

CHAPTER 23

PERFORMANCE MEASUREMENT, COMPENSATION, AND MULTINATIONAL CONSIDERATIONS

23-20 (25min.) Financial and nonfinancial performance measures, goal congruence.

1. Operating income is a good summary measure of short-term financial performance. By itself, however, it does not indicate whether operating income in the short run was earned by taking actions that would lead to long-run competitive advantage. For example, Summit's divisions might be able to increase short-run operating income by producing more product while ignoring quality or rework. Harrington, however, would like to see division managers increase operating income without sacrificing quality. The new performance measures take a balanced scorecard approach by evaluating and rewarding managers on the basis of direct measures (such as rework costs, on-time delivery performance, and sales returns). This motivates managers to take actions that Harrington believes will increase operating income now and in the future. The nonoperating income measures serve as surrogate measures of future profitability.

2. The semiannual installments and total bonus for the Charter Division are calculated as follows:

Charter Division Bonus Calculation For Year Ended December 31, 2000

January 1, 2000 to June 30, 2000		
Profitability	$(0.02 \times \$462,000)$	\$ 9,240
Rework	$(0.02 \times \$462,000) - \$11,500$	(2,260)
On-time delivery	No bonus—under 96%	0
Sales returns	$[(0.015 \times \$4,200,000) - \$84,000] \times 50\%$	<u>(10,500)</u>
Semiannual installment		<u>\$ (3,520)</u>
Semiannual bonus awarded		<u><u>\$ 0</u></u>
July 1, 2000 to December 31, 2000		
Profitability	$(0.02 \times \$440,000)$	\$ 8,800
Rework	$(0.02 \times \$440,000) - \$11,000$	(2,200)
On-time delivery	96% to 98%	2,000
Sales returns	$[(0.015 \times \$4,400,000) - \$70,000] \times 50\%$	<u>(2,000)</u>
Semiannual installment		<u>\$ 6,600</u>
Semiannual bonus awarded		<u><u>\$ 6,600</u></u>
Total bonus awarded for the year		<u><u>\$ 6,600</u></u>

The semiannual installments and total bonus for the Mesa Division are calculated as follows:

**Mesa Division Bonus Calculation
For Year Ended December 31, 2000**

January 1, 2000 to June 30, 2000		
Profitability	(0.02 × \$342,000)	\$ 6,840
Rework	(0.02 × \$342,000) – \$6,000	0
On-time delivery	Over 98%	5,000
Sales returns	[(0.015 × \$2,850,000) – \$44,750] × 50%	<u>(1,000)</u>
Semiannual bonus installment		<u>\$10,840</u>
Semiannual bonus awarded		<u>\$10,840</u>
July 1, 2000 to December 31, 2000		
Profitability	(0.02 × \$406,000)	\$ 8,120
Rework	(0.02 × \$406,000) – \$8,000	0
On-time delivery	No bonus—under 96%	0
Sales returns	[(0.015 × \$2,900,000) – \$42,500] which is greater than zero, yielding a bonus of	<u>3,000</u>
Semiannual bonus installment		<u>\$11,120</u>
Semiannual bonus awarded		<u>\$11,120</u>
Total bonus awarded for the year		<u>\$21,960</u>

3. The manager of the Charter Division is likely to be frustrated by the new plan, as the division bonus is more than \$20,000 less than the previous year. However, the new performance measures have begun to have the desired effect—both on-time deliveries and sales returns improved in the second half of the year, while rework costs were relatively even. If the division continues to improve at the same rate, the Charter bonus could approximate or exceed what it was under the old plan.

The manager of the Mesa Division should be as satisfied with the new plan as with the old plan, as the bonus is almost equivalent. However, there is no sign of improvements in the performance measures instituted by Harrington in this division; as a matter of fact, on-time deliveries declined considerably in the second half of the year. Unless the manager institutes better controls, the bonus situation may not be as favorable in the future. This could motivate the manager to improve in the future but currently, at least, the manager has been able to maintain his bonus without showing improvements in the areas targeted by Harrington.

Ben Harrington's revised bonus plan for the Charter Division fostered the following improvements in the second half of the year despite an increase in sales:

- increase of 1.9% in on-time deliveries.
- \$500 reduction in rework costs.
- \$14,000 reduction in sales returns.

However, operating income as a percent of sales has decreased (11 to 10%).

The Mesa Division's bonus has remained at the status quo as a result of the following effects

- increase of 2.0 % in operating income as a percent of sales (12% to 14%).
- decrease of 3.6% in on-time deliveries.
- \$2,000 increase in rework costs.
- \$2,250 decrease in sales returns.

This would suggest that there needs to be some revisions to the bonus plan. Possible changes include:

- increasing the weights put on on-time deliveries, rework costs, and sales returns in the performance measures while decreasing the weight put on operating income.
- a reward structure for rework costs that are below 2% of operating income that would encourage managers to drive costs lower.
- reviewing the whole year in total. The bonus plan should carry forward the negative amounts for one six-month period into the next six-month period incorporating the entire year when calculating a bonus.
- developing benchmarks, and then giving rewards for improvements over prior periods and encouraging continuous improvement.

23-26 (20–30 min.) Risk sharing, incentives, benchmarking, multiple tasks.

1. An evaluation of the three proposals to compensate Marks, the general manager of the Dexter Division follows:

- (i) Paying Marks a flat salary will not subject Marks to any risk, but will provide no incentives for Marks to undertake extra physical and mental effort.
- (ii) Rewarding Marks only on the basis of Dexter Division's ROI would motivate Marks to put in extra effort to increase ROI because Marks's rewards would increase with increases in ROI. But compensating Marks solely on the basis of ROI subjects Marks to excessive risk because the division's ROI depends not only on Marks's effort but also on other random factors over which Marks has no control. For example, Marks may put in a great deal of effort, but, despite this effort, the division's ROI may be low because of adverse factors (such as high interest rates or a recession) which Marks cannot control.

To compensate Marks for taking on uncontrollable risk, AMCO must pay him additional amounts within the structure of the ROI-based arrangement. Thus, compensating Marks only on the basis of performance-based incentives will cost AMCO more money, on average, than paying Marks a flat salary. The key question is whether the benefits of motivating additional effort justify the higher costs of performance-based rewards.

Furthermore, the objective of maximizing ROI may induce Marks to reject projects that, from the viewpoint of the organization as a whole, should be accepted. This would occur for projects that would reduce Marks's overall ROI but which would earn a return greater than the required rate of return for that project.

- (iii) The motivation for having some salary and some performance-based bonus in compensation arrangements is to balance the benefits of incentives against the extra costs of imposing uncontrollable risk on the manager.

2. Marks's complaint does not appear to be valid. The senior management of AMCO is proposing to benchmark Marks's performance using a relative performance evaluation (RPE) system. RPE controls for common uncontrollable factors that similarly affect the performance of managers operating in the same environments (for example, the same industry). If business conditions for car battery manufacturers are good, all businesses manufacturing car batteries will probably perform well. A superior indicator of Marks's performance is how well Marks performed relative to his peers. The goal is to filter out the common noise to get a better understanding of Marks's performance. Marks's complaint will be valid only if there are significant differences in investments, assets, and the business environment in which AMCO and Tiara operate. Given the information in the problem, this does not appear to be the case.

3. Superior performance measures change significantly with the manager's performance and not very much with changes in factors that are beyond the manager's control. If Marks has no authority for making capital investment decisions, then ROI is not a good measure of Marks's performance—it varies with the actions taken by others rather than the actions taken by Marks. AMCO may wish to evaluate Marks on the basis of operating income rather than ROI.

ROI, however, may be a good measure to evaluate Dexter's economic viability. Senior management at AMCO could use ROI to evaluate if the Dexter Division's income provides a reasonable return on investment, regardless of who has authority for making capital investment decisions. That is, ROI may be an inappropriate measure of Marks's performance but a reasonable measure of the economic viability of the Dexter Division. If, for whatever reasons—bad capital investments, weak economic conditions, etc.—the Division shows poor economic performance, as computed by ROI, AMCO management may decide to shut down the division even though they may simultaneously conclude that Marks performed well.

4. There are two main concerns with Marks's plans. First, creating very strong sales incentives imposes excessive risk on the sales force, because a salesperson's performance is affected not only by his or her own effort, but also by random factors (such as a recession in the industry) that are beyond the salesperson's control. If salespersons are risk averse, the firm will have to compensate them for bearing this extra uncontrollable risk. Second, compensating salespersons only on the basis of sales creates strong incentives to sell, but may result in lower levels of customer service and sales support (this was the story at Sears auto repair shops where a change in the contractual terms of mechanics to "produce" more repairs caused unobservable quality to be negatively affected). Where employees perform multiple tasks, it may be important to "blunt" incentives on those aspects of the job that can be measured well (for example, sales) to try and achieve a better balance of the two tasks (for example, sales and customer service and support). In addition, the division should try to better monitor customer service and customer satisfaction through surveys, or through quantifying the amount of repeat business.

23-27 (30min.) Relevant costs, performance evaluation, goal congruence.

This problem illustrates the dysfunctional behavior that could be motivated by arbitrary allocations of corporate overhead to profit-conscious divisional managers.

1. Without the \$800,000 in sales from the low-margin product line in the Andorian Division, the second quarter operating statements (in thousands) will be:

<u>Andorian</u>	<u>Orion</u>	<u>Tribble</u>	<u>Total</u>	
Net sales	<u>\$1,200</u>	<u>\$1,200</u>	<u>\$1,600</u>	<u>\$4,000</u>
Cost of sales	450	540	640	1,630
Divisional overhead	<u>150</u>	<u>125</u>	<u>160</u>	<u>435</u>
Divisional contribution	600	535	800	1,935
Corporate overhead	<u>288</u>	<u>288</u>	<u>384</u>	<u>960</u>
Operating income	<u>\$ 312</u>	<u>\$ 247</u>	<u>\$ 416</u>	<u>\$ 975</u>

2. The company is worse off as a result of dropping the low profitability line of products because it has lost \$100,000 in contribution margin from the dropped product line with no reduction in corporate overhead. Total operating income decreases from \$1,075,000 in the first quarter to \$975,000 in the second quarter.

3. The Andorian Division manager's performance evaluation measure (divisional operating income) is higher (\$312,000 in the second quarter versus \$300,000 in the first quarter) as a result of dropping the low-profitability product line. The Andorian Division manager is able to show a \$12,000 higher operating income because the \$100,000 in lost contribution margin from the dropped product line is more than offset by the \$112,000 reduction in corporate overhead that is charged to the Andorian Division. Andorian Division sales are now only 30% of corporate sales rather than the previous 41.7% of sales (so 30% of total corporate overhead costs of \$960,000 equal to \$288,000 are allocated to the Andorian Division in the second quarter, whereas 41.7% of \$960,000 equal to \$400,000 are allocated to the Andorian Division in the first quarter).

4. The easiest solution is to not allocate fixed corporate overhead to divisions. Then, the problem of dysfunctional behavior will not arise. But central management may want the division managers to "see" the cost of corporate operations so that they will understand that the corporation as a whole is not profitable unless the combined divisions' contribution margins exceed corporate overhead. In this case, an allocation basis should be chosen that is not manipulable or under the control of division managers. It must also have the property that the action taken by one division does not affect the corporate overhead allocations that get made to the other divisions (as occurred in the second quarter for the company).

In general, a lump sum allocation based on, say, budgeted net income, or budgeted assets, rather than an allocation that varies proportionately with an actual measure of activity (such as sales or actual net income) will minimize dysfunctional behavior. The allocation should be such that managers treat it as a fixed, unavoidable charge, rather than a charge that will vary with the decisions they make. Of course, a potential disadvantage of this proposal is that managers may try to underbudget the amounts that serve as the cost allocation bases, so that their divisions get less of the corporate overhead charges.