An Optimization Of Supply Chain In Financial Services

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Abstract

The author of this paper is looking for ways to enhance the supply chain for cash flow, which is a reversed product flow and a two-way information flow. Over the last 15-20 years, academics and practitioners have focused on increasing supply chain material flow velocity and lowering costs, as well as 3RP (3 Resource Planning) logistics and management solutions such as outsourcing or collaborative management. Since the emergence of the Internet and information technology standards created by the VICS, CMP (Council of Supply Chain Management Professionals), ECR Europe (Efficient Consumer Response), ICS (Voluntary Inter-industry Commerce Standards), and SCC (Voluntary Inter-industry Commerce Standards), there has been a true revolution in terms of information flow (Supply Chain Council).

To emphasize the importance of the research question, we examine the strategic drivers and success factors that most banking institutions face as they seek to expand their role in the functioning of large markets. These strategic drivers may explain how banks position their current range of services to supply chains and broader markets. To understand the possible roles that financial institutions may play in working with supply chain managers for mutual benefit, we analyze the strategic, tactical, and operational issues and objectives that supply chain managers confront today. However, the study issues in this article are driven by many competitive challenges that traditional financial institutions face in their present spheres of influence and market domains.

Keywords: Financial supply chain management, working capital, logistic chain, supply chain finance, reverse factoring.

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Introduction

In contemporary business, supply chain management (SCM) is used to optimize the movement of commodities, information, and financial flows inside and across enterprises via functional and cross-company integration. 1 Traditionally, scholarly SCM publications focused on designing and optimizing commodities and information flows. 2 Financial flows between supply chain enterprises, on the other hand, have been largely ignored in academic SCM literature until recently. 3 This article examines the function of financial flows in supply chains as well as the impact that SCM may have on lowering capital costs for such discharges. 4 Financial aspects of SCM are included in a framework. In addition, a mathematical model is offered to explain "supply chain finance," which refers to financial operations that occur across supplier networks (SCF). The model's basic idea is that supply chain data can be used to reduce investment risks and, as a result, capital costs associated with financing projects within supply chain networks.

Logistics, inventory management, centralized information, demand forecasting, shrinking lead times, and other heavily relevant topics comprise supply chain management. Typically, manufacturers' supply chain managers control materials and information flow within manufacturing supply chains and manage business communication systems between partners.

In contrast, we focus our attention in this thesis on what we believe to be an often overlooked aspect of successful supply chain management: the regulation of money flows both within and across supply networks. Most successful firms' executives are often concerned about the flow of money, or financial transactions, within supply chains, because they seek the maximum net present value from their capital, assets, and resources investments.

A broader view of the financial flows of the larger supply chain isn't necessarily high on the priority list of financial managers, who tend to focus on internal inflows and outflows.

As banks try to promote e-commerce, they have shown little interest in the logistics of managing supply chains. They sought to gather financial data from supply chain processes to facilitate financial settlement services. The purpose of a letter of credit is to let people know about trades and provide credit to them. Supply chains depend on these processes to function properly. Those transactions do not relate to other parts of the supply chain, so for the bank, they represent discrete, independent transactions (even though millions of them occur every year).

The financial sector is mainly passive in the operational and logistics aspects of supply chain management compared to the wealth of supply chain data it has available to it. Banking is a function that relies on the effective processing of supply chain information; therefore, banks have many opportunities to use and extract more information from the data they analyze daily. It has been found that by using the information of this type, managers can gain a deeper understanding of every actor along the path to payment, which will allow them to provide a higher level of financial settlement services and therefore reduce the risks of price fluctuation across the entire supply chain. As a result of an incentive plan to increase local network performance, money and
profit are always driving forces behind any attempt by supply chain firms to improve their local networks.

As an example, raw material suppliers prefer to take advantage of economies of scale and scope if there is a great demand for their products. As a result, manufacturing executives wish to increase output through improvements in process efficiency, thus lowering the cost of production on a unit of manufactured goods. On the other hand, the staff involved in materials and warehouses and outbound logistic and outbound management teams are generally looking for ways to reduce transportation costs by using volume discounts, cutting inventory levels, and quickly restocking stock. Meanwhile, the customers, on the other hand, are looking for a shorter lead time and accurate order fulfillment. The operational goals of the numerous actors involved in the supply chain are often derived from the overall profit goals for the firm. On the other hand, the banking industry usually acts as a financial intermediary in today's supply chains, providing information and financial support as required.

We suggest, however, that following the initial capital infusion, banks may play a range of operational and tactical roles in a supply chain network, given the necessity of flawless financial operations in consistently achieving these objectives. In other words, banks and other financial institutions have several opportunities to aid supply chain orchestrators and hence play a larger role in supply chain operations. The relevance of combining cash and material movements in a supply chain is recognized by several manufacturers, retailers, and logistics service providers. Others offer financial services that are intimately related to logistics services, enabling them to integrate financial services with their supply chain operations and boost profitability.

On the other hand, the traditional banking business faces not only a strategic challenge but also a potential loss of market share and income opportunity as a result of supply chain agents' actions. Invasion of a different sort and new entrants is likely in the financial services sector. While traditional banks are actively entering the supply chain management field, the financial services industry sees new challenges from brick-and-mortar businesses. The purpose of this study is to explore possible strategic options for traditional banking to address these challenges.
Literature Review

To evaluate financial supply chain management, a variety of key performance indicators may be employed. The cash flow cycle is an important metric that indicates how long it takes for receivables to be delivered and collected in cash. It is time for a company to receive money in the form of cash that it has invested. The cash flow cycle (figure 1) may be divided into two parts: the operational cycle (the time between supplier delivery and real cash collection of receivables) and the cash flow cycle (the time between supplier delivery and real cash collection of receivables) (the time between cash payment for inventory and actual cash collection of receivables).

The longer a company’s cash flow cycle is, the greater its working capital requirement becomes, hence decreasing it will immediately free up liquidity.

As illustrated in fig. nr, the following parameters may be recognized within the cash flow cycle. 1:

During the days that pass between receiving items and getting supplier invoices, as well as completing a sale and receiving a customer invoice, your inventory is considered to be days in inventory. The average number of days it takes for a corporation to sell its products is when products are kept in inventory. It is important to realize that in Supply Chain Management, a single supply chain figure serves as a focal point for all functions located within the supply chain (e.g., inbound logistics, inventory management, etc.).

- The days in payables are the period between the time when the product was received at the warehouse and when the invoice from the supplier was received, as well as between receiving the invoice and paying the inventory. A graph depicting the average business's time to produce a supplier can be seen below. In this case, the metric refers to the company's
outstanding receivables, and it is a crucial figure for debtors who wish to optimize their purchase-to-pay cycle by increasing their cash flow.

- One of the days sales outstanding measurement types is the "Days Sales Outstanding" (DSO). This measurement is how long it takes between the moment an item is sold and the moment the customer is invoiced, and when the customer pays the invoice. This measure calculates how many days, on average, it usually takes for companies to receive cash after a transaction has been completed. A high deferred sales order (DSO) indicates that a company sells on credit to its customers and is taking longer to deliver its payment.

- The information shown on this screen relates to the period when the customer is sold the product, when they pay the invoice and the average number of days receivables are overdue. Generally, a business's days in receivables (DSO) are the best possible DSO when all receivables are collected before the due date.

Both days in inventory and sales outstanding may be lowered throughout the cash flow cycle.

Payable days may be reduced, but they must be strictly monitored to avoid endangering supplies. Cash collection may be improved to minimize receivables days.

A primary objective of financial supply chain management is to minimize outstanding receivables to maximize working capital.

Because FSCM is a novel logistics approach that has just recently been recognized in the literature.

**Transaction Cost Reduction**

The action of selling and acquiring a contingent claim as a part of a financial transaction is an example of a bank financial transaction. In the sense that we are discussing here, a conditional claim is a right that may be exercised at a later date, providing specific criteria are met. The scenario is envisaged, for instance, that Party A requests $10,000, and party B takes up the request in exchange for a promise that the same amount will be returned not more than a year after the successful completion of the venture. In this case, you could interpret B's transaction as him paying $10,000 to A for a bill he issued. Due to this, he is speculating over the amount of the transaction.

In a financial transaction, two functions need to be carried out. Income transfers, for example, could be a good example of this, where an organization that has a surplus of cash would be transferring it to an organization with a deficit of cash. Based on economic theory, the difference between savings and investments creates an organization's financial surplus or deficit. The savings and investments of each organization must be matched if financial transactions cannot be accomplished. In light of this fact, a company either has to limit its investments to the amount of savings in the company or has to invest as much as the company has in savings, regardless of whether an appropriate investment opportunity exists. Financial transactions help allocate investments across the economy in a more efficient way.
A financial transaction can also perform the function of re-allocating risk. If a company anticipates a high level of income in good economic times, but a low level of income during a hard economic downturn, it may be worthwhile to purchase a contingent claim that would pay a large amount of money during a hard economic downturn but a low sum during an excellent economic downturn. The opposing side to this debate relies on the fact that contingent claims were incurred in many different ways depending on how the claim's value is defined. The counter value of a loan contract, for example, is fixed regardless of the result of the business effort (for example, the debtor may be unable to repay the loan when the business is in struggle). On the other hand, an equity contract has its counter value based on the amount the business earns. It may be possible to re-allocate a range of risks using a combination of several different types of contingent claims. Financial transactions also play an important role in the re-allocating of risk among their participants.

Portfolio theory covers a variety of ways for reducing variation in money received while retaining the same expected return on investment, notably through combining a variety of dependent claims. However, acquiring the greatest possible selection of contingency claims has severe constraints. The transaction fee may be proportionate to the number of transactions, and the firm may lack the requisite competence to establish the optimum asset allocation, among other considerations. These are the fees that must be paid for a transaction to be completed. They're referred to as "transaction expenditures" as a consequence of this. Financial transactions have significant transaction costs, and transaction volume is determined by the number of transactions rather than the transaction value. Consequently, when a particular organization with specialized knowledge and talents purchases money from other corporations to manage them as a single huge fund and cut transaction costs, a financial transaction is often more efficient. The most fundamental function of financial organizations is to lend money.

**Production of Liquidity**

A financial institution may bring together an asset portfolio by collecting cash on behalf of multiple companies to set up a large portfolio of assets, which should then be redistributed to those companies. Having a broad range of possible returns in your portfolio allows you to achieve this goal by implementing smart asset management. To accomplish the objective of effective pooled investment management, trade-offs between improving consumer expectations of returns and reducing risk in the portfolio must be made to achieve this objective. In dealing with financial risk mitigation, the trade-offs between increasing consumer expectations of returns and reducing risk in the portfolio must be determined. The application of this risk-mitigation technique can not be separated from the existence of a conundrum for financial institutions: how to balance long-term viability with the availability of short-term liquidity to achieve greater flexibility. Instead, we should consider investing a portion of our money in floating assets that can be redeemed quickly to protect against short-term risks rather than investing everything in fixed assets that cannot be redeemed for a long time. The short-term liquidity of the bank is essential, but in the long run, the bank needs to be able to balance stability and sustainability on the whole. The return on longer-
term investments will provide you with more stability in the long run than that of short-term investments, which may have a lower yet more variable return on investment. Despite this, many large and small economies struggle with the fundamental component of success, which is the struggle between liquidity and long-term stability, or more precisely, the trade-off between long-term stability and short-term liquidity. Overall, financial services organizations seek efficient money managers by distributing money into both short-term and long-term assets efficiently. This approach is yet another critical element of their strategic success.

Supply networks, like component companies, face unforeseen occurrences that are acts of God. Large banks and other financial institutions may offer short-term deposit accounts to a wide range of firms and even supply chains. Deposit accounts that can be liquidated at any time are different from other kinds of accounts in that the principal is normally covered, and the notice is minimal. During a breakdown of the supply chain or a problem with the balance of payments, firms may be able to liquidate these short-term accounts for more flexibility. The capacity of banks to handle different types of short-term accounts may enable them to build a larger pool of short-term fund accounts. These banks can use their combined assets for long-term lending or investment due to lower liquidation risk than individual accounts (as financial institutions increase their customer bases and total assets), which reduces liquidation risk.

The effort they put forth may result in a monetary reward. Rather than investing in a trust, a customer can obtain liquidity by opening a bank account since the bank guarantees the investment principle. Investors in the financial institution can share any residual risk after pooling funds from clients, but it cannot be eliminated unless the portfolio mitigates all hazards, which is rare.

Thus, banks are among the key contributors to the economy in meeting their customers' liquidity needs (for their businesses), making money available for long-term investments, and absorbing risk from the firms that operate in their environment.

Figure 2 A literature review was conducted on the influence of SCM on corporate value, and a gap assessment was made (Source "[12]")

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Customer Value

Internal quality assurance has given way to external client satisfaction and eventually to customer value as a way for organizations to monitor the quality of their goods and services. In supply-driven manufacturing, corporate goals were dominated by internal quality metrics, such as the number of defects. According to the customer satisfaction survey, the company's products and services are evaluated by current customers based on their use. Current customer value emphasis is to determine why customers choose one product over another while considering the whole range of commodities, services, and intangibles that contribute to creating a company's brand and product.

Customer Value: What variables affect customer value in other sectors? To influence customer perception, a business needs to provide what customers want and need, vary its product offerings, offer competitive prices, provide quality services, and cultivate strong relationships with customers. While there is much debate about how to maximize performance in each area, in this essay, I'm going to focus on how financial services increase customer value. The value-added services that an organization offers may influence customer decisions. The loss of profitability and competitive edge occurs when only price matters and all other factors are equal. As a result, the firm must get closer to their customers so they can realize how they can differentiate their products. Several supply chains have adopted this method due to technological developments. The availability of information has become a valuable value-added service to accomplish this goal. There is an expectation that customers will pay a premium for information visibility; for instance, a customer might pay a premium for information about an order's status. A service that combines financial and logistical data inside a supply chain may provide a greater value-added service.

When the business and its customers have a deeper relationship, the customers become more loyal to the business. Boosting sales and retaining customers becomes even more complicated when businesses build tailored user profiles.

Measures of customer value may include: Clients' views are the basis for customer value, so operations must start with a deep understanding of their needs. According to this theory, even supply chain performance must be measured in customer value. As delivery performance and availability have become important in today's markets, the service level is typically connected with the ability to meet the customer's delivery date. Understanding the worth of your clients is the first step toward determining the right service level. If customers choose low cost, information, or customization over speedy delivery, we may decrease the service level of the delivery date.

There are several ways to measure customer satisfaction. To monitor sales progress, surveys provide feedback on what can be improved. Despite that, however, there are still many areas that need improvement.

The retailer assesses a buyer's retention rate at the point of sale, but that doesn't tell us anything about the customer's loyalty. It is important to understand consumer repurchase and desertion.
trends to determine client loyalty. The difference between defections and repurchases is harder to assess since angry customers tend to close their accounts, making it harder to communicate with them in the future to find out what has changed.

Individual and coordinated performance criteria must be considered when evaluating supply chain performance. A result of this is the SCOR standardization model. (Supply Chain Operations Reference Model) is SCOR’s method for measuring supply chain performance. Several SCOR metrics are listed in Table 1 for evaluating supply chain performance. These supply chain metrics could become benchmarks for the industry. As previously stated, each company's unique circumstances should be taken into account when evaluating the value of each metric.

<table>
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<tr>
<th>Performance Attribute</th>
<th>Customer-Facing</th>
<th>Internal-Facing</th>
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<td>Reliability</td>
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<td>Delivery performance</td>
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<td>Perfect order fulfillment</td>
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<td>Production flexibility</td>
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<td>Supply chain management cost</td>
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<td>Cost of goods sold</td>
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<td>Value-added productivity</td>
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<td>Warranty cost or returns</td>
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<td>Cash-to-cash cycle time</td>
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<td>Inventory days of supply</td>
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<td>Asset turns</td>
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Table 1 SCOR v5.0 Overview, Supply Chain Council (Source "[9]"

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Conclusion

We can summarize several approaches and technologies described previously on traditional banks and how they can provide value to supply chain networks hidden behind conventional networks. Based on the study's findings, four key recommendations for financial organizations shall be made: (1) Focus on the entire supply chain and not just individual suppliers; (2) Integrate materials and information flow with cash flow management; (3) Make sure that partnerships are reliable and stable; and (4) Manage these changes through an independent organization.

Focus on the entire chain: Traditional banks tend to focus exclusively on cash flow management instead of looking at their customers' entire supply chain networks. Banks are currently providing a limited number of banking services aimed primarily at enhancing cash flow-related activities to boost supply chain efficiency. EDI is one example of the range of products and services provided by banks. With the help of these services, users can order cash in a shorter period and receive it in a shorter amount of time, along with lower risk exposures. These services enable banks to maintain their current level of confidence because they are no longer concerned with critical information about the currency flow. The abstract nature of these services means banks have trouble differentiating themselves from their competitors as they don't address the individual needs of their customers. Due to the focus on cash flow and their ability to appeal to a variety of industries, they may be able to compete with low prices and high performance. Consequently, the abstract nature of cash flow boosting services makes them easier to get into for newcomers; once additional features are available, customers may switch to another financial service provider.

Material, knowledge, and money flow at varying velocity in the supply chain: This article discusses the opportunities created by a varying velocity of material, knowledge, and money. Banks have helped improve cash flow for supply chain partners. Despite this, they can significantly increase the efficiency of the total network system as they coordinate financial and informational flows.

When examining how to realize these potentials, it's important to remember that none of these enhancements can be maintained without completely understanding the network's material and information flows. Banks must generally employ these value-added services to raise competition's entrance hurdles. Even though banks have been striving for loyal customers via customization and learning, they are essentially limiting themselves if they stick to the sphere of cash management. A new horizon of services must be explored to deliver unique solutions tailored to their customers.

Due to the low number of service providers specializing in this market, its growth has been slow. Certainly, there have been some notable successes, but they are few and far between, and rarely acknowledged or publicized. Such pioneers are untrained and inexperienced. As a result, they turn to finance from other sectors (such as logistics) because financial institutions do not provide the services they need. The pioneers saw a demand for their expertise and abilities after some successful experiences. These niches in the financial services market may have escaped the notice
of the old and mature giants of the industry so that they may represent a threat to traditional banks. Pioneers are still undecided about the best method for gathering the fruits and defending their territories against the giants. Currently, the banks are learning how to successfully respond to these inquiries via the new services and avoid detection by the traditional large banks. Therefore, I recommend traditional banks investigate the possibilities and challenges posed by supply chain management, along with the necessary countermeasures to keep them safe from new entrants. Execution matching becomes more challenging in such a scenario.

By identifying existing assets, potential strategic alliances can be established. Banks need to develop their fundamental competencies to cope with threats from other industries. As technological dispersion facilitates the copying of business models, latecomers can easily replicate the leaders' business models, especially if it is based solely on generic components. Managing material movements can be done with the same ability to regulate monetary flows. Likewise, experience with complex financial service systems can reduce operational risks.

Further research and testing are needed to identify which characteristics provide the best competitive advantage to traditional banks.

In addition, these organizations must keep track of the flow of materials and information throughout the supply chain. To achieve this, trade partners within the supply chain should be motivated to disclose data about their activities. In this case, finding trade partners who can provide data on differences between sectors/organizations that can be used to build the FSP. Third-party logistics companies, commonly known as LSPs, are the best candidates for this kind of intermediary role.

Let's consider UPS as an example. UPS's success in managing supply chains can be attributable in part to its acquisition of First International Bank, a company with expertise in structured trade finance and commercial lending programs. UPS Capital, the company's finance division, was recently established. This information is used to optimize the cash flow of UPS Capital's customers based on UPS Capital's extensive logistical data. The reverse approach can be used for banks seeking to build knowledge around new processes and areas. Banks can purchase or develop strategic relationships with third parties to access their customers' logistical information.

We recommend establishing a new company devoted to serving supply chain partners, in addition to current bank sub-groups. Regarding the supply chain network, attitude is another potential stumbling block for banks. Banks become the supervisor for borrowers to assess borrowers' financial situations fairly and decrease the "agency fee". As a result, banks are viewed by borrowers' management as a police force that protects them from harming investors. To protect its investors, a bank may withhold loans from borrowers with a low chance of repaying their loans. As a result, executives of borrowers and banks have interests that overlap. The government receives financial information from them.
By providing the bank with the more required information, they might be less inclined to do so voluntarily.

A successful supply chain is dependent on the continuous exchange of information among trading partners. It is a common challenge for all supply chains to align the objectives of different stakeholders with a higher total value. The purpose of this is to simplify overall financial flows by collecting data on material movement along a supply chain. However, the objectives contradict each other. It may withdraw money from the supply chain using the same information to protect its investors. If a bank is seen as a self-interested institution, trade partners are unlikely to share trading information.

Since the bank's supervisory role derives from its roots as an investment, it is difficult to solve this paradox as long as it serves both functions. Accordingly, we believe that companies operating as trading partners in supply chains should be distinguished from banks typically involved in banking activities.

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