Comparing Bank Financing and Trade Credit

A new paper by Simon Professor Abraham Seidmann and Professor Bing Jing of Cheung Kong Graduate School of Business, “Finance Sourcing in a Supply Chain,” examines the merits of trade versus bank credit between a manufacturer and a retailer with limited capital. The study brings critical new insights to an active research area that has important managerial implications.

The central research result in the paper is that both bank and trade credit have comparative merits in ameliorating the negative effects of double marginalization, a troublesome phenomenon that reduces profits along the supply chain.

When the manufacturer’s production costs are relatively low, they show trade credit is far more effective than the use of bank financing at eliminating double marginalization. (See sidebar.)

Seidmann and Jing’s model of a supply chain consists of one manufacturer and one retailer. The manufacturer has sufficient capital; the retailer does not. In their model, trade credit yields higher total profits in the supply chain when the manufacturer’s marginal production cost is low enough—for example, in the production of high-margin goods such as software, perfumes, cosmetics, and pharmaceuticals. By extending trade credit, the manufacturer shares the risk of low demand and the retailer’s liability goes down. As a result, the retailer stocks greater inventory than it would with bank financing and the manufacturer reaps higher profits.

“A retailer is likely to buy more, and sell more, if it isn’t going to the bank for financing,” Jing says.

Bank financing, the other option, has its own advantages. In supply chains where marginal production costs are higher, bank financing yields higher profits for both manufacturer and retailer.

Retailers that sell products with high marginal production costs—cars, for example—are better off using bank credit to purchase inventory. Working with the bank, the retailer can order just the right number of cars to guard against overstocking because it is buying them up front and paying interest on the inventory loan from the bank.

This method protects not only the retailer but also the manufacturer: Automobiles that don’t sell during the model year must be sold at a discount, reducing the channel profits.

“It is the lending bank that bears the retailer’s default risk if demand is lower than expected, not the manufacturer,” the authors note. “In contrast, when the retailer finances with trade credit, the manufacturer bears the retailer’s default risk.”

Seidmann says the paper contributes fresh information to the growing study of supply chain financing. It provides a new explanation for trade credit and also guides the manufacturer’s decision on when it is best to offer trade credit.

What is Double Marginalization?

For an example, let’s look at a supply chain with two independent firms, a manufacturer and a retailer, that are separate companies. If each firm has market power, then each prices at a markup over marginal cost. “Every hand must take a cut, and this produces a double-blow effect of lower total supply-chain profits and higher retail prices,” Seidmann says. This is the so-called double marginalization.

For example, a shoe manufacturer makes a pair of shoes for $40 and sells it directly to consumers for $80. Suppose that with that price they sell four pairs a day, for a total channel profit of $160. Alternatively, a retailer buys those shoes from the manufacturer at $80 and sells each pair for $100. With this higher price, only two pairs per day will sell, resulting in a lower total channel profit of $120. As expected, pricing above marginal costs yields deadweight losses, and both firms become less profitable under this double marginalization.