An Assessment of Supply Chain Finance and Working Capital Management in Organizations

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Abstract - The wave of globalization have dispersed supply chain internationally as production moved beyond national boundaries. Information Technology & communication have made the operations of supply chain much easier and all pervasive. The demands for operating globally has increased and businesses have transformed and identified valuable hidden sources to tap liquidity from within their own processes. [1]. Supply chain finance (SCF) is a hot topic in business circles and connects with supply chain management and trade finance. Organizations the world over are trying to merge the approach of supply chain management and trade finance into tangible benefits. With cash drying up & credit squeeze, Organizations are tapping new sources to finance their working capital needs and avenues for cost reduction are being explored in the entire supply chain. Financial managers have taken the lead to acquirecash and generate savings from supply chain logistics. For Organizations, working capital management is a key priority for increasing profitability without compromising on the day-to-day liquidity available for business. SCF is a niche segment in liquidity management & enormous value can be derived by pulling unnecessary cash locked from the processes in supply chain. This paper is an attempt to study the various supply chain finance topics in discussion today and how it is affects the working capital of an Organization. [2]

Keywords: Supply-chain finance (SCF), Funder, Discounting, Invoice, Program, Liquidity, Risk, Optimization, Solutions, Collaboration, Implementation, and Automation.

I. INTRODUCTION

Supply chain finance is an arrangement whereby the buyer extends payment terms to suppliers. The seller is paid for invoices raised with the buyer from a third party, typically called the Funder. The buyer is able to optimize working capital needs by paying late and the supplier generates early cash flow by being paid early. [5] Supply chain finance is a win-win situation for both the parties as it releases the cash that would otherwise have been locked inside the supply chain. In other words, the buyer is able to increase their days payable outstanding (DPO) by foregoing immediate payments and the seller is able to lower their DSO (Days Sales Outstanding) by early access to capital. [8] The funder also generates profits by getting quality credit, earn return from a relatively risk free transaction with reduced payment risks. This tripartite relationship between vendors, buyers and bank is a natural safeguard against defaulting on their contractual mutual obligation. [3] & [4]. Euro Banking Association defines SCF as "the use of financial instruments, practices, and technologies to optimize the management of working capital and liquidity tied up in supply chain processes for collaborating business partners. SCF is largely 'event-driven'. Each intervention (finance, risk mitigation or payment) in the financial supply chain is driven by anevent in the physical supply chain. The development of advanced technologies to track and control events in the physical' [7].

II. CONTENT

A. SCF Evolution

Supply chain finance evolved in the late 1990 and started with large banks offering traditional supply chain finance to selected corporate buyers. It was still in the experimentation phase and the benefit was not known. Until 2008 just before the financial crisis, a large number of large banks started implementing supply chain finance with their top reputed suppliers [9]. In the aftermath of the 2008 financial crisis, the importance of supply chain finance gained visibility and all efforts were focussed on improving working capital management & mitigating risk [10]. In recent years fintech service providers are driving the supply-chain finance innovation and in the next few year's block-chain based solutions is most likely to be introduced in future.

B. SCF Approach & Instruments

A supply chain finance program could be either buyer led or supplier led. The emergence of new technologies to connect with counter parties have led to the growth to what it is today. In a traditional supply chain or reverse factoring model, there are three parties and the chronological four steps below [11] & [12].

- 1. Buyer or purchaser
- 2. Seller or Supplier
- 3. Funder or the Financing Institution also known as risk takers

Step 1: A corporate buyer launches the SCF program and invites the top rated suppliers to enrol for onboarding in the program. The buyer is usually selective in choosing the suppliers. The supplier, who has good market standing, demonstrated good performance or had a long business

relationship from the past are invited to join the program [13].

Step 2: The supplier makes the supplies to the buyer and the buyer immediately notifies the funder or the financial institution who is also a participant in the SCF program. The funder reviews the invoice and makes early payments to the supplier. For e.g. if the payment is due in 60 days the funder pays in 15 days reducing the time lag by 45 days. The main objective of SCF is to secure business continuity, ensure steady flow of supply on the one hand, and finance sales growth on the sellers' side. The revenue potential of supply chain finance is huge and Industries offer considerable scope to tap it [14].

Step 3: The funder processes the request against a nominal finance fee or discount and transfers the balance to the supplier's account. The funder generates revenue by discounting the full value of the invoice by mutually agreed rates, which could be anywhere between 2-3% [16].

Step 4: The funder submits the invoice to the buyer on maturity for payment and realizes the full value of invoice. In steps, four the funder bridges the gap between earlier pay supplier date and a later invoice due date. The traditional SCF program is attractive when the buyer has a good reputation and market standing and sellers are smaller parties as compared to the buyers [17].

A traditional SCF model is beneficial to all the parties. The sellers benefit by access to capital much earlier as the funder pays them immediately [18]. The seller is required to bear the cost of discount but the comparative gains that accrue is much higher. The buyer benefits by foregoing immediate payments and they are able to manage working capital by holding cash for longer period. The cash saved can be diverted to other investments with larger payoff and realize opportunity gains. The funder is paying the supplier at a discounted value and realizing the full value on maturity from the buyer at a future date. The funder gains on a relatively risk free transaction [19].

The second buyer centric model is the dynamic discounting. In dynamic discounting, the buyer uses their own surplus cash to pay the suppliers early and receive discounts. The earlier the payment is given to seller the more is the quantum of discount received and vice versa. [20]. The buyer uses their own liquid cash &does not avail or extend the payment period. The discount earned outweighs the cost of holding payment and since the model is self-funded, there is no cost of financing involved. Generally, the trend now is the third party technology providers usually Fintech firms are managing this model. They charge a fee for managing the SCF platform and are incentivised based on buyers and seller's participation in the SCF program. [20]

The other approach in SCF is the supply side model called the Receivable Finance. Receivable Finance is one option where the supplier realizes the value of the invoice based on its strength at a discounted value from the funder. [15] The invoice is assigned, transferred & delivered to the funder and who later submits the invoice to the buyer for payment when the maturity date comes. Receivable finance is also otherwise known as invoice discounting. Discounts are calculated based on the current interest rates prevalent and a certain percentage of margins. This form of financing is similar to factoring. [22] Pre-shipment finance is another source of funds for the supplier. The supplier submits the purchase order to the funder and is able to obtain funding before actual shipment or delivery of the goods. The funder considers the purchase order as a conclusive and sufficient evidence of repayment of funds in future. Post-shipment finance is provided to the seller who submits the shipping documents to the funder as evidence of goods shipped and the banker in exchange provides the fund. [23]. Warehouse or Inventory finance is another form available to the seller where the physical evidence of goods is collateral for funding. Generally warehouse finance is an unstructured trade transaction and done selectively with major buyer and seller only because ownership or title of the goods in the warehouse could be in dispute and pose risks for the funder.

Another instrument in the SCF space is the Bank payment obligation (BPO). BPO is an instrument designed for working capital financing where the contracting parties do not use documentary evidence and instead rely on data for effecting payments and financing. BPO is an irrevocable obligation of the buyer's bank to pay the seller's bank based on certain data sets [24]. Data sets are numerical inputs extracted from documents like invoices, purchase orders, pricelists, bill of lading, shipper's advice, Customs and clearance certificates. Society for worldwide interbank financial telecommunication SWIFT is the facilitator for BPO transactions [25]. All banks need to register with SWIFT Trade Service Utility (TSU)and in exchange for fees SWIFT will assist the bank for going live & execute a transaction. BPO transactions are electronically executed in SWIFT TSU platform, uses a unique transaction matching mechanism, and can significantly generate savings [26]. Operationally, it will enable reduction in cost of documentation, discrepancies, avoid delays, disputes and reduce investigation efforts for exceptions that arose. BPO is not a SCF technique but an enabler for supply chain finance. BPO has international acceptance and follows the Uniform Rules for Bank Payment Obligation (URBPO) standards set by the International Chambers of Commerce. Since BPO transaction are bank-to-bank obligation based on digital workflow and therefore the consequential bank charges are lower as compared to a traditional letter of credit (LOC). Both the buyer and the seller are paid faster and all parties gain thus improving working capital position [27].

C. SCF Risks

Supply chain finance also comes with inherent and due share of risks. Supply chain solution is a counter to some of these risks but not all [14].

D. Country Risks

This risk is prevalent in cross border trade and associated with the economic and political risk of that country where the trading partners are located. Political turmoil and social unrest are a big hindrance to SCF adoption & implementation. Country risks are difficult to mitigate as they are uncontrollable and depends on the inter country bilateral relations.

E. Exchange Risks

Cross border trade are negotiated at predetermined exchange rates mutually decided by the parties. Exchange rates are never static and continue to fluctuate daily causing uncertainty for the trading parties. A depreciation or appreciation in the value of currency causes the exporter or the importer to gain or lose and this risk is difficult to mitigate. The only way to reduce this risk is to limit exposure and apply various hedging techniques, which is provided by the funder or the financing institution.

F. Transportation Risks

Transportation risks is a probability that the cargo is destroyed on voyage, pilfered, lost or stolen in transit or the journey diverted to other destinations. This risk is dependent on either the exporter or the importer who assume risk during the journey. Generally, the carrier does not undertake this risk and requires insurance cover for cargo booked by the exporter at the loading destination. This risk to some extent can be mitigated by taking Insurance coverage.

G. Commercial Risks

Commercial risks arise when either the buyer or the seller defaults and fail to honour its obligation. The exporter might stop or abandon production, the goods not accepted because of poor quality, or there could be a violation of the contractual terms. For an importer there could be procurement risk where the goods are not delivered as per agreed quantity or the importer may be facing insolvency prosecutions. This risk can be mitigated by taking bank guarantee, reducing cost of trade and insurance.

H. SCF Benefits

Supply chain finance offers numerous benefits and extends across the enterprise. Both qualitative and quantitative benefits are immense [28]. The goods manufactured by Organizations pass through a complex cycle from initial sourcing of raw materials to conversion to finished products and finally to be delivered to the end customer. This is where the role of working capital management and strategy comes into picture and requires to be managed optimally. Cash is blocked in the supply chain and especially in those Industries where the processing cycle is lengthy affecting liquidity. The cash, which is otherwise locked up, could

have been put to alternative use [29]. Supply chain finance addresses this by providing solutions to streamline the cash conversion cycle so that the cash is not lying idle for long. Many Organizations have introduced e-payments, e-invoicing, e-billing, Electronic data interchange (EDI), Electronic bill payment & presentment (EBPP) online transfer so that unnecessary paper work is avoided and the cash blocked can be quickly released for other use. Automating several processes also enables the firm to take advantage of discounts, quicker access to capital and reap the benefits on an ongoing basis [30].

Another benefit of supply chain finance is that the buyer and the seller are able to avoid operational risk and uncertainty. Suppliers in the chain are primarily small players and small and medium enterprises (SMEs) who need immediate cash to keep their operations sustainable. [31]. Holding their cash for longer period could lead to disruption in supply and ultimately cause shortages. The buyer in turn would face inventory deficiency and replenishment will not be possible affecting production and business. By providing supply chain finance the buyer has assurance of continuous uninterrupted supply fulfilling required market demand and the seller is able to access quick cash [32]. Supply chain finance also helps improve reputation and market standing as neither of the parties are in default in their mutual business relationship.

Nowadays the SCF program are implemented as Software as a Service (SaaS) [33]. SaaS based platform is gaining popularity because unknown buyers and sellers have been able to interact electronically even though they are geographically dispersed and located in remote areas. The on boarding time of buyers and sellers is also reduced and thereby improving implementation timelines and smoother transition for new entrants. The platform also ensures that all players in the supply chain gets adequate financing based on their requirements. Some of the common SCF platforms are the letter of Credit (L/C), and the Open Account (O/A), which facilitates the L/C, process in the bank in the dematerialized form. Other ancillary systems are the Customer Relationship Management (CRM), systems that offer services like risk assessment, financial reporting, determining the credit limit and exposure, provide ratings, monitoring and checking the compliance etc. [34]. Transaction Risk Management (TRM) enables payment errors and reconciliation, information about rejected goods, shipping delays and a system of continuous tracking of cargo. There are other third party systems like export financing, import financing and inventory financing. These technological platforms have trigger points, which helps buyer and seller to take appropriate decisions quickly [35].

I. SCF Challenges

There are primarily two challenges with credit in the supply chain process. First, for large Organizations the cost incurred on billing, collection, and customer delinquency administrative costs and if the supply chain extends beyond borders than there are costs related to customs, risk, compliance etc. [36]. Smaller Organizations face the problem of capital and they are further constrained in offering expensive financing options to customers with flexible payment terms leading to liquidity and cash flow problems.

There are other secondary challenges that continue to hinder the SCF adoption process. First is the legal, regulatory and jurisdictional, taxation issues for implementation across the Organization's global supply chain [37]. Some regions are so diverse with different language and customs, which makes the SCF program very complicated. The Companies are geographically isolated, which makes it difficult to implement. The buyer and seller profiles in certain regions are also difficult to verify because of poor credit ratings. The unstable domestic economy makes lending riskier and small buyers and sellers do not have a sound asset liability management practices in place. Since paper work is nearly eliminated adequate due diligence also cannot be conducted to complete a proper Know your Customer (KYC) verification. Second, is the problem of supplier and funder participation, cost of on boarding, communication etc. Suppliers are reluctant to participate because of the costs and associated fees required for onboarding. complicated and laborious process also dissuades suppliers from onboarding [38]. Further, the training and support needed also affect participation. For example, if the buyer or the supplier feels that the SCF program is not convenient then they might not use it at all or use it only when it is essential. There has to be a system of continuous day and night 24-hour support from technology groups to make the process user friendly, simple so that the adoption is higher [39]. All Information Technology (IT) systems & applications like order management, document management, workflow systems, bank connectivity, payments execution and tracking software's will need to be recalibrated and integrated into the SCF platform. Third is departmental conflict within large Organizations. Different department has their own goals and they generally do not align with each other, which makes the SCF implementation difficult in practice. Conflicts arise because of miscommunication or no communication at all. Various department like IT, Finance, Sales, Procurement, Treasury, and Legal have their own processes in place and may not like to change them unless they are convinced of the benefits of the program [40]. To avoid departmental frictions some multination Organizations with diverse business interests across the globe have formed Working Capital Council (WCC) an inter-departmental group driven by the Treasury Department within the Finance vertical [44]. The WCC has the representations from all departments and the main aim is to enhance communication, collaborate and coordinate all departmental objectives and integrate with the Organizational working capital strategy. However, some critics say that the formation of such intra department body are infructuous and serves no purpose because of conflicting interests, which are irreconcilable [41]. fourthly, there are accounting treatment that needs to be considered and how the items both payables and receivables are treated in the Balance sheet, how they are classified should be relooked into. All of these challenges continue to disrupt SCF initiatives and should be addressed holistically to make them manageable and surmountable. [42].

J. SCF Players

Some of the players in SCF landscape are large fortune 500 Companies with huge cash reserves and globally distributed buyers and suppliers. E.g. Oracle. Dell Computers, Toyota Motors. Second category is the major buyers who are in need for instant cash thereby greater emphasis on working capital management. E.g. Amazon, Tesco, IKEA, Walmart. Third category consists of small suppliers who face lengthy and stringent payment terms and bank finance is either unaffordable or unobtainable. E.g. Suppliers from India, Malaysia, Indonesia, Vietnam, China, Bangladesh, Brazil, and other developing Countries. The fourth category is the banks, which are highly regulated. E.g. Citibank, Bank of America, Deutsche, RBS, UBS etc. The SCF vendors are B2B suppliers namely ARIBA, BASWARE, TUNGSTEN, TAULIA, INVOICEWARE, PRIMEREVENUE, KYRIBA, DEMICA & ORBLAN. All these vendors provide their own proprietary customized solutions to Corporates in matters relating to supply chain finance. [50]

The Reserve Bank of India in 2014 has introduced a scheme named Trade Receivable Discounting System (TReDS) to finance trade receivable of Micro Small & Medium Enterprises (MSMEs) [32]. TReDS is an institutional mechanism to convert trade receivables into liquid cash from multiple financiers. TReDS facilitates financing of trade receivables of MSMEs from corporate and other buyers including Government Departments and Public Sector undertakings through the auction mechanism at attractive market rates [49]. Receivable Exchange of India (RXIL), a joint venture promoted by Small Industries Development Bank of India (SIDBI)and National Stock Exchange (NSE)incorporated under the Companies Act, 2013 operates the TReDS platform. Invoice mart is another digital invoice-discounting platform launched by India's third largest private AXIS bank and M Junction Services Limited, a B2B e-commerce Company. Invoice mart is a platform created by TReDS, approved by RBI in July 2017 to enhance availability of funds to MSMEs [43] & [33].

IV. CONCLUSION

Supply chain finance has gained considerable prominence in recent years due to globalization of trade [45]. The world of trade finance have been made easy with SCF and is considered as the cheapest and simplest way to manage working capital needs. SCF at the same time should not be confused with a loan or an early payment option or factoring even though they may appear similar. The digitalization of trade documentation, rise of cloud technologies, emergence of big data, easily accessible third party platform for lending and payment network have

further helped SCF to have widespread acceptance in the Industry. [46]. SCF is a technique deployed to improve the financial bottom-line for both the trading partner. It is not a trend anymore but a backbone of end-to-end infrastructure. The working capital generated in SCF value chain is used to fund innovations or can be productively diverted to new initiatives. Additionally, the funds may be deployed to reduce industry volatility and improve margin. [47]. Thus to sum up the money which would otherwise have been locked up in accounts receivable or accounts payable can now be gainfully employed to generate income or put to more strategic use for both the participants. [48]. SCF program also strengthens the tripartite buyer-supplier-funder relationship as all the parties extend a helping hand to each other to survive in the competitive market place.

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