ADVANCED LEVEL EXAMINATION

2023

Orchid

(3.5 HOURS)

STRATEGIC BUSINESS MANAGEMENT

This exam consists of **TWO** questions (100 marks).

Marks breakdown

Question 1	55 marks
Question 2	45 marks

The questions in this paper have been prepared on the assumption that candidates do not have a detailed knowledge of the types of organisations to which they relate. No additional credit will be given to candidates displaying such knowledge.

The link to the ICAEW bookshelf can be found in each question above the word processing area.

Important Information:

Please read this information carefully before you begin your exam.

Starting the exam

Click on the **right-hand arrow** in the header to begin the exam. The exam timer will begin to count down.

Preparing your answers

Respond directly to the exam question requirements. Do not include any content of a personal nature, such as your name.

Only your answer in the word processing area will be marked. You must copy over any data for marking from the spreadsheet area to the word processing area.

Issues during the exam

If you encounter any issues during the exam you should tell the invigilator (centre) or online chat support (RI) as they may be able to resolve the issue at the time. Neither the invigilator nor the online chat support can advise you on how to use the software.

Ending the exam

When the exam timer reaches zero, the exam will end. To end the exam earlier, go to the last question and click the right-hand arrow button, then click the **Submit** button to close the exam.

After the exam

We will invite you to complete a student survey after the exam.

If you believe that your performance was affected by issues which you raised during the exam, you should submit a special consideration application to ICAEW, **within 7 days of the exam**, as per ICAEW's published policy. If you are sitting remotely please refer to anything of note which occurred and will have been recorded, for use as evidence to support your case.

1 Davrina plc

Assume it is now November 20X8

You have recently joined Duggan Walls LLP, a firm of ICAEW Chartered Accountants, and you are working in the department dealing with advisory and assurance work. You have been asked to attend a meeting that has been arranged between your manager Charles Kent and Emma Fry, the chief executive officer of an important client, Davrina plc.

Davrina is an AIM-listed company that has enjoyed spectacular growth in the past few years in online retailing. It sells cosmetics and beauty products, mainly in the UK, targeting a market of customers who are mainly in their early to mid-20s.

The meeting

Emma begins the meeting with the following comments.

'We like to think that we are a very successful company that has enjoyed strong growth for several years. Until now, our growth has been entirely through organic expansion. We have historically enjoyed a strong competitive advantage in our online sales software, but this is getting outdated now and some of our competitors have more flexible systems.

'Recently, however the board has become concerned about a fall in our profitability. When the results for the year ended 31 December 20X7 were announced, Davrina's share price fell by one-third and it is now trading at a multiple of 28 times annual earnings. Two years ago it was trading at a multiple of 75 times annual earnings.

'I have some financial information about the company to give you (**Exhibits 1 and 2**).

Growth strategy

'The board of directors believes that in order to maintain or increase the P/E multiple for the share price, the company needs to expand rapidly. We have discussed the possibility of achieving the desired rate of growth through a combination of organic growth of the existing business and acquisitions of other newly-established online retail businesses.

'We are not sure about how best to grow the business, or even in which parts of the market we should look to grow. Our sales manager Tom Barnes has prepared a brief summary for you of online retailing in the UK (**Exhibit 3**).

'If we do decide on a policy of growth through acquisition, we are going to need extra financing, and this is likely to be mostly debt. You may be interested in an email I received recently from the company treasurer, Dave Jackson (**Exhibit 4**).

Potential acquisition in the supply chain

'Ethernaze Ltd is one of Davrina's suppliers of cosmetics. The Ethernaze business was established by two sisters who each own 50% of the equity. They have now informed me that they do not want to carry on in business any longer and have

been unable to find a buyer who will pay an 'honest price' for their company. They therefore plan to take the company into voluntary liquidation.

'In response to a request from me, they have provided details of the company's assets and liabilities at the end of December 20X7. They are unwilling, at this stage, to provide details of profits or losses, but I suspect that the company is operating at a loss or, at best, a very small profit. I shall give you the limited information that I have so far: it is a brief note from Sonia Lee, one of the two sisters (**Exhibit 5**).

'I think that the board of Davrina may wish to consider the possibility of acquiring Ethernaze, provided we offer a fair price. This will enable us to maintain the supply of products that have been popular with our online customers. With better organisation, it should be possible to operate the company at a profit and restore its financial position within a fairly short time.

'The Davrina board needs to make a quick decision before Ethernaze takes the liquidation option.

Online sales system

'The success of our business depends on online sales and payments through our website, and increasingly on the development of marketing initiatives that are properly targeted at customers, based upon their buying history. I think that we may need to invest in a system upgrade that supports all of these activities, given their importance in enabling us to continue to grow organically. Our head of IT recently attended a presentation by a software supplier and is very enthusiastic about the potential benefits of a system upgrade, as am I, but there are still some questions to be answered. As you might expect, I am worried about the effect that all of this investment might have on our reported profits. I can't see the board agreeing to anything that will have a significant impact on earnings, when we are trying to restore profitability.

'We had a breach of system security a short while ago, so at the very least some improvement in our system will be necessary.

'I will give you a copy of a memo I sent recently to our head of IT that sets out some of my thinking about this (**Exhibit 6**). I will also send you the details of a possible investment in customer relationship management software (CRM) that our IT and marketing teams are very enthusiastic about (**Exhibit 7**).'

Manager's instructions

Following the meeting, Charles Kent tells you that Emma Fry has sent him a letter setting out the requirements of the Davrina board (**Exhibit 8**). He would like you to draft a reply to each of the requests that are set out in this letter.

Requirement

Prepare the draft reply that Charles Kent has asked for.

Total: 55 marks

Exhibit 1: Financial information prepared by Davrina's management accountant

Extracts from the statements of profit or loss of Davrina plc for the years ended 31 December (available in the pre-populated spreadsheet)

	A	B	C
4		**20X7**	**20X6**
5		**£'000**	**£'000**
6	Revenue	461,300	346,000
7	Cost of sales	(232,500)	(166,100)
8	Gross profit	228,800	179,900
9	Distribution expenses	(69,100)	(46,900)
10	Payroll and staff costs	(45,400)	(29,900)
11	Warehousing costs	(25,600)	(19,100)
12	Marketing costs	(25,800)	(12,600)
13	Production costs	(2,500)	(2,300)
14	IT costs	(6,200)	(4,900)
15	Depreciation and amortisation	(7,800)	(6,300)
16	Other operating costs	(24,100)	(19,600)
17	Operating profit	22,300	38,300
18	Finance costs	(4,600)	(4,400)
19	Profit before tax	17,700	33,900
20	Taxation	(3,500)	(6,700)
21	Profit after tax	14,200	27,200

Summarised statement of financial position as at 31 December 20X7 (available in the pre-populated spreadsheet)

	A	B
26		**20X7**
27		**£'000**
28	Non-current assets	
29	Intangible assets	28,100
30	Property, plant and equipment	29,000
31		57,100
32	Current assets	
33	Inventory	90,000
34	Receivables	15,200
35	Cash	2,700
36		107,900

	A	B
26		**20X7**
27		**£'000**
37	Total assets	165,000
38		
39	Equity	
40	Shares (8 million shares of 25 pence each)	2,000
42	Reserves	56,800
43		58,800
44	Non-current liabilities	60,000
45	Current liabilities	46,200
46	Total equity and liabilities	165,000

Additional notes

1 About 40% of the company's tangible non-current assets are computer equipment.

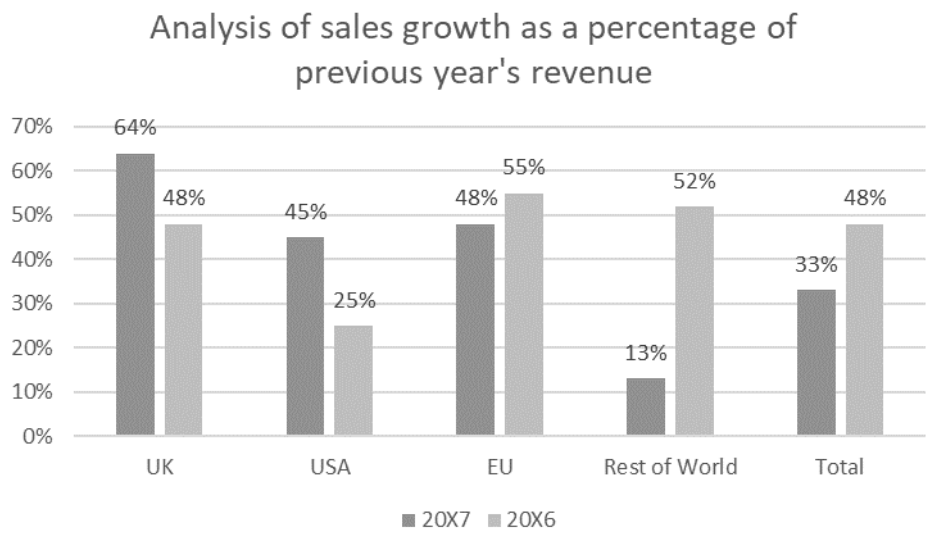
2 The company's intangible assets consist mainly of capitalised software that is not regarded as being an integral part of the hardware that it runs on, and web site development costs. These assets are amortised over four to five years.

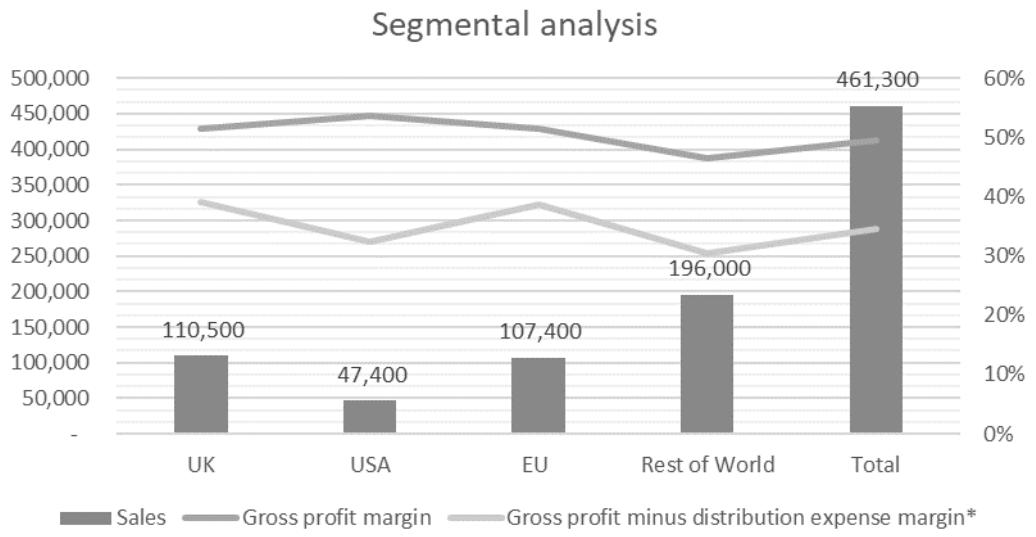
3 Borrowings consist of medium-term bank loans, on which the average annual interest rate is currently 6%.

4 The board has a policy of paying a 'progressive dividend', with growth in dividends per share each year. In 20X7 dividend payments were £1.30 per share.

Exhibit 2

Segmental analysis for the year ending 31 December 20X7:





* Distribution expenses include the cost of dispatching goods to customers as well as the cost of returned goods.

20X7 sales data by month and product type (available in the pre-populated spreadsheet)

	A	B	C
1	**Monthly purchases**	**Quantity ordered**	**Product type**
2			
3	Feb	213	A
4	Jan	218	E
5	Dec	1776	D
6	Feb	103	C
7	Feb	198	C
8	Apr	364	A
9	Mar	263	D
10	Jun	781	A
11	Apr	298	E
12	Dec	3165	A
13	Apr	101	B
14	May	119	B
15	May	176	A
16	July	1932	D
17	Oct	1456	E
18	July	349	D
19	Oct	1035	A
20	July	345	E
21	Sept	1071	D

	A	B	C
22	Aug	1032	C
23	Aug	1012	E
24	Dec	2016	D
25	Aug	2052	A
26	Dec	2737	E
27	Sept	1046	D
28	Sept	2041	A
29	May	269	C
30	Oct	2734	C
31	Oct	1046	A
32	Sept	1034	B
33	Oct	1051	E
34	Nov	3022	D
35	Nov	2891	E
36	Dec	1069	C
37	Nov	1301	E
38	Jan	360	C
39	Mar	323	E
40	Dec	2067	A
41	Dec	2346	C
42	Aug	1075	A

Additional notes

1 One of Davrina's unique selling points is its simplified pricing structure. All products are priced at one of the following price points:

Product type	**Price point**
A	4.99
B	7.99
C	9.99
D	11.99
E	13.99

2 The average number of units per customer order in 20X6 was 2.3 units whilst the average sales price per unit was £8.50.

3 The number of customers in 20X7 was 22,100

Exhibit 3: Note on the online retail market in the UK

Prepared by Tom Barnes, Sales Manager of Davrina plc

The online retail market in the UK continues to grow, although the rate of growth is currently not as rapid as in the past. In the past 12 months total retail sales in the UK have grown by about 4% and online retail sales by 9%.

The market is dominated by a small number of large retailers, notably Amazon, which continue to expand into different parts of the online market. The biggest sectors of the market are for digital products such as music, films and e-books, and for fashion clothing, but the market for online grocery shopping is increasing.

Many established retailers, with physical (so called 'bricks and mortar') retail outlets, have developed a multi-channel retailing strategy, and have web sites for making online purchases.

For companies such as Davrina, which sell physical products online, distribution and returns are a problem. There are problems with delivering sales orders when the customer is not at home, and the costs of returns can be high. Some online retailers expect customers to pay the postage cost of returns. Multi-channel retailers can offer a 'bricks and clicks' service, where customers can buy online and collect the item within 24 hours at a local store, where they can examine the item or try it on before they take it away.

Dealing with returns can be very expensive. The problem is that with some products, customers may not be entirely certain what they are buying until the item is delivered to them. Online clothing retailers probably have the biggest problem, due to uncertainty about clothing sizes. Quite a large percentage of items that are sent to customers following an online purchase are returned, and this creates administrative costs as well as wasted postage costs.

Successful online retailers must have a well-designed website – even major retailing groups will struggle if their website is poorly designed. We also need to advertise effectively on a small marketing budget: Davrina uses small ads in search engines such as Google but we are also trying to encourage the use of social media for spreading views about our products. We have also built a database of customers, and we email them with special offers.

It is difficult to predict the future of online retailing. Our view, however, is that the market has room for substantial further growth, and in time it will become normal to buy most products online. We also think that there will be opportunities for niche retailers, in spite of the presence of larger online competitors. The market for digital products is global, but for many physical products markets will remain mostly national – because of the costs of distribution.

Davrina has benefited in recent years from a high share price. Many quoted online retail companies still command high P/E ratios, but my view is that valuations will decline over time as expectations of future growth and profitability in the market are reduced and become a bit more realistic.

Exhibit 4: Email from the Davrina treasurer, Dave Jackson, to Emma Fry: additional financing

Emma

I have been looking into financing methods, as you requested.

We have been given indications by a syndicate of banks that the company should be able to raise up to £100 million in loans at an annual interest rate of about 6% to finance acquisitions, with tax relief at 20% on the interest costs.

I would be attracted to debt capital as a source of funding. With the volatility in our share price, we cannot be certain about the cost of our equity. We estimate that our cost of equity is about 15%, which is much higher than the cost of debt.

However if we do go for debt financing, I would recommend that we look for fixed interest payments and medium-term borrowing. I can see interest rates increasing by a few percentage points over the next two or three years.

Exhibit 5: Ethernaze

Note from Sonia Lee to Emma Fry:

Dear Emma

Here is a summary of the assets and current liabilities of Ethernaze as of the end of December 20X7.

Assets	**£'000**
Cash	21.5
Property, plant and equipment	1.0
Inventory	125.3
Receivables	30.0
Current liabilities (mainly a bank loan maturing in January 20X9)	176.9

In 20X7, our sales to Davrina totalled £340,000. Our gross profit margin on sales is about 50%. We make some sales to other customers but these are not significant: we supply almost exclusively to Davrina.

We would be interested in an offer from Davrina to buy the business, but let me know soon. We have already almost made up our minds to put the company into liquidation.

Exhibit 6: Memo written by Emma Fry to Davrina's head of IT

Not so long ago, our online sales system was among the most innovative and successful online retailing software systems in the world, but the system (both hardware and software) has not been updated for three or four years. In that time, our competitors have developed their own online transaction capabilities and in many areas of customer service they now outperform us.

As you know, the company also suffered a blow to its reputation two months ago with the report in the media that a hacker into our system stole the identities of about 500,000 customers, and more than 100,000 sets of payment card details.

A number of shareholders are apparently still angry at the system failure and are demanding changes to the composition of the audit committee and the board.

Following your review of suitable new systems that are available on the market, you have told me that Davrina will have to spend at least £5 million purchasing software and hardware next year to at least 'catch up' with our competitors in terms of online capability, and to provide an enhanced level of data security. That's £1 million more than the current value of our IT system shown in the accounts.

We are going to have to announce improvements to the IT system to address these concerns, but the cost worries me.

Exhibit 7: Notes from head of IT about proposed system upgrade

Technology and the internet are continually evolving, and will continue to shape the way that we manage our customers. In particular, the proliferation of smartphone usage in our target age group has changed the way that customers compare offers, talk to each other (especially via social media) and make purchase decisions. Competitors such as Amazon continue to expand into the online market and we need to keep up. Developing our website capability is a key part of this, enabling our customers to buy what (and how) they want – but I have talked to our marketing department and there is a firm belief that we need to get much better at communicating with our customers. This work has been started with the development of our database, but its functionality is rudimentary and is limited to stored contact details which are used to send customers details of special offers, regardless of their suitability to the recipient.

We have already discussed a system upgrade that will bring us more up to date in terms of capability and data security, costing £5 million. The same supplier can provide us with a system whose functionality goes beyond these basic requirements and includes an integrated customer relationship management (CRM) system.

The cost of such a system would be as follows:

- New website and CRM software £5.5 million
- Server hardware £500,000

It is predicted that such a system would deliver increased sales revenue of £1.5 million per year.

I have spoken with the finance department about the feasibility of this, and it appears that there are two routes available to us:

- Davrina could purchase the system outright, using bank loan facilities. If the system is purchased, Davrina would be able to claim an annual tax depreciation allowance of 20% of the reducing balance.
- Davrina could lease the system under an agreement which would entail payment of £1,250,000 at the end of each year for the next 5 years.

Payments of annual maintenance, training and technical support fees for the software and hardware would be around 1.5% of the original total price, regardless of the finance option chosen.

Exhibit 8: Draft terms of engagement set out in a letter from Emma Fry

The board of Davrina requires Duggan Walls LLP to prepare a report covering the following matters.

(1) Explain and evaluate the financial performance and position of Davrina and assess the risk that its business operations may cease to achieve further growth. Include a structured analysis of the segmental data and of the data relating to sales by product type and month that is available in the **pre-populated spreadsheet**

(2) Set out and explain the advantages and disadvantages for Davrina plc of pursuing a strategy of growth through acquisitions in the UK online retailing market. Please include any comments you may have on financing options for an acquisition-led growth strategy, and on the financial reporting implications of such a strategy.

(3) Suggest, and justify, a valuation and offer price for the small supplier company, Ethernaze Ltd, bearing in mind that its owners are considering putting the company into voluntary liquidation.

(4) Briefly explain the benefits to Davrina of investing in a customer relationship management (CRM) system, and show what the preferred financing method should be if the company decides to go ahead with the enhanced project.

(5) Explain the implications for reported profits of undertaking the project to enhance the company's IT systems with associated CRM capability, depending on whether Davrina purchases the system or chooses to lease it.

2 Premier Hearing plc

Assume it is now November 20X2.

Premier Hearing plc (PH) is listed on the London Stock Exchange. It manufactures high-quality, technologically-advanced hearing aids.

You are an ICAEW Chartered Accountant and you have recently joined PH's internal assurance, review and monitoring team (IARM) as its deputy head. The PH technology director, Rose Rogers, met with you and said:

'I need your help as I have been asked to report to the next board meeting on a number of issues. The head of IARM is currently ill, so I would like you to report directly to me. As you are new to PH, I have provided background information on the hearing aid industry and PH (**Exhibit 1**).

'At a recent meeting, the board considered PH's digital assets. Some directors expressed concern about whether our digital assets represent value for money for PH, given the cost of creating them. They also want to determine a value for PH's digital assets and evaluate the performance of its devices. I have provided more details (**Exhibit 2**).

'At the same board meeting, the marketing director, Andy Anders, proposed new pricing strategies for one of PH's hearing aids. Andy has provided relevant information (**Exhibit 3**).

'Emera Evans, the finance director, has raised ethical concerns about two matters. I have provided you with Emera's note to the board outlining these concerns (**Exhibit 4**).

'It is becoming increasingly important that we report to our stakeholders on our ESG performance, I have gathered some recent data that I believe should be included in our next ESG report (**Exhibit 5**).

'I would like you to address the above matters so that I can report to the board. I have set out instructions in a separate document (**Exhibit 6**) explaining what I would like you to do.'

Requirement

Respond to the instructions from the PH technology director, Rose Rogers (**Exhibit 6**).

Total: 45 marks

Exhibit 1

Industry and company background information – provided by PH technology director, Rose Rogers

Industry background

Hearing impairment is a common and growing medical problem worldwide. Hearing impairment can occur in all age groups, but it is most common in older people.

A hearing aid (device) is designed to improve the hearing of users who are suffering hearing impairment. Surgical procedures can treat some types of hearing loss, but the use of a hearing aid is often the most effective treatment.

In many countries, the public sector health care service provides hearing aids free or at a reduced price. However, government financial constraints mean that there are limits on the number and quality of the devices that can be provided.

More technologically-advanced hearing aids can be purchased in the private sector. These are normally fitted by specialist professionals (audiologists) working for pharmacists, private clinics or specialist retailers.

Over the past 10 years, there have been many advances in hearing aid technology, including smartphone compatibility, Bluetooth connectivity and artificial intelligence (AI). This has resulted in a very competitive private sector market for hearing aid manufacturers, with a wide variety of quality and prices.

Company background

PH sells its hearing aids in the UK private sector only.

A consumer (user) who requires a hearing aid visits a pharmacist, private clinic or specialist retailer. An audiologist recommends and fits a suitable hearing aid device for the user, supplied by PH or one of its competitors.

The contract for the sale of the device is between PH and the user. The user pays separately for the audiologist's services.

PH has three types of device in its portfolio of hearing aids. PH's marketing team works with audiologists to identify the users who are most suitable for each of its devices and encourages audiologists to recommend suitable PH devices to potential users. For some potential users, all three types of device are suitable, but for other potential users none of them is suitable.

PH has a large research and development (R&D) department which is responsible for developing new types of hearing aid and supporting software to establish competitive advantage. In 20X1, a new AI-based hearing aid device and its supporting software were patented by PH. The hearing aid (including the supporting software) was branded Synthetic Intelligent Audio (SIA). Most of SIA's R&D activities related to the software, rather than to the SIA device. On 1 January 20X2, sales of SIA commenced.

PH has a financial year ending 31 December.

Exhibit 2

Digital assets and performance of PH's devices – prepared by technology director, Rose Rogers

The board is undertaking a review of PH's digital assets. These are assets held in digital form, including software and data.

The board is concerned about the level of R&D expenditure being incurred to create digital assets and devices. In particular, the finance director is concerned about whether the amount spent on R&D is justified by the benefits that PH derives.

The board also wishes to value the digital assets to better understand their worth to the business. However, there is no agreement on the most appropriate method of valuation.

The board has decided to evaluate the SIA project as an example.

<u>The SIA technology</u>

SIA is an AI-based hearing aid device with supporting software. It is marketed as an in-the-ear computer with connectivity and transmissibility. SIA analyses surrounding noises for the user and makes immediate adjustments to facilitate better hearing for a wide variety of sounds in many different environments.

Whilst AI is not new in the hearing aid industry, SIA software is a stage ahead of competitors' products in its real-time machine learning algorithms which adapt to different environments and to the personal attributes of each user.

The SIA also collects and transmits data from the user's device back to PH. The data captured includes how much time a user was engaged in conversation and how long they wore the hearing aid each day. The company is then able to learn from this data how to improve future products and software.

PH has consent from users to monitor and analyse the data captured from SIA.

<u>Digital assets relating to the SIA project</u>

In the review of digital assets, two separate assets were identified relating to SIA:

- The software supporting SIA devices.
- The data captured by PH from transmissions by each user's device.

<u>Other devices</u>

Apart from SIA, PH produces and sells two other types of hearing aid:

- DeepBlue uses Bluetooth technology connected to a user's mobile phone. This technology was new in the industry when DeepBlue was launched, but it is now commonplace.
- Audex is a basic device which is suitable for mild hearing impairment only. There are number of similar devices in the market produced by competitors.

<u>Financial data</u>

PH has gathered the following preliminary information on the three devices, for comparative purposes:

					Revenue Years to 31 December		
Device (with relevant software)	**Date launched (1 January)**	**Product life cycle from launch**	**Price per device**	**Gross profit margin**	**20X0 £000**	**20X1 £000**	**20X2 Estimated £000**
SIA	20X2	4 years	£3,000	40%	-	-	14,400
DeepBlue	20W9	5 years	£1,800	30%	11,520	10,368	8,294
Audex	20W7	8 years	£800	15%	16,000	15,200	14,440

Notes

- Gross profit margins exclude R&D costs and are expected to be similar in 20X2 for DeepBlue and Audex to that experienced in 20X0 and 20X1.
- Future growth rates beyond 20X2 are uncertain for all devices.
- The product life cycle is the period when PH expects to sell the devices and supporting software, before they are superseded by new versions or innovations developed by PH.
- The devices and software will continue to be useable beyond the end of the product life cycle.
- The price per device includes the hearing aid and initial supporting software.
- PH uses an annual interest rate of 10% to evaluate projects' NPVs.

SIA project – Post-implementation internal assurance review

At its recent meeting, the board asked IARM to undertake a post-implementation internal assurance review to evaluate the SIA project to date.

The SIA project was selected for review as it is a recently implemented project from which the board wishes to learn lessons about future R&D investment. There is no intention to abandon the SIA project, but the board wishes to understand whether, with the benefit of current knowledge, the original decision to invest still seems to have been appropriate. Different opinions were expressed at the board meeting.

The finance director, Emera, argued: 'The board needs to know whether all the benefits that PH is likely to gain from the SIA project will outweigh all the costs that have been and will be incurred, including R&D. I estimate that these R&D costs totalled £20 million in present value terms at the date of SIA's introduction on 1 January 20X2. I do not believe that, with hindsight, the project represents value for money as we will never recover the R&D outlay. Although there is some uncertainty, I think that SIA sales volumes will remain constant at their 20X2 level over the product life cycle. In my opinion, it would have been better if the R&D project on SIA had never been started.'

The marketing director, Andy Anders, disagreed: 'We can't just look at the direct financial costs and benefits. We could not have continued with only the two existing devices, DeepBlue and Audex – this would have been unsustainable. We need to consider wider strategic and operating factors which will inform future investment decisions on new devices.'

Exhibit 3 Proposed new pricing strategies – prepared by marketing director, Andy Anders

Estimated sales volumes of SIA for 20X2 are disappointing. Market research has revealed that, while many potential users of hearing aids believe that SIA is worth the price, they find it difficult to afford the total amount all at once at the time of purchase.

I therefore believe that, from 1 January 20X3, we should sell the SIA (device and software) on a subscription basis, where users make quarterly payments over three years for SIA supplied during 20X3. I believe that this would significantly increase sales volumes for SIA. If the subscription model is successful, we can extend it to future years' sales of SIA and to our other products.

I asked the treasury department to provide some figures for various pricing strategies for SIA.

Treasury department figures

Three mutually exclusive choices were identified. In each case, the user is paying for the device and initial supporting software.

Choice 1

Continue to sell SIA for £3,000 each, with the full amount payable by the user on the day of purchase.

Choice 2

Provide SIA on a subscription basis for a payment of £319.66 per quarter for the three years following the purchase date. This subscription price includes annual hearing tests for the user, including checking the device. Subscriptions would be payable to PH by the user every three months, with the first payment being three months after the day of purchase. The user would be contractually committed to making all 12 payments. Ownership passes to the user at the end of the three-year period.

Choice 3

This choice uses the same subscription basis as Choice 2, except that PH would then sell the subscription contract rights, without recourse, to a bank, immediately after a user's purchase. The bank would pay PH £2,539 for each SIA to acquire the subscription rights. The quarterly rentals of £319.66 would then be payable by the user to the bank.

The treasury department uses an annual interest rate of 10% to evaluate projects.

Financial reporting concerns

The board would also like to understand the impact of the three choices on the financial statements for the year ending 31 December 20X3 using, as an example, the sale of one SIA on 1 January 20X3.

Exhibit 4

Ethical concerns, note to the board – prepared by Emera Evans, finance director

I am writing to inform the PH board of my ethical concerns about two separate matters:

Length of subscription contracts

The proposals to sell SIA under three-year subscription contracts (Exhibit 3 – Choice 2 and Choice 3) are, in my opinion, unethical.

The product life cycle of SIA is estimated to end on 31 December 20X5. This means that many consumers will be tied into their SIA device later than this. They will still be paying subscriptions for SIA past the end of the product life cycle, when better and more suitable products will be available. If the subscription model for SIA is extended into new sales in 20X4, this will make matters worse.

Many consumers of SIA are old and vulnerable. To sell them devices that may become outdated during the subscription period is, I believe, mis-selling and unethical.

Relationships with audiologists

It is good that PH works closely with audiologists. However, audiologists have an important role in advising potential users about the most appropriate hearing aid, including the selection of devices made by PH or by its competitors.

It concerns me that PH is attempting to provide inappropriate inducements to audiologists to recommend its devices to users in preference to the devices of competitors.

I am not suggesting that PH is making any direct cash payments to audiologists. It is more subtle than that. For example, PH held a seminar for audiologists to update them on recent technical developments in PH devices. As a concept, this is fine. However, the only audiologists invited were those who had recommended a minimum number of PH devices in the previous year. All expenses were paid by PH for the seminar in a luxury hotel in Switzerland over three days, with only two hours per day devoted to technical presentations. The audiologists were invited to bring a guest with them.

Exhibit 5 – ESG performance of PH

Environmental performance

PH is committed to playing its part to reduce climate change. The board have committed the company to reducing carbon emissions by 40% in the year 20X3 compared to 20X2 and to become carbon neutral a further 10 years after this.

This will be achieved by investing in the creation of a new rechargeable hearing aid and switching to cleaner forms of energy.

The disposable batteries used in PH's current products have a major environmental footprint as they are disposed of in landfill sites. While there are several reasons why disposable batteries will remain a practical choice in PH's current products for some time to come, the company can significantly reduce their environmental impact by investing in a new product that will operate with a rechargeable battery.

Carbon emissions for 20X1 compared to the forecast for 20X2 is provided below:

	20X2 (forecast)	**20X1 (actual)**
Scope 1 Carbon emissions (kilograms of CO_2)	576,322	789,988
Number of products sold	29,456	27,619

The new rechargeable product will be launched in 20X3 and it is hoped that 15% of total revenue will be generated from this new product.

Social performance

At PH we want all our staff to feel valued. We ask staff to complete a survey every year and based on this we calculate a staff engagement score, being the percentage of staff who feel valued by the company. In 20X1 the score was 65%. It was agreed that there was a need to improve this so PH introduced a flexible working week with the option to work from home on at least one day per week. In 20X2 to score increased to 87%.

Staff numbers were as follows:

	20X2	**20X1**
Total number of employees	589	543
Percentage of female staff	53%	49%

Governance performance

PH complies with all provisions of the UK Corporate Governance code.

The company supports diversity, and currently 29% of the board are female. 14% of the board identify their ethnic heritage as being other than white.

Exhibit 6

Instructions from technology director, Rose Rogers

I would like you to draft notes for me addressing the following matters.

1. Using the information in Exhibit 2:
   (a) Evaluate:
      - the performance of SIA for the year ended 31 December 20X2 compared with the other two devices for the three years to 31 December 20X2; and
      - whether the SIA project is likely to be ultimately beneficial to PH.

      Consider financial and non-financial benefits, costs and risks.

   (b) Explain and critically evaluate any methods that PH could use to determine an appropriate commercial value for the following digital assets:
      - The software supporting SIA devices.
      - The data captured from each user's SIA device.

      You are not required to calculate a value for these digital assets.

      Ignore:
      - financial reporting rules
      - tax
      - the proposals in Exhibit 3
2. For the post-implementation internal assurance review for the SIA project (Exhibit 2), set out the assurance and review procedures to be carried out in respect of the relevant historical data and forecast data, including any underlying assumptions.
3. Regarding the proposed new pricing strategies for SIA (Exhibit 3):
   (a) Calculate the annual implicit interest rate earned by the bank under Choice 3.

   (b) Evaluate each of the three choices and provide a reasoned recommendation.

      Consider financial, operating and strategic issues. Show, using the treasury department's figures, supporting calculations for a sale on 1 January 20X3 of one device.

   (c) For each of the three choices, set out and explain the financial reporting treatment of the sale of one SIA on 1 January 20X3 in PH's financial statements for year ending 31 December 20X3.

      Ignore:
      - the concerns raised in Exhibit 4
      - tax and deferred tax
4. Set out any ethical issues for the PH board arising from the two matters raised by the finance director, Emera Evans (Exhibit 4). Recommend any actions that the PH board should take in respect of these matters.
5. Evaluate the ESG performance of PH based on the information provided in (Exhibit 5).

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