

## **CGMA NOVEMBER 2016 EXAM ANSWERS**

### **Variant 4**

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#### **SECTION 1**

##### *Part 1*

This is not necessarily as straightforward an argument as it might at first appear.

Sustainability implies that ADF's operations will not affect the welfare of future generations if it switches to organic farming methods. It could be argued that organic farming is in tune with natural cycles of growth and harvest and so must be inherently sustainable. That is true, in the sense that a large farm could be used to sustain a dairy herd almost indefinitely. Organic farms could, in principle, keep operating and producing food into the indefinite future.

The problem with organic farms is one of scale. There has to be a reason for farmers paying for artificial fertilisers and feedstuff when they have organic alternatives that are readily available. If ADF switches to a purely sustainable and organic operation then the size of the herd will have to contract. It is unlikely that the fields will support as many as 1,600 cows. In terms of sustainability, that means that organic farming may leave future generations struggling to obtain sufficient food.

There is also a question of commercial sustainability. At present, all of ADF's cows are housed in four sheds, where they can easily be moved through the milking parlour twice every day with little or no human intervention. If the cows are released into the fields then it will become far more difficult to organise milking and more staff will be required. ADF is struggling to make a profit as it is and so it will become more difficult to remain afloat.

In terms of responsibility, it may appear that organic farming offers better animal welfare and healthier food, but that has to be proven. Cows can hardly express a preference for being housed in either a cow shed on an open field and so it is difficult to tell whether they are more contented. Some consumers believe that organic food is healthier, but that would have to be proven scientifically. A preference for organic food could be based on perceptions created by organisations such as Greengrass.

##### *Part 2*

The first strategic risk is that the dairy industry as a whole will move towards organic farming. The whole point of this exercise is to enable ADF to distinguish its product from the

competitions' products. The dairy farms are effectively forced to take the prices offered by the supermarkets and there is no reason to believe that they will be able to charge more just because their products are produced using organic methods. Some aspects of the shift to organic farming will be easy to reverse, such as moving the herd back into sheds. Other aspects will be more complicated, such as restoring crop growth after applying organic fertilisers.

Even if ADF is able to retain a significant share of the organic market, there is no guarantee that consumers will pay the premium that would cover the additional costs and compensate for lost production. In principle, market research may only go so far in establishing consumers' intentions. Consumers may claim that, in principle, they would be keen to buy organic produce or pay more for the sake of improved animal welfare, but they will actually have to incur the higher cost before ADF derives any benefit. Even if there is an uptake, any problems with Hiland's economy could see consumers quickly revert to less expensive foods.

Reverting to organic methods could lead to a disaster. A dairy farm is a system of living organisms, both plant and animal. Farmers may not have the skills required to raise cattle using organic methods. Social and geographical changes could leave cattle in fields more exposed to, say, diseases transmitted by wildlife or carried in the mud from other farms that may cling to tankers and other delivery vehicles. Diseases such as foot and mouth disease can devastate farms very quickly and ruin businesses.

The lack of clarity as to what is meant by organic farming could lead to controversy. For example, some activists might argue that ADF's approach to "humane" farming methods does not go far enough and that ADF's milk is not "organic". Even if ADF pays Greengrass to argue to the contrary, the danger is that the market will pay little attention to the detailed argument and will simply register the allegation that ADF's products are being inaccurately described. The financial cost of dealing with such a public relations issue could be substantial.

## SECTION 2

### *Part 1*

Our qualitative engagement with natural capital might include the manner in which we treat our herd. If we claim to operate on an organic basis then we should indicate how we ensure that we meet the animal welfare standards that are implied by that. We can indicate how we manage the herd to ensure that any sick or injured cows are treated quickly and humanely. We can indicate the extent to which we use veterinary support to restore cows to full health.

Our engagement with natural capital also includes our treatment of wildlife. ADF occupies a large area of land that provides a habitat for a variety of other creatures. Farmers regard some of those creatures as pests because they consume resources and spread diseases to the herd. The Integrated Report can indicate how we balance out stewardship of this natural habitat against the commercial considerations of running a farm and the animal welfare issues of protecting the herd.

Quantitative measures can include the extent to which we use the natural capital to create our products. For example, we use land and rainwater to grow grass and we use cows to convert that grass into milk. We could offer stakeholders quantitative measures of that process, such as the average milk yield per acre of land occupied by the farm. We could measure our interaction in other ways, such as the quantities of fertiliser used to replenish the soil to ensure a healthy crop of grass.

There could also be negative impact on natural capital that we should disclose in the interests of transparency. For example, even an organic farm will use tractors and other machinery that is powered by diesel. We might disclose the quantity of fuel burned. Other negatives could include the extent to which we used antibiotics in the treatment of cows or the quantities of animal feed that had to be shipped in to cover any shortfall.

### *Part 2*

The first thing that we must do is identify the cause of the disquiet. Are the original staff members concerned that they will be passed over in favour of the new appointments? Or do they simply resent having to adopt new working practices? The very fact that we take time to meet with them and discuss their concerns will go some way towards reassuring them.

It will help if we explain the reasons for the differences. The original employees will not necessarily accept those reasons, but they might at least accept that ADF will not revert to its previous practices. If the new methods are regarded as permanent then the employees will have an incentive to accept them, even if they do not particularly wish to do so. It will also help if a positive can be taken from the explanation, such as the shift to organic methods safeguarding jobs.

Training the original staff in organic methods will help demonstrate ADF's commitment. These employees are dependent on ADF for their homes as well as their jobs and so any positive commitment will be very encouraging. The training will ensure that the original employees can contribute fully and so reduce their perception that they may be made redundant. The investment will also make them more effective organic farmers, so ADF will benefit in other ways.

Asking the original employees to advise on the best way to implement the necessary changes will also help ensure that they feel valued. The consultation will give them the opportunity to air any grievances and settle any issues. It will also confirm that ADF values their experience and wishes to continue to benefit from it. Again, ADF could benefit because these employees may have insights based on their long experience of working on the farm.

## SECTION 3

### *Part 1*

We need to be careful to distinguish the value of Taverner's as a going concern, as opposed to its value to ADF. We need to start by establishing just how much of Taverner's capacity ADF will require and the extent to which the company will continue to be engaged in other business.

If we intend to have the bottling plant given over entirely to bottling ADF's milk then we need to consider Taverner's in terms of replacement cost. If we could build a suitable factory and staff it with suitably skilled workers for less than H\$4 million then we need not buy the factory.

If we intend to keep Taverner's operational as a going concern then we would value the basic company in terms of future earnings. We might find a quoted company that offers a similar service and multiply Taverner's earnings by the quoted company's P/E ratio.

In valuing Taverner's as a going concern, we can allow for the fact that we will be enhancing ADF's overall profits by selling bottled milk. We might still be willing to buy the company even if our model suggests that it is worth less than H\$4 million.

### *Part 2*

The integration issues will depend, in part, on the work that Taverner's has been doing previously. Milk has a very limited shelf life and so Taverner's will have to be able to cope with the need to bottle incoming tanker loads of milk and have them ready for shipment as quickly as possible. If Taverner's has been used to bottling non-perishable liquids such as, say, spring water then it will require a significant change to its operational tempo. It may be necessary to change working hours or shift patterns to accommodate the rhythms of a twice daily milking cycle on the farm.

Integration will be further complication by ADF's lack of experience in bottling and logistics. In the short term, there may be a great deal for both companies to learn and neither may possess the necessary skills and knowledge to ensure that the farm and the bottling plant work together efficiently. The lack of mutual understanding could lead to tensions that could even result in hostility. It will be necessary to ensure that there is frequent contact between ASF's Board and the management at the bottling factory.

### *Part 3*

Most risk models in finance provide a measure of volatility or sensitivity, such as a standard deviation or beta coefficient. Those figures can be valuable when valuing an asset in the context of a portfolio. They are not particularly relevant in this context because the success or failure of this investment could be hugely significant to the shareholders of ADF. It is not sufficient to apply a valuation model that takes account of risk because such models tend to allow for both upside and downside risks, whereas the downside risks are critically important to ADF's shareholders.

One approach would be to engage in scenario planning, mapping out what different conditions might mean for the success or failure of this investment. This might enable a range of outcomes to be identified, so that the shareholders can have an understanding of the best and worst scenarios. If the conditions that would lead to the worst possible case are unlikely then the risks might be worth taking, but if they appear all too possible then it may be better to pass on this opportunity. We might also consider whether there are less risky approaches. For example, we could let someone else buy Taverner's and then pay them to bottle our milk. That might be less profitable, but the downside risk would be far lower.

#### *Part 4*

Arguably, profits and wealth are linked and so they are not mutually exclusive, but Max does raise an interesting point.

Profit is largely about the short term maximisation of the surplus of revenue over expense. Clearly, it is desirable for any business to earn profits, but short term profitability can affect long term wealth.

As the Board of a family company (and family members), we are acting as custodians of an entity that will be passed on to future generations. We need to ensure that ADF has sufficient resources available to remain viable into the long term and so protect the wealth that has been created since ADF was founded.

The move to organic farming and the associated acquisition of the bottling plant has the potential to enhance the future prosperity of ADF. In the longer term, it may mean that the company can position itself as a supplier of a premium product.

In the short term, establishing ADF as a premium organic vendor will involve spending money on promotion and branding. It may be several years before that investment bears any fruit, but future generations of Anderson will benefit if we persevere.