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Technology-Enabled Supply Chain Finance for Small and Medium Enterprises is a Major Growth Opportunity for Banks

In most emerging markets, small and medium enterprises, or SMEs, lack access to the credit and liquidity they require for their daily working capital needs. This is partly due to the fact that the credit risk of such businesses is typically difficult to assess and their working capital needs are unpredictable. In most countries these businesses operate primarily in the retail and wholesale trade segments, and banks have generally not done enough to finance their domestic or international trade operations, especially open account transactions. Supply chain finance structures offer an alternative solution to finance the trade flows of these enterprises, with benefits for all stakeholders, including large enterprises, their SME trade counterparts, and financial institutions. This type of financing helps banks extend working capital finance to SMEs by leveraging commercial and trust relationships between the SMEs and corporates; it helps large corporates improve their working capital management and decreases supply chain disruptions; and it enables banks to better assess, measure, and manage the risks of extending financing to SMEs.

Public Disclosure Authorized

Supply chain finance is a broad category of financing with multiple products, and it contributes significantly to global trade finance, which has an estimated financing gap of $1.9 trillion annually around the world.[1] According to the Aite Group, the estimated potential volume of reverse factoring, one of the common supply chain finance products, ranges from $255 to $280 billion, globally.[2]

Growth in the supply chain finance sector is rising steadily. In the period between 2008 and 2014, domestic factoring volume increased on average by six percent per year across 70 countries in Europe, the Americas, Africa, Asia and the Pacific. International factoring volume grew on average 16.6 percent per year.[3] Moreover, research conducted by Demica shows that supply chain financing at major international banks is growing by a rate of 30 to 40 percent a year, and much of the expected future growth will be driven by local supply chains.[4]

Companies can use supply chain finance to significantly increase their economic value by extending days payable outstanding, reducing days sales outstanding, reducing automation related costs, and boosting trade volumes as a result of greater economies of scale. "The strategic relationship between supplier, buyer, and a bank would naturally prevent either party from failing to deliver on mutual contractual obligations," according to Eugenio Cavenaghi of Banco Santander.[5] The compelling benefits of supply chain finance make it clear that it is a very attractive market opportunity for banks.

Supply chain finance has traditionally been driven by international banks that focused more on cross border trade, but its adoption has been slow due to weak recourse environments, as well as scalability and origination costs. However, in recent years there has been a shift toward digitization and automation of both supply chain finance transactional flows and supply chain financial solutions. Leveraging the wide range of trade and transactional data, rapidly growing technology platforms are now playing a crucial role in increasing transparency by providing risk profiling credit information for banks to gain a larger share of the market.

According to Enrico Camerinelli of the Aite Group, the key trends in supply chain finance are its ability to:

- Transition from paper-based transactions to electronic invoicing
- Move from a buyer-centric model to a distributed network of buyers and suppliers with no defined central anchor
- Use transactional data to assess the credit worthiness of potential borrowers.[6]

Supply chain finance not only provides market trends and prevents disruptions, but also helps banks better manage risks. André Casterman, a member of the ICC Banking Committee states that "a big innovation in the market is using transactional

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data for risk assessment and mitigation. The data from the physical value chains and payment data collected through technology providers can be used to enhance the knowledge of the credit-worthiness of a particular enterprise, industry, or region." The playing field has changed, propelling the supply chain finance sector forward.

Automation Considerations

Technology, either in-house or multi-bank platforms, is central to any successful supply chain finance program. When selecting the technology, three important factors need to be considered. These are automation, simplicity, and scalability (Figure 1).
The nature of supply chain finance platforms is quite diverse, making selecting a well-suited supply chain finance platform a monumental task that requires banks to clearly understand the goals of the program, as well as current capabilities and gaps.

Supply chain finance solutions can take various forms in order to address different challenges. A bank considering launching or scaling up its supply chain finance business typically has the following two options: (1) use a bank-led platform, either developing an internal IT infrastructure or adopting another bank's platform; (2) contracting a bank-independent platform through: (a) licensing the technology solution from a technology platform; (b) outsourcing the automation services to a third-party platform such as Software as a Service; or (c) participating in a marketplace as one of multiple funders.

Figure 1. Success factors for an effective supply chain finance technology solution

Automation

Key Features:
- Speed of transactional flow
- Data collection from physical supply chain flows
- Reporting functionality
- Integration with the core banking system

Key Benefits:
- Increased productivity
- Timeliness of invoice delivery
- Multi-party transaction visibility
- Efficiency

Simplicity

Key Features:
- Intuitive interface
- Structured workflow, easy accessibility by all parties
- Flexible connectivity to various core systems

Key Benefits
- Ease of use for ultimate user
- Minimum level of training required for staff and trade counterparts.

Scalability

Key Features:
- Ability to scale up transactional volume
- Efficient problem solving with integration and operationalization
- Ability to extend offering to more than one product

Key Benefits:
- Reduced number of errors
- Unconstraint business growth

Source: IFC

Figure 2 illustrates IFC's approach to the segmentation of supply chain finance platforms.

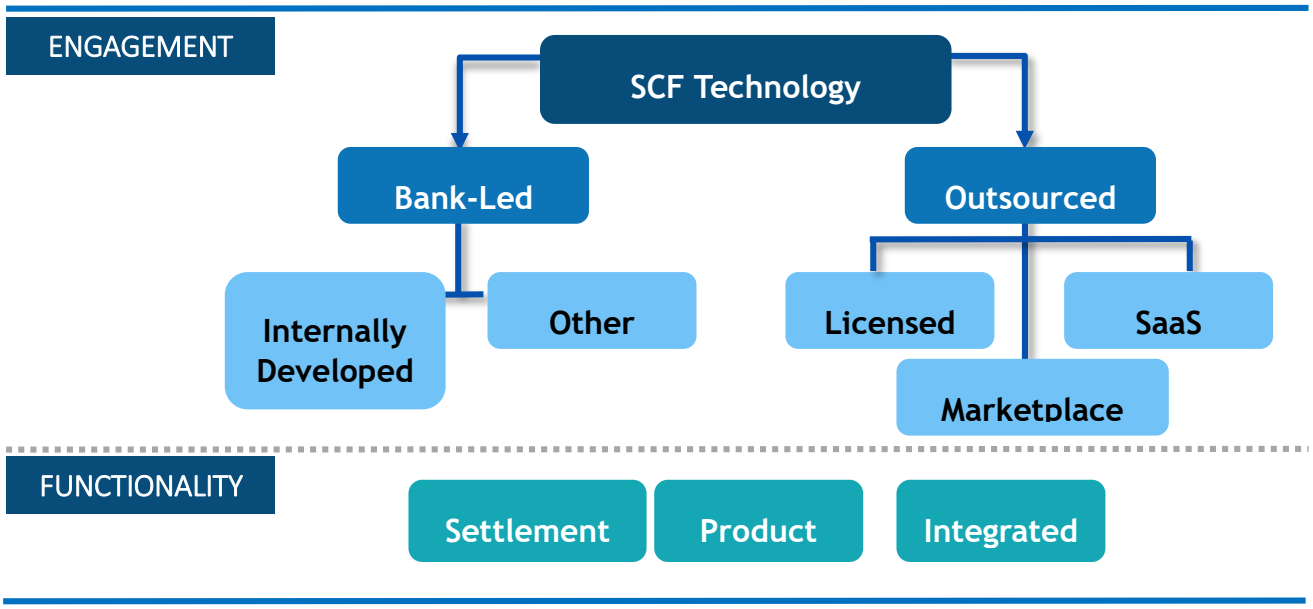
Bank Led Platforms

Bank led platforms, especially those developed internally, provide a high level of flexibility and can be highly configurable, enabling easy integration of treasury, procurement, and IT work streams. In such a scenario, banks are the sole owner and funder of the program, which establishes exclusivity rights to the supply chain solution and strengthens its connection with clients, providing the bank with a competitive advantage.

However, developing such a platform from scratch can be highly complex, delaying the launch of a supply chain finance program and invariably requiring a substantial financial investment.

Development, implementation and maintenance make this option expensive and less adaptive. Big banks such as Citibank, HSBC, ICICI Bank, Deutsche Bank, Santander, and JPMorgan Chase manage their individual proprietary supply chain finance platforms. However, these institutions are pioneers in supply chain finance and their systems are well integrated into their transaction banking capabilities.

Figure 2. Supply chain finance technology solutions engagement categorization



Source: IFC (SCF = Supply chain finance; SaaS = Software as a Service).

Smaller financial institutions may also choose to partner with another bank to use their technology platform. This allows the institution to provide additional financing while avoiding the credit process and the additional cost of hosting a platform. However, this option is exercised more in a syndicated supply chain finance transactions and is not prevalent due to data sharing issues.

The number of independent third-party platforms has increased significantly. According to Casterman, "the financing option provided by business-to-business platforms is an important development in the market." He adds that AP Ariba and Basware are among the largest Purchase-to-Payments networks facilitating financing. They collaborate with financial institutions to combine their transaction data with the participating bank's balance sheet to satisfy funding requirements.[7] So, depending on the needs and goals of the supply chain finance program for the bank and the businesses, the external platforms can be contracted in three different ways: (1) licensed, (2) Software as a Service; or (3) marketplace.

Licensed. Financial institutions can buy a readily available solution and license it. The license agreement with an external supply chain finance platform may include installation, integration with the core banking system, and ongoing support and maintenance—all undertaken under the platform's brand. The financial institution can also white label the solution and present it under a new name. White-labeled solutions provide great marketing benefits, although they increase the cost of implementation. Platforms such as Premium Technology (FinShare), Orbian, and Demica work with banks on white-label solutions, along with their own proprietary offerings. In addition, to ensure that first-comer benefits are fully explored in a given market, financial institutions could consider an exclusive relationship for a given time period, on a case-to-case basis, with an external technology provider.

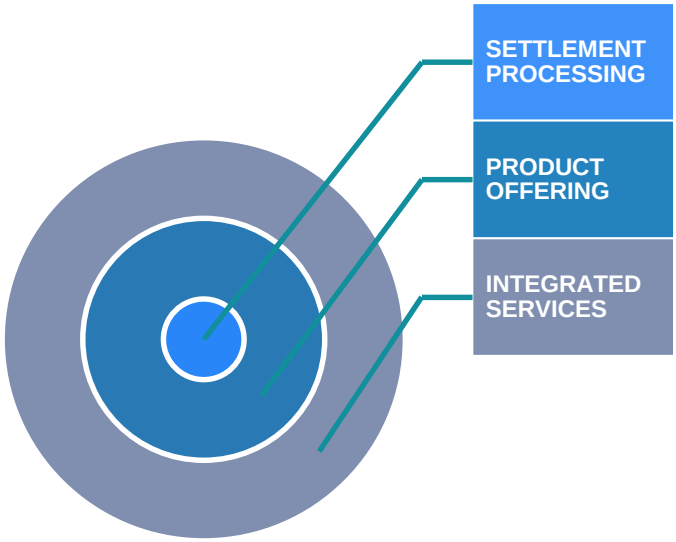
Software as a Service. The financial institution can also use an external software company's services on a 'Software as a Service' basis, where the provider is responsible for data aggregation and hosting, for managing the transactions, and for communication with stakeholders. In comparison to the licensed solution, this option features faster implementation, up-to-date technology, low integration requirements, and low costs.

Such a solution typically has a standardized set of functionalities and therefore may be less customized and tailored toward the specific needs of each financial institution. The bank also carries the business risk of the technology company by contractually hiring it to manage the supply chain finance related business processes. Some examples of the Software as a Service model used in the supply chain finance space include Kyriba, Taulia, and Prime Revenue.

Marketplace. Technology solutions can be enabled for stakeholders along the supply chain through the marketplace, providing them with access to a wide range of financial institutions and enabling them to sell invoices directly to investors, including banks, hedge funds, and private equity firms. In such a model, the suppliers and buyers can choose a funder among investors registered on the platform and based on

the specifics of the transaction, geography, and price. The bank can also agree or disagree on finance specific transactions. The marketplace can also work as an auction, allowing various investors to bid and participate in the invoice auctioning. Platforms such as Prime Revenue, Ariba, Orbian, Nafin, Bolero, and the Receivables Exchange are examples of supply chain finance marketplaces.

Figure 3. Functionality of supply chain finance platforms



Source: IFC

Service level functionalities of supply chain finance platforms

A bank can select the technology platform best suited to its requirements from a range of vendors and at varying degrees of functional complexity. Market practitioners define various segmentation methodologies of the platforms depending on their functionality. Alexander Malaket, a member of the ICC Banking Committee, for example, defines three types of supply chain finance platforms: (1) payment processors for trade settlement, (2) package providers for standardized products and financing, and (3) global trade management providers for payment settlement, distribution of risk, cash management, and other comprehensive services. Banks can select platforms that best match their needs and fill the gaps of their own technology infrastructure.

Settlement processing. Platforms such as Ariba, Oxygen Finance, and GT Nexus support the electronic flow of trade documents and information, document exchange, automation of payments, e-invoicing, data matching, and reconciliation between buyers and sellers. Such platforms provide banks with transparency on buyer and supplier transactions, simplifying financing decisions and allowing buyers and suppliers to collaborate on a single platform.

Product offering. In addition to process management, platforms such as PrimeRevenue, GT Nexus, Premium Technology, GSCF, GTC, Misys, and Octet provide financial institutions with an automated system for managing their trade accounts through various structured supply chain finance products, including invoice discounting, purchase order financing, reverse factoring, and distributor finance.

Integrated services. In order to ensure a seamless and efficient supply chain finance program it is crucial that all participating parties—both the supplier and buyer treasuries, sales, procurement, IT, legal, and the financial institution—clearly understand the processes, responsibilities, and pricing involved. Technology providers such as Demica and Prime Revenue can provide an advisory role to stakeholders on various related matters, including assisting with the complicated onboarding process. Such services might lie in the following areas:

Source: IFC

It is important to consider that the above categorization is not mutually exclusive and that there is a degree of overlap owing to the emerging nature of the industry. Another dimension to consider when looking at technology platforms is the anchor focus and the product range.

There are platforms that focus more on international and tier one anchor companies, while the emerging platforms place greater focus on tier two and/or regional and local corporates. In addition, the range of products offered by the platforms varies, especially when it comes to their ability to offer distributor finance solutions.[8]

Emerging Trends in Supply Chain Finance

Supply chain finance securitization

Supply chain finance trade payables and receivables can be packaged into securities and distributed to capital markets along with other types of derivatives. Some platforms (for example, the one offered by CRX Markets) offer an auction-based securitization platform that provides various types of investors with access to this type of instrument.

New solutions are appearing in the market that have the ability to reduce the risk of a single issuer, distribute an exposure across several suppliers in a bundled security, issue it in capital markets, or sell it directly to private or institutional investors. Alexander Malaket says that "securitization is part of the market and gains attention in periods where banks experience balance sheet limitations and constraints and must remove trade business from the balance sheet. Fintech companies will have a role to play in these securitization processes which strive to diversify the risks."[9]

Blockchain technology. With innovation occurring in the financial technology space, banks are looking for new ways to compete. According to Casterman, "blockchain technology can boost purchase order financing by providing greater security, better efficiency, and higher confidence in the data used for making financial decisions. Today, purchase order financing is quite underutilized, since it often requires a confirmation through letters of credit or other instruments. Blockchain can ease this requirement and enable purchase order financing for wider use by SMEs."[10]

According to the Global Trade Review, a number of institutions including Standard Chartered Bank, DBS Bank, and Infocomm Development Authority of Singapore are discussing the possibility of developing a blockchain-based invoice trading platform. It is based on Ripple's distributed ledger technology for tracking invoices, backing loans to suppliers, and reducing the risk of invoice duplication while maintaining client confidentiality.[11] Such a platform would allow banks to convert invoices into digital assets on a distributed ledger. Participants get a cryptographic identity, while information on the status of invoices is accessible to all users, allowing third parties to verify the authenticity of trade documents.

Building Competencies Beyond Technology for Sustainable Supply Chain Finance Solutions

Technology solutions are an important factor, although they are not the only driver of success when launching a supply chain finance program. There are other important factors, summarized in Figure 4.

Figure 4. Competency framework of a successful supply chain finance program

Source: IFC

Operational model. A supply chain finance program requires a clear operational structure within the bank. This includes a well-defined place in the organizational structure, clear responsibilities, and streamlined processes. To achieve these it is important to quantify the business opportunity for supply chain finance and gain a thorough understanding of the operating and legal environment that will define the types of products and service offerings required for a specific market. It is equally critical to design good methodologies to segment not only the corporate clients, but also their suppliers and distributors, along with having an appropriate coverage and commercial model to target, engage, and service clients in the supply chain.

Products and Services. When designing the product strategy and choosing which type of supply chain finance products to offer, it is important to understand the market size and competitive landscape in order to innovate and find the appropriate offering that will quickly gain a sizeable market share in the market, as well as the legal and financial infrastructure landscape (such as moveable collateral registries) that will help to identify the most demanded and scalable supply chain finance products. A detailed product design with good accompanying credit policies and a product implementation

plan are key to successfully launching the new product supply chain finance offering.

Sales and Delivery Channels. When designing the sales model, financial institutions must establish a cost-benefit analysis (for example, peer group comparison of working capital efficiency) for each corporate client chosen to join the supply chain finance program. It must also create an onboarding mechanism for suppliers and distributors, detailing the functionality of the program as well as the products, technology, and benefits of participating in the program. In addition, a suitable sales outfit is required to allow the bank to rapidly acquire, onboard, and manage a portfolio of new clients. To achieve efficiency while keeping operational costs low, financial institutions must tailor their service offering based on the size of the targeted business.

HR & Systems. Banks need to create the proper incentive and reward mechanisms to align their sales force and achieve the growth and scale of the program. Training is often needed to equip the front line team, both corporate and SME staff, with the necessary technical and operational skills to sell and fully service clients in the supply chains.

Credit Risk Management. A number of areas need to be in place to successfully and safely scale up the supply chain finance program, including designing the appropriate credit policies detailing the anchor client classification criteria and corresponding buyers and suppliers. Industry benchmarks can also be established to improve the design of risk and pricing profiles.

For more advanced cases, the use of application and behavioral scoring models can help to support the credit differentiation process, while installing early warning systems will help the bank to anticipate adverse movements in its portfolio and minimize expected losses. A well-structured collections framework and an active client management approach at the corporate and SME level are key to minimizing losses when late payment cases arise.

Management Dedication. According to Eugenio Cavenaghi, Head of Trade, Export and Supply Chain Finance at Banco Santander, "the major challenge for banks in establishing a supply chain finance business is aligning the interests of various internal stakeholders. Senior management and business line leaders should understand the importance and benefits of supply chain finance which includes high returns, low risk, and a strengthened relationship with the clients. Once the interests are aligned, the institution should mobilize the necessary resources. In order to establish a well-functioning supply chain finance business, the bank needs to allocate significant resources, both human and financial."[12]

Creating a supply chain finance program involves a complex set of processes and procedures, which requires a strong central coordination function with a dedicated supply chain finance team. The team has to be responsible for gaining the buy-in from various stakeholders in the bank (for example, corporate/commercial, retail/small business, credit, compliance, IT, legal, and HR), which often entails clear profit sharing/shadowing arrangements, and a strong commitment from management to drive the program through inception to implementation.

In addition, this team also coordinates the external relations with third parties and partners who work in the supply chain finance space.

Conclusion

Supply chain finance can help banks grow their SME portfolios in a sustainable and risk-mitigated manner. The industry is rapidly evolving, with local and regional financial institutions realizing the inherent opportunities within their corporate portfolios. Market trade flows and the increased availability and proficiency of technology platforms has made supply chain finance portfolio growth more feasible.

Fortunately for financial institutions, there are multiple options beyond building an internal supply chain finance IT solution, including external technology providers.

At the same time, financial institutions need to understand the market for supply chain finance and make the best use of technology to create a solid supply chain finance program that is successful, scalable, and sustainable.

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About IFC and its supply chain finance practice

IFC, a member of the World Bank Group, is the largest global development institution focused on the private sector in emerging markets. Working with more than 2,000 businesses worldwide, we use our capital, expertise, and influence to create markets and opportunities in the toughest areas of the world. In FY16, we delivered a record $19 billion in long-term financing for developing countries, leveraging the power of the private sector to help end poverty and boost shared prosperity. For more information, visit www.ifc.org.

IFC has a strong track record of enabling access to finance to small and medium enterprises through supply chain finance programs, and it has successfully completed investment transactions and advisory projects with both large companies and financial institutions. Focusing on financial intermediaries, IFC offers a range of investment and trade finance solutions through the Global Trade Supplier Finance Program, a $500 million multicurrency finance program launched in 2010 to provide affordable short-term financing to suppliers in emerging markets. In addition, IFC offers comprehensive supply chain finance advisory services that help client financial institutions launch new or scale up existing supply chain finance programs through market research, business model design, product development, sales process enhancement, technology set up, and credit and risk management.

IFC as a trade finance counterparty and an investor in the financial technology market works with Nafin, GT Nexus, and Prime Revenue platforms.

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[5] Comment by Eugenio Cavenaghi to IFC staff, 2016.
[6] Comment by Enrico Camerinelli to IFC staff, 2016.
[7] Comment by André Casterman to IFC staff, 2016.
[8] Distributor finance is also known as buyer finance and is defined as "the provision of financing for a distributor of a large manufacturer to cover the holding of goods for resale and to bridge the liquidity gap until the receipt of funds from receivables following the sale of goods to a retailer or end-customer." See BAFT - Euro Banking Association (EBA) - Factors Chain International (FCI) - International Chamber of Commerce (ICC) - International Trade and Forfaiting *Association (ITFA*), Standard definitions for techniques of supply chain finance, 2016.
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