



# Goliath Corporation: An instructional case in transfer pricing policy

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## Abstract

This case illustrates some of the issues associated with setting firms' transfer pricing policies. The simulation requires students to assume the roles of top management and divisional management for Goliath Corporation in negotiating transfer prices. The student playing the role of top management first selects a transfer pricing policy from four possible mechanisms: *market-based*, *cost-based*, *negotiated*, and *dual-pricing*. Given the top manager's policy choice, divisional managers are then constrained to use that policy as they decide whether to purchase internally or externally based on their respective negotiations. In each negotiation, there is an ex ante best decision for Goliath as a whole. The case is thus useful in demonstrating how managers' transfer price policy choices can lead to bad sourcing decisions.

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## 1. Introduction and synopsis

This paper presents an instructional case that is useful in illustrating the issues associated with setting firms' transfer pricing policies. The case requires students to assume the roles of top management and divisional management in negotiating transfer prices. The organiza-

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tional dynamic is modeled around the chief executive officer (CEO) of Goliath Corporation and the autonomous managers of the Plastic Products, the Metal Products and the Electronics Divisions of Goliath. The simulation requires first that the student playing the role of CEO choose a transfer pricing policy from four possible mechanisms: *market-based*, *cost-based*, *negotiated*, and *dual-pricing*. After the CEO makes the policy decision, which binds the divisional managers to the use of that policy, the divisional managers then face insourcing/outsourcing scenarios and are required to decide whether to purchase internally or externally based on the respective policy choices. Given that there is an ex ante best decision for Goliath Corporation as a whole in each negotiation, the case is useful in illustrating how policy choice can lead to good or bad insourcing/outsourcing decisions. We conclude by discussing some of the insights that should be possible from the exercise.

The case also highlights an organizational design issue that is increasingly important given the rapid integration of both information technology and globalization in the modern business environment. Interconnections within and between potential customers and suppliers, both internal and external to the firm, will increasingly impact students in their subsequent careers. Thus, an improved understanding of the challenges faced by decentralized organizations in motivating and measuring performance will help satisfy the demands of both potential employers and business school graduates for relevant classroom content. Finally, we find that the case makes the teaching of transfer pricing policy and outcomes, a subject that is often relegated to appendices in textbooks and greeted with little enthusiasm by students, a more engaging subject for instruction and discussion. Our experience has been that students enthusiastically participate in the group exercise and appreciate the positions of the other students in the group. While our recent experience has primarily been focused on graduate students as participants, the case translates well (with appropriate class preparation) to upper-division undergraduate accounting and finance students.

The remainder of the case is structured as follows. In the following two sections, we present the case procedures and materials used to administer the group exercise. In the fourth section, we present the solutions to the case as they pertain to the “best decisions” for Goliath Corporation given the case materials. Finally, we present some of our insights into students’ reactions to the case.

## 2. Case procedures

We assign students to “companies,” with each group of four students representing a company.<sup>2</sup> One student is assigned the role of CEO of Goliath, and the remaining three students each assume one of the three divisional-manager roles (i.e., the Plastic Products, the Metal Products, and the Electronics Divisions of Goliath). The case materials are then handed out to the students, with the CEO receiving the instructions appropriate to the CEO, and each divisional manager receiving her/his respective instructions.<sup>3</sup> After receiving and reading the instructions, the CEO is required to select a transfer pricing policy – and then s/he receives the full set of instructions that are provided to the divisional managers to see the decisions they face. Divisional managers are then charged to

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<sup>2</sup> We have used a number of strategies when the number of students is not divisible by four. For example, a company can have two CEOs, representing a transition of top management, or the instructor can serve as CEO for one or more companies. The least desirable option would be to eliminate a division.

<sup>3</sup> These materials are available in electronic form from the authors.

proceed with negotiations to satisfy their production needs according to their respective instructions. We impress upon the students serving as divisional managers that their primary objective is the well-being of their respective divisions, while we insist that the student serving as CEO respect the autonomy of the divisional managers and allow them to make their own decisions.

The four transfer pricing policies we incorporate into the case are *market-based*, *cost-based*, *negotiated*, and *dual-pricing* approaches.<sup>4</sup> For purposes of our case, the market-based approach requires the selling division to price its product at the external market price, less two percent to reflect reduced transaction costs (e.g., lower sales efforts, no bad debts). The cost-based approach requires the selling division to price its product at its full absorption cost.<sup>5</sup> The negotiated approach allows divisional managers to negotiate and agree upon an appropriate price based upon market data and cost data of the supplying division. Finally, the dual-pricing approach allows the selling division to charge 120% of its full manufacturing cost, while the buying division pays 98% of the external market price.

As instructed above, the CEO in each four-person group will choose one of these policies and communicate it to her/his managers. However, to make the case meaningful, the instructor in the class needs to have a variety of policies selected. Hence, we suggest that the instructor require that each of the four policies be represented in at least one group. This implies that, in a multi-group setting of five–six groups, no more than two CEOs should use the same policy. Thus the instructor may need to impose a constraint on the decisions of the CEOs, and should approve their policy choices on a “first come, first served” basis.

While the divisional managers are engaging in negotiations, the CEO must consider what the divisional managers *should* do for the overall welfare of Goliath, which requires appropriate relevant cost analysis. Note that the CEO observes the interactions between divisional managers, and might answer factual questions but does *not* interfere with their negotiations. As the negotiations proceed, the CEO must also prepare to discuss the merits of her/his actual policy decision and analyze the desirability of insourcing/outsourcing choices for the overall corporation. As the negotiations wind down, the divisional managers are charged with recording the results of their negotiations. Specifically, each divisional manager must record whether she/he chose to make an internal transfer, and, if so, at what price. Second, each divisional manager must comment on her/his reasoning in the decisions and any other observations. The case concludes with each participant receiving the entire package of information and discussing the results of the case, including the CEO’s analyses of whether the internal transfer should have taken place. As the facilitator, the instructor should summarize the results of the negotiations, and provide a discussion of what was done, and whether each internal transfer is best for the company as a whole. Fig. 1 summarizes the steps in the exercise, and is useful for class orientation, while Fig. 2 is for the instructor’s use in summarizing the results.

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<sup>4</sup> Prior to engaging the students in the case, we spend an appropriate amount of time discussing the commonly-used methods of setting transfer prices and how they are likely to be implemented in typical corporate settings. For example, we explain to students how the dual-pricing approach resolves the differences in transfer prices paid and received using an inter-divisional clearing account.

<sup>5</sup> This approach can be modified to include a mark-up of the selling division’s costs to yield a profit to the seller.

1. Assign “companies” (groups of 4 students) and pass out materials:  
 1 CEO, 3 divisional-manager roles
2. CEO sets TP policy—then receives full package to see decisions divisional managers face.
3. Divisional managers negotiate for their needs according to instructions.
4. Meanwhile, CEO considers what the divisional managers should do for the overall welfare of Goliath (CEO observes but does not interfere). Be prepared to discuss the merits of students’ actual decisions.
5. Give everyone full package, discuss results.

-What was done?

-What were the motivations?

-Was it for the best of the company as a whole?

Fig. 1. Procedures for the “Goliath” transfer pricing exercise.

		Results under Policy of:															
Transaction	Good for Goliath?	Market-Based				Cost-Based				Negotiated				Dual-Pricing			
		Company (Student team)				Company (Student team)				Company (Student team)				Company (Student team)			
		A	B	C	...	...	...	...	...	...	...	...	...	...	...	...	n
1: Plastics → Metals	Yes																
2: Electronics → Plastics	No																
3: Metals → Electronics	No																

Fig. 2. Summary of results.

### 3. Case materials

There are four parts to the case materials because the exercise is conducted as a group exercise involving four interacting students. Recall that one student is assigned the role of the CEO of Goliath Corporation, while the three remaining students each assume the role of division manager. Each divisional manager participant is issued a separate set of instructions that are not communicated to the other participants in the group.

### 3.1. Instructions to the CEO of Goliath Corporation

Congratulations! You have just been appointed CEO of Goliath Corporation. One of the first items to cross your desk is the need for a review of transfer pricing policies. You have three divisions that report to you: *Plastic Products*, *Metal Products*, and *Electronic Products*. The manager in each of these divisions has considerable autonomy, and transactions between divisions are common. Division managers receive raises and bonuses in which divisional ROI and other accounting-based divisional earnings indicators play a major part. **In keeping with maximum autonomy, you allow divisions to accept or reject any offer to buy or sell to another division. However, whenever an internal transaction does occur, the price must follow guidelines that you set.** It is these guidelines that you are now considering.

There are four possible mechanisms from which you can select. One is to use a *market-based* transfer price, with the divisions using actual competitive prices that the buyer would have to pay outsiders, less 2% to adjust for the economies of dealing internally (less sales effort, no bad debts, etc.). The second is a *cost-based* approach, with the selling division transferring its product at a price equal to its full manufacturing cost. The third is a *negotiated* transfer price which would be whatever price the two divisions can agree on. The fourth is a *dual pricing* mechanism, where the selling division receives 120% of its full manufacturing costs, and the buying division pays 98% of the market price they would otherwise pay outsiders.

You must choose one of these policies and communicate it to your managers so that they can begin the process of operating their respective divisions. As CEO, you should feel free to observe some of their interactions to see how well your policy is working out. After setting the policy, however, you should not interfere with your managers' autonomy. In other words, let them make their own decisions without pressure or guidance from you.

Your transfer pricing policy selection:

- *Market-based*: actual competitive prices that the buyer would have to pay outsiders, less 2% to adjust for the economies of dealing internally (less sales effort, no bad debts, etc.).
- *Cost-based*: actual full manufacturing cost.
- *Negotiated*: whatever price the two parties can agree on.
- *Dual*: The selling division receives 120% of its full manufacturing costs. The buying division pays  $98\% \times$  (the market price they would pay outsiders).

### 3.2. Instructions to the manager of the plastic products division

Congratulations! You have just been appointed manager of the Goliath Corporation Plastics Division. Your annual bonus is an important part of your compensation and is tied to your total divisional income. Your CEO currently is deciding on a transfer pricing policy affecting your income, and will soon communicate this to you. In keeping with maximum autonomy, each division **may enter transactions with outsiders or insiders as it sees fit.** However, when an internal transaction occurs, **the price** must follow guidelines that headquarters sets. It is these guidelines that the CEO is now considering.

Here are the possibilities that s/he is considering:

- *Market-based*: actual competitive prices that the buyer would have to pay outsiders, less 2% to adjust for the economies of dealing internally (less sales effort, no bad debts, etc.).

- *Cost-based*: actual full manufacturing cost.
- *Negotiated*: whatever price they can agree on.
- *Dual*: The selling division receives 120% of its full manufacturing costs. The buying division pays  $98\% \times$  (the market price they would pay outsiders).

Check the one that your CEO communicates to you.

OK! Now you are ready to negotiate with the other divisions.

**First**, the Metals division wishes to purchase 5000 equipment cases from you. Your cost/unit is as follows:

Direct material	\$28.00
Direct labor	17.00
Variable overhead	34.00
Fixed overhead	45.00
Total	\$124.00

Currently, you have enough excess capacity in your plant to produce 5000 more units per month. You now are selling 12,000 similar units per month to an outside customer, at \$174 each, but you currently have no additional outside market. The Metals Division manager will be contacting you with an offer to purchase the units. Remember that you may accept or reject, and that the pricing will depend on the CEO's new policy.

Please note the result of your negotiation below:

- We completed the deal internally at \$———/unit.
- We could not complete a deal internally ——.
- Comments on your rationale and other observations:

**Second**, you need 2000 electronic sensors, which you could purchase from a reliable outside source for \$75 each. The Electronics Division is also a potential supplier, with the price based on the CEO's new policy.

Please note the result of your negotiation below:

- We completed the deal internally at \$———/unit.
- We could not complete a deal internally ——.
- Comments on your rationale and other observations:

### 3.3. Instructions to the Manager of the Metal Products Division

Congratulations! You have just been appointed manager of the of Goliath Corporation Metals Division. Your annual bonus is an important part of your compensation and is tied to your total divisional income. Your CEO currently is deciding on a transfer pricing policy affecting your income, and will soon communicate this to you. In keeping with maximum autonomy, each division **may enter into transactions with outsiders or insiders as it sees fit**. However, when an internal transaction occurs, **the price** must follow guidelines that headquarters sets. It is these guidelines that the CEO is now considering.

Here are the possibilities that s/he is considering:

- *Market-based*: actual competitive prices that the buyer would have to pay outsiders, less 2% to adjust for the economies of dealing internally (less sales effort, no bad debts, etc.).
- *Cost-based*: actual full manufacturing cost.
- *Negotiated*: whatever price they can agree on.
- *Dual*: The selling division receives 120% of its full manufacturing costs. The buying division pays  $98\% \times$  (the market price they would pay outsiders).

Check the one that your CEO communicates to you.

OK! Now you are ready to negotiate with the other divisions.

**First**, you need to purchase some equipment cases, either from the Plastics Division or from an outside source. You have a bid from a reliable outside supplier who will provide the 5000 units per month that you need for \$115 each. You also should consider buying them from the Plastics Division, with the price to be determined in accordance with your CEO's new transfer price policy.

Please note the result of your negotiation below:

- We completed the deal internally at \$————/unit.
- We could not complete a deal internally —.
- Comments on your rationale and other observations:

**Second**, the Electronics Division needs 8000 brackets of an unusual design. Your costs to make and deliver these would be:

Direct material	\$18.00
Direct labor	7.00
Variable overhead	24.00
Fixed overhead	35.00
Total	\$84.00

Currently you have enough excess capacity in your plant to produce 8000 more units per month. You now are selling 21,000 units per month to an outside customer, at \$104 each.

The Electronics Division manager will be contacting you with an offer to purchase 8,000 units. Remember that you may accept or reject the offer, and that the pricing will depend on the CEO's new policy.

Please note the result of your negotiation below:

- We completed the deal internally at \$————/unit.
- We could not complete a deal internally —.
- Comments on your rationale and other observations:

### 3.4. Instructions to the Manager of the Electronics Division

Congratulations! You have just been appointed manager of the of Goliath Corporation Electronics Division. Your annual bonus is an important part of your compensation and is

tied to your total divisional income. Your CEO currently is deciding on a transfer pricing policy affecting your income, and will soon communicate this to you. In keeping with maximum autonomy, each division **may enter transactions with outsiders or insiders as it sees fit**. However, when an internal transaction occurs, **the price** must follow guidelines that headquarters sets. It is these guidelines that the CEO is now considering.

Here are the possibilities that s/he is considering:

- *Market-based*: actual competitive prices that the buyer would have to pay outsiders, less 2% to adjust for the economies of dealing internally (less sales effort, no bad debts, etc.).
- *Cost-based*: actual full manufacturing cost.
- *Negotiated*: whatever price they can agree on.
- *Dual*: The selling division receives 120% of its full manufacturing costs. The buying division pays  $98\% \times$  (the market price they would pay outsiders).

Check the one that your CEO communicates to you.

OK! Now you are ready to negotiate with the other divisions.

**First**, you need to purchase some brackets of an unusual design, either from the Metals Division or from an outside source. You have a bid from a reliable outside supplier who will provide the 8,000 units per month that you need for \$40 each. You also should consider buying them from the Metals Division, with the price to be determined in accordance with your new CEO's transfer price policy.

Please note the result of your negotiation below:

- We completed the deal internally at \$————/unit.
- We could not complete a deal internally —.
- Comments on your rationale and other observations:

**Second**, the Plastics Division needs 2000 electronic sensors. Your costs to make and deliver these would be:

Direct material	\$20.00
Direct labor	9.00
Variable overhead	14.00
Fixed overhead	25.00
Total	\$68.00

Currently you have no excess capacity in your plant to produce these units per month. You now are selling 11,000 similar units per month to outside customers, at \$80 each.

The Plastics Division manager will be contacting you with an offer to purchase the units. Remember that you may accept or reject, and that the pricing will depend on the CEO's new policy.

Please note the result of your negotiation below:

- We completed the deal internally at \$————/unit.
- We could not complete a deal internally —.
- Comments on your rationale and other observations:

#### 4. Teaching note and solution to the respective sourcing decisions

Should Goliath's top management want the internal transactions to occur? In other words, are these transactions good for Goliath? We next provide the solutions to this question. First, we consider the potential transaction where the Plastics Division would transfer 5000 cases to the Metals Division. The following analyses are pertinent:

**Internal transaction:**

*Out-of-pocket costs:*  $(5000 \text{ cases})(\$28 + \$17 + \$34) = (5000 \text{ cases})(\$79) = \$395,000.$

*Opportunity costs:* Since plastics has excess capacity, the opportunity cost of the internal transfer is zero.

**Outside purchase:**

*Out-of-pocket costs:*  $(5000 \text{ cases})(\$115) = \$575,000.$

This analysis suggests that the internal transaction *is* beneficial to Goliath Corporation. Specifically, since Plastics has excess capacity, the relevant cost of the internal transfer is simply the sum of the out-of-pocket costs, or \$395,000. Comparing this to the outside purchase cost of \$575,000 suggests that the transfer should occur.

Second, we consider the potential transaction where the Electronics Division would transfer 2000 sensors to the Plastics Division. The following analyses are pertinent:

**Internal transaction:**

*Out-of-pocket costs:*  $(2000 \text{ sensors})(\$20 + \$9 + \$14) = (2000 \text{ sensors})(\$43) = \$86,000.$

*Opportunity costs (profit foregone on existing sales):*  $(2000 \text{ sensors})(\$80 - \$43) = \$74,000.$

*Total relevant costs:*  $\$86,000 + \$74,000 = \$160,000 (= 2000 \text{ sensors} \times \$80).$

**Outside purchase:**

*Out-of-pocket costs:*  $(2000 \text{ sensors})(\$75) = \$150,000.$

This analysis suggests that the internal transaction *is not* beneficial to Goliath Corporation. Since Electronics has no excess capacity, the opportunity cost of the internal transfer is the contribution margin Electronics must forgo if it transfers the sensors internally. The net result is that Goliath would be worse off if the internal transfer occurs.

Finally, we consider the potential transaction where the Metals Division would transfer 8000 brackets to the Electronics Division. The following analyses are pertinent:

**Internal transaction:**

*Out-of-pocket costs:*  $(8000 \text{ brackets})(\$18 + \$7 + \$24) = (8000 \text{ brackets})(\$49) = \$392,000.$

*Opportunity costs:* Since metals has excess capacity, the opportunity cost of the internal transfer is zero.

**Outside purchase:**

*Out-of-pocket costs:*  $(8000 \text{ brackets})(\$40) = \$320,000.$

This analysis suggests that the internal transaction *is not* beneficial to Goliath Corporation. Specifically, the Metals Division's out-of-pocket costs are greater than the cost to Electronics of purchasing the brackets externally.

In summary, the above analysis shows that, *ex ante*, the transaction between the Plastics and Metals Divisions is desirable for Goliath, while the transactions between Electronics and Plastics and between Metals and Electronics are undesirable (everything else being equal). We next turn our attention to whether the four transfer pricing mechanisms, market-based, cost-based, negotiated and dual-pricing, will lead the parties involved to make the correct decision. We examine each in turn.

4.1. *Plastics* → *Metals*

Given that the managers are rational and understand how their costs behave, the maximum (“ceiling”) price that Metals would be willing to pay in this transaction is \$115 (i.e., the price at which Metals can acquire the cases from an outside supplier), while the minimum (“floor”) price that Plastics would be willing to accept is \$79 (i.e., the sum of Plastics’ out-of-pocket costs to manufacture the case).

Method	Outcome/ Perspective		Reason
	Metals (buyer)	Plastics (seller)	
Market-based	Yes	Yes	The market-based method implies that Plastics would set a price of 98% of \$115, or \$112.70. At this price, both Plastics and Metals would have incentives to execute the internal transfer. Specifically, from Plastics’ point of view, the \$112.70 price is greater than its out-of-pocket costs of \$79, while, from Metals’ perspective, the \$112.70 price is less than the external price of \$115
Cost-based	No	Yes	The cost-based approach requires that Plastics would set a price of \$124. Plastics thus has an incentive to make the transfer, since its out-of-pockets are only \$79. However, given that Metals can purchase the cases externally for \$115, Metals has no incentive to execute the internal transfer
Negotiated	Yes	Yes	The negotiated approach implies that Plastics and Metals will set a price through negotiation. The internal transfer is likely to occur, because, at any price between the ceiling of \$115 and the floor of \$79, Metals achieves a savings relative to the external price, while Plastics earns a positive contribution margin
Dual-pricing	Yes	Yes	The dual-pricing method implies the price paid to Plastics would be 120% of its full manufacturing costs of \$124, or \$148.80. On the other hand, the price paid by Metals would be \$112.70 (98% of the outside price of \$115). At these prices, Plastics receives a positive contribution margin of $\$148.80 - \$79 = \$69.80$ , while Metals pays a price that is less than the outside price. Hence, the internal transfer is likely to occur

In sum, the market-based, negotiated and dual-pricing methods give rise to incentives to transfer the product internally, which is *ex ante* the best outcome for Goliath. However, the cost-based approach would lead to an external purchase, a sub-optimal outcome.

4.2. *Electronics* → *Plastics*

The maximum price that Plastics would be willing to pay in this transaction is \$75, which is the price at which Plastics can acquire the sensors from an outside supplier, while the minimum price that Electronics would be willing to accept is \$80, or the sum of Electronics' out-of-pocket costs to manufacture the sensor plus the profit foregone from loss of existing sales. Note that, under these conditions, when the floor price exceeds the ceiling price, the relevant costs of insourcing exceed those of outsourcing, so that an internal transaction is not desirable for the organization; this is what the discussion of this transaction above concluded.

Method	Outcome/ Perspective		Reason
	Plastics (buyer)	Electronics (seller)	
Market-based	Yes	No	The market-based method implies that Plastics would pay a price of 98% of \$75, or \$73.50. At this price, Plastics would have an incentive to purchase internally, but Electronics would reject the transfer. From Electronics' point of view, the \$73.50 price is less than the \$80 sum of its opportunity costs and its out-of-pocket costs
Cost-based	Yes	No	The cost-based approach requires that Electronics would set a price of \$68. But the division would have to give up revenues of \$80 that it would otherwise receive from its sales to external customers. Thus, Electronics has no incentive to enter into the contract with Plastics. On the other hand, Plastics does have an incentive to make the transfer, since its cost in the external market would be \$75
Negotiated	No	No	The negotiated approach suggests that Plastics and Electronics will be unable to agree to a price that is mutually acceptable. Electronics wants a price at least as great as its out-of-pocket and opportunity costs of \$80, while Plastics would only be willing to pay a maximum of \$75, the external price. The internal transfer is unlikely to occur as neither division has an incentive to deal internally
Dual-pricing	Yes	Yes	The dual-pricing method implies that the price paid to Electronics would be 120% of its full manufacturing costs of \$68, or \$81.60. This is in excess of the price charged to existing external customers. On the other hand, the price paid by Plastics would be \$73.50 (98% of the outside price of \$75). At these prices, Electronics receives a positive contribution margin of $\$81.60 - \$43 = \$38.60$ , while Plastics pays a price that is less than the outside price. Hence, the internal transfer is likely to occur

In sum, the market-based, cost-based, and negotiated methods give rise to incentives to reject the internal transfer of product, which is ex ante the best outcome for Goliath. However, the dual-pricing method provides divisional managers with incentives to transfer internally. Juxtaposing the outcomes associated with the dual-pricing method tends to come as a surprise to students, since they often see the dual-pricing approach as an interesting approach to resolve the potential disputes arising from transfer pricing.

#### 4.3. Metals → Electronics

The maximum price that Electronics would be willing to pay in this transaction is \$40, which is the price at which Electronics can acquire the brackets from an outside supplier. On the other hand, the minimum price that Metals would be willing to accept is \$49, which is the sum of Metals' out-of-pocket costs to manufacture the bracket.

Method	Outcome/ Perspective		Reason
	Electronics (buyer)	Metals (seller)	
Market-based	Yes	No	The market-based method implies that Electronics would pay a price of 98% of \$40, or \$39.20. At this price, Electronics would have an incentive to purchase internally, but Metals would reject the transfer. From Metals' point of view, the \$39.20 price is less than its out-of-pocket costs of \$49
Cost-based	No	Yes	The cost-based approach would allow Metals to set a price of \$84, which exceeds its out-of-pocket costs of \$49. Given that Metals has excess capacity, the division does have an incentive to execute an internal transfer. Conversely, given that Electronics can purchase the bracket for \$40, Electronics would reject an internal transfer
Negotiated	No	No	The negotiated approach suggests that Electronics and Metals will be unable to agree to a price that is mutually acceptable. Metals wants a price at least as great as its out-of-pocket costs of \$49, while Electronics would only be willing to pay a maximum of \$40, the external price. The internal transfer is unlikely to occur as neither division has an incentive to deal internally
Dual-pricing	Yes	Yes	The dual-pricing method implies the price paid to Metals would be 120% of its full manufacturing costs of \$84, or \$100.80. This is well in excess of Metals' out-of-pocket costs of \$49. On the other hand, the price paid by Electronics would be \$39.20 (98% of the outside price of \$40). At these prices, Metals receives a positive contribution margin of $\$100.80 - \$49 = \$51.80$ , while Electronics pays a price that is less than the outside price. Hence, the internal transfer is likely to occur

Recapping, the market-based, cost-based and negotiated methods give rise to incentives to reject the internal transfer of product, which is *ex ante* the best outcome for Goliath. However, as with the previous example, the dual-pricing method provides divisional managers with incentives to transfer internally.

## **5. Discussion and insights**

We have found the case to be useful for demonstrating a variety of issues in transfer pricing. The case should first emphasize the purpose of transfer pricing in motivating optimal insourcing/outourcing decisions by creating conditions of goal congruence. Given student reaction to the negotiated outcomes arising from the autonomy inherent in a decentralized organization, as well as the *ex ante* “best” decisions in the scenarios, we find that the case is a good vehicle for demonstrating these pitfalls in policy selection. The case debriefing can also lead to discussions as to whether central managers should intervene in the decision making process; this line of dialog leads to even deeper considerations of the costs and benefits of decentralization and how accounting method choice can influence managers’ behaviors. Another insight is that, when managers fail to understand the reward system and their cost behavior (especially the role of fixed capacity costs) they may fail to make decisions that are in their own best interest; such misunderstandings are likely to emerge in the class discussion.

A discussion of results also emphasizes that both market-based and negotiated prices tend to induce decisions that are in the best interest of Goliath overall, but the negotiated prices tend to require more time and effort by managers. Further, the scenarios presented above illustrate that the dual-pricing approach may facilitate internal transfers and the cost-based approach may inhibit internal transfers, but it should be clear that this situation is not always desirable and that the dual-pricing and cost-based methods may be capricious and treacherous in their motivations and outcomes. As such, the case lends itself to discussions of the need for revisions of the incentive system, and, with experience, users may wish to experiment with such changes.

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