MANAGEMENT CASE STUDY NOVEMBER 2018 EXAM ANSWERS

Variant 5

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CIMA will not accept challenges to these answers on the basis of academic judgement.

Section 1

Capital rationing

The lack of finance is an example of capital rationing. Grapple has Z$30m and the investment projects approved by the board require more cash than this. The projects are not mutually exclusive. This means that any of them may be undertaken at the same time.

Project 4 should not be undertaken as it achieves a negative net present value. This would not add shareholder wealth and Grapple should not consider doing this from a financial perspective. However, the project is environmentally friendly and this may improve the entity's corporate social image.

The profitability index (PI) is calculated as the net present value divided by the initial investment. Projects would be ranked according to the highest PI first down to the lowest. The projects would be undertaken until the finance has been exhausted.

Assuming that project 4 is ruled out for now, from the spreadsheet the first project to upgrade the bottling plant has the highest PI at 0.27 and would be undertaken first. This would use Z$21 million of the Z$30 million available. As project 3, building the visitor and education centre has the next highest PI this would then be undertaken. There are insufficient funds to complete it in full so the Directors would need to determine whether it could be partly built rather than built in full. Assuming that the net realisable value is earned in proportion to the investment then 75% ([Z$30m – Z$21m]/Z$12m) of the net present value of Z$3m (i.e. Z$2.25m) would be generated. This would leave no funds available for project 2 and this would be abandoned.

If project 4 is considered a sound investment for the corporate image of the entity then this would reduce the value added to the business and there would be Z$1m less to invest in project 3.

Project 2 has a positive net present value and therefore if Grapple went ahead with it, value would be added to the business. It may be possible not to abandon this altogether but to delay the project until Grapple can acquire further funding.

WACC

There are two questions to answer here:

1. Will WACC change if there is a new issue of shares; and
2. Should Grapple be using WACC as a discount factor to appraise projects or should we be using the cost of equity.

Will WACC change?

WACC is calculated as an average cost of Grapple's finance (debt and equity) weighted according to the proportion of each element in the pool of funds. These weightings are based on the market values of the debt and equity. The cost of equity of Grapple is higher than the cost of debt. It therefore follows that WACC will increase if there is more equity in the capital structure. It will be above 8% and using this as a discount factor would cause the net present values of each project to reduce.

Should the cost of equity be used?

Grapple should not use the cost of equity just because the new project is being funded from equity. The new funds are being put into the pool of funds and Grapple is using all funding to operate the business. It is appropriate to use WACC. Further reasons would include:

1. It assumes that the level of gearing (the proportion of debt to equity) will remain unchanged for the foreseeable future. Grapple has not suggested that further finance will be issued or whether they wish to change the balance of debt to equity.
2. The projects to be undertaken do not change the business risk of Grapple I.e. they do not take Grapple into a different line of activity.
3. These new projects seem to be substantial and not insignificant to Grapple.

SECTION 2

Stages of Project Management

Whilst different models of project management suggest slightly different stages, the activities within them remain similar. It is worth noting that some of the stages may be carried out in conjunction with other sub-projects of this overall information systems project. This answer, however, treats it as a stand-alone project. Taking a simple five-stage approach to project management, the stages would be as follows:

Initiation - This appears to have been mainly completed, given that the Board have already approved the project, and carried out a cost-benefit analysis. The purpose of the stage is to determine whether or not to actually go ahead with a project, culminating in the production of a Project Initiation Document (PID). The activities which should have already been completed would be a business case, justifying the project, and an overview of the objectives and the risks involved. It would seem that the risk management has not yet been completed, but this is sometimes considered in the planning stage, and I would certainly recommend that takes place to minimise any potential impact on the project or its outcomes. The PID, if it has not already been produced, should include the objectives, scope, timeline and basic budget for the project. For example, the scope seems to suggest that the Big Data system will be for marketing only, so this project may not capture the data for other purposes.

Planning – This should include a comprehensive plan of all aspects of the project before the initiation actually takes place. An important element will be the work breakdown structure and network diagram, which will allow for the planning of individual activities such that the project can be completed in the most time-effective way possible. It will be necessary to determine dependencies such that there is no time wasted during the project. For example, it will be necessary to purchase the data storage hardware and software and install it, prior to beginning the data collection activities. Other elements of planning include the quality plan; again, this will be of vital importance. The quality of the project and its deliverables could influence whether we are in breach of data protection regulations. There should also be human resource planning, procurement planning, communications planning and budgeting taking place during this stage. Finally, there should be a plan for measurement of success, such that it will be possible to determine, post-completion, whether the project has been a success or not.

Implementation – This stage is where the project appears to get fully underway. The plans can be put into place. This will include the actual purchasing and installation of the hardware and software, as well as the training of staff and the design of the data collection, storage and analysis techniques.

Monitoring and Control – This stage usually takes place simultaneously with the implementation stage. The project manager should use exception reports to ascertain whether the project is on track. These can cover all the major constraints such as time, cost and scope. Projects should have defined gateways at which there are deliverables to be signed off by the project manager and any required stakeholders e.g. there could be a gateway when all hardware has been installed, requiring sign off by the project manager and the procurement and installation teams. Anything going off track should be recognised immediately and dealt with accordingly.

Completion – This stage comprises three key aspects; the closing of the project, the post-project review and the benefits review. The closing of the project is mainly administrative, ensuring all documentation has been completed, all deliverables are in place and all suppliers have been paid. The post-project review usually takes place a few months after completing the implementation stage and considers what went well or badly in the project itself. This could include whether it was completed on time, to budget, and included only the defined scope. It could also consider softer aspects such as how well-managed the project was and whether the team worked well together. Finally, the post-completion or benefits review would take place some months or sometimes even years after the project ends; sufficient time to see whether the listed benefits have been met. I have not seen the listed benefits for this particular project, but I assume there will be some specific sales growth targets or increase in brand recognition for example. It will be important to have sufficient data to measure these. It is at this final stage where any unintended benefits recognised will be discussed, as well as potential for future projects related to this one, perhaps, in this case, to extend the projected use of the system.

Risks associated with the Big Data

There are a number of risks associated with Big Data:

Availability of skills – Grapple is not a large organisation. We do not have a separate information technology department, so it may be that this service is provided mainly by external support. There may be a lack of skills to maintain the system. There is also the need to analyse the data on a continuing basis. The system will contain both structured and unstructured data and the analysis skills will need to be advanced to make use of the array of data available. This risk is increased as the data will constantly change and evolve, as will the systems from which it can be collected.

Security of data - The risk of an accidental leak of data, or of the deliberate hacking of data cannot be ignored. The reputational damage could be immense. Although Grapple is unlikely to hold end-customer banking information, there could still be damaging information leaked. Grapple will probably have a website requiring user logins and passwords. The leaking of these could cause great problems. Resources are needed to ensure the security, and these could be both expensive and technically difficult to maintain. Hackers become more sophisticated every day and new technologies are needed to ensure security against them

Data Protection - If the Big Data system collects information from social media sites, as suggested, then there is a chance that some personal data will be collected, against the wishes of an individual. The Data Protection Regulations Initiative allows the right to privacy and the right to have data erased. We would have to ensure that we were not breaching the strict regulations. There is a risk of prosecution if we do not adhere to these.

Failure to realise potential benefits – Big Data is a current theme, and many organisations may be tempted to utilise it because they do not wish to be left behind. However, if not planned and managed correctly, it could become a very expensive whim, which fails to payback its ongoing investment. The project suggests that Big Data will be used for marketing purposes only, but it could have so many more benefits, especially in production and product design. Our major competitors, Party Pops and Carnival, are using it in all aspects of their business.

SECTION 3

Balanced Scorecard

The Balanced Scorecard is a performance measurement system focused on four perspectives; financial, customer, internal business processes and learning and growth. Traditional performance measures focus on financial results, which have already occurred but the idea behind the scorecard is that the non-financial measures of the other perspectives all drive performance in the future.

The starting point for the scorecard is the mission or strategy, and so we could take the mission "*To combine the use of sustainable, high quality ingredients and expert manufacturing techniques to produce a unique soft drink experience" Roger Grapple, CEO* and consider what is needed both to measure this and to make it happen. Similarly, our strategy mentions 'premium products', 'expanding distribution', 'developing products' and 'superior taste', all of which should be considered important enough to be measured, if they appear in our strategy.

So, we could include measures such as the following, in each perspective (note, this is not a complete or definitive scorecard):

Financial - Increase in market share, Return on investment

Learning and Growth – Percentage of revenue from new products, percentage of revenue from new distribution channels

Customer – customer ratings of flavour/quality of products

Internal processes – Processing time, unit outputs from manufacturing processes, cycle time for developing new products

By introducing a scorecard and using it to replace traditional performance measurement, it brings in understanding of what drives success as well as an element of controllability e.g. understanding that new products drive future revenue and profitability, with a focus on time to develop them, should allow us to become efficient and effective in this part of our strategy.

If the scorecard is used for performance measurement it can encourage all areas of the organisation to work together to improve future performance.

Effective appraisal system for performance control

An effective appraisal system should be one which provides feedback and encourages positive behaviours for actions taken, thus controlling employee behaviour towards the desired outcomes. These outcomes should relate to the organisational objectives.

There are a number of elements required for an effective appraisal system, although these can be achieved through different approaches. It is important that an appraisal system has the support from senior managers or it is unlikely to be applied consistently throughout.

Targets – Employees must know what is expected of them if they are going to perform as we would wish. They must associate with these targets, as, if they don't feel they are relevant or achievable, they will not attempt to achieve them. We could select appropriate targets from a Balanced Scorecard which would be relevant to their role. So, for example, a sales manager's target could include an amount for sales of new products.

Informal/ongoing review – A good appraisal system needs monitoring and ongoing feedback, rather than simply telling someone at the end of a period whether they have done a good job or not. This means that behaviour can be adjusted along the way, making it more likely that positive outcomes will occur by the end of the appraisal period. This is beneficial for both the employee and the company. So, if a sales manager is failing to hit targets on sales of new products, assistance could be provided by sharing the techniques of those who are successfully doing so.

Formal Review – This should be a timetabled discussion between the manager and the employee. Sufficient time should be awarded and the employee should be given the opportunity to speak, perhaps even starting with a self-appraisal.

Action Plan – Following the formal review an action plan should be developed, including new targets for the next appraisal period.

Competitive Benchmarking

Benchmarking is "The establishment, through data gathering, of targets and comparators, that permit relative levels of performance (and particular areas of underperformance) to be identified." *CIMA Official Terminology*

Competitive benchmarking is where we gather data about key competitors, with an aim of learning from their best practices and learning from them so as to improve our practices. It is highly unlikely that competitors would be willing to supply us with information so this process may start with publicly available information. For example, we know that Party Pops and Carnival have high market share so we could begin by examining their accounts. Party Pops has the better profit before tax percentage (10.88%), as well as the highest market share (45%), so we could examine these in more detail.

Obviously, it will be difficult for us to see exactly how they achieve that, but the more data we gather, the better we are able to determine their processes. For example, we could reverse engineer their drinks to attempt to determine the ingredients within them, and thus establish the costs. It may even help us to determine the processes used if our analysis is sufficient. Price information is readily available.

Our gathering of Big Data may provide information such as how quickly Party Pops products leave the shelves in various retailers compared to our products. This could assist us in determining where to target our marketing. It could also be used to track social media sites to see what is trending in relation to their products, again, as a comparator for ours.

Therefore, we could use benchmarking to help determine good practices in terms of marketing, product design and production processes. We would need to be careful not just to use this to emulate Party Pops, but also to see where we can gain an advantage over them.

Alternatively, we could look at competitive benchmarking in other areas. For example, we could benchmark our production processes against those of Candy Drinks.

Benchmarking will only be useful if we act upon the results.

SECTION 4

Earnings per share (EPS)

Basic EPS is calculated as profit available for ordinary shareholders divided by the number of ordinary shares in issue [Profit for the year / Number of ordinary shares in issue]. It tells investors how much profit has been earned for each shareholder and therefore how much could be paid as a dividend if all profits were to be distributed. The ratio has increased this between last year and this year and this is a positive sign for shareholders. Roger should emphasise that.

During the year there has been a new issue of shares and this has increased the number in issue. The EPS would be calculated based on a weighted average number of shares in issue during the year. The fact that the ratio has improved from 15.8c to 22.5c suggests that there has been a significant increase in profit between the two years as the increase in the number of shares would have reduced the ratio. Again, Roger would do well to emphasise this.

The employee share option scheme will not affect the basic earnings per share but will have an impact on the diluted earnings per share (DEPS). DEPS must be presented on the face of the statement of profit or loss in addition to the basic EPS and it tells shareholders how much their current EPS may reduce in the future. It gives a worse - case scenario. It is calculated as the basic EPS but the number of ordinary shares also takes into account any potential shares that Grapple has a current obligation to issue in the future at below the current market value. The share options create such an obligation. The market price is currently Z$1.75 and the shares will be acquired for Z$1.50. As the price is below the current market value then Grapple will need to calculate the DEPS. The number of shares taken into account in the calculation would be based on the current number in issue and the equivalent number of shares that will be issued free of charge based on the difference between the current market price of Z$1.75 and the exercise price of Z$1.75. These options do not create adjustments to the current profit figures but the DEPS, if calculated this year, would be below 22.5c.

Relationships with external parties

Shareholders - It is going to be important to maintain a good relationship with our shareholders as they are essentially the owners of the business. Under the Agency Principle, our directors must act in the best interests of the shareholders. For example, if they do not feel that the Big Data initiative will pay off for the company, they could object.

Usually, shareholders would be classified as 'Keep Satisfied' on the stakeholder grid. They have voting power to prevent certain things from happening if they object, depending on the proportion of shareholders and can also vote with their feet by selling shares. A sudden flurry of selling activity could cause prices to fall and the value of the company to decline.

Therefore, our actions, and the way we communicate them, must be designed to keep our shareholders satisfied. As the shareholders do not see the way we work on a day-to-day basis, it is important that any communication we have with them is transparent and accurate so that they can make the best decisions for themselves. We have a duty to report reliably. So, when we discuss the effect on EPS of the share options, we must do so truthfully. We should also accurately communicate the strategies we are undertaking to grow their shareholder value. If we 'over-forecast' the outcomes of the Big Data project for example, they may rely on this for future growth.

Our Big Data initiative may actually be beneficial to this communication, as it will improve the availability of good data for reporting purposes, allowing us to maintain credibility with the shareholders.

Debt providers – shareholders are not the only external parties who provide finances to an organisation, our debt providers are also important external stakeholders. As at 30 June 2018, we had Z$16.5 million in loans. Although debt holders take priority, they may feel that increasing the sources of finance makes the company riskier. It is important to communicate with existing and potential finance providers of our ability to pay back any loans and of our expectations for future growth.

Providers of new debt finance will usually require detailed business justification for investment projects, again requiring robust and accurate reporting.

Government – There are statutory reporting requirements for a listed organisation, in addition to the standard statutory requirements. We must submit accounts in specified formats, using specific methods in many cases. Of course, we can maintain our own management accounts however we choose, but our published financial accounts must follow regulations and be submitted to a specified time frame.

Government communication also includes our taxation and statistical returns. It is highly important for these to be accurate and timely; an incorrect tax return can lead to legal consequences for the company. Accurate statistical analysis is important as economic analysis depends upon companies submitting up-to-date, relevant and accurate data.

External auditors – External auditors will review our financial accounts and our internal controls. These need to be much more rigorous now we are listed. It is important we have all the information available for them, including access to source documents. A good data system can store images of the source documents, making it easier to provide this communication.