

## **CGMA STRATEGIC CASE STUDY MAY 2019 EXAM ANSWERS**

### **Variant 1**

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#### **SECTION 1**

##### **Requirement 1 – demand for sports injury clinics**

From Anthony's description, the scanner will offer advantages in terms of speed of recovery from injuries, but will not necessarily cure problems that were previously untreatable. The treatment will have a relatively narrow market in terms of patients who are both willing and able to pay for faster recovery. There is unlikely to be a mass market for this type of treatment. As a starting point, Denby should approach potential buyers, with a view to establishing whether they would be likely to use this service. If their initial response is that they would have little or no need for such an expensive service then Denby should probably regard that as a strong argument not to proceed.

Anthony seems to regard professional soccer clubs as potential clients. The loss of a key player through injury could put a club under significant pressure, both sporting and financial, and so it would be worth establishing whether they would be interested in Denby acquiring this capability. The approach would have to be framed carefully because the clubs are unlikely to make any binding commitment to use this equipment, even if they argue that Denby should acquire it. They could be positive about the principle of Denby making the investment and may then continue to use conventional treatments or fly their players to Cornopia if they require treatment. Denby needs to conduct a more thorough analysis to determine whether the clubs would have a meaningful incentive to pay for the treatment that could be provided by the new technology, even if that is simply a check on the credibility of any comments made by the clubs.

Denby should start by making contact with major soccer clubs' doctors and physiotherapists in order to discuss the numbers of players who have been injured in recent years. If there are actually very few injuries then that might suggest that there is very little real demand from soccer clubs. If there have been more injuries then the next step is to establish whether the clubs might have used the new technology if it had been available. Denby could ask to discuss case histories of injured players, including prognosis before treatment, the actual outcome and whether the availability of the proposed new technology would have helped. The club could then be asked whether the players were sufficiently valuable to have justified the cost of treatment using ultrasound and microsurgery in order to establish how many referrals each major club might have made on, say, an annual basis.

Denby also has records relating to sports injury patients whom it has treated using conventional means. These records could be studied with a view to determining the number of cases in which the new technology would have had a beneficial clinical effect. Denby could then estimate the net additional cost of using the proposed new equipment compared to the patients' actual billings and also the difference in terms of the outcome of that treatment. Denby could then have identified patients who would have benefitted significantly and could ask them whether they would have paid that additional fee in order to have had that additional expected benefit. It would be ideal if Denby could link the net additional cost to any economic information that the company has about these patients. A professional golfer, say, might be prepared to invest a month's income in securing a more rapid recovery from an injury. It is unlikely that many patients would be willing or able to spend, say, a year's income.

### **Requirement 2 – borrowing**

Borrowing an additional K\$130m would increase Denby's gearing from  $550/(550+1,144) = 32\%$  to  $(550+130)/(550+130+1,144) = 37\%$ . That is quite a significant increase in gearing, so Denby could find that it is getting close to gearing restrictions in any covenants on existing borrowings. It could also find that the increase causes shareholders some concerns about whether Denby is borrowing too aggressively to fund this project. It probably would be irresponsible for Denby to allow itself to get close to its maximum borrowing capacity or to borrow to the point where the share price starts to fall.

The additional funding will be invested in specialised medical equipment, in modifying physiotherapy suites, and similar costs. Those assets are unlikely to provide the lender with any meaningful security. In the event that Denby becomes unable to service the loan then the assets will undoubtedly have to be sold at a discount. That could mean that Denby is forced to liquidate assets associated to existing, and profitable, areas of the business in the event that the new sports centres fail. The lenders will possibly wish to take security against other assets in any case because they will not be interested in having the right to repossess assets that will have little or no market for resale. Borrowing in this manner will expose other areas of the company to the risks of default and so it may be regarded as a rather reckless thing to do.

Denby's cost of debt, ignoring tax relief, is  $22/550 = 4\%$ , so the additional borrowing would increase reduce profit before tax by  $130 \times 4\% = \text{K}\$5.2$  million. That decrease would represent a significant proportion of profit before tax and would be a further argument that the borrowing could be regarded as reckless. The additional finance charge should be considered in the further context of the fixed costs associated with staffing and depreciation of the new equipment. Combining the borrowing costs with the additional expenses will create a significant risk that profits will fall, with an even greater decrease on return on capital employed.

The speculative nature of this project will introduce a speculative element into Denby's revenues and operating profit. That suggests that it would be more prudent to reduce gearing by raising funding from equity. Higher gearing will accentuate any volatility created by the new venture which appears to be a highly volatile proposal. At the very least, Denby should consider its forecast revenues and operating profits and should revisit the gearing decision on the basis of a prudent analysis of the business case.

## **SECTION 2**

### **Requirement 1 – intellectual property**

At present, all of Denby's hospitals provide orthopaedic care. This creates a need to attract patients to buy those services. Some patients may be attracted to Denby because they require surgery and do not wish to wait for KHS treatment or are prepared to pay more for the greater comfort and privacy associated with private healthcare. Those patients may not be particularly interested in the expertise of Denby's doctors. They may simply assume that all practising doctors are competent. Straightforward injuries and medical problems that are to be treated by established techniques will probably require little or nothing in the way of consultation between doctors.

Dr Mtimbe's arguments concerning sports injuries do make sense. Sports professionals' careers may depend on making a full and rapid recovery and that may provide an incentive for orthopaedic surgeons to learn and apply the latest developments. The risks of doing so are potentially high, partly because of the ethical risk associated with harming a patient and partly because of the costs and adverse publicity associated with causing further problems. Soccer players and their clubs may be unwilling to take a risk with a proposed treatment unless Denby can claim that it has a successful track record. Developing a list of techniques in which Denby has experienced staff will enable the company to attract more high-profile patients.

There could be a strategic benefit in spreading orthopaedic services across all hospitals. It will, for example, ensure that there is more widespread adoption of the latest techniques into mainstream medicine. Even if patients are not particularly concerned with being treated with the latest techniques, if Denby can help patients recover more quickly and more consistently then it will save costs in the process. Consultation will reduce the potential costs associated with paying damages and adverse publicity because it will be more difficult for a patient to accuse the company of negligence in the event that they do not recover as hoped. Sharing experience will also enable Denby to roll out any new technologies when their costs decrease to the point where they can be used more widely. That could assist Denby to obtain a commercial advantage over the other private hospitals.

It may prove difficult for Denby to safeguard any intellectual property that it creates, thereby reducing its value as a strategic resource. For example, if the DSICs leave Denby with a small number of orthopaedic surgeons who have valuable expertise then Denby's competitors may be tempted to lure them away. Competitors may offer to enhance salaries. They may also be able to offer even more advanced equipment or other desirable benefits that Denby could struggle to compete with. Concentrating advanced skills in the DSICs might also discourage the sharing of knowledge and experience, making the loss of senior doctors even more serious. There will be fewer really senior doctors and so they will be less willing to encourage their colleagues from other hospitals to seek advice. Furthermore, Denby may be unable to prevent its doctors from sharing knowledge with doctors from competing private hospitals. Medical ethics may forbid doctors from refusing to offer advice when it has been specifically requested.

### **Requirement 2 – information system**

It would be difficult to design a reliable information system that enabled doctors to share their experiences and consult one another in a meaningful way. Dr Mtimbe's point seems to be that doctors often need to consult colleagues because cases differ

to a significant extent. For example, the effects of a particular treatment could be affected by the severity of the injury or other aspects of the patient's medical history and so a database that links treatments to situations may not reduce the need for communication between doctors. Such an information system might make it easier to identify colleagues with relevant experience, but it would not necessarily make the relevant information accessible in the manner implied by Regina. Encouraging doctors to seek consultations with colleagues could lead to an inefficient use of time, with constant interruptions. Also, some decisions have to be taken quickly and surgeons are not always available to offer advice when crucial decisions have to be made because, say, they are operating.

The information system will not be as adaptable as direct consultations between experienced doctors. For example, it could be discovered that an accepted treatment carries previously unrecognised risks in certain circumstances. The information system may not make those risks apparent in files relating to cases that had a successful outcome, because the patient could have recovered despite the risks. It is unlikely that the doctors would have followed the advice from the information system blindly in any case, but they will have to consider whether their colleagues were aware of the latest knowledge when they input their cases into the system. Doctors may be reluctant to base decisions on the system if it starts to introduce further complications into reading and interpreting the output.

There could be a significant cost in terms of time and effort to input details into the information system. It will only have value if doctors can establish whether past cases that have been highlighted by the system are relevant to the cases for which they are seeking a consultation. The records will have to be comprehensive to allow for meaningful comparisons between cases on factors such as prior medical history. If doctors resent this inconvenience then they may not give a full account of their cases, potentially undermining the value of the system.

It may be unnecessary to create a separate information system given that Denby will already have detailed medical records online. It may be possible to use Big Data analytics to gather useful insights from existing patient records. One advantage is that the data will be open to re-evaluation in the event that, say, a particular drug is found to have side effects in a particular situation. The system would also reduce the risk that the findings could be biased by anecdotal evidence. For example, a doctor could prescribe a particular drug and believe that it cured the patient when the patient was actually recovering anyway. Big Data analytics would be able to identify whether there was statistical evidence to support the use of a drug in a particular situation. The application of Big Data analytics in these circumstances would, of course, be an information system even if it took a different form from that envisaged by Regina.

### **SECTION 3**

#### **Requirement 1 – exchange rate and foreign currency borrowing**

The economic indicators do suggest that the C\$ can be expected to weaken against the K\$. Purchasing Power Parity Theory suggests that the real cost of goods will be the same regardless of currency. That suggests that a currency that is subject to a high rate of inflation will tend to weaken in order to offset its diminishing purchasing power. Similarly, the International Fisher Effect suggests that the same real rate of interest will be charged on any given currency. Again, that suggests that the C\$ will decline against the K\$ to compensate for the difference in the interest rates.

John's arguments make sense from a theoretical perspective, but there can be no guarantee that these theories will eliminate the risks. There is empirical evidence to suggest that Purchasing Power Parity Theory and the International Fisher Effect can provide an accurate indication of the direction of any currency change, but they do not offer a precise and accurate forecast of future rates. Given that the outstanding balance will be C\$180m, even a relatively small forecasting error could lead to a significant variation in the amount payable. It is even possible that the Cornopian Government will act to maintain and protect the value of its currency over a relatively short period, such as the nine months that is the case here, and so Denby could suffer a significant additional cost.

Arranging to borrow C\$180m will have the effect of hedging the lump sum payment that is due in nine months. Once the loan has been arranged, the lender will settle the amount outstanding as at the due date in full, regardless of any changes in currency values. Given that there is a large balance due and also a potential concern arising from the economic indicators that suggest a currency movement could be forthcoming, it might be prudent to hedge by borrowing in this way. Unfortunately, it will then leave Denby with a commitment to repay the loan with interest over the next 15 years.

Settling the loan will expose Denby to movements between C\$ and K\$ for an extended period. The interest rate on the loan is fixed, so the C\$ payments are known and will be payable over the next 15 years. During that time, there could be significant movements, both strengthening and weakening of the C\$. The fact that the lender agreed to a fixed rate loan suggests that the lender anticipates that the C\$ will strengthen, which would be associated with a reduction in the C\$ interest rate. The only consolation is that the payments extend into the long-term future and so the payments have a low net present value and the additional cost will not start to affect shareholder wealth for some time.

## **Requirement 2 – share price**

The implications for the share price will depend in part on the extent to which the markets believe that this will be a positive NPV investment. In the short term, the announcement of the project will have to be evaluated by the shareholders and they will form an opinion as to whether the investment makes commercial sense. Hopefully, they will be encouraged by the fact that it will give Denby an advantage in competing for the custom of major soccer clubs and professional sports people. Presumably, Denby will make a public announcement of this new service and will describe its advantages, if only to ensure that potential patients are aware of it. That will help the shareholders understand the value of the investment.

This could be regarded as a risky investment, but the shareholders should hold diversified portfolios and so will only be concerned with the systematic risk of the venture. The factors that will affect the success or failure of the DSICs are unlikely to be influenced by factors that affect the stock market as a whole. Their required rate of return may well be lower than that used by the directors in evaluating this project and so the share price may be more likely to increase than decrease. There is, however, always a danger that the shareholders will be concerned that the directors have taken an unacceptable risk or have decided to invest in the project for selfish reasons that could decrease the market value.

Integrated reporting would give the shareholders additional insights into the value creation process. That should make it easier for them to understand the project from the directors' point of view. The shareholders are more likely to share the directors' optimism if the board clarifies the reasoning behind investing in this project. The

integrated report should clearly describe the strategic focus and should look more to the future. Such an emphasis will make the board's logic more apparent to the shareholders. A clear explanation of how the centres will fit into Denby's overall strategy will give the shareholders a clearer basis for evaluating and supporting the board's expectations and will, hopefully, enable them to better understand the project's strategic fit.

The integrated report will add to the usual reporting of historical capitals. Giving the shareholders insights into the manufactured capitals will enable them to better understand the new technology and how it will enable the two centres to treat patients more effectively. It will also make it clearer how this technology will assist Denby to compete in this market against other private hospitals. The integrated report will also highlight the impact that the investment will have on intellectual capital, stressing the experience that using this equipment will provide. It will also provide insights into social capital, including the extent to which this project will help Denby develop closer ties to the management of major soccer clubs.