

STRATEGIC CORPORATE FINANCE

PROFESSIONAL 2 EXAMINATION - AUGUST 2016

NOTES:

Section A - Answer Question 1; and

Section B - Answer **any two** from Questions 2,3 and 4.

Should you provide answers to more questions than required in Section B, you must draw a clearly distinguishable line through the answer not to be marked. Otherwise, only the first two answers provided will be marked.

STRATEGIC CORPORATE FINANCE TABLES ARE PROVIDED

Time Allowed

3.5 hours plus **20 minutes** to read the paper.

Examination Format

This is an open book examination. Hard copy material may be consulted during this examination subject to the limitations advised on the Institute's website.

Reading Time

During the reading time you may write notes on the examination paper, but you may not commence writing in your answer booklet.

Marks

Marks for each question are shown. The pass mark required is 50% in total over the whole paper.

Answers

Start your answer to each question on a new page.

You are reminded to pay particular attention to your communication skills. Care must be taken regarding the format and literacy of your solutions. The marking system will take into account the content of your answers and the extent to which the answers are supported with relevant legislation, case law or examples, where appropriate.

Answer Booklets

List on the cover of each answer booklet, in the space provided, the number of each question attempted. Additional instructions are shown on the front cover of each answer booklet.

THE INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS IN IRELAND

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CASE STUDY – Marinero

Con Kearney is the founder and Chief Executive Office of 'Ballinwilling Boats' a small power boat producer in East Cork, Ireland. Ballinwilling has been a success right from the day that Con started building boats commercially 10 years ago. The key to Ballinwilling's success has been Con's skilful adaptation of traditional boat design, particularly the 'Dory' and 'Launch' styles to construct attractive, robust and affordable leisure boats. Ballinwilling is particularly well-known for an easy to handle Dory type speed boat called the 'Chilli', named after Con, of course. Two other crucial factors in Ballinwilling Boat's success are Con's wife, Marcella, a meticulous planner, and the workforce of skilled boat builders employed by the firm. Marcella and Con are the only shareholders in the company.

Marcella's strategic insight has helped enormously to drive the business forward and she has now developed a plan to expand into the UK market. Marcella hails from Wiltshire, England. However, when she was younger she spent many a long summer's school holiday helping her uncle, Tom Telford, at his boatbuilding yard near Looe in Cornwall. Tom is a superb boat builder and a salesman par excellence. Tom's business, which is called 'Marinero' has built all sorts of boats in the past but had a tough time in the recession and now specialises mainly in producing dinghies. Tom has recently turned 61 and, while he does not wish to retire, he would like to cut back on his business activities. He does not mind selling boats: it is the responsibility of running the company at the same time that he finds is becoming more stressful. In the last five or six years, Marinero has contracted in size and has mainly produced dinghies such as 'Optimists' and 'Mirrors' for children to learn sailing. At present there are only three other members of staff (besides Tom) employed at Marinero. They are Paddy Poldark who is aged 65 and about to retire; Doreen Dresden who looks after administration, and finally Vic Tremayne who by all accounts is a seriously good boat builder and sailor. Vic and Tom designed the 'Marlin' a small, very stable and easy to sail dinghy for children beginning to learn to sail.

Tom Telford spent Christmas 2015 with the Kearneys near Castlemartyr, County Cork. While he was there, Marcella sounded Tom Telford out on the prospect of Ballinwilling Boats taking over Marinero. Tom is delighted with Marcella's approach to buy his business. Although he likes constructing and selling boats, he is finding the running of the business to be a strain. He was further pleased when Marcella suggested that he would remain on as an employee if Ballinwilling purchased the business. Marcella points out that his existing staff are excellent and that Marinero has a very good name for building all sorts of boats. Even though in the past two or three years Marinero has been building mainly 'Mirrors' and 'Optimists' the English coastline features many yachts constructed in Looe by Marinero. It is well known that Marinero has also built several 'Dories' and 'Launches' in the past which means that there is a tradition in Marinero that Ballinwilling can easily build upon.

The prospect of Ballinwilling Boats taking over the business also pleases Tom, since it would keep his staff in employment, all of whom are actually his friends as well as his employees. Although Tom and Paddy are at an age when retirement is not far away, Tom reckons that both could still make a very positive contribution to the business. Though he is quick to add that he no longer needs the responsibility of running a boat building company, he would also be pleased to see Doreen and Vic kept on with the company.

Con was initially caught a little off-guard by the conversation between Marcella and Tom. However, Con feels that Tom's experience and contacts along the Cornish coast could be very useful to Ballinwilling Boats if it sets up in Cornwall. He is concerned about how to finance the deal should it ever take place. Ballinwilling Boats has been constantly expanding since Con and Marcella set it up 10 years ago. So although quite profitable, it does not have an abundance of spare cash. An abridged version of Ballinwilling Boats Financial Statements to the year ended 31 January 2016 is contained in Table 1. Now in August 2016, the firm has €105,000 cash in the bank and projects to have more in January 2017 before it disburses a dividend of €50,000. The company started paying dividends to Con and Marcella in 2015 and they project to maintain this dividend into the foreseeable future. The operating expenses include combined salaries of €110,000 for Con and Marcella.

Table 1 - Ballinwilling Boats

	Income Statement €'000				
	2016 Actual	2017	2018	2019	2020
Sales	1,500	1,545	1,591	1,623	1,639
Operating Expenses	1,275	1,313	1,352	1,379	1,393
Operating Income	225	232	239	243	246
Interest	30	28	30	30	28
PBT	195	204	209	213	218
Taxation	24	25	26	27	27
Net Profit After Tax	171	179	183	187	191
Dividends	50	50	50	50	50
Addition to Equity	121	129	133	137	141

	Balance Sheet €'000				
	2016 Actual	2017	2018	2019	2020
Fixed Assets	1,425	1,468	1,511	1,542	1,557
Net Current Assets	180	185	191	195	197
Operating Assets	1,605	1,653	1,703	1,737	1,754
Cash (Overdraft)	(55)	76	159	211	285
Net Assets	1,550	1,729	1,861	1,948	2,039
Shareholder's Equity	1,000	1,129	1,261	1,398	1,539
Debt	550	600	600	550	500
Total Financing	1,550	1,729	1,861	1,948	2,039

Throughout the spring and early summer of 2016, Marcella and Con discuss some more about the possibility of purchasing the Marinero business. Marcella is excited about the prospect of taking over Marinero. She has worked with Tom before and knows that he is an excellent boat builder and a good businessman. He is also her uncle and she feels that she can trust him. She tells Con that knowing Tom takes much of the risk out of the venture. It would not be like purchasing a business from a stranger. In addition, she points out that when she met Con all those years ago she was working for Marinero herself. Con ponders this for a moment. He casts his mind back to the juvenile sailing scene in Cornwall when he used to sail his 'Mirror' against that of his now wife. She was a formidable competitor then and of course through her, he got to know Tom Telford, whom he also likes and respects. He tells Marcella that they will have to talk to their accountant before he can even think of making an approach to the bank in order to procure the finance to acquire Marinero. Notwithstanding his wife's feeling that knowing Tom Telford reduces the risk of the new venture he also intends to enquire about the additional risks that the new venture into the UK market might bring.

Meanwhile, Tom Telford (having returned to Cornwall) looks at the order book. While nothing like as busy as when Marinero was in its prime, the outlook seems quite healthy for the coming summer. He has so many orders that he is wondering how he can possibly start to take things easy if Marinero is not acquired by Ballinwilling Boats. He thinks that Marinero may even have to take on an additional part-time staff member to complete these orders. He also informs the staff at Marinero of the impending offer from Ballinwilling Boats.

Table 2 outlines the projected accounts for Marinero on the assumption that it continues to operate in its current business with its current management team. In essence, the sales figure for 2016 is made up of 65 dinghies (mainly Mirrors, Optimists and Marlins). The latter is a type of craft designed by Tom Telford and Vic Tremayne and is popular for beginners who are not yet interested in competitive sailing. It is a very easy craft to sail, more stable than any other dinghy. It is often used to introduce young children to sailing. Approximately £100,000 of the sales in the financial year ended March 2016 came from accessories such as launching trailers, dolly-wheels, anchor kits, boat covers, pumps and ladders.

Armed with the actual accounts of Marinero for the 12 months to the end of March 2016 and projections prepared by Tom and his accountant for the coming years, Tom, Marcella and Con sit down to discuss the deal. They first discuss the value of Marinero's shoreside location which has ample space and parking in Cornwall. Con wishes to consider buying the premises as an option since the craft that he builds are very different from those currently built by Marinero. He states *"I am not sure that we can afford to buy out Marinero fully ; I also construct a different type of boat so I am not sure about this as an option"*. Both Marcella and Tom don't wish to pressurise Con into buying Marinero. While Tom is happy to take a *"back seat"* he feels that the business that he built up over many years is worth preserving. Marcella agrees and suggests that the boatyard was constructed when Marinero was building much larger yachts and would be large enough to accommodate both Tom's existing business and the new business that Ballinwilling Boats would bring. Tom does not

wish his niece and her husband to overstretch themselves financially and indicates that he is willing to sell part of the business to them. He states that if he had a proper pension fund he would be leaving Marcella the boatyard in his will. However, his pension pot is the 'Marinero' business so he will have to sell it to provide for himself in the future. He tells them both that he is getting old and does not feel that he will have the energy to run the boatyard for much longer. The business (though much smaller than it once was) is in good shape and is expanding again after the recession. Tom makes no secret of the fact that he would like to give them the boatyard but his financial circumstances demand that he sells it to provide for his retirement. Tom, Con and Marcella feel that they have thrashed out the main issues at hand, and afterwards adjourn for a nice dinner followed by a few drinks in a local pub. As Tom is about to leave for home he points out to Con and Marcella:

"I am very flexible about the manner in which we structure this deal. I do not have a pension fund from outside of the business which is far and away my most valuable asset and while I would be happy to give it to you, I simply cannot afford to do so. It is important to me that it is passed on to people who know how to run it. Because of this, if you feel that you cannot afford all of the business I am willing to consider selling a controlling interest in it to you. I am delighted that you wish for me to continue to work for the company. Without the pressures of running the company I will be able to work in Marinero for longer. My current staff and I will concentrate on the sale of dinghies rather than the management of the company. When retirement finally beckons, you may be able to buy my remaining shares in the business and this will set me up for the future." Marcella and Con thank Tom for his flexibility.

The following week Con and Marcella call on Ned Nagle, their accountant. Con explains the situation to Ned. He would definitely like to buy Marinero. He is unsure whether Ballinwillling Boats can afford Marinero and also whether they can finance the purchase. They would like Ned to advise them and also help construct a business plan in order to procure some funding from a bank.

Ned listens carefully to Con's story. Ned obtains the projections and accounts for Ballinwillling Boats and Marinero. Ned undertakes to peruse the information and work out how much Marinero is worth. He will also advise Ballinwillling Boats on whether or not they can afford to buy Marinero.

Table 2 MARINERO

	Income Statement £'000				
	2016 Actual	2017	2018	2019	2020
Sales	770	809	849	874	883
Operating Expenses	660	688	722	743	751
Operating Income	110	121	127	131	132
Interest	0	0	0	0	0
PBT	110	121	127	131	132
Taxation	22	24	25	26	26
Net Profit After Tax	88	97	102	105	106
Dividends	50	50	50	50	50
Addition to Equity	38	47	52	55	56

	Balance Sheet £'000				
	2016 Actual	2017	2018	2019	2020
Fixed Assets	800	768	806	831	839
Net Current Assets	99	97	102	105	106
Operating Assets	899	865	908	936	945
Cash	0	81	90	117	164
Net Assets	899	946	998	1,053	1,109
Shareholders' Equity	899	946	998	1,053	1,109
Debt	0	0	0	0	0
Total Financing	899	946	998	1,053	1,109

Con convinces Ned that with some input from himself the sales of Marinero for 2017 can be increased by 50%. The sales for each subsequent year to 2020 can also be increased, as outlined in Table 3. The terminal growth rate will rise from 1% under Tom Telford's control to 2% under the control of Ballinwillling Boats. All ratios will remain the same otherwise. Ned uses this information to estimate pro-forma accounts, as outlined in Table 3. On the basis of the Ballinwillling Boats'

balance sheet Ned assumes that it will buy 50% of the shares plus one share of Marinero's equity. Ned assumes that Tom will wait until January 2017 to get the final part of the purchase consideration. He plans for Ballinwillling Boats to borrow €424,000 as a bridging loan. This will be refinanced by Marinero borrowing the equivalent amount in sterling. Ballinwillling will owe a similar debt to Marinero since its loan will be repaid by the latter. These transactions are reflected in the projections in Table 3 below.

Table 3
MARINERO REVISED PROJECTIONS FOLLOWING TAKEOVER

	2016 Actual	Income Statement £'000			
		2017	2018	2019	2020
Sales	770	1,213	1,700	1,751	1,769
Operating Expenses	585	1,031	1,445	1,488	1,503
Operating Income	185	182	255	263	266
Interest	0	6	15	15	15
PBT	185	176	240	248	251
Taxation	37	35	48	50	50
Net Profit After Tax	148	141	192	198	201
Dividends	50	50	50	50	50
Addition to Equity	98	91	142	148	151

	2016 Actual	Balance Sheet £'000			
		2017	2018	2019	2020
Fixed Assets	800	728	1,020	1,051	1,061
Net Current Assets	99	146	204	210	212
Operating Assets	899	873	1,224	1,261	1,273
Cash	0	117	(92)	19	157
Loan to Ballinwillling	0	297	297	297	297
Net Assets	899	1,287	1,429	1,577	1,727
Shareholder's Equity	899	990	1,132	1,280	1,430
Debt		297	297	297	297
Total Financing	899	1,287	1,429	1,577	1,727

Ned also discovers the following information:

1. The risk free rate of interest is 0.1% in both the UK and Ireland.
2. The market risk premium is 5.75% in the UK and 6% in Ireland.
3. The exchange rate between sterling and the euro is 70 pence, i.e. one euro equates to £0.70.
4. Having perused Aswath Damodaran's data pages on the internet site at the Stern School of Business, in New York, Ned finds that the beta for the Shipbuilding and Marine industry is rather high at 2. He also notes that the average debt/value ratio in the industry is 0.46 giving a debt/equity ratio of .85.
5. The correlation between the industry returns and the return on the FTSE All share index is 0.5.
6. The corporation tax rate in the UK for firms earning less than £300,000 is 20% and it is 21% for other firms.
7. Ned contacted the Munster and Connacht Bank and was told that Ballinwillling could apply for a euro loan over 10 years at an APR of 6%.
8. Ned contacted Tom Telford and the latter (with Marcella) has also had a conversation with The Royal Bank of Wales which has quoted him a rate of 4.5% over LIBOR for a 20 year loan of about £300,000. There is a moratorium on principal repayments of up to 5 years available on this loan. The loans from both banks are subject to a successful application and credit assessment.
9. LIBOR is currently 0.5%.
10. The beta of bank debt in the boat Ship Building and Marine sector is 0.1.
11. Both Marinero and Ballinwillling Boats have 1,000,000 fully paid up shares in issue.

END OF CASE STUDY

SECTION A - Compulsory Question.

Fully explain and justify all answers and assumptions made in arriving at your answers.

1.

REQUIREMENT:

- (a) Critically assess the value of Marinero to Tom Telford. (20 Marks)
- (b) Evaluate how much Marinero would be worth if Ballinwilling gains control of it and implements its planned expansion? (15 Marks)
- (c) Critically explain the difference between the two valuations of Marinero in (a) and (b). (15 Marks)

[Total: 50 Marks]

SECTION B – Answer only 2 questions from this section

2.

REQUIREMENT:

- (a) Discuss why Ned might come to the conclusion that Ballinwilling Boats should buy 50% of the shares plus one share of Marinero? (5 Marks)
- (b) Having considered whether using Marinero to borrow the finance for Ballinwilling to buy some of Tom's shares in Marinero is fair to Tom, discuss the advantages and disadvantages of this type of deal from Tom's perspective. (10 Marks)
- (c) Formulate a plan which would compensate Tom for the disadvantages referred to in (b) above. (10 Marks)

[Total: 25 Marks]

3.

REQUIREMENT:

- (a) Marcella feels that knowing Tom considerably reduces the risk of purchasing Marinero. Critically appraise the risks involved from Ballinwilling's perspective. (15 Marks)
- (b) Taking each type of risk in turn recommend appropriate methods that Ballinwilling might use to mitigate these risks. (10 Marks)

[Total: 25 Marks]

4.

REQUIREMENT:

- (a) Formulate an outline business plan for Ballinwilling's expansion into England to support the procurement of a loan from a bank. (15 Marks)
- (b) Rationalise (aside from a transfer of wealth from Tom to Ballinwilling) why Marinero rather than Ballinwilling should borrow the money required to pay Tom as part of Ned's plan. (5 Marks)
- (c) There are some challenges or problems with Ned's projections for Marinero. Outline any factors which may cause concern to a bank considering providing finance for the take-over of Marinero. (5 Marks)

[Total: 25 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

THE INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS IN IRELAND STRATEGIC CORPORATE FINANCE

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SOLUTION 1

First compute the cost of equity capital.

$$K_e = E(R_i) = R_f + \beta_i \{E(R_m) - R_f\}$$

We need to compute the appropriate Beta.

The equity beta of the Shipbuilding and Marine industry is 2.0 but the leverage of the industry is also high with a debt to value ratio of .46

$$\text{Noting that } \beta_A = \beta_E \frac{E}{V} + \beta_D \frac{D}{V}$$

We can compute the unlevered or asset Beta: as $2(.54) + .1(.46) = 1.08 + .046 = 1.126$

We could have allowed for the tax deductibility of debt $1.08 + .046(1-.2) = 1.117$

Since we have got estimates on either side of 1.12 we will settle on this as the unlevered beta for Marinero. We note that Marinero has no debt so this is the beta of equity as well.

However we also note that Tom Telford is not a diversified shareholder. Therefore he is exposed to unsystematic or diversifiable risk. Accordingly, we undertake the following adjustment to beta to take account of the The marginal contribution of Marinero to the market portfolio is its total risk or standard deviation σ_j .

$$\beta_j = \frac{\sigma_{jm}}{\sigma_m^2} = \frac{\rho_{jm} \sigma_j \sigma_m}{\sigma_m^2} = \frac{\rho_{jm} \sigma_j}{\sigma_m}$$

Dividing through by ρ_{jm} we get $\frac{\beta_j}{\rho_{jm}} = \frac{\sigma_j}{\sigma_m}$

We are told that the correlation between Shipbuilding and Marine and the market portfolio is 0.5 so the beta of Marinero is therefore $\frac{1.12}{.5} = 2.24$.

Inserting the above into $K_e = E(R_i) = R_f + \beta_i \{E(R_m) - R_f\}$

we get $0.1 + 2.24(5.75) = 12.98$ say 13%

Since Marinero has no debt we can estimate the Free Cash Flows from Marinero and discount them at 13% to get the value of Marinero from Tom Telford's perspective.

Computation of Free Cash Flow £'000

Operating Income After Tax	97	102	105	106
ΔNOA	-34	43	27	9
Free Cash Flow (OI - ΔNOA)	131	59	78	97
Cash Flow Statement				
Dividends	50	50	50	50
Increase (Reduction) in Cash	81	9	28	47
Reduction (Increase) in Debt	0	0	0	0
Interest on Debt	0	0	0	0
FCF	131	59	78	97
FCF	131	59	78	97
Discount Factor	1.130	1.277	1.443	1.630
DFCF	116	46	54	59
Terminal Value				813
PVDFCF to 2019	275			
PVTV	499			
Enterprise Value	774			
Value of Debt	0			
Value of Equity	774			
Number of Shares in thousands	1,000			
Worth per share	0.77			
Operating Income Aft Tax	97	102	105	106
Capital Charge	117	112	118	122
ReOI	-20	-11	-13	-16
Discount Factor	1.130	1.277	1.443	1.630
Discounted ReOI	-18	-8	-9	-10
TV				-132
PV of ReOI to 2019	-45			
PV of TV	-81			
Book Value	899			
Value of Equity	774			
Number of Shares in Thousand	1,000			
Worth per share	0.77			

We can see from the above that Marinero is worth £770,000 pounds sterling or £0.77 per share.

- (b) Ned had to make some adjustments to Marinero to reflect what would happen if Ballinwilling Boats took it over. If effect he has to assume how the deal is structured.

On the basis of the above valuation of Ballinwilling will have to spend £385,000.77 (500,001 shares at 77 p each) to gain control of Marinero. This is approximately €550,000.

At the end of its last financial year in January 2016 Ballinwilling has an overdraft of €55,000. However, the projections show that it should have €76,000 in cash available at the end of January 2017. These projections also show a dividend of €50,000 is to be paid to the owners of Ballinwilling each year. So if the dividend is not paid the business should be able to come up with €126,000 by the end of January 2017. The fact that Ballinwilling has €105,000 cash on hand in August 2016 is evidence that these projections can be achieved. This leaves a shortfall of €550,000 - €126,000 = €424,000. Which would have to be borrowed. Ned in effect assumes that Tom will wait until January to get the final part of the purchase consideration.

It makes sense to transfer this borrowing onto the balance sheet of Marinero (tax and interest rate reasons). This can be done when Ballinwilling gets control of Marinero by refinancing its loan by one borrowed by Marinero. So from the perspective of planning we can assume that Marinero borrows the required €424,000 (£297,000). This might seem unfair on Tom Telford so Con and Marcella should be transparent about this with him. They are using Marinero itself to raise the finance to purchase his shares. However, Marinero and hence Tom will benefit from the tax shield provided by the debt. They should point out that there is a greater tax shield from debt in the UK and this plus the lower interest rate and longer term of the loan are reasons that Marinero should borrow the money. In fact the borrowing by not being extreme and being affordable will enhance the value of the firm. They should recognise Tom's cooperation here by giving him a put option to sell Ballinwilling the remaining shares on 31 January 2019 a fair price. If things go to plan Marinero should be more valuable in 2019 than it is now due

mainly to the hard work of Con and Marcella and to a small extent to the tax shield from the borrowing. Of course Marinero has much more debt capacity than Ballinwilling and this is also being exploited here.

We first have to re-estimate the cost of capital of Marinero since it will now be partly financed by debt. We have an estimate of the value of equity of Marinero £770,000 though the equity has a book value of £899,000. This is a result of pretty poor growth prospects or an overvaluation of the assets of Marinero in its balance sheet giving rise to a negative present value of residual income. The debt will be matched on the Marinero balance sheet by a loan owing to Marinero by Ballinwilling (Because Marinero refinanced a Ballinwilling Loan) If things went badly wrong Marinero could claim £297,000 from Ballinwilling so we will include it as part of the former's value for computing its WACC. The value of Marinero can therefore be estimated at £770K + £297K = £1067K. There is a case for setting the value of this debt of Ballinwilling to 0 since it will never be repaid if things go to plan and also for adding on some value for the PV of the tax shield. However we will assume that the value of Marinero's equity is as computed above. Therefore D/V = .28 and E/V is 0.92. Since Ballinwilling is also undiversified we can base our calculation of the cost of equity on the same data we used to compute Marinero's cost of capital as an unlevered firm.

$$\beta_E = \beta_A + (\beta_A - \beta_D)(D/E) = 2.24 + (2.24 - .1)\frac{297}{1067}(1 - .2) = 2.24 + .48 = 2.72$$

The levered cost of equity is then $E(R_i) = r_F + \beta_i[E(R_m) - r_F] = 0.1 + 2.72[5.75] = 15.74\%$

The weighted average cost of capital is therefore $.28((1-0.2)(.05) + .1574(.72) = .011 + .113 = .124$ or We will take this to be 13% though it could easily be argued that 12% is just as good an estimate. We will be conservative and base the valuation on a rate of 13%

- (a) On the basis of Table 3 the Free Cash Flows are re-estimated as follows:
Computation of Free Cash Flow

Operating Income After Tax	147	207	213	217
ΔNOA	-26	351	37	25
Free Cash Flow (OI - ΔNOA)	173	-144	176	192
Cash Flow Statement				
Dividends	50	50	50	50
Increase (Reduction) in Cash	117	-209	112	127
Reduction (Increase) in Net Debt	0	0	0	0
Interest on Debt	6	15	15	15
FCF	173	-144	176	192
FCF	173	-144	176	192
Discount Factor	1.130	1.277	1.443	1.630
DFCF	153	-113	122	118
Terminal Value				1781
PVDFCF to 2019	280			
PVTV	1092			
Enterprise Value	1372			
Value of Net Debt	0			
Value of Equity	1372			
Number of Shares in thousands	1,000			
Worth per share	1.37			
Operating Income Aft Tax	147	207	213	217
Capital Charge	117	114	159	164
ReOI	30	93	54	53
Discount Factor	1.130	1.277	1.443	1.630
Discounted ReOI	26	73	37	33
TV				495
PV of ReOI to 2019	170			
PV of TV	304			
Book Value	899			
Value of Equity	1372			
Number of Shares	1,000			
Worth per share	1.37			

The value of Marinero has increased to £1.37 million approximately.

- (c) The drivers of this increase in value are the new business selling Dories and Launches. This accounts for most of the increase in value. Technically the new business increases sales and the terminal growth rate.

It can be seen from the valuation of Marinero under Tom that its value is less than its book value. This suggests that the business is not generating enough sales or growth on the basis of its assets or alternatively the assets are overvalued in the balance sheet. Now with additional sales and growth the business is worth more than its book value.

Also the tax shield accounts for some increase in small increase in value.

Finally those who estimate the cost of capital at 12% will argue that the lower cost of capital through the use of debt which costs less than equity is also a factor. Those who consider the cost of equity to remain at 13% should point out that it is not a factor. As it turns out the valuation of Marinero if the cost of capital reduces to 12% would be £1.532 million or about £150,000 more than at 13%.

SOLUTION 2

- (a) Marinero is certainly worth buying at the correct price according to the valuations outlined in question
1. Essentially Ballinwilling's plan makes sense and they can add value to Marinero while paying Tom a fair price for his current business.
 2. They do not have the cash to buy 100% of Marinero. Their overdraft is €55,000 however Ballinwilling will have €76,000 in cash by early 2017 and if they do not pay out the dividend will have €126,000 in cash.
- (b) It would appear unfair to Tom to use his own asset Marinero to borrow in order to finance the purchase of his shares. However the following points are relevant.
1. Tom needs to sell a private company and his shares in it are not liquid assets. It may not be easy to find a alternative buyer for the business.
 2. Marcella is related to Tom and will give him a fair price. Offering him £385,000 for half the company now is a fair price.
 3. Ballinwilling will grow the business and make it more profitable and more valuable making Tom's share worth more through their work.
 4. The borrowing will give a tax shield and therefore increase the value of the business. However, borrowing brings financial risk which could reduce the value of the business. However in this case it would seem that the additional risk is not too onerous.
 5. If the business proceeds as expected the value of Marinero will grow and with it the value of Tom's stake.
 6. Ballinwilling controls the business so can run it as it sees fit.
- (c) One way of compensating Tom is to give him a put option to sell his remaining shares to Ballinwilling in 2019 for a price which will allow him capture some of the gains made by the expansion organised by Ballinwilling.

The value of Marinero at the end of 2019 on the basis of the projections is

FCF		192.078
Discount Factor		1.13
DFCF		169.9805
Terminal Value		1781.087
PVDFCF to 2019	170	
PVTV	1576	
Enterprise Value	1746	
Value of Net Debt	0	
Value of Equity	1746	
Number of Shares in thousands	1,000	
Worth per share	1.75	
Operating Income Aft Tax	213.09	217.2924
Capital Charge		163.8936
ReOI		53.3988
Discount Factor		1.13
Discounted ReOI		32.75048
TV		495.1525
PV of ReOI to 2019	33	
PV of TV	438	
Book Value	1280	
Value of Equity	1751	
Number of Shares	1,000	
Worth per share	1.75	

Therefore Tom's stake of roughly 50% is worth £875,000. This is an awful lot more than the worth of 50% of Marinero today. So if the projections to 2019 are achieved Ballinwilling should be willing to pay Tom £875,000 for his remaining stake in the business as this is a fair price.

Therefore, while in the short-run Tom may have appeared disadvantaged by the Marinero borrowing the money to buy him out. IF things go as planned his stake in Marinero will be worth a lot more in 2019.

Another way to compensate him is to pay him more than the business is currently worth as run by Tom by way of compensation for the fact the Marinero is doing the borrowing.

If Tom were to get a put option to sell his remaining shares the strike price of the put should be set at less than £1.75 per share.

SOLUTION 3

(a) The risks are:

1. That the business will not expand as planned. Marinero will not sell as many Dories and Launches.
2. The exchange rate risk. Sterling is rather strong against the Euro at the moment so many depreciate in the future.
3. This will reduce the value of Ballinwilling's investment in Euro terms.
4. There are risks in terms of stretching the management of Ballinwilling to run a business in Cornwall and simultaneously run another business in East Cork. It could be difficult to keep a tight control on both businesses.
5. There is the risk that the current projections for Marinero are not correct and that this business will fall off as soon as Tom Telford retires from it.
6. Difficulties in the integration of both businesses with respect to administrative procedures and business / work practices. Further the types of boat constructed by each business is currently very different.
7. Recruitment of a good workforce.
8. The cost of capital may increase.

(b) The risks can be mitigated by

1. Careful planning and an agreed approach between Tom Telford and Ballinwilling to get the construction of Dories and Launches going in the Cornwall. Advertising etc.
2. Borrowing the cost of the shares in sterling will offset the impact of exchange rate risk. Thus, if sterling depreciates and the value of the investment declines so will the value of the loan.
3. Keeping Tom Telford on should help in this regard. But this will be a challenge nonetheless. Perhaps Vic Tremayne can step up after a while and help here.
4. Tom remaining on should definitely help mitigate this risk.
5. The two businesses are different. Each will have to learn more about the other.
6. Transferring some workers from Cork on secondment can be used if but Vic Tremayne should prove helpful here. He can be given a position of responsibility for the new business and a consequent raise in salary. He can be replaced at Marinero and he can help recruit additional local workers.
7. This is just a risk one has no control over. However, some sensitivity analysis can be done to see how the value of Marinero varies with the cost of capital. Note the loan in Sterling is at a variable rate. If this rate should rise more than say Irish rates it will probably indicate that inflation is higher in the UK so sterling should depreciate against the Euro.

SOLUTION 4

(a) The business plan should include at least four items:

The people
The opportunity
The context
Risk and Reward

Requirements

Refinancing of Ballinwilling Loan £297,000

Sources

Royal Bank of Wales £297,000

The loan is required by Marinero to refinance the borrowing of Ballinwilling Boats. This loan was originally borrowed to buy just over 50% of the shares in Marinero. The projections show that Marinero can easily generate the free cash flow to repay this loan.

The people involved here are Con Kearney and Marcella Mumford. They currently run a very successful boat building business in East Cork. Marcella is English and has worked in Marinero previously. All three (effective) shareholders of Marinero Tom, Con and Marcella have long track records of success in the industry. Tom is well-known to Marcella and Con and they ought to be able to work well together. Both groups have a track record in designing attractive boats.

Ned Nagle CPA is providing valuable financial expertise regarding the deal.

The opportunity here is that Ballinwilling wishes to apply its successful formula for building attractive Dories and Launches in the much larger UK market. Both Marinero and Ballinwilling have good reputations for building boats. With the recession ending the market for boats is increasing again. Since Ballinwilling boats are different to those of Marinero they are serving subtly different markets so Marinero will not be competing with itself. The attractiveness of Ballinwilling's boats lies in their easy of handling which makes them particularly sought after by the neophyte sailor.

Ballinwilling will get access to the much larger UK market for Dories and Launches. As the UK economy grows the market for boats should increase further. Marinero is a good but no longer exciting business. The Ballinwilling boats investment should give it a boost with the new power boat business. Marinero and Tom already have a good reputation for boat building and with Marinero's spare capacity to utilise Ballinwilling's investment should be worthwhile.

Marinero clearly has borrowing capacity since it has no borrowings at the moment. Cash flows are projected to be tight in the second year after the takeover. This is as a result of an investment in Fixed Assets and Current assets to support the expanding business. The business is likely to need a short-term facility or overdraft to get through this period. Also a moratorium on principal repayments on the loan would be a big help here. The annual repayment on a £297,000 loan at 5% over 15 years (assuming a moratorium on principal repayments of 5 years) is £28,613. The free cash flow for 2019 and 2020 are 6.15 and 7.1 times respectively. The fixed assets as per the balance sheet are worth 2.6 times the loan now and are planned to increase in due course so by 2020 they will be worth 2.8 times the loan.

With the increased emphasis on health and safety at sea Ballinwilling and Marinero have good safe and reliable boat designs that are easy to sail.

- (b)
1. Because the interest rate is cheaper in the UK.
 2. Because the corporate tax rate is higher in the UK giving a more valuable tax shield.
 3. Because Marinero will borrow in Sterling – probably at a lower rate than Ballinwilling can and the business will be earning sterling income so it makes sense to match this with sterling funding.
- (c)
1. Ned has no plans to raise working capital or finance for fixed assets to support the expansion of the Marinero business into Dories and Launches. (He is presuming to use Marinero's working capital here). All attention is focussed exclusively on buying the shares of Tom Telford and not enough attention is arguably spent dealing with how the business is to expand.
 2. As a result of (c) 1 there is a very significant negative free cash flow in 2018. There are no plans outlined as to how this is to be treated.