
Answers

1 Fiag

Report

To: CEO of Fiag

From: A. Accountant

Date: Sept 20X5

Subject: Performance reporting and other management issues at Fiag

Introduction

This report evaluates the current performance report used by the board of Fiag, first against the accusations that it misrepresents performance and then, that it fails to measure Fiag's performance against its objectives. Second, justified recommendations of performance indicators arising from an analysis of the external business environment are offered. Finally, the report examines an issue associated with budget setting and its effect on staff rewards in the production department.

(a) (i) Manipulation of board report

The non-executive director (NED)'s criticism of the current report seems to have good reason. The problems lie in omitting bad news by using classifications some of which appear to select only a positive view of performance and some which manipulate commonly used performance indicators.

Omitting the bad news

The report gives only one industry average (operating margin) but does not provide a revenue growth comparator. While cost and detailed profit information is often difficult to obtain, the revenue figures are clearly reported for most entities and so it should be straight-forward to see if Fiag's fall of 6% is representative of the market as a whole.

The report does not calculate many of the year on year changes. This may be because important headings such as gross profit show a deteriorating performance. It could be argued that many of these calculations are unnecessary (such as for the detailed cost headings). However, no such case can be made for not showing the percentage fall in operating profit.

The revenue performance fall may be worse than portrayed as the range without the electrical bicycle has seen revenue fall from \$284m to \$248m (13%). This category covers 91% of the current revenue earned by Fiag.

Misclassification of costs

Exceptional costs relate to the development of the new electrical bicycle which appears to be part of the main activities and a central part of the strategy of the business. These costs should be considered normal. Their placement after the operating profit line means that key performance indicators such as return on capital employed are not affected so over-stating performance.

Administrative expenses includes government grant income which probably should be stated separately as it is material, short term and will not match to the full five years of costs associated with developing the electrical bicycle.

Commentary

The commentary appears misleading. It gives a positive impression of revenue growth by only selecting the growth in revenue from new models rather than noting the underperformance of the range as a whole. It quotes the improved profit before tax figure while ignoring the widely used operating profit figure, thereby bypassing the reason for the rise in profit before tax which is the fall in exceptional costs resulting from the completion of development of the new electrical bicycle model.

The description that a fall in operating margin is small ignores a number of facts. The fall is not 1.8% but 1.8 percentage points which is 27% on 20X4. Also, no reference is made to the industry comparator of 11% against which Fiag's 4.8% looks poor.

Thus, the commentary fails to address the falling revenue, gross profit and operating profit and so is not representing the performance of Fiag accurately.

(ii) Measuring the achievement of the objectives of Fiag

The critical measure of whether the report is fit for its purpose is that it shows whether the business is achieving its objectives. Fiag's overall objective is

- 'to give the shareholders sustainable growth in returns'

and it intends to do this by:

- developing the best quality bicycles;
- manufacturing the best quality bicycles;
- bringing the joy of cycling to a broad customer base in Beeland.

Overall, the report is in the format of a statement of profit or loss, so it contains a number of common financial measures, but these are only loosely connected to the stated mission. The following problems are noted about how the report measures the achievement of the objectives:

1. There is no direct measure of shareholder returns in the report, not even profit after tax which would allow an earnings calculation. There is no statement of the gains which shareholders would make in income (dividends paid) or capital terms. While it is not possible to give capital growth through share price rise as Fiag is unlisted, shareholder wealth changes could be measured through NPV or economic value added. Growth of the returns would require the change year on year of these indicators and this is only partially recognised in the existing report where not all growths are provided.
2. The sustainability of the returns are unclear from the report. These require the determinants of future performance to be measured. This should be done by examining the success of the supporting strategies.
3. The first two supporting strategies of the overall objective relate to the qualities of Fiag's products. The report does not measure these individually. There is an indirect measure of customer attitude through the revenue growth figure but without competitor comparison or a market share, it is not possible to draw a conclusion about any of the qualities of the products. These elements relating to the products are difficult to measure overall as they are likely to be dependent on each product line individually.
4. The objectives also make clear the need to separately measure development and manufacture.
 - (a) There are no separate categories for all new products although there is a note on revenue from the Zoam. The number of development projects, their state of completion and then their market performance all require to be monitored.
 - (b) There is little apart from the gross profit to indicate the efficiency of the manufacturing process.
5. The failures in points 3 and 4 reflect the choice to use only data from the financial systems in the report. The measurement of these aspects requires Fiag to move beyond its traditional information systems.
6. There is no measure of the customer base and so the broadening of the customer base cannot be commented upon. This final aspect would appear to be addressed by the Zoam which seems attractive to those who may previously have not been willing or able (elderly) to make the physical effort. This failure also reflects the lack of external competitor/market information in the report where the only external data given is the industry average operating margin.

Other aspects

From the perspective of a board report, it should provide information to allow the board to perform its tasks of planning for the future of Fiag and controlling its existing activities. For planning purposes, the lack of external information about customers and competitors makes some of the numbers difficult to interpret. For control purposes, there is previous year information given but not sufficient to establish a trend (which requires at least three years of information). Also, there is no indication of whether the business is meeting its budgets through the provision of variances.

In terms of presentation, the report is clear and in a traditional profit and loss format, would be easily understood by most readers. It uses terms which would be recognisable to those used to reading accounts. It is helpful that a narrative commentary is provided. However, problems with the quality of the narrative are noted above and often the commentary does not go beyond restating the figures in the table. It should provide the significant explanations for performance as measured by the key indicators which should be linked directly to the objectives of Fiag noted above.

(b) External business environment at Fiag

The political environment is characterised by government actions which appear aimed to increase the use of bicycles in Beeland. Tax allowances represent a financial incentive while the building of new cycle paths should make cycling safer and so increase participation. These factors are both beneficial to Fiag. Suitable indicators of the impact of these factors on Fiag would be the increased demand for their products (volumes purchased) and also the increased participation rates with total number of kilometres cycled or if this is not available, then total market size for bicycles in Beeland. It is not unusual for retailers to ask if customers were buying under a government scheme and if Fiag did this, it could measure how well it was exploiting this free sales promotion. The growth of these indicators should be compared with revenue growth at Fiag.

The broad economic environment is characterised by growth and the populace of Beeland has become wealthier. For Fiag, this should mean growing volumes and margins although the cost base (e.g. staff costs) will inflate too. Again, the size and growth of the overall market and Fiag's relative performance against these will show if it is developing a competitive advantage. The introduction of tariffs will increase the costs and can be measured at Fiag by the negative impact on profit margins.

The socio-cultural factors include demographic trends and changes in customers' tastes. The increasing interest in health should again be a factor in driving the consumers' taste towards cycling and so, as above, indicators of the market size/growth and Fiag's relative performance are relevant. The ageing demographic factor should seem to increase the attractiveness of the electrical bicycle over other models and so the market/growth of this particular sector and Fiag's share along with the relative performance of electrical bicycles against the traditional models at Fiag should be monitored. Fiag seems at the forefront of this development and should be seeking to maintain that competitive advantage.

Technology impacts on Fiag in two ways. First, the development of new models, such as the Zoam, where the lightweight aspect will further enhance the model's attractiveness especially to the elderly. In order to continue to monitor competitive advantage, the average weight of Fiag's models (especially the Zoam) should be compared to the average of its competitors. Second, new materials could improve further the contribution per unit as material costs are cut. The use of contribution or gross profit to measure this impact is plausible but may be indirect since this change may also influence the selling price. Therefore, a measure of direct material cost per unit would better capture the change.

(c) Production department

Fiag should consider measuring the SPM's performance against factors within her control. The use of general variances does not do this and these should be split into planning and operational variances.

Planning variances are those which arise due to inaccurate forecasts or standards in the original budget setting. Operational variances are then the remainder due to the decisions of operational managers. A planning variance is the difference between the original standard and a revised one set with the benefit of hindsight. An operational variance is the difference between this revised standard and actual performance. The SPM makes a reasonable case that she should not be penalised for poorly set budgets. The operational variances compare actual performance against a realistic standard set with the benefit of hindsight, eliminating misjudgements by senior management who set the budget.

The revised standard cost should have been \$268. Therefore, the variance controllable by the SPM was the total operational cost variance.

	\$m
Revised standard cost of production (\$268 x 85,000)	22.78
Actual cost	22.50
Total operational cost variance	0.28 F

The SPM is correct in feeling that she should have received a bonus as with the adjusted budget, it can be seen that her department has performed ahead of budget with a favourable variance. Fiag's senior management should consider a change to the definition of variance in such bonuses to include only the controllable variances, otherwise cases such as these will cause staff to ignore the bonuses as not achievable and lead to the loss of their motivational effect.

The extent of the problem in standard cost setting for Fiag is clear from the adverse planning variance:

	\$m
Revised standard cost (\$268 x 85,000)	22.78
Original standard cost (\$255 x 85,000)	21.675
Total planning cost variance	1.105 A

Fiag's senior management should examine what could be learned for the future from this case, exploring whether the imposition of tariffs could have been foreseen and could have been mitigated by, for example, purchasing from local suppliers so avoiding importing.

2 Gaddon

(a) Calculation of 20X4 G score

$$\begin{aligned}
 G_1 &= \text{Current assets/total assets} = (2,585 + 195)/42,670 = 0.065 \\
 G_2 &= \text{Earnings before interest, tax, depreciation, amortisation/total assets} = (-1,790 + 2,000)/42,670 = 0.005 \\
 G_3 &= \text{Revenue/total assets} = 51,840/42,670 = 1.215 \\
 G_4 &= \text{Total assets/non-current liabilities} = 42,670/24,000 = 1.778 \\
 \text{G score} &= (3 \times 0.065) + (4 \times 0.005) + (1.5 \times 1.215) + (1.2 \times 1.778) \\
 &= 0.195 + 0.020 + 1.823 + 2.134 \\
 &= 4.172
 \end{aligned}$$

Gaddon's G score lies in the interval between 4 and 6 where further analysis is needed to evaluate the probability of corporate failure. The G score is, however, close to 4, at which point Gaddon would be in danger of corporate failure.

Advantages of using quantitative models such as the G score

The calculation of the G score is relatively straightforward and uses information which is readily available from Gaddon's published accounts. This allows benchmarking against different organisations in the same industry, and evaluation of changes in the G score over time.

The G score is based on statistical correlations between financial ratios and past company failures. It is therefore an objective calculation which does not rely on individual judgement, and may be tailored to make it more relevant for organisations operating in different industries or countries.

Drawbacks of using quantitative models such as the G score

The G score is backwards looking and based on historical financial data for the company. This historical information may not be relevant for future performance. The financial data used in the calculation is from the company's published accounts for the year to June 20X4, and so is already over a year out of date. Events after the date of these accounts, such as the increase in

interest rates by the Central Bank of Jayland, could have caused Gaddon's financial situation to have improved or deteriorated significantly. By September 20X5, Gaddon had already defaulted on payment of its debt to the bank. The continuing support, or otherwise, of the bank is likely to be a clearer indicator of corporate failure than is the G score calculated using historic financial data.

Also, the G score only predicts whether corporate failure is likely to occur in the next two years, one of which has already elapsed. It therefore is able to predict corporate failure for only a relatively short amount of time.

The individual weighting of the elements of the score may not be relevant to Gaddon. The model was developed by academics at JSB and is specific to companies in Jayland. It is, however, based on statistical analysis of all companies quoted on the Jayland stock exchange. This will include companies operating in quite different sectors to Gaddon, such as manufacturing and banking, which might make it misleading to apply to a gymnasium operator.

The published accounts of companies approaching corporate failure may be more subject to manipulation and creative accounting than other companies. This may limit the usefulness of calculating the G score, though there is no evidence for this happening at Gaddon.

The calculation of the G score alone may be insufficient to predict corporate failure, and further analysis such as cash flow analysis, or evaluation of the external environment, may be required as well. In particular, the G score is most predictive when the score is low or high. There is a grey area where the G score is between 4 and 6, where no clear prediction is made as to the probability of corporate failure.

(b) Importance of liquidity indicators in predicting corporate failure

As companies approach corporate failure, their published accounts are more likely to be manipulated or have changes in accounting policies which affect profit. Liquidity indicators are important, and often more reliable than profit-based indicators, because cash is much harder to manipulate in published accounts than profit, which contains subjective judgements and estimates.

The company's cash position has deteriorated significantly (by 89% between 20X3 and 20X4), to the point in September 20X5 where it has had to default on loan payments in order to pay staff wages and trade payables. This deterioration is due to the cash required for the setting up of the 60 new gymnasiums in Veeland, and also due to the operating losses the company has suffered as a result of lower than anticipated customer numbers there.

It appears that the CEO has not adequately considered liquidity in her financial evaluation of the expansion. The borrowing costs have not been considered, nor apparently the need for liquidity to repay the loans.

A commonly used measure of liquidity is the current ratio, which is the current assets divided by the current liabilities. The current ratio has also deteriorated significantly 3.85:1 $((1,620 + 1,750)/875)$ in 20X3 to 1.88:1 $((2,585 + 195)/1,475)$ in 20X4. This means Gaddon is less able to pay its current liabilities as they fall due. Used alone, the current ratio is not a good indicator of corporate failure as it assumes the company can liquidate all its current assets to pay creditors, which is not true in reality. It is unclear what customers' payment terms are, though it is likely that they either pay in advance or as they use the gymnasiums. Gaddon is unlikely to have difficulty converting its revenue into cash, which would be another indicator of corporate failure. Instead, the negative free cash flow arises from negative operating profitability and high interest costs.

Another important indicator of liquidity to assess whether Gaddon is at risk of corporate failure is its interest cover ratio; that is the relationship between the operating cash flows of the business and its interest payments. In 20X4, the interest cover is 0.175 $((-1,790 + 2,000)/1,200)$, which is very low. An interest cover below the range of between 2 and 5 is a strong indicator of corporate failure.

A much better predictor of corporate failure is the ratio of free cash flow to total non-current liabilities. In 20X3, this was 38:1 $(3,800/100)$ and in 20X4, it was -0.13 $(-3,200/24,000)$. This is a significant decrease. Having a negative free cash flow, Gaddon is already defaulting on its debt payments and breaching loan covenants with its lenders. Without the continuing support of lenders, Gaddon will be unable to avoid corporate failure.

As the company has missed the July and August 20X5 instalments on the loan repayments, it seems that the liquidity is continuing to deteriorate, and this must indicate a high probability of corporate failure. Even if Gaddon were to become profitable again in the future, without sufficient cash the company may continue to breach lenders' covenants and will be unable to pay lenders and creditors, who may eventually force the company into liquidation.

The liquidity indicators calculated, together with the negative operating profit in 20X5, do therefore indicate that Gaddon is close to corporate failure and is probably only able to continue trading because of support from its lenders.

(c) Failure of a major project

The transition from a previously successful business into a failing one is often due to a major project, investment or acquisition which goes very wrong. This appears to be the case with Gaddon. It had operated successfully for many years, but was facing corporate failure within a year of commencing an overambitious expansion project. The root cause of why this happened seems to stem from poor management and poor financial controls.

Management failings

The CEO appears to be relatively inexperienced. Furthermore, the other board members appear not to have the skills and experience to support her, at least not in the formation of strategy. There seems to have been little impetus in developing strategy in the past, and the board relied on the CEO for strategic direction.

The CEO seems to have little commercial acumen in setting up gymnasiums in a country where the citizens are not interested in sport or physical exercise. However, the other board members should have challenged the CEO strongly about their concerns and the risks of the project.

To improve performance in the formation of strategy in the future, Gaddon needs to appoint board members who have the skills and experience to drive strategy formulation, and the willingness to challenge the CEO.

Poor financial controls

The finance director left the company soon after the expansion plan was brought up. He was apparently not replaced and the CEO undertook the financial evaluation of the project herself. As a result, possibly due to her lack of skills or experience, some fundamental aspects of the future performance of the new gymnasiums were not considered, resulting in operating losses. Nor were the liquidity requirements of the project adequately considered.

To prevent this recurring, Gaddon should develop clear performance criteria for the evaluation of new investments or projects. The business must ensure that it has the staff with the necessary skills and experience to undertake investment appraisal and to be able to evaluate risks in the external environment.

Changes in the external environment

Gaddon must ensure that it fully evaluates risks in the external environment when appraising new investments, for example, by using a PEST analysis. It is unclear whether the rise in interest rates in Jayland could have been foreseen, but this change in the external environment greatly compounded the liquidity problems caused by the overambitious expansion plans.

3 Harry

- (a) The performance pyramid aims to link the drivers of performance with the traditional financial results through the different layers of an organisation.

It is based on the belief that each level of an organisation has different concerns but they must support each other in order to achieve the overall objective (vision) of the organisation. The aim is to produce a set of performance measures which covers the outputs (traditionally financial) and the drivers of those outputs. The pyramid shape is to emphasise that the measures should support this vision, through all layers of the organisation (from operational to strategic). Thus the vision flows down through each layer generating appropriate measures which, in turn, support it.

The pyramid is split vertically between the driving forces of customer satisfaction (external) and flexibility/productivity (internal). These forces are monitored and controlled via measures at the operational level which cover day-to-day issues of quality, delivery, and the cycle time of different processes and waste.

Some of the terms in the pyramid are well understood but others are more specific to the model. Flexibility is a concept which indicates the business systems' ability to change in response to internal and external factors such as customer needs. Cycle time relates to all processes in the organisation from the credit cycle to product development to order processing. Waste is a general term relating to the optimal utilisation of the business's resources and elimination of non-value adding activities.

- (b) There are four operational headings in the pyramid which shall be considered in turn.

Waste is about optimal use of resources and minimisation of non-value adding activity. There are 1.05 million keyboards produced but this only represents 86% utilisation of the capacity of the factory (2,695,680 minutes of production line time are available at 2.2 minutes per keyboard meaning that the factory can produce 1,225,309 at full capacity). Therefore, capital invested in the factory is under-utilised, although an 80+% utilisation would be considered efficient for many manufacturing operations.

Quality can be measured through four cost types: inspection and prevention costs (which represent the costs of preventing faults in the production process and inspecting to avoid faulty goods leaving the factory) and internal and external failure costs (which are costs resulting from faulty goods being identified before and after delivery to the customer). There are no data given for 20X5 on the costs of inspection and prevention. However, the effectiveness of inspection can be measured in that only 0.4% of orders were returned while inspection stopped the delivery of 1.5% of faulty goods. There was a loss of \$50,400 at standard cost from the scrapping of faulty keyboards although 60% of faulty boards identified were able to be repaired. The effectiveness of prevention can be measured in that there is a roughly 1.9% failure rate in total, which must reflect the good production practice at the factory. There are data on measures of the costs of internal failure from reworking goods (\$18,900). But there are no data on the costs of external failures from 0.4% of customer returns which may incur further repair or warranty claim costs.

Delivery has been outsourced to Achall and Harry is reliant on Achall to provide the data on the quality of Achall's own service. This represents a risk which Harry can control by monitoring its own customer feedback to identify if Achall is under-reporting the late deliveries. Based on Achall's data, 92% of orders are delivered on time at an average time of 3.4 days.

Cycle time for working capital is being measured but this should be done for all the significant processes in Harry. The processes which have been identified so far are setting up production lines, running the production on an order and delivering the order. Measurement of production cycle times is likely to be particularly important in assessing the efficiency of such a cost-conscious business. There are data on delivery time (3.4 days on average) and on production time (2.2 minutes per production line). These should appear in the pyramid of indicators if they are deemed sufficiently important.

- (c) In order to understand the issues surrounding measurement of non-financial indicators, it is necessary first to consider the more commonly used financial ones. Financial indicators will be produced by Harray's financial systems. These systems will generate much of the cost information used, for example, in measuring the costs of quality. They are internally controlled and additionally monitored by the external auditors of the organisation. Such systems are by definition working with easily quantified data (invoice values). For these reasons, they are likely to be the most reliable data available.

However, for the measurement of headings such as cycle time, the data are often going to be non-financial. Cycle time requires measuring how long processes take, for example, the length of time it takes a production line to produce a keyboard. These data are within the control of Harray and the data will be obtained by production records and interviewing the key personnel. However, they will not be subject to the checking and controls over financial data and, therefore, may be more prone to error.

Other non-financial data used may come from external sources. For example, at Harray, they are using the delivery data of Achall. This data must be treated carefully as there is an incentive for Achall to under-report late deliveries as there may be penalties for such non-performance in their contract with Harray (there is also the threat of losing the contract). Harray will want to ensure that Achall's data is reliable by checking it against its own customer complaint records. Also, the definition of non-financial data is more subjective, for example, what constitutes a late delivery (though this should be consistent with the service level agreed in the contract).

[Tutorial note: *There is a wide variety of possible answers to this question which will be given credit, provided they are consistent with part (b).*]

1 Fiag

(a) (i) Misrepresentation by report

1 mark per point including:

Omitted industry averages

Omitted certain year on year changes

Misclassification of costs: exceptional costs and grant income

Commentary misleading

Additional credit given where points are correctly supported by calculations

Maximum 12 marks

(ii) Measuring the achievement of the objectives of Fiag

Breakdown objectives of Fiag – up to 2 marks

Show hierarchy and break into measurable parts

Measurement of objectives within the report – up to 10 marks

Other points – up to 4 marks

Maximum 14 marks

(b) External business environment

For each of political, economic, socio-cultural, technological:

Discussion of the relevant issue in the PEST analysis – up to 2 marks

Justification of suggested KPIs on the issue – up to 2 marks

Points must be related to Fiag's business.

Maximum 12 marks

(c) General definitions and discussion of planning and operational variances – up to 3 marks

Calculations:

Operational variance 1

Planning variance 1

Conclusion on SPM's bonus 1

Comments on actions for senior management going forward – up to 4 marks

Maximum 8 marks

Professional presentation – 4 marks

Total 50 marks

2 Gaddon

(a) Calculations

Each element of the G score – 1 mark

Conclusion based on G score – 1 mark

Advantages of quantitative models – up to 4 marks

Disadvantages of quantitative models – up to 4 marks

Maximum 10 marks

(b) Calculations – up to 3 marks

Commentary – 1 mark per relevant point

Maximum 8 marks

(c) Factors leading to corporate failure – 1 mark per point

Maximum 7 marks

Total 25 marks

3 Harray

(a) Performance pyramid

1 mark per point:

- Link indicators to vision
- Need for indicators of performance drivers
- Indicators should run through three levels
- Split between external and internal views
- Objectives flow down and measures consolidate upwards
- Explanation of specific terms in the model – flexibility, cycle time and waste
- Other reasonable points, e.g. use of examples from the scenario to illustrate points

Maximum 6 marks

(b) Operational indicators

1 mark for correct calculation of a suitable indicator and 1 mark for each point in commentary

- Waste – up to 4 marks
- Quality – up to 6 marks
- Delivery – up to 4 marks
- Cycle time – up to 3 marks

Maximum 12 marks

(c) NFPIs

1 mark per point:

- Financial systems more heavily checked (audit)
- Financial data is obviously quantified
- Internal systems more easily controlled
- Sources of data for NFPIs
- External data used is potentially more unreliable
- Application of a suitable example at Harray to each point

Maximum 7 marks

Total 25 marks