Examiner's General Comments

The performance on Paper P9 was extremely disappointing. Many candidates appeared to have done little preparation. It was noted in the November 2005 Post Exam Guide that many candidates demonstrated poor knowledge of even quite basic financial calculations and that their grasp of many basic concepts was also limited. These weaknesses are still evident in May 2006. A further weakness was the poor presentation and structure of candidates' solutions.

Question One appeared to present candidates with particular challenges despite clues to answering the question (and (a) (i) in particular) being clearly evident in the scenario. **Question Two** was a standard working capital management and financing question, although it was avoided by the majority of candidates and many candidates ignored the financing aspects of the question. **Question Three** was even more unpopular, although it required fairly straightforward calculations of the yield to maturity of a bond and a conversion value of a convertible bond which provided readily accessible marks for the well-prepared candidate.

Questions Four and **Five** were by far the most popular of the optional questions on this paper. Answers to **Question Four** were disappointing as many candidates were unable to apply the APV approach correctly and few candidates used an ungeared cost of equity in the NPV base calculation. **Question Five** was generally well answered with most candidates being able to make a reasonable attempt at the NPV calculations and draw basic conclusions from the results. However, few were able either to calculate appropriate PIs based on rationed cash flows, or to "stand back" from the NPV and PI results and use these to help identify the best overall combination of projects.

In the sections below that explain how the marking scheme was applied, where the comment says "*up to 3 marks are available for each valid point"*, 0.5 marks are awarded for a bullet point, 1 mark for some attempt at (correct and valid) discussion, rising to 3 marks for good discussion of the point using appropriate illustrative examples. The published answers are used as a guide (these are available as a download from CIMA Publishing – click on the link on the CIMA website www.cimaglobal.com). Marks are also awarded for candidates' own valid comments that might not be in the marking guide or the published answers.

Where marks are shown for calculations, the mark shown is the maximum available assuming calculations are all correct. Marks are available for recognition of correct approach and understanding.

Note that in the marking scheme the sum of the marks available for specific activities may total more than the marks indicated on the question paper. This is to allow some flexibility in marking, but the maximum marks that can be awarded for a section of a question cannot exceed the number of marks indicated on the question paper.

SECTION A

Question One

(a)

Assume you are one of the financial advisors working for PM.

(i) Explain, with supporting calculations, how the Finance Director and advisors of PM have arrived at their estimates of post-merger values.

(10 marks)

(ii) Calculate and comment briefly on the likely impact on the share price and market capitalisation for PM and NQ Inc when the bid terms are announced. Make appropriate assumptions based on the information given in the scenario.

(4 marks)

(iii) If NQ rejects the terms offered, calculate

- the maximum total amount and price per share to be paid for the entity; and
- The resulting share exchange terms PM should be prepared to agree without reducing PM's shareholder wealth.

(6 marks)

(Total for part (a) = 20 marks)

Rationale

The question involves, in part (a), explaining the calculations for estimates given in the scenario relating to post-acquisition values, re-calculating these using sensible assumptions based upon information in the scenario and, finally, recalculating the exchange terms should the American entity reject the ones initially calculated and then proposed by the organisation concerned.

Suggested Approach

- Calculate the number of shares to be offered to NQ and the shares that will be in issue following the merger if the terms are accepted;
- Convert NQ's earnings into sterling and add to PM's earnings to obtain an earnings figure for the combined entity;
- Confirm the FD's EPS figure by dividing the total number of shares in issue into the combined earnings figure (as calculated above);
- Recognise that the P/E ratio of PM is the growth rating that should be applied to NQ's earnings;
- Confirm the FD's post acquisition market capitalisation figure by applying PM's P/E ratio to the earnings figure for the combined entity (calculated above);
- Provide some brief comments on the calculations;
- Calculate and comment on the impact on share prices including comments on why there is no reason for the market value to be different than PM plus NQ;
- Calculate new market values and share prices attributable to PM and NQ shareholders;
- Calculate maximum price to be paid and exchange terms in the following circumstances:
  - value of combined entity based on FD's post-merger values;
  - profit on sale of licences;
  - value of PM;
  - maximum market value and share price;
  - share exchange terms.

Marking Guide	Marks
Calculations of pre-acquisition values	3.5
Calculations of post-acquisition values	4
Comments	2.5
Calculations of candidate post-acquisition and market values	4
Calculations of maximum price	6

Examiner's Comments

This question was particularly poorly attempted, mainly because candidates did not read the scenario properly. Many completely misunderstood the question and assumed it was a general valuation question. They therefore calculated values for the two entities using net assets, dividend valuations models and so on, which wasted a lot of exam time.

Common Errors

- Incorrect valuation methods as noted above for example net assets, dividend valuation models;
- Use of industry average PE ratios to calculate the values of the two entities. PE ratios for both entities can be calculated from the data given;
- Failure to recognise the assumption of boot-strapping by the Finance Director. This was made explicit in the question scenario on the bottom line of page 2 of the question paper: *"He (the CEO of PM) also believes he can boost the entity's share value if he can convince the market his entity's growth rating can be applied to NQ's earnings"*
- Little or no attempt to calculate post merger share prices despite the clear requirement to *"Calculate … share price and market capitalisation.."* in part (ii). Many candidates simply suggested that the bidder's share price would go down and the target's price would go up following the announcement of the bid. This approach gained some credit, but was not what was required for satisfactory marks;
- Failure to recognise the impact of the sale of licences on the value of the merged entity.

Question One

(b)

Write a report to the Board of PM that evaluates and discusses the following issues:

(i) How the merger might contribute to the achievement of PM's financial objectives, assuming the merger goes ahead on the terms you have calculated in (a) (iii). If you have not managed to calculate terms, make sensible assumptions.

(12 marks)

(ii) External economic forces that might help and/or hinder the achievement of the merger's financial objectives. Comment also on the policies the combined entity could consider to help reduce adverse effects of such economic forces.

(8 marks)

(iii) Potential post-merger value enhancing strategies that could increase shareholder wealth.

(10 marks)

Rationale

In part (b), candidates are required to write a report to the organisation's Board evaluating and discussing how the acquisition might contribute to the organisation's financial objectives, reducing any external economic forces that might adversely affect the achievement of these financial objectives and any value enhancing strategies that could increase shareholder wealth.

Suggested Approach

Part (i)
Discuss how the merger will contribute to the achievement of company objectives including key points about:

- Increasing earnings per share;
- Maintaining gearing below 30%;
- Maintaining a PE ratio above the industry average.

Include appropriate calculations to support your discussion.

Part (ii)
Discuss external economic factors noting key points as follows:

- Exchange rate fluctuations;
- Changes in interest rate/inflation rate;
- Hedging methods to reduce these risks;
- Competition controls;
- Possibility of stock market crash;
- Integration problems.

Part (iii)
Discuss post merger value enhancing strategies. Key points include:

- Need for a position audit;
- Need for an integration strategy;
- Synergy/economy of scale/staff savings;
- Marketing strategy;
- Diversification and effect on cost of capital;
- Sale of non-core/redundant assets;
- Need for a communication strategy.

Marking Guide	**Marks**
Discussion of how the merger will contribute to achievement of company objectives	12
Discussion of impact of external economic factors	8
Discussion of post-merger value enhancing strategies	10
Includes marks for presentation and structure	3

Examiner's Comments

The attempts at part (i) of the report were generally very poor and few candidates provided any supporting calculations for their answers. Attempts at part (ii) and (iii) were, on average, of a better standard, although frequently the discussion simply listed bullet points irrespective of their relevance.

Common Errors

- No supporting calculations in part (i);
- Incorrect calculations of gearing;
- *Not* recognising that this was a *merger* situation.

SECTION B

Question Two

(a)

(i) Calculate the minimum and maximum working capital levels based on the Financial Controller's assumption regarding the timing of peaks and troughs in working capital variables and discuss the validity of that assumption.

(6 marks)

(ii) Using the figures calculated in (i) above, calculate and draw a chart in your answer book to show the short-term and long-term (permanent) financing requirements of MNO under each of the following working capital financing policies:

- moderate policy, where long-term financing matches permanent net current assets;
- aggressive policy, where 30% of permanent net current assets are funded by short-term financing;
- Conservative policy, where only 40% of fluctuating net current assets are funded by short-term financing.

(7 marks)

Rationale

Part (a) (i) and (ii) requires candidates to calculate minimum and maximum working capital levels based on assumptions given in the question and to discuss their validity in light of such calculations and then to calculate, and illustrate, the financing requirements for the given entity using various bases.

Suggested Approach

- Calculate amount of working capital tied up in accounts receivable, accounts payable, inventories and in total on both minimum and maximum criteria;
- Discuss the validity of the Financial Controller's assumption;
- Calculate financing requirements;
- Provide a chart illustrating the financing requirements.

Marking Guide	**Marks**
Calculations of working capital	4
Discussion of validity of assumption given in question	2
Calculations of financial requirements	4
Graphical illustration of financial requirements	3

Examiner's Comments

Very few candidates attempted this question. The main weaknesses in the answers of those who did were the inability to provide the calculations required by the scenario, in particular, minimum and maximum working capital levels and long-term financing requirements under each financing policy.

Common Errors

- Basing calculations for accounts payables and inventories on revenue rather than cost of sales;
- Failure to recognise that *maximum* accounts payable coincided with the *minimum* working capital;
- Omitting to discuss the validity of the Financial Controller's assumption regarding the timing of peaks and troughs in working capital variables;
- Making no attempt at part (a) (ii) of the question or making some attempt, but with no calculations.

Question Two

(b)

Discuss the advantages and disadvantages of an aggressive financing policy and advise whether or not such a policy would be appropriate for MNO.

(6 marks)

Rationale

Part (b) requires discussion of the advantages and disadvantages of a particular financing policy and its applicability to the given entity.

Suggested Approach

Discuss the advantages and disadvantages of an aggressive working capital financing policy, including comments on its appropriateness for MNO.

Marking Guide	**Marks**
Discussion of pros, cons and appropriateness of "aggressive policy"	6

Examiner's Comments

Common Errors
Discussing working capital management instead of financing policies for working capital.

Question Two

(c)

Advise MNO whether a profit or cost centre structure would be more appropriate for its treasury department.

(6 marks)

Rationale

Part (c) requires candidates to advise the given entity on the applicability of one or other different structures for its treasury department.

Suggested Approach

Provide a discussion of the advantages and disadvantages and features of operating a treasury department as a profit centre or a cost centre, including a conclusion about the most appropriate choice for MNO.

Marking Guide	**Marks**
Issues relating to the choice between a profit and cost centre structure and advice on the best structure for MNO	6

Examiner's Comments

Common Errors

- Discussing centralisation rather than addressing the question, which required a discussion of the merits of establishing a treasury department as a profit centre compared with a cost centre;
- Failure to advise on the best structure for MNO.

Question Three

(a)

Write a response to Sr. A, Sr. B and Sr. C, directors of EFG, discussing the issues raised and advising on the most appropriate financing instrument for EFG. In your answer, include calculations of:

- expected conversion value of the convertible bond in five years' time;
- yield to maturity (redemption yield) of the five-year unsecured bond.

Ignore tax.

(18 marks)
(including up to 8 marks for calculations)

Rationale

This question requires candidates to respond to questions raised by the directors of the entity described in the question on the most appropriate financing instrument to satisfy its funding requirements over the next few years. Marks are available for the calculations produced showing expected conversion values of the convertible bond and yield to maturity of the unsecured bond.

Suggested Approach

- Calculate the expected conversion value of the convertible;
- Calculate the yield to maturity of the bond;
- Note that the cost of the bank loan is the interest rate;
- Provide a discussion responding to each of the three board members;
- Provide a recommendation on the most appropriate financing instrument for EFG.

Marking Guide	**Marks**
Calculations for appropriate financing instrument	Up to 8
Comments in response to Board member A	3
Comments in response to Board member B	3
Comments in response to Board member C	3
Advice on most appropriate financing instrument	3
	Max 18 in total

Examiner's Comments

This was the least popular question on the paper. However, those who attempted it tended to score well on the calculations, but they rarely extended the answer beyond the points identified in the scenario.

Common Errors

- Incorrect or no calculations of the value of the convertible;
- Incorrect calculations of yield to maturity;
- *No recommendation.*

Question Three

(b)

Advise a prospective investor in the five-year unsecured bond issued by EFG what information he would expect to be provided with and what further analysis he should undertake in order to assess the creditworthiness of the proposed investment.

(7 marks)

Rationale

This part asks candidates to advise a prospective investor on what information they should expect from the given entity and what further analysis the investor should themselves undertake to assess the creditworthiness of their proposed investment.

Suggested Approach

- Discuss the type of information needed to determine creditworthiness,
- Discuss what other analysis should be undertaken before making a decision.

Marking Guide	**Marks**
Advise prospective investor	7

Examiner's Comments

Common Errors
- Weak discussion generally;
- No discussion of what further analysis is required.

Question Four

(a)

Advise GHI on whether or not to proceed with the project based on a calculation of its adjusted present value (APV) and describe the limitations of an APV approach in this context.

(15 marks)

Rationale

This question requires candidates to advise the given entity on whether it should proceed with the project described in the question, based upon a calculation of its adjusted present value (APV) and allowing for the limitations of an APV approach.

Suggested Approach

Calculate base NPV:

- Cost of equity of an ungeared firm;
- Forward exchange rates;
- Cash flows in €;
- Tax liabilities (note: alternative approaches acceptable here);
- DCFs and NPV.

Calculate APV based on base NPV:

- Tax shield on debt;
- Issue costs and related tax relief;
- APV.

Provide a recommendation

Discuss the limitations of APV

Marking Guide	Marks
Calculation of ungeared cost of equity	2.5
Calculations of base NPV	4.5
Calculations of APV	4
Advice to proceed	1
Limitations of APV	up to 4
	Max 15 in total

Examiner's Comments

This was a very popular choice of the optional questions on the paper. Many candidates recognised that this was NPV-based, although many failed to fully understand how this progressed to an APV calculation.

Common Errors
NPV base calculations:

- Incorrect discount rate - an ungeared cost of equity is required in APV calculations. Many candidates simply used the geared cost of equity, *ignoring the information given in the question*, and others calculated the weighted average cost of capital;
- Incorrect inclusion of debt cash flows in the NPV calculation.

APV calculations

- Using the cost of equity to discount the tax relief on interest costs rather than the cost of debt;
- Incorrect or no calculation of the tax shield on interest costs;
- Ignoring issue costs and/or their tax relief.

- Discussing the limitations of NPV rather than APV.

Question Four

(b)

Explain the function of the project committee of GHI in the following stages of the project:

(i) determining customer requirements and an appropriate product design for the UK market;

(5 marks)

(ii) Controlling the implementation stage of the project.

(5 marks)

Rationale

This part requires candidates to explain the function of the project committee, should the project go ahead, on two particularly important stages of the project.

Suggested Approach

- Discuss customer requirements and product design;
- Discuss control of implementation.

Marking Guide	**Marks**
Comments on how to determine customer requirements and an appropriate product design	5
Comments on controlling implementation	5

Examiner's Comments

Common Errors
This part of the question was generally well handled although the answer to part (b) (i) tended to focus only on market research techniques rather than product design and differentiation issues. Trial implementation and evaluation and feedback controls could have been considered in more detail in part (b) (ii).

Question Five

(a)

Advise RST on the best combination of projects based on an evaluation of each project on the basis of both:

(i) NPV of cash flows;

(ii) A profitability index for use in this capital rationing analysis.

(15 marks)

Rationale

This question requires candidates, in part (a), to evaluate proposed projects using both NPV techniques and profitability indices that were appropriate for this capital rationing analysis. Candidates were also required to advise the given entity on the best combination of projects based on these evaluations.

Suggested Approach

- Calculate NPV and PI for all five projects. Note that the PI should be based on net year 1 cash flows to reflect capital rationing in year 1;
- Consider all possible combinations of projects within the $30 million capital constraint in year 1 to identify the combination that produces the highest combined NPV, using PI results to assist in this exercise;
- Provide a conclusion.

Marking Guide	**Marks**
Project NPV and PI indices (1.5 marks per project for NPV and 0.5 marks per project for PI indices)	10
Rankings by NPV and by PI index	2
Identification/recommendation of best overall combination	3

Examiner's Comments

Common Errors

- Inability to calculate the present value of cash flows in perpetuity that start in future years;
- Inability to calculate a cumulative discount factor for annuities that do not start in Year 1;
- Basing profitability index on Year 0 despite the question clearly stating the capital restriction was in Year 1.

Question Five

(b)

Discuss

(i) Whether or not capital rationing techniques based on NPV analysis are appropriate for a publicly-owned entity such as RST.

(5 marks)

(ii) As a publicly-owned entity, what other factors RST should consider and what other analysis it should undertake before making a final decision on which project(s) to accept.

(5 marks)

Rationale

In part (b), candidates are required to discuss whether capital rationing techniques are appropriate to the entity given its current situation and, finally, to advise the given entity on other factors and/or further analysis it should consider and/or undertake prior to making a final decision.

Suggested Approach

- Discuss whether such analysis is appropriate for public bodies;
- Discuss what other factors should be considered and analysis undertaken.

Marking Guide	**Marks**
Discussion of capital rationing and the public sector	5
Discussion of other factors for consideration	5

Examiner's Comments

Common Errors

- Discussing capital rationing in general rather than in the context of the public sector;
- Omitting key issues such as the reliability of the cash flow forecasts and sensitivity of the result to changes in underlying data.