's value by $160 million, but the share price would be expected to remain unchanged.

$$\frac{\$1{,}440\text{m}}{36\text{m shares}} = \$40$$

The shareholder's wealth would remain at $40,000 whether or not (s)he sold the shares. If no shares were sold the situation is as (1) above. If shares were sold, 1,000 shares sold gives $40,000.

These estimates are unlikely to be accurate. If the market perceives that these policies are conveying significant new information about the company's future prospects, either positive or negative, the share prices will differ from the above figures.

Framework for analysing dividend policy (LP 10.6, p.385)

Aswath Damadaran asked two questions to analyse dividend policy:

1. How much cash is available to be paid out as dividend and how much of that cash is actually paid out to shareholders?
   Available cash = Free Cash Flow to Equity (FCFE)

   FCFE = Net profit after tax (NPAT) + depreciation + amortisation - capital expenditure +/- change in working capital - loan principal repayment + new debt issued

2. How good are the investment projects available to the company?

   Compare: Required return (Cost of capital) vs Accounting return on equity (ROE)

FCFE versus Dividends

ROE versus Required return	*FCFE < Dividends*	*FCFE > Dividends*
ROE > Required return	**(1)** Invest in projects and cut dividends	**(2)** Maximum flexibility in dividend policy
ROE < Required return	**(3)** Reduce investment and cut dividends	**(4)** Reduce investment and increase dividends

Dividend policy question

Alibaba, the Chinese e-commerce marketplace, came to market through an IPO on the New York Stock Exchange in 2014, raising a record amount of US$25 billion, making it the largest IPO ever.

This was despite the fact that it had never paid a dividend and was not expected to do so in the near term.

Why were investors nonetheless prepared to buy Alibaba shares at an IPO price of US$68 putting it on a historic P/E multiple of over 41?

Solution
- Investors earn a return from company shares in the form of dividends and capital gain(or loss)
- Companies that can earn a high return from investment are likely to reinvest profits and pay low or no dividends. Provided that there is adequate return on investment this will result in growth in the company's profits and share price. Investors should be content with this provided the return on investment that the company can achieve exceeds that which the investor could earn by reinvesting dividends in an alternative investment with equal risk.
- The attraction of young companies in high tech markets lies largely in their growth potential. This growth will be maximised if all profits are retained and invested in the business rather than distributed. Therefore investors in such companies expect to earn a return through the capital gain in the shares, rather than through dividends.
- Per case, investors were prepared to pay a price which put Alibaba on a P/E multiple of over 41 indicates that they believed that the company had a high potential for growth and the ability to generate a high return on investment.
- Investors buying shares in Alibaba on IPO did not expect to receive dividends. Consequently it is growth in sales and profits that would be likely to be the main driver of the share price for the foreseeable future.

Anson's tips for dividend policy questions:
1. Think of any theory to support the dividend policy
2. Forms of dividend
3. Dividend paid → equity value decrease → share price decrease → cash value increases → total shareholder's value wont change (assume no tax impact)

Extract from QP MB Dec 2013 Q6

You are the CFO of ABC Limited, a company listed on the Hong Kong Stock Exchange. In about one week's time, you are meeting with the Board of Directors and you are expected to propose the dividends for the latest financial year 2012/13 for their consideration.

Historical Earnings Per Share (EPS) and Dividend Per Share (DPS) are summarized below.

	EPS ($)	DPS (to common shareholders) ($)
2009/10	1	0.6
2010/11	1.12	0.66
2011/12	1.19	0.726
2012/13	4.793	To be proposed

The company has adopted this dividend policy for over 10 years.

During the year ending 2012/13, the company has 10,000 $0.1 par value common shares and 1,000 $1 par value, 4%, cumulative redeemable preference shares issued and outstanding. The preference shares were issued at the beginning of 2012/13. All common and preference shares have existed since the beginning of the financial year and there has been no new issue or repurchase of shares.

The 2012/13 EPS, based on the audited account is $4.793, its breakdown is as follows:

- $3 as the gain on <u>sale of an asset</u>, a one-off event.
- $1.309 from <u>core business earnings</u>, expected to be recurring.
- $0.484 <u>extra earnings</u> due to a new project launched one year ago. These earnings have a <u>very high chance</u> of becoming recurring 1 year later, but, as of today, there is still uncertainty.

The dividend for the cumulative preference shares is equivalent to a reduction of EPS of $0.2 for the purpose of evaluating earnings attributable to common shareholders.

The company did not pay any interim dividend.

The Board is very concerned that an inappropriate dividend policy for 2012/13 will depress the share price leading to difficulties in equity financing in the coming year.

Required:

(a) What is the average (arithmetic average) historical payout ratio for the past three years, 2009/10, 2010/11 and 2011/12? Describe the dividend policy that the Board has been following.

(5 marks)

(b) You are evaluating whether the policy identified in part (a) is still applicable for 2012/13. For each of the following policy choices i.e. policies 1, 2 and 3, propose for the Board's consideration specifying how much special and general dividends should be distributed from 2012/13 earnings. Support your answers with calculations.

(Policy 1) Applying the historical policy to the whole distributable current earnings;

(Policy 2) Signalling that the core business earnings as well as the new project earnings will be both recurring and the sale of assets is a one-off;

(Policy 3) Signalling only the core business earnings are recurring, extra project earnings are not certain and the sale of assets is a one-off.

(6 marks)

(c) For each of the dividends proposed in part (b), discuss the shortcomings. Conclude by recommending with justification which policy the company should follow.

(8 marks)

Answer to QP MB Dec 2013 Q6

Answer 6(a)

2009/10: $0.60 / $1 = 0.6 (60%)

2010/11: $0.66 / $1.12= 0.59 (59%)

2011/12: $0.726 / $1.19 = 0.61 (61%)

Average: (0.6 + 0.59 + 0.61) / 3 = 0.6 (60%)

The company has been adopting a constant dividend payout policy, distributing on average 60% of earnings as dividends.

Answer 6(b)

Policy	Special Dividend	Regular Dividend	Total ($)
1	0	2.76 = (4.793 - 0.2) x 0.6	2.76
2	3	0.956 = (4.793 - 3 - 0.2) x 0.6	3.956
3	3.29 = 3 + 0.484 x 0.6	0.665 = (4.793 - 3 - 0.2 - 0.484) x 0.6	3.955

Answer 6(c)

Policy (1)

This dividend is misleading as the asset sale is a one off, giving the wrong signal to the market that this amount is recurring, leading to great disappointment next year when the dividend is back to its normal level.

Policy (2)

This signals good news (extra earnings to be recurring) prematurely. If the earnings are not repeated next year, dividends will be reduced, shareholders will be disappointed and then will depress the share price.

Policy (3)

Understate future recurring growth potential as the general dividend is lower than prior years as some dividends will be given to preference shareholders. The common shareholders may get the wrong message that future earnings will decline and this could result in pressure on the share price.

Recommendation

As the directors are very concerned about the share price due to these wrong signals, it is recommended to follow Policy 2. This is because even though it can be argued that the high earnings growth will be confirmed only one year later, the current assessment that it will be successful is high. Given the risk of an improper under-performing signal depressing the share price is higher than the risk of not meeting growth expectations, policy 2 is preferred.

Panelist report

Question 6(a) – 5 Marks

This question required the candidates to calculate the dividend payout ratio. The question was answered well.

Question 6(b) – 6 Marks

This question required the candidates to demonstrate their knowledge of special and general dividend calculations under different policy scenarios. The key aspect was the signalling effect of these policies. The answer required a good knowledge of dividend calculations in order to signal the appropriate message to the shareholders.

This question was answered poorly, with the following two major weaknesses observed from candidates' answers:

- Unable to differentiate the three policy choices in terms of distribution between general and special dividends; and
- The impact on EPS from the preference dividends was not considered in the dividend payment calculation to common shareholders.

Question 6(c) – 8 Marks

This question required the candidates to discuss the shortcomings of the three policy choices in Question 6(b). This question also asked for recommendations as to the appropriate policy to be adopted by the company. The candidates who performed exceptionally well were able to critically discuss the implications for dividends due to a one-off sale of assets and the extra earnings of a new project as a possible recurring event, and therefore provided well-argued recommendations.

Most candidates failed to highlight the signalling effect of dividend policy and therefore lost substantial marks in this question.