

# Embracing change. Shaping futures.

## Financial Management

Read the mind of an FM marker

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## Introduction

**I am a member of the team who will mark Financial Management. This article is designed to give you, the candidate, an insight into my mind, so that you can better understand what a marker will be looking for when it comes to marking your Financial Management script.**

Insight into a marker's thinking – appreciating what we are trained to look for, what we award marks for, the reasons why marks may not be awarded – will help you fulfil your potential and gain the necessary marks to pass.

It will help you appreciate the points that will attract marks so that you can better assess your answers when practicing questions.

This article uses two candidates' answers to a question selected from the December 2017 exam.

To support your reading of this article, you should refer to the September/December 2017 – Sample Questions.

**[Click the link here.](#)**

**Fulfil your potential  
and gain the necessary  
marks to pass.**

## Question 32

Section C of the exam comprises two 20-mark constructed response questions which will mainly come from the working capital management, investment appraisal and business finance areas of the syllabus. This question is drawn from the area of investment appraisal.

As the basic calculation of net present value is assumed knowledge of *Management Accounting*, you should expect questions in *Financial Management* to involve 'trickier' aspects. For example, allowing for inflation and taxation or adjusting for risk and uncertainty.

Also, it is section C that provides you with the opportunity to display deeper knowledge of topics in responding to the discursive parts of questions, which can be worth up to 10 marks.

- |   |                 |
|---|-----------------|
| (a) (i) Calculate the net present value of the planned investment project.            | (9 marks)       |
| (ii) Calculate the discounted payback period of the planned investment project.       | (2 marks)       |
| (b) Discuss the financial acceptability of the investment project.                    | (3 marks)       |
| (c) Critically discuss the views of the directors on Pelta Co's investment appraisal. | (6 marks)       |
|   | <b>20 marks</b> |

**Discursive parts of questions can be worth up to 10 marks.**

### Observations on the requirements

The first thing to note is that calculations are worth a maximum of 11 marks. Given that it is very easy to make mistakes in calculations, it is very important to answer the discursive requirements to be confident about earning a pass mark.

Part (b) refers to the acceptability of "the investment project", which prompts for a discussion that *applies* knowledge to the calculations. For 3 marks there has to be more to say than "NPV is positive therefore accept". So think! What about the acceptability of the project according to the second criterion – calculated in (ii)? Do the criteria give the same answer? If not, which gives the correct answer? Why?

Part (c) asks for a **critical discussion** "of the **views** of the directors ...". It is not possible to start answering this without first identifying these views which are clearly stated in the last paragraph of the scenario starting "The views...". There are three:

1. An evaluation period of 4 years
2. An assumed terminal value of 5% of the initial investment cost; and
3. Two investment appraisal techniques must be used – NPV and a maximum discounted payback period of two years.

Therefore, for 6 marks, you should aim for 2 marks of relevant comment for each issue. Ignoring any of the views would immediately restrict the marks available. For a **critical** discussion, the answer needed to focus on the negative aspects of the directors' views.

## Notes on candidate one's answer to Q32

Follow this link to see candidate one's answer to Q32

[View it here](#)

### Note 1

One mark was available for inflated sales amounts. Only ½ a mark has been given because the Year 1 amount is incorrect. Although this flows through to later amounts (shown in red), the candidate cannot be penalised again for this error.

### Note 2

Two marks were available and have been awarded for variable costs – one for the variable cost per unit and one for the totals. If the totals had been incorrect, the marker would look to the cross-referenced working to see if any partial credit could be awarded.

### Note 3

There were no marks available for the contribution sub-total as this is not necessary to the calculation, and therefore a waste of exam time.

### Note 4

There were no marks available for the fixed costs – both the amounts and their timings 'lift' directly from the question.

### Note 5

There were no marks for these sub-totals which are then used in the calculation of tax (Note 6). Although the row has been incorrectly captioned 'profit before tax', rather than 'cash flow before tax', this has not been penalised as there is no negative marking.

### Note 6

All four marks relating to tax (liabilities, benefits and timings) have been given in full. Under the 'own figure rule', the candidate has not been penalised for the incorrect amount for Year 2 which flows from the initial error in sales. (As the calculations of tax allowable depreciation ('TAD') are correct, the working has not been reproduced.)

### Note 7

This is another row that is not necessary to the calculation and therefore earns no marks (see Note 3). Note that this is also incorrectly captioned with 'profit' (see Note 5).

### Note 8

There was no mark for the initial investment as this also lifts from the question. One mark was available for the terminal value, which had to be calculated, but only ½ mark is given as the timing is incorrect. Awarding 'partial credit' differentiates a candidate from other candidates who simply omit something entirely.

### Note 9

One mark was available and has been awarded for the calculation of the present values using the correct rate (12%), even though all but one of the amounts are incorrect due to earlier errors. This 'method mark' shows the application of the 'own figure rule'.

### Note 10

Marks have already been awarded (see Notes 1 & 2).

### Note 11

The candidate has been rewarded with nearly full marks. This illustrates two important points in exam technique (1) a clear layout is important, so the marker can follow your steps, and (2) if you spot an earlier error when you later review your answer, it is probably not worth trying to remedy it.

### Note 12

Both of the marks available for this part were essentially method marks: One mark for **accumulating present values** of cash flows – which needed only be consistent with part (a)(i) (i.e. following the 'own figure rule') and one mark for calculation of payback.

In the absence of any working, **NO MARKS** can be awarded for anything other than the correct answer (2.7 years or 2 years and 8 or 8½ months). Even for a 2-mark part question, it is still good exam technique to show **all workings**, so a marker can give appropriate credit. It is not the task of the marker to rework a candidate's answer.

**It is not the task of the marker to rework a candidate's answer.**

**Note 13**

One mark has been awarded for the only (and most obvious) answer point given. As noted in the observations on the requirements, more was needed for this to be a 'discussion'.

**Note 14**

As noted in the observations on the requirements, there were three views to be discussed *critically*. That evaluation over four years is a 'safe' view and 'reduces risk and uncertainty' does not criticise it. One mark is given for the final point made here, although it is not just the possible rejection of a project that is the issue. (As the candidate calculated in (a)(i), the project would not be rejected.)

**Note 15**

This is a digression into something that the candidate knows but is not relevant. Such 'knowledge dumping' earns no marks.

**'Textbook' knowledge will earn few, if any, marks in this exam.**

**Note 16**

One mark given for identifying that the terminal value assumption is too general and needs to be specific to each project appraisal. For a further mark the candidate could have elaborated on how it would affect investment appraisal (using either of the evaluation methods) or suggested an alternative assumption.

**Note 17**

Given the very promising start to the answer, the remainder is a disappointment. The candidate's standard of English is good, but rote-learned 'textbook' knowledge will earn few, if any, marks in this exam. The time that the candidate could have saved on the calculations (see Notes 3 & 7), would have been better spent on the narrative parts.

The mark for candidate one for Q32 is 11/20.

**TOTAL:**

**11/20**

## Notes on candidate two's answer to Q32

Follow this link to see candidate two's answer to Q32

[View it here](#)

### Note 1

Apart from Year 1, the numbers in the contribution line are all wrong. If these had all been correct, there would have been 3 marks. The marks are not prorated (e.g.  $\frac{1}{4} \times 3$ ); instead, we turn to the referenced working.

Working 1 shows that selling prices have been correctly inflated – so there is one mark for this. But unit variable costs have not – so the mark for that is lost.

The one mark for calculating total variable cost can then be given, even though it is 'wrapped up' in the contribution line (applying the 'own figure rule').

### Note 2

3 of the 4 available marks are awarded – one for the calculation of tax liability @30% (a 'method mark'), one for the correct timing of the tax cash flows (indicated by the tick in the Year 1 column) and one for the tax benefits in Years 1-3 (cash flows in Years 2-4). The only error is in the Year 4 benefit (cash flow in Year 5).

Turning to the *referenced* working shows that although the scrap amount has been included something is wrong. Again, it is not the marker's task to rework the candidate's answer. However, for the purpose of this article, we can note that the omission of brackets for the 10,547 sub-total may have led the candidate to increase, instead of reduce, the balancing allowance. Although the error is likely to have been careless, the mark is lost – scrap proceeds must reduce a balancing allowance/increase a balancing charge.

### Note 3

The full mark is given for the terminal value of the investment as both amount and timing are correct.

### Note 4

No credit can be given for the calculation of PVs because the real after-tax cost of capital (7%) has been used instead of the nominal after-tax cost of capital (12%). This incorrect choice is a fundamental error.

### Note 5

The answer looks 'promising' as the candidate has given a working to show accumulated amounts and calculated a payback period. However, the question clearly asked for the calculation of *discounted* payback. The candidate has taken *operating* cash flows from their answer to part (a)(i), which are undiscounted and therefore clearly wrong.

Again, it is not the marker's task to rework a candidate's answer, but just the consideration of reasonableness shows that there must be an error in the calculation of 2 year 10 months. Their balance at the end of 2 years is only a small negative amount but a large positive amount at the end of 3 years. The payback period based on the candidate's working must therefore be much closer to 2 years than to 3 years. That said, a mark has been awarded which distinguishes their effort from candidates who did not attempt this part.

### Note 6

The opening statement is incorrect as according to the candidate's calculation in (ii), payback exceeds the maximum period of two years..

### Note 7

This simply restates in words the answers to parts (a)(i) and (ii), so no marks awarded.

**Note 8**

One mark is given for relating the calculated payback period to rejection of the project. The candidate cannot be penalised for having contradicted this earlier, as there is no negative marking.

**Note 9**

A further mark is given for reasoning that the decision based on payback should be overturned in favour of the positive NPV decision.

**Note 10**

No mark as nothing has been added to this information copied from the question scenario.

**Note 11**

To praise a method is not to 'critically discuss' it, so even if these statements were true, they do not answer the question set.

**Note 12**

No mark as this appears to be regurgitation of 'textbook knowledge'; there is no application of knowledge here. Also, it is incorrect knowledge, as discounted payback is based on NPVs, not profit.

**Note 13**

No mark as to conclude that the directors should 'consider using' a method they are already using makes no sense.

**Note 14**

The candidate ignored both the 4-year evaluation and terminal value assumptions and considered only the use of two appraisal techniques. So even if answer points had been valid it could earn at most 2 marks.

The mark for candidate two for Q32 is 9/20.

**TOTAL:**

**9/20**



## September/December 2018 exam marked answers

Marks

### Question 32 candidate one

✓ denotes 1 mark

#### (a)(i) Return on investment

Years	0	1	2	3	4	5
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Sales (W1)		15,704	20,249	24,199	27,659	½
Variable costs (W1)		(5,356)	(6,752)	(8,310)	(9,692)	✓✓
Contribution		10,348	13,497	15,889	17,967	
Fixed costs	–	(700)	(735)	(779)	(841)	–
Profit before tax	–	9,648	12,762	15,110	17,126	–
Tax @30%	–	– ✓	(2,894)	(3,826)	(4,533)	(5,138) ✓
TAD benefit (W2)	–	–	1,875	1,406	1,055 ✓	2,789 ✓
PAT	–	9,648	11,743	12,690	13,648	(2,349)
CAPEX	(25,000)					1,250 ½
DF@12%	1	0.893	0.797	0.712	0.636	0.567
PV	(25,000)	8,616	9,359	9,035	8,680	(651) ✓

NPV = 10,039

#### Working

##### 1. Adjust for inflation

	Yr 1	Yr 2	Yr 3	Yr 4
Selling price	30.2	32.45	33.75	35.10
Variable costs	10.3	10.81	11.59	12.3

##### 2. TAD

Not reproduced

##### (ii)

3 yrs and 9 months

(b) As the project has a positive NPV, it should be accepted.

1

TOTAL – Part (a)(i):  
**8/9**

TOTAL – Part (a)(ii):  
**0/2**

TOTAL – Part (b):  
**1/3**

### Notes

← Note 1

← Note 2

← Note 3

← Note 4

← Note 5

← Note 6

← Note 7

← Note 8

← Note 9

← Note 10

← Note 11

← Note 12

← Note 13

Relevant notes

## Marks

(c) The views of the directors of Pelta Co that all investment projects must be evaluated over four years of operations is a very safe view, as it only allows to accept the projects which pay back over a very short period. As uncertainty and risk increase into the future, this approach reduces risk and uncertainty. However, this approach may have its disadvantages and have a negative effect on profitability. By looking at only four years of projects' lives, the directors immediately reject the projects that take longer to pay back, but could potentially be more profitable over the whole life of a project. ✓

The approach may not work very well if Pelta cannot take on all projects with a positive NPV during capital rationing. In this case, the whole life of the project should be considered and the profitability index used to determine which project should be accepted. On the other hand, if there are cash shortages, looking at payback short-term may actually be useful.

Another disadvantage of this approach is a very generalised terminal value of 5%. Each investment may have a different useful life and residual value. ✓ This may affect the outcome of each investment appraisal.

It is very useful that directors have chosen appraisal methods that use cash flows instead of profits, as profits are subject to accounting treatments and may be manipulated. However, using other appraisal methods may also be useful, such as ROCE to give a full picture and also to allow to compare mutually exclusive projects. Such methods eg ROCE are also very popular and well understood and would help with presenting projects to a wider audience.

1

← Note 14

0

← Note 15

1

← Note 16

0

← Note 15

TOTAL – Part (c):

**2/6**

## Notes

TOTAL –  
Q32:**11/20**

Relevant notes

## Marks

## Question 32 candidate two

(a)(i)

YEAR	1	2	3	4	5
UNITS ('000)	520	624	717	788	
CONTRIB/UNIT (W1)	20.9	21.84	22.82	20.84	
CONTRIBUTION	10,868	13,628	16,362	16,422	✓
FIXED COSTS	(700)	(735)	(779)	(841)	
OPERATING C/F	10,168	12,893	15,583	15,581	
TAX (@30%)		(3,050)	(3,868)	(4,675)	(4,674) ✓
TAX SAVINGS (W2)	✓	1,875	1,406	1,055 ✓	3,539
INVESTMENT				1,250 ✓	
NET CASHFLOW	10,168	11,718	13,121	13,211	(1,135)
DISCOUNT FACTOR (@ 7%)	0.935	0.873	0.816	0.763	0.713
PRESENT VALUE	9,507	10,230	10,717	10,079	(809)

PRESENT VALUE	39,714,000
INITIAL INVEST.	(25,000,000)
NET PRESENT VALUE	14,714

## WORKINGS

## (1) INFLATION ADJUSTED CONTRIBUTION

	YR1	YR2	YR3	YR4	YR5
SALES PRICE/UNIT	31.20	32.45	33.75	35.10	✓
VARIABLE COST/UNIT	10.3	10.61	10.93	11.26	
CONTRIBUTION/UNIT	20.9	21.84	22.82	20.84	

## (2) TAX SAVINGS

YEAR		CASH FLOW	TAX SAVINGS
0	Investment	(25,000)	–
1	T.A.Dep'n	6,250	1,875
		(18,750)	
2	T.A.Dep'n	4,688	1,406
		(14,063)	
3	T.A.Dep'n	3,516	1,055
		10,547	
4	SCRAP	1,250	
	BALANCING ALLOWANCE	(11,797)	3,539
		0	

TOTAL – Part (a)(i):

6/9

## Notes

← Note 1

← Note 2

← Note 3

← Note 4

← Note 1

← Note 2

Relevant notes

## Marks

(ii)

YEAR	CASH FLOW	BALANCE
0	(25,000)	
1	10,168	(14,832)
2	12,893	(1,939)
3	15,583	+13,644

Payback period = 2 years, 10 months ✓

TOTAL – Part (a)(ii):

**1/2**

(b) The project is acceptable according to the two preferred appraisal methods.

The NPV is positive \$14,714 million. And the discounted payback was 2 years and 10 months.

If Pelta management have less tolerance to the result then they could reject the project on the basis that it does not payback in the required 2 years.

However I would encourage tolerance of the result as the payback method is not very accurate and is an estimation. Therefore the 10 extra months can be ignored and the project accepted on the basis of positive NPV.

TOTAL – Part (b):

**2/3**

(c) The directors view all investment projects with both net present value and discounted payback.

The net present value is the perfect method. This method is reliable as it considers the value of money, current price and market value. The data and information is more reliable.

The discounted payback is easy to use but using the information is historical and based on profit not considering the value of money. The information and profit could be manipulated.

Conclusion: The directors should consider using NPV method to evaluate the investment project perfectly.

TOTAL – Part (c):

**0/6**

## Notes

← Note 5

0

← Note 6

0

← Note 7

1

← Note 8

1

← Note 9

0

← Note 10

0

← Note 11

0

← Note 12

0

← Note 13

← Note 14

TOTAL –  
Q32:

**9/20**

Relevant notes

For more tutor resources,  
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