CHAPTER 23
PERFORMANCE MEASUREMENT, COMPENSATION, AND MULTINATIONAL CONSIDERATIONS

23-32 (20–30 min.) Division manager's compensation, risk sharing, incentives.

(Continuation of 23-31)

1. Consider each of the three proposals that the management of Mason Industries is considering:

a. *Compensate Grieco on the basis of a fixed salary without any bonus.*

Paying Grieco a flat salary will not subject Grieco to any risk, but will provide no incentives for Grieco to undertake extra physical and mental effort.

b. *Compensate Grieco on the basis of division residual income (RI).*

The benefit of this arrangement is that Grieco would be motivated to put in extra effort to increase RI because Grieco's rewards would increase with increases in RI. But compensating Grieco largely on the basis of RI subjects Grieco to excessive risk, because the division's RI depends not only on Grieco's effort but also on random factors over which Grieco has no control. Grieco may put in a great deal of effort, but the division's RI may be low because of adverse factors (high interest rates, recession) that the manager cannot control. For example, general market conditions will influence Grieco's revenues and costs.

To compensate Grieco for taking on uncontrollable risk, Mason Industries must pay her additional amounts within the structure of the RI-based arrangement. Thus, only using performance-based incentives costs Mason more money, on average, than paying a flat salary. The key question is whether the benefits of motivating additional effort justify the higher costs of performance-based rewards.

c. *Compensate Grieco using other companies that also manufacture go-carts and recreational vehicles as a benchmark.*

The benefit of benchmarking or relative performance evaluation is to cancel out the effects of common noncontrollable factors that affect a performance measure. Taking out the effects of these factors provides better information about management performance. However, benchmarking and relative performance evaluation are effective only when similar noncontrollable factors affect each of the companies in the benchmark group. If this is the case, as it appears to be here, benchmarking is a good idea. If, however, the companies in the benchmark group are not exactly comparable because, for example, they have other areas of business that cannot be separated from their go-cart and recreational vehicle business, or they operate under different market conditions, benchmarking may not be a good idea. If the noncontrollable factors are not the same, then comparing the RI of Grieco's division to the RI of the other companies will not provide useful relative performance evaluation information.

2. Mason should use a compensation arrangement that includes both a salary component and a bonus component based on residual income. The motivation for having some salary and some performance-based bonus in Grieco's compensation is to balance the benefits of incentives against the extra costs of imposing uncontrollable risk on the manager. If similar noncontrollable factors affect the performance of the benchmark companies that also manufacture and sell go-carts and recreational vehicles, I would

recommend that the bonus be based on the JSD's residual income relative to the residual income earned by the benchmark companies.

23-33 (30–40 min.) ROI, RI, investment decisions.

1.

	Revenue / Total Assets	×	Operating Income / Revenues	=	Operating Income / Total Assets
2000					
Newspapers	0.939		0.239		0.224
Television	2.133		0.025		0.053
Film Studios	0.635		0.121		0.077
*1999**					
Newspapers	1.023		0.200		0.205
Television	2.222		0.022		0.048
Film Studios	0.640		0.137		0.088

*Not Required

The Newspaper Division has a high ROI because of its high income margin. The Television Division has a low ROI despite a high investment turnover because of its very low income margin. The Film Studios Division has a low ROI despite a reasonably high income margin because of its low investment turnover.

2. Although the proposed investment is small, relative to the total assets invested, it earns less than the 2000 return on investment (0.224) [or the 1999 return on investment (0.205)] (All dollar numbers in millions):

$$\text{2000 ROI (before proposal)} = \frac{\$1{,}100}{\$4{,}900} = 0.224$$

$$\text{Investment proposal ROI} = \frac{\$30}{\$200} = 0.150$$

$$\text{2000 ROI (with proposal)} = \frac{\$1{,}130}{\$5{,}100} = 0.222$$

Given the existing bonus plan, any proposal that reduces the ROI is unattractive.

3. Residual income for 2000 (before proposal, in millions):

	Operating Income		Imputed Interest Charge		Division Residual Income
Newspapers	$1,100	–	$588 (0.12 × $4,900)	=	$ 512
Television	160	–	360 (0.12 × $3,000)	=	(200)
Film Studios	200	–	312 (0.12 × $2,600)	=	(112)

4. Residual income for proposal (in millions):

	Operating Income		Imputed Interest Charge		Residual Income
	$30	–	$24(0.12 × $200)	=	$6

Investing in the fast-speed printing press will increase the Newspaper Division's residual income. Hence, if Kearney is evaluated using a residual income measure, Kearney would be much more willing to adopt the printing press proposal.

23-34 (20–30 min.) **Division manager's compensation.** (Continuation of 23-33)

Consider each of the three proposals that Rupert Prince is considering:

1. *Compensate managers on the basis of division ROI.*

The benefit of this arrangement is that managers would be motivated to put in extra effort to increase ROI because managers' rewards would increase with increases in ROI. But compensating managers largely on the basis of ROI subjects the managers to excessive risk, because each division's ROI depends not only on the manager's effort but also on random factors over which the manager has no control. A manager may put in a great deal of effort, but the division's ROI may be low because of adverse factors (high interest, recession) that the manager cannot control.

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

Finally, rewarding a manager only on the basis of division ROI will induce managers to maximize the division's ROI even if taking such actions are not in the best interests of the company as a whole.

2. *Compensate managers on the basis of companywide ROI.*

Rewarding managers on the basis of companywide ROI will motivate managers to take actions that are in the best interests of the company rather than actions that maximize a division's ROI.

A negative feature of this arrangement is that each division manager's compensation will now depend not only on the performance of that division manager but also on the performance of the other division managers. For example, the compensation of Ken Kearney, the manager of the Newspaper Division, will depend on how well the managers of the Television and Film studios perform, even though Kearney himself may have little influence over the performance of these divisions. Hence, compensating managers on the basis of companywide ROI will impose extra risk on each division manager.

3. *Compensate managers using the other divisions' average ROI as a benchmark*.

The benefit of benchmarking or relative performance evaluation is to cancel out the effects of common noncontrollable factors that affect a performance measure. Taking out the effects of these factors provides better information about a manager's performance. What is critical, however, for benchmarking and relative performance evaluation to be effective is that similar noncontrollable factors affect each division. It is not clear that the same noncontrollable factors that affect the performance of the Newspaper Division (cost of newsprint paper, for example) also affect the performance of the Television and Film studios divisions. If the noncontrollable factors are not the same, then comparing the ROI of one division to the average ROI of the other two divisions will not provide useful information for relative performance evaluation.

A second factor for Prince to consider is the impact that benchmarking and relative performance evaluation will have on the incentives for the division managers of the Newspaper, Television, and Film studios Divisions to cooperate with one another. Benchmarking one division against another means that a division manager will look good by improving his or her own performance, or by making the performance of the other division managers look bad.

23-36 (30 min.) ROI, RI.

1. $$\text{ROS} = \frac{\text{Operating Income}}{\text{Sales}} = \frac{1{,}800{,}000}{15{,}000{,}000} = 12\%$$

$$\text{ROI} = \frac{\text{Operating Income}}{\text{Total Assets}} = \frac{1{,}800{,}000}{10{,}000{,}000} = 18\%$$

2a. $$\text{ROI} = 20\% = \frac{\text{Operating income}}{\text{Total Assets}} = \frac{X}{10{,}000{,}000}$$

Hence operating income = 20% × 10,000,000 = $2,000,000
Operating income = Revenue – Costs
Therefore, Costs = $15,000,000 – $2,000,000 = $13,000,000
Currently,
Costs = Revenues – Operating income = $15,000,000 – $1,800,000 = $13,200,000

Costs need to be reduced by $200,000 ($13,200,000 – $13,000,000)

b. $$\text{ROI} = 20\% = \frac{\text{Operating income}}{\text{Total assets}} = \frac{\$1{,}800{,}000}{X}$$

Hence X = 1,800,000 ÷ 20% = $9,000,000
PD would need to decrease total assets in 2001 by $1,000,000 ($10,000,000 – $9,000,000)

3. RI = Income – (Required rate of return × Investment)
= $1,800,000 – (0.15 × 10,000,000)
= $300,000

4. PD wants RI to increase by 50% × $300,000 = $150,000
That is PD wants RI in 2001 to be $300,000 + $150,000 = $450,000
If PD cuts costs by $45,000 its operating income will increase to
$1,800,000 + $45,000 = $1,845,000

$$RI_{2001} = \$450{,}000 = \$1{,}845{,}000 - (0.15 \times \text{Assets})$$
$$\$1{,}395{,}000 = 0.15 \times \text{Assets}$$
$$\text{Assets} = \$1{,}395{,}000 \div 0.15 = \$9{,}300{,}000$$

PD would need to decrease total assets by $700,000 ($10,000,000 – $9,300,000).

5. Barrington could use ROS to some degree. That way there is less focus on cutting costs and reduction in assets and more emphasis on actual revenues and how they translate into operating income.

Barrington may also want to consider nonfinancial measures such as customer satisfaction and market share, quality, yield and on-time performance as well as monitor employee satisfaction and the development of employee skills.