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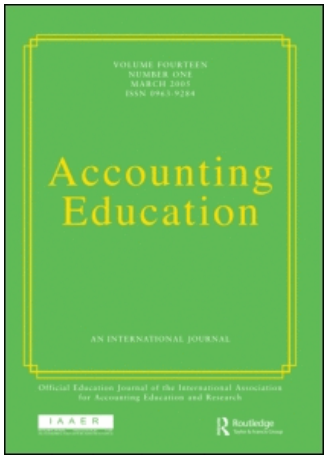

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Funding issues in a major strategic project: a case of investment appraisal

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Abstract

This paper describes and allows interaction with the issues involved in a major investment decision. In the summer of 1997, UKH faced major decisions concerning the purchase and funding of new plant and equipment. The authors were given excellent access to the company and were able to document key steps in the decision process. The issues are set out in a case study format which allows the reader to retrace the analyses carried out within UKH. A number of tasks are suggested which should test, develop and enhance a range of analytical, social and negotiation skills. The case can be handled in a variety of ways and most of the suggested tasks can be undertaken or omitted depending on the pedagogical objectives of the course/instructor.

Keywords: investment decision, finance, case study

Introduction

This paper describes the issues involved in a major investment decision faced by UKH,[1] a major operator in the UK transport industry, in the summer of 1997. As a condition of operating leases won by the company, equipment had to be replaced and the company had to decide whether this should be leased or purchased and how to raise the necessary finance. The authors were allowed full access to key documents and were able to record the decision process as it unfolded over a period of months. The data presented is realistic and faithfully reflects the economic realities faced by UKH management. However, the final financial arrangements ultimately made between UKH and its banker are not revealed in order to maintain commercial confidentiality.

A case study style presentation has been chosen so that the reader can gain insights into the issues that arose in making a major investment decision and in raising finance to fund it. Particular features of the case include the interaction between investment decision-making and financing and the opportunity to simulate commercial reality by a role-playing exercise in which participants take the parts of UKH and a merchant bank.

The case is set out in a manner which should make it easy to use as a teaching aid. Separate sections cover background information, project cashflows, financial analysis,

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[1] Throughout this paper the case study is referred to as UKH (UK Holdings) in order to maintain confidentiality.

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Table 1. Overview of student activities

Task 1	A technical exercise: to take account of monthly (rather than year-end) cash flows.
Task 2	Evaluate the project over its 26 year life.
Task 3	Funding issues: calculate an appropriate weighted average cost of capital.
Task 4	Commercial issues: study a typical bank funding proposal, calculate the cost of raising debt finance and re-assess the project.
Task 5	Negotiation: a role play exercise between representatives of UKH and the bank.

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financing the project and financial structure and student tasks are set at the end of each section. These tasks allow students to work through the case, retracing the analysis carried out within UKH. A number of technical issues arise: valuation of an annuity; capital allowances and tax effects; calculating internal rates of return and net present value; and identifying an appropriate cost of capital. Students need a good knowledge of basic financial management, an understanding of sensitivity analysis and spreadsheet skills in order to deal with these issues. A comprehensive reference for the investment appraisal and finance aspects of the case would be Brealey and Myers (1996). However, most of the knowledge needed could equally be found in a standard management accounting textbook such as Drury (1996, chapters 15 and 16, pp. 383–460). There are many texts and manuals dealing with IT in general and spreadsheets in particular, but Mayes and Shank (1996) stands out because of its focus on the application of spreadsheet methods to problems in financial analysis.

The last part of the case focuses on the negotiation between UKH and a merchant bank and here students need both technical skills (in order to foresee the consequences of particular outcomes) and interpersonal and negotiation skills in order to reach a settlement which is acceptable to both parties. See Table 1 for an overview of possible student activities.

If used in its entirety, the case requires a significant time commitment. An instructor could spend 30 minutes introducing the case and giving initial guidance; attempting the technical aspects of the case will take typical students between three and six hours; and the negotiation and subsequent analysis of outcomes could require two hours of class time. The case has been tested at master's level (MA, Finance) and students were positive about the insights gained into the practical application of theoretical methods and the commercial issues which arise in a really significant investment decision.

While the case can be quite time consuming, it is possible to abbreviate it without losing its coherence. For example, the first task (a technical aside) could be omitted and, in task 4, students can simply be given (instead of being asked to calculate) the costs of raising debt finance and servicing the initial loan. By adopting appropriate variations the case can

be used at both postgraduate and advanced undergraduate levels and it should be especially useful in finance and financial management options at master's level.

Background

UKH comprises several wholly-owned subsidiaries, two of which hold operating franchises in separate regions of England and Wales. The franchises were won in 1995 when the then Conservative government extended its privatization programme. In the first instance, operating franchises were awarded for a limited period and it was understood that holders would have to bid again when the franchises expired. One of the conditions of the franchises was that a significant investment in plant and equipment would be undertaken during the course of the franchise period. This case deals with the investment and funding issues which arose from this requirement.

The board of directors of UKH saw its financing options as twofold. Either the new equipment could be leased or it could be purchased. The first alternative would minimize risk because if the group were to lose its operating franchise, it would not face the problem of disposing of illiquid assets. The alternative was to purchase. This would ensure that UKH remained in the transport business because, even if operating franchises were lost, the group would remain a major player in the business through its ownership of key assets, which could be rented or leased to other operators.

The inclination of the board was to adopt the second option, to purchase, and there were a number of strategic reasons which are outside the scope of the case for this preference. However, while disposed towards purchasing rather than leasing new plant and equipment, the board needed to be assured that its preferred strategy was financially attractive. In order to address this issue the Financial Director of UKH proposed that, if new plant and equipment were purchased, it should be owned by a new company within UKH – Leaseco Ltd. Leaseco would purchase the required equipment and lease it to the operating company (one of the existing subsidiaries of UKH). The Financial Director set out his reasons for this proposal:

1. The establishment of Leaseco would clearly separate financial from operating issues.
2. The new company could be established in a manner which would isolate it from UKH if the new operation were to become insolvent.
3. The new company would facilitate joint venture arrangements which could be important in funding the new enterprise.

Project cashflows

In order to evaluate the proposal the Financial Director needed to estimate the stream of income which would accrue to Leaseco as a result of leasing equipment to operators (the UKH subsidiary in the first instance but, possibly, other operators after the first franchises expired). This cash stream was based on 'arm's length' estimates of the cost of operating leases. Income flows are assumed to commence in the year 2000 and to continue for 26 years at which time the equipment is assumed to have a residual value of about £19 million. (In review it was suggested that the value of £19 million after 26 years' operation seemed unduly optimistic. However, the residual value of £19 million will be discounted

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over 26 years and the analysis is not therefore expected to be particularly sensitive to this assumption.) The cash flows are set out in Appendix 1. The assumptions on which the cash flows were based are outside the scope of the case but they included:

1. An inflation assumption – assuming that transportation prices would inflate at between 2% and 3% per annum.
2. A utilization assumption – assuming that between 60% and 100% of the plant and equipment could be re-leased throughout the 26 years' life of the project.
3. An 'obsolescence' assumption – assuming that as the plant and equipment became older it would command a less attractive price in the market place.

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The cash flow forecasts were thought to be of good 'quality': the assumptions made were conservative and a significant element of the projected income was underpinned by Government subsidies and commitment. An assumption was also made concerning the value of the cash flows received. In order to facilitate analysis it is conventionally assumed that all project cash flows take place at year ends. In this project, the lease income will be received monthly and so the conventional end-year assumption would penalize the project (especially given its long life). In order to overcome this technical problem the Financial Director uprated the projected annual cash flows by a factor of 4.5%. (The cash flows set out in Appendix 1 have already been uprated by this factor.) The factor was based on the assumption that income received could earn a before-tax rate of return of 10%.[2]

Task 1: Validate the factor of 4.5% used to uprate the value of incoming cash flows

Having established an estimate of the gross cash flows the Financial Director now had to assess whether the project was viable. A number of potential suppliers were asked to quote and, taking account of the technical specification, service arrangements and price, a preferred supplier was selected. The quoted price from this supplier was £48.375 million for plant and equipment to be available on 1 January 2000. The rate of corporation tax appropriate to the project was 31% and capital allowances calculated on a 25% reducing balance basis for tax purposes were available.[3] Tax was assumed to be payable approximately one year in arrears.

Task 2: Establish the after tax cash flows. Calculate the payback and the internal rate of return of the project. What further information is needed in order to establish whether the project is viable?

[2] A reviewer suggested that the assumption of a 10% before-tax return might be optimistic. However, the assumed return of 10% before-tax must be related to economic circumstances in the UK at the time of writing. The before-tax cost of *borrowing* was 8% to 9% and, in this context, the assumption that the company could earn 10% before-tax seems sensible to the authors. Most importantly a 10% return was actually assumed by UKH.

[3] The system of tax allowances in the UK, at the time of writing, was based on the reducing balance method of depreciation. Thus, an investment of £10 million would attract a capital allowance of £2.5 million in its first year. In its second year it would attract an allowance of £1.875 million (£7.5 million × 25%). If an asset is sold a 'balancing allowance' is calculated (which might be positive or negative) based on the difference between the sale price of the asset and its written down value for tax purposes (for more details, see, for example, Davis and Pointon, 1994, Ch. 9).

Financial analysis

In order to assess the viability of the project an estimate of the cost of capital of the project was needed. The Financial Director approached a number of merchant banks in order to establish how much funding could be raised by debt finance and found that it would not be difficult to borrow 90% of the cost – some £43.5 million. The interest charge on this loan was expected to be between 1.5% and 4% above bank base rate (7.37% when the project was under consideration). The remaining £4.875 million of funding required would have to be injected as equity finance, and UKH had set a target of 20% return (before tax) for such finance.

Task 3: Calculate the cost of capital for the project and assess its viability

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Financing the project

Having determined the parameters within which the project was viable the Financial Director then approached the merchant banks with a clear specification of his requirements. The plant and equipment would be manufactured in the period 1998–2000 and a loan of £43.5 million would be drawn down over this period in order to make staged payments to the contractor. The schedule of staged payments is set out in Appendix 2.

The contractor required that the funds necessary to finance manufacture be available when the contract was signed and the banks were therefore asked to quote their terms for a loan of £43.5 million to be available from October 1997. Appendix 3 sets out the key paragraphs from a typical quotation. It was not atypical for a bank to require arrangement fees, commitment fees and underwriting arrangements as well as (of course) interest on any portion of the loan drawn down during the period 1997–2000. Whilst the fees appeared relatively expensive this was, to some extent, offset by the willingness of banks to negotiate competitive interest rates.

Task 4: Establish the total project costs during the period 1997–2000. Does this affect your judgement of the project's viability? Reconsider the project's cost of capital in the light of your analysis. Does this affect your judgement of the project's viability?

The financial structure

It was eventually concluded that the project was intrinsically viable and whether the project was to go ahead then depended upon reaching an agreement with one of the banks. The issues which arose at this stage of the project are best understood by a simulated role play exercise with participants representing the bank and UKH. Negotiations start from the last quotation by the bank (as set out in Appendix 3).

As an aside, one of the banks expressed its interest in joining UKH as a shareholder in Leaseco with the following proposed capital structure for the jointly-owned company:

		£m
Debt capital:		43.500
Equity capital:	Bank:	1.500
	UKH:	3.375
		48.375

The bank would expect 30.7% of the after tax earnings of Leaseco as dividends (based on its 30.7% share of the equity of the company). The balance (69.3%) of the after-tax earnings would accrue to UKH. (This proposal eventually came to nothing but the reader may wish to consider whether the proposal as formulated is attractive to Leaseco.)

Table 2. Negotiation between UKH and the bank

Role for the Financial Director of UKH

As Financial Director of UKH you should negotiate as good a deal as you can for UKH. The major issues you need to consider are:

1. The fees you are willing to pay. The bank's initial quotation is almost certainly its initial bargaining position. You are aware that making large loans is inherently more profitable to the bank than making small loans (so long as the borrower does not default).
2. The expected interest charges on outstanding debt. Obviously you want the minimum possible mark-up over bank base rate.
3. The debt repayment schedule. You probably want the repayment schedule to be extended over as many years as possible (because debt finance is, arguably, cheaper than equity finance).

Role for the Bank's Negotiator

As negotiator on behalf of the bank you should obtain as good a deal as you can for the bank. You have three major objectives:

1. To cover all the bank's expenses in setting up and administering the loan and to make the bank's 'normal' profit margin on this activity. (The bank's cost structure for large loans is normally reckoned to be about £500,000 'fixed' costs (for any loan) and about 0.5% of the loan in 'variable' costs.)
2. To obtain an acceptable return on the loan finance injected into the project by the bank. (Your minimum working assumption is bank base rate plus 1.0% for loan finance.)
3. To minimize the bank's exposure should the project fail to deliver all the expected benefits. To this end you wish to negotiate an aggressive schedule of debt repayment during the first four years of the project – whilst income streams are secure because the initial franchises are operating.

Outcomes

The negotiation can be regarded as successfully concluded when the following issues have been agreed:

1. The interest rate on debt finance (stipulated as a premium over bank base rate).
2. The schedule of debt repayment to the bank.
3. The fees payable to the bank by Leaseco for arranging the loan, commitment and underwriting.

Task 5: Negotiation between UKH and the bank. See Table 2.

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The case of UKH: teaching notes

The first part of the case sets out the assumptions and expected cash flows associated with the proposed purchase. Two tasks are set at this stage. The first task is a technical exercise to check that an uprate factor of 4.5% correctly takes into account monthly (rather than end-year) cash flows. This was important in the case because of the long time-span involved (26 years) and the consistently pessimistic bias which would be introduced if the effect were ignored. The first task, however, can be omitted without affecting the remainder of the case material. The second task requires that the project be evaluated over its 26 year life, taking into account capital allowances and tax implications. A spreadsheet needs to be constructed to carry out this analysis efficiently.

The third task switches to the funding of the project and requires calculation of an appropriate weighted average cost of capital. This task is quite straightforward given the information available – i.e. that 90% of the funding can be raised as debt while the remaining 10% will be UKH equity. The reader is invited to assess the viability of the project and, even if a pessimistic assumption is made about the cost of borrowing, the project seems attractive. The next part of the case requires careful study of a few key paragraphs from a typical bank contract. These paragraphs are presented in Appendix 3 and represent the distillation (and considerable simplification) of the proposals received.

Despite the simplified nature of the information, the fourth task is not simple. It requires that the costs of raising debt finance and servicing the loan be estimated. Degrees of refinement are possible and the time value of money may be taken into account. The total cost is about £3.8 million. However, the key issue here is not precise calculation, it is careful analysis of the proposed contract to ensure that it is well understood and that all its implications are taken into account. Students attempting this task will need guidance and the instructor might point out that the actual contracts received were several pages in length. It is difficult to overestimate the importance of reading such contracts carefully. Important clauses were contained in the small print! If desired, task 4 can be omitted. Students can simply be advised that loan charges amount to £3.8 million and be asked to re-assess the project.

Whilst tasks 1–4 are primarily technical exercises, task 5 attempts to simulate, by means of a role play, the negotiation between UKH and its potential banker. Vital to this negotiation is an understanding of the cash flows that will accrue to the bank and to UKH. A typical spreadsheet analysis is provided (see Table 5) to which students might be guided. The schedule of repayments proposed by the bank leads to an unsatisfactory result for UKH and the key issue is whether terms can be negotiated which satisfy both parties. Students should find this enlightening and they should begin to realize the importance of comprehensive preparatory financial calculations if a good outcome is to be achieved.

Students are likely to find task 5 more interesting if a competitive aspect is introduced into the role play exercise. Suppose that the class can be conveniently divided into five groups, two representing UKH and three representing banks. The 'banks' could be briefed to the effect that this would be a good contract to win because it might lead to more business as other operators sought finance under the terms of their operating franchises. They could be asked to table revised offers – to be made available to the two UKH teams. The UKH teams could then negotiate with any (or all) of the bank teams with the aim of reaching the best deal possible. At the end of the exercise one bank might have won the contract with both UKH teams or two separate banks might have won contracts. The

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reason why one or two banks got the contract and one (or two) did not would be very enlightening and these could be revealed in plenary session. Whether 'UKH' or a particular 'bank' had achieved a good (or a poor) deal would be assessed by the instructor and, if the case were assessed, credit could be given for closing the deal and for the value of the contract won.

Task 1

Task 1 is a technical exercise in order to check that the factor of 4.5% used by the Financial Director to uprate annual cash flows (because these are received monthly) is valid. The Financial Director assumed an annual 10% before tax return in this calculation.
First the annual return has to be converted to a monthly figure:

$$(1.1)^{\frac{1}{12}} = 1.007974$$

And the equivalent monthly interest rate is 0.7974%
Applying this rate of interest to a 12 period annuity (of £1 per period):

$$\text{Value} = \frac{1.007974^{12} - 1}{1.007974 - 1} = 12.5408$$

So twelve monthly payments of £1 are worth £12.54 (not £12). An annual sum received monthly is actually worth:

$$\frac{12.54}{12.00} = 1.045$$

That is 4.5% more than it appears.

Task 2

Task 2 involves a relatively simple calculation – so long as the reader is conversant with the uses of spreadsheets! A typical spreadsheet analysis is set out in Table 3. Column 2 reflects the expected cash flows (per Appendix 1 in the case). Column 3 shows the tax liability associated with these cash flows lagged by one year to allow for the normal delay in settling tax liabilities. Column 4 is calculated as column 2 less column 3. Column 5 shows the written down balance of the investment taking a write down of 25% in each year and column 6 shows the allowance itself. Column 7 calculates the tax credit associated with the allowance. Column 8 is the final after tax cash flow associated with the project.

Having established the after tax cash flows it is a simple matter to calculate the project's internal rate of return. The Excel function has been used to calculate this as 9.49%. Column 9 in the spreadsheet shows the calculations needed to calculate the project's payback period which is slightly more than 9 years.

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Table 3. Calculations of the payback period, internal rate of return and net present value

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
Year	**Cash flow**	**Tax payable**	**Cash flow after tax**	**Written down value**	**Allowances**	**Tax credit**	**After tax cash flow**	**Payback calculation**
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	
1999	-48375			48375			-48375	-48375
2000	4825		4825	36281	12094	3749	8574	-39801
2001	4825	1496	3329	27211	9070	2812	6141	-33660
2002	4825	1496	3329	20408	6803	2109	5438	-28222
2003	4825	1496	3329	15306	5102	1582	4911	-23312
2004	5346	1496	3850	11480	3827	1186	5037	-18275
2005	5486	1657	3828	8610	2870	890	4718	-13557
2006	5628	1701	3927	6457	2152	667	4595	-8962
2007	5666	1745	3922	4843	1614	500	4422	-4540
2008	5814	1757	4057	3632	1211	375	4433	-108
2009	5965	1802	4162	2724	908	281	4444	4336
2010	6120	1849	4271	2043	681	211	4482	
2011	5946	1897	4049	1532	511	158	4207	
2012	6101	1843	4257	1149	383	119	4376	
2013	6260	1891	4368	862	287	89	4457	
2014	6119	1940	4179	646	215	67	4246	
2015	6146	1897	4249	485	162	50	4299	
2016	6305	1905	4399	364	121	38	4437	
2017	6469	1954	4514	273	91	28	4543	
2018	5041	2005	3035	205	68	21	3057	
2019	5172	1563	3609	153	51	16	3625	
2020	5048	1603	3444	115	38	12	3456	
2021	3503	1565	1938	86	29	9	1947	
2022	3593	1086	2507	65	22	7	2514	
2023	3687	1114	2573	49	16	5	2578	
2024	3783	1143	2640	36	12	4	2644	
2025	18925	1173	17752	27	9	3	17755	
		5867	-5867				-5867	
IRR:							9.49%	
NPV(6.9%):							10487	
NPV(8.44%):							3802	

Whether the project is viable cannot be ascertained without some estimate of the cost of capital associated with the project – the subject of the next task.

Task 3

If borrowing from the bank can be arranged at a very favourable rate (1.5% above base rate is assumed here) then the weighted average cost of capital for the project can be calculated as follows. Remember that the 'tax shield' should be taken into account for debt finance so the after-tax cost of debt is $8.87 \times (1 - 0.31) = 6.12\%$

90% debt finance at 6.12%:	5.5083
10% equity finance at 13.8%:	1.3800
Weighted average cost of capital	6.8883 %

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Table 4. Total project costs during the period 1997–2000

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
Month	**Payments to**	**Front end fee &**	**Commitment**	**Interest on loan**	**Outstanding**		**Discount factors**	**NPV**
	contractor	**guarantee fees**	**fees**	**(at 6.47% pa)**	**loan**	**Investment**	**(at 7.00% pa)**	
	£'000	£'000	£'000	£'000	£'000	£'000		£'000
Oct-97	1500	225			1725			
Dec-97			209	27	1961			
Mar-98			208	31	2200			
Jun-98			207	35	2441			
Sep-98			205	39	2685			
Dec-98		167	204	42	3099			
Mar-99	8154		202	49	11503			
Apr-99	3969			60	15533			
May-99	5859			81	21473			
Jun-99	4284		110	113	25980			
Jul-99	4032			136	30148			
Aug-99	3150			158	33456			
Sep-99	378		50	175	34059			
Oct-99	1648			178	35886			
Nov-99	1883			188	37956			
Dec-99	1883	167	28	199	40232	40232	1.000	40232
Jan-00	3530					3530	0.994	3510
Feb-00	3766					3766	0.989	3724
Mar-00	4340					4340	0.983	4267
Dec-00		167				167	0.935	156
Dec-01		167				167	0.873	146
Dec-02		167				167	0.816	136
Total investment at December 31, 1999:								52172
Incremental costs associated with the loan:								3797

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On this basis the project appears viable since the cost of capital, at just 6.9%, is significantly below the project's internal rate of return. The net present value of the project at a discount rate of 6.9% is about £10.5 million.

If a pessimistic view of the cost of debt finance were adopted (base rate plus 4%) then the weighted average cost of capital would be calculated as 8.44%. Obviously this is significantly higher than the optimistic assumption but, on the assumptions to date, the project would still be viable with a net present value of £3.8 million when discounted at 8.44%. Students should be encouraged to undertake further sensitivity analysis on variables such as: projected cash flows, residual value, the 10% return assumption in task 1, and tax rates. In judging the viability of the project, however, it should be borne in mind that the directors of UKH considered projected base cash flows to be conservative (being derived from conservative assumptions for price inflation and utilization).

Task 4

Taking account of all the fees and interest payable on the loan during the period October 1997–December 1999 is quite complex. The spreadsheet used in the analysis is presented in Table 4.

In this spreadsheet the various payments to the contractor, to the bank and to the residual value guarantor are listed in columns 2, 3 and 4. It is assumed that these are met by drawing down the loan from the bank and this leads to an interest charge on the outstanding loan (column 5). The interest is calculated at the bank's proposed rate of base rate plus 2% and the tax shield is taken into account in arriving at the effective after tax rate of 6.47%. The outstanding loan is recorded in column 6 and it can be seen that the total investment would be £40.2 million at 31 December 1999. To this must be added the commitments in the period 2000–2002 and these commitments have been discounted at an after-tax discount rate of 7% per annum. (This discount rate is based on the estimated weighted average cost of capital for the project.)

Taking all the various charges and debt servicing into account the spreadsheet shows that the investment is about £52.172 million, some £3.8 million more than that used in the calculations for tasks 2 and 3.

This should, of course, lead to re-evaluation of the project. First, and most obviously, the revised value for the investment reduces the projected net present value of the project by £3.8 million. Second, not so obviously, the weighted average cost of capital for the project should be recalculated to take into account the need for substantially more equity capital. The calculation also recognizes the bank's proposed interest rate of base rate plus 2%:

£8.625 million equity at 13.8%:	1.190
£43.5 million debt at 6.47%:	2.814
	4.004 %

A weighted average cost of capital of 4.004/52.125 = 7.68%

The inclusion of these revised figures in the spreadsheet (Table 3) shows the project generating an internal rate of return of 8.45% and a net present value of £3 million.[4] The project is considerably less attractive than previously thought but, nevertheless, it still returns a healthy net present value – and this despite some fairly hefty charges which would surely be negotiable.

Task 5

Task 5 aims to simulate the 'live' negotiation which took place between the Financial Director of UKH and the banks. (Three banks were approached and their 'final' terms compared in order to reach a decision.) In order to determine whether a particular deal was acceptable the Financial Director devised a spreadsheet which split the cash flows between those accruing to UKH and those accruing to the bank. This spreadsheet is presented in Table 5.

The spreadsheet has been constructed by taking the project's after tax cash flows (column 2) and dividing them between the bank and UKH's lease company, Leaseco. Column 6 shows the total return to the bank being the sum of the return of capital (column 4) and interest payments (column 5). Not surprisingly the return to the bank is 9.37%, the rate of interest charged.

Columns 7 and 8 show the cash flows to Leaseco. Column 7 shows the tax relief associated with the interest payments and column 8 shows the project cash flows from

[4] The spreadsheet was amended by substituting £52.125 million in place of £48.375 million as the initial investment and 7.68% in place of 6.9% as the after tax cost of capital.

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Table 5. Splitting the cash flows between UKH and the bank

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Year	**After tax**	**Bank Cash Flow**				**Leaseco Cash Flow**	
	cash flow	**Capital**	**Outstanding**	**Interest**	**Total**	**Tax credit on**	**Total**
		payments	**Loan**	**Payments**		**interest paid**	
	£'000	£'000	£'000	£'000	£'000		£'000
1999	-52172	-43500	-43500		-43500		-8672
2000	8574	3750	-39750	4076	7826	1264	748
2001	6141	3750	-36000	3725	7475	1155	-70
2002	5438	3750	-32250	3373	7123	1046	-530
2003	4911	3750	-28500	3022	6772	937	-815
2004	5036	3000	-25500	2670	5670	828	303
2005	4718	3000	-22500	2389	5389	741	157
2006	4595	3000	-19500	2108	5108	654	227
2007	4422	3000	-16500	1827	4827	566	248
2008	4433	3000	-13500	1546	4546	479	453
2009	4444	3000	-10500	1265	4265	392	658
2010	4482	3000	-7500	984	3984	305	890
2011	4208	1500	-6000	703	2203	218	2310
2012	4376	1500	-4500	562	2062	174	2532
2013	4457	1500	-3000	422	1922	131	2710
2014	4246	1500	-1500	281	1781	87	2595
2015	4299	1500	0	141	1641	44	2746
2016	4437				0	0	4481
2017	4543				0	0	4543
2018	3056				0	0	3056
2019	3626				0	0	3626
2020	3456				0	0	3456
2021	1947				0	0	1947
2022	2514				0	0	2514
2023	2578				0	0	2578
2024	2644				0	0	2644
2025	17755				0	0	17755
2026	-5867				0		-5867
Internal Rate of Return					9.37%	£6,266.41	10.66%
Net Present Value at discount rate of 13.8%					-£7,564		-£3,237

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Leaseco's point of view. Column 8 is calculated as the project cash flow (column 2) less the cash flows received and remitted to the bank (column 6) plus the interest tax credit (lagged column 7). At first sight it may seem that the internal rate of return on Leaseco's cash flow at 10.7% is satisfactory. However, it must be remembered that this is a return on *equity* capital, and Leaseco's target return on equity is 20% before tax, 13.8% after tax.

This analysis shows that the division of project cash flows is not satisfactory to Leaseco. It might be expected that a negotiation between the bank and Leaseco would result in some concessions by the bank so that, eventually, both parties would be satisfied. Concessions might be made in respect of the interest rate charged, the loan charges and, most importantly, the repayment schedule. A deal was eventually struck which both parties were prepared to accept.

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Appendix 1: Projected lease income

Year	*£'000*	
2000	4825	
2001	4825	
2002	4825	
2003	4825	
2004	5346	
2005	5486	
2006	5628	
2007	5666	
2008	5814	
2009	5965	
2010	6120	
2011	5946	
2012	6101	
2013	6260	
2014	6119	
2015	6146	
2016	6305	
2017	6469	
2018	5041	
2019	5172	
2020	5048	
2021	3503	
2022	3593	
2023	3687	
2024	3783	
2025	18925	(being the estimated residual value of the equipment)

These are annual figures which have been uprated by a factor of 4.5% in order to take into account the monthly profile of lease income.

Appendix 2: Schedule of payments to the manufacturer

Date	*£'000s*
October 1997	1500
March 1999	8154
April 1999	3969
May 1999	5859
June 1999	4284
July 1999	4032
August 1999	3150
September 1999	378
October 1999	1648
November 1999	1882.5
December 1999	1882.5
January 2000	3530
February 2000	3766
March 2000	4340

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Appendix 3: Proposed contract from the bank

Maximum facility

£43 500 000

Facility amortization

The facility shall be available from 1 October 1997 and the capital shall be repaid in quarterly instalments as follows:

Year		*Annual repayment £000*
2000	4 payments of £937 500 million	3750
2001	"	3750
2002	"	3750
2003	"	3750
2004	4 payments of £750 000	3000
2005	"	3000
2006	"	3000
2007	"	3000
2008	"	3000
2009	"	3000
2010	"	3000
2011	4 payments of £375 000	1500
2012	"	1500
2013	"	1500
2014	"	1500
2015	"	1500

Interest

LIBOR plus 2%, compounded monthly on the outstanding balance of the loan.

Front end fee

£225 000 payable 1 October 1997.

Commitment fee

0.5% payable quarterly in arrears on undrawn amounts.

Lender's guarantees

If the operating franchise is lost the borrower guarantees to repay the outstanding balance of the loan at 31 December 2003. In order to do this the borrower may refinance the loan but, should the borrower choose not to do this, there will be recourse to a Residual Value Guarantor who will guarantee to purchase the equipment for a sum of £28 500 000.

The bank will nominate the Residual Value Guarantor who will require a fee of approximately 3% of the residual value for this service. This fee (£835 500) will be paid in annual sums of £167 100 commencing 31 December 1998 and concluding 31 December 2002.

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