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Transfer pricing for aligning divisional and corporate decisions

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Abstract Discussions about transfer pricing normally presume the firm's objective is to maximize profit while making the best use of existing capacity. This article differs by exploring the impact of transfer pricing on capital budget decisions. In decentralized firms, decision authority for investment is assigned to division managers whose capital budgets include revenues from internal transfers. When a selling division is under capacity, economic theory recommends a transfer price based on differential cost. Here the seller generates sufficient revenues to recoup operating costs, but not enough to recover capital costs. Consequently, division managers will reject some investments that otherwise would have increased corporate shareholder value. Market-based transfer pricing overcomes this conflict by allocating savings on inter-company transactions to the selling division. However, market transfer pricing may result in shortfalls to corporate profit. Nonetheless, we argue in favor of the use of transfer pricing on the presumption that long-term value creation takes precedence over short-term profit.

1. The transfer pricing dilemma

Suppose you are a division manager deciding whether to make a new investment. Some of the new product output would be sold to other corporate divisions. Company policy requires that sales between divisions are made at a discount. Other divisions would gladly buy from you and pay lower prices. Senior management likes this arrangement because it costs less to make the goods instead of going outside the firm to buy them. Both the buying division and the firm as a whole then boost profits. It is clear that the investment increases shareholder value. Here is where the dilemma arises: If the manager of the selling division makes the investment, he or she will recover cost but won't increase division profits. So, why should the manager invest when the benefits go to others in the firm?

The source of conflict in this situation is the firm's transfer price. It is the amount one division pays for goods transferred from another division. Transfer prices provide internal signals that direct the allocation of resources and profits within the firm.

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Academic discussions about transfer price focus on motivating managers to choose levels of internal sales and purchases that maximize current period profits. Economic theory offers guidelines for setting the correct transfer price to achieve this short-term objective. But as we saw with the investing manager dilemma, the right transfer price for generating profit may discourage a manager from making the investment in the first place.

One solution would be for corporate managers to step in and mandate that the selling division make the new investment. However, such directives fly in the face of decentralized organizational structures that rely on division managers to identify and champion investment proposals. Division managers prepare capital budgets to determine whether it makes sense to pursue investment projects. Their calculations are based on estimates for revenues, including those derived from internal sales. Thus, discounted transfer prices that are good for corporate profit may be bad for justifying investment.

In this article, we explore the impact of transfer prices on the decision to make capital investments and, by extension, we examine whether transfer prices for maximizing short-term profits are consistent with long-term value creation. We break from the traditional manner of looking at transfer pricing in two ways. First, instead of assuming the goal is short-term profit, we base our model on increasing shareholder value. Second, whereas traditional transfer pricing presumes that the selling division seeks to make best use of existing capacity, we examine whether the division will choose initially to invest in capacity, particularly when its use involves sales to other divisions.

We are particularly interested in determining whether the chosen transfer prices support long-term goal congruence between the division and the corporate entity. Ideally, both will make the same investment decision. We find that whenever the transfer price is less than market price, long-term goal congruence is jeopardized. On the other hand, a market transfer price ensures that the division and corporate will both invest, but it may result in lower short-term profits. Nonetheless, we recommend market transfer prices on the presumption that long-term value creation takes precedence.

2. Transfer pricing and internal allocation of cash flows

A corporation creates value for its shareholders by increasing the expectation for future cash flows (Copeland, Koller, & Murrin, 2000; Rappaport, 1998). This is largely accomplished by investment in projects that produce a positive net present value (NPV). In a firm organized as a single functional unit, the responsibility for long-term investments falls upon senior corporate managers. The capital budget model, which fully incorporates the differential cash flow impact on all parts of the firm, guides managers' investment decisions. When projections for an investment result in a positive NPV, then the value of the firm increases as well, and corporate managers will choose to invest in the project at hand.

When firms are divided into distinct business units, decision authority for identifying and selecting capital investments is assigned to division managers. This reflects the corporate motivation for decentralization which assigns decision authority to managers who are closest to market strategy and operations. They are expected to have a better understanding of investment opportunities, and hence are best positioned to make investment decisions.

Consistent with capital budgeting norms, division managers will be guided to invest when a project under scrutiny results in a positive NPV. In evaluating projects, managers will only incorporate differential cash flows that are attributed to their areas of responsibility. As such, a divisional capital budget will ignore firm-wide, non-divisional costs and benefits that may simultaneously accrue from this investment to other organizational units. Consequently, division NPV and corporate NPV may not be identical.

One significant cause for difference between the corporate and divisional project calculations is the firm's transfer pricing system. The issue of concern is cost savings that arise from making goods within the firm rather than buying externally. These reduced costs are also true cash increases to the firm since they represent fewer dollars paid to outside vendors. The savings may be assigned, through the transfer price, to either the buying or selling division. Meanwhile, the cost associated with carrying productive capacity is borne exclusively by the seller. It is this productive capacity that generates long-term value.

Assume, for example, that a firm generates \$1,000 in value when one of its divisions buys internally instead of going to an outside supplier. If goods are transferred at market price, then the entire \$1,000 savings go to the selling division. On the other hand, if goods are transferred at differential cost, the entire savings go to the buying division. Therefore, with differential cost the selling division only generates sufficient revenues to recoup its operating cost for making the sale, but its capital costs are ignored.