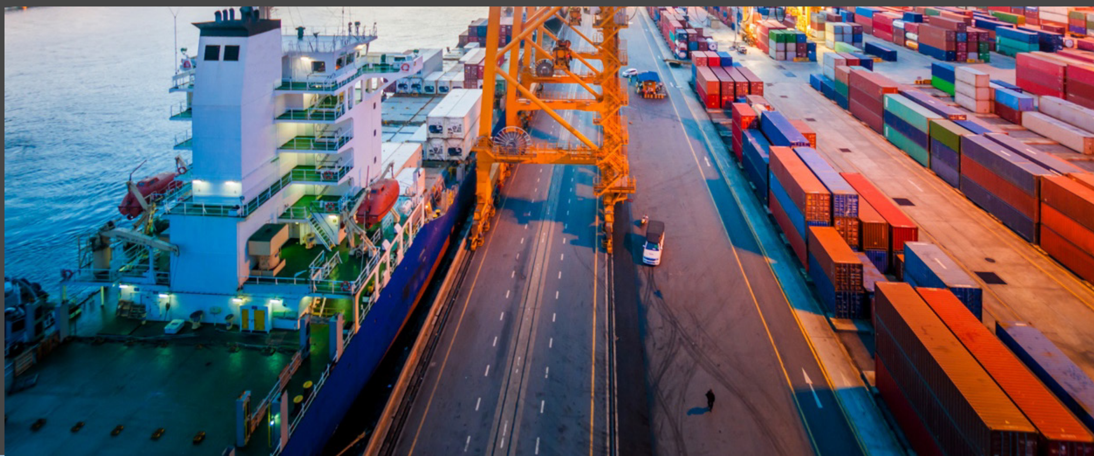
Digitising supply chain finance – opportunities amidst constraints

August 2024



Foreword

Significant disruptions in global value chains have posed challenges to economies all around the world. Such disruptions create obstacles for small and medium enterprises in both domestic and international trade. This has necessitated a relook at global supply chain structures in order to make them more robust and resilient.

The rise of new-age technologies like the internet of things (IoT), artificial intelligence, blockchain and increasing digitisation have demonstrated the potential for bringing in major innovations in supply chain finance (SCF) techniques. This can result in improved processing times, transparency and controls, leading to increased participation from financial institutions to support the value chain.

With respect to the Indian context, the need for SCF becomes more pronounced due to a range of factors. India's economy is characterised by a considerable number of micro, small and medium enterprises (MSMEs) that often face challenges with their cash flows. Significant policy initiatives have been put in place such as Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE), Mudra loans and TReDS to cater to the financial needs of MSMEs. With the help of technological advancements and regulatory support, SCF is evolving rapidly in the Indian ecosystem.

In this white paper, we discuss the various business models and technological innovations in the supply chain ecosystem.

I trust you will find this to be an interesting read and gain relevant actionable insights for your organisations.

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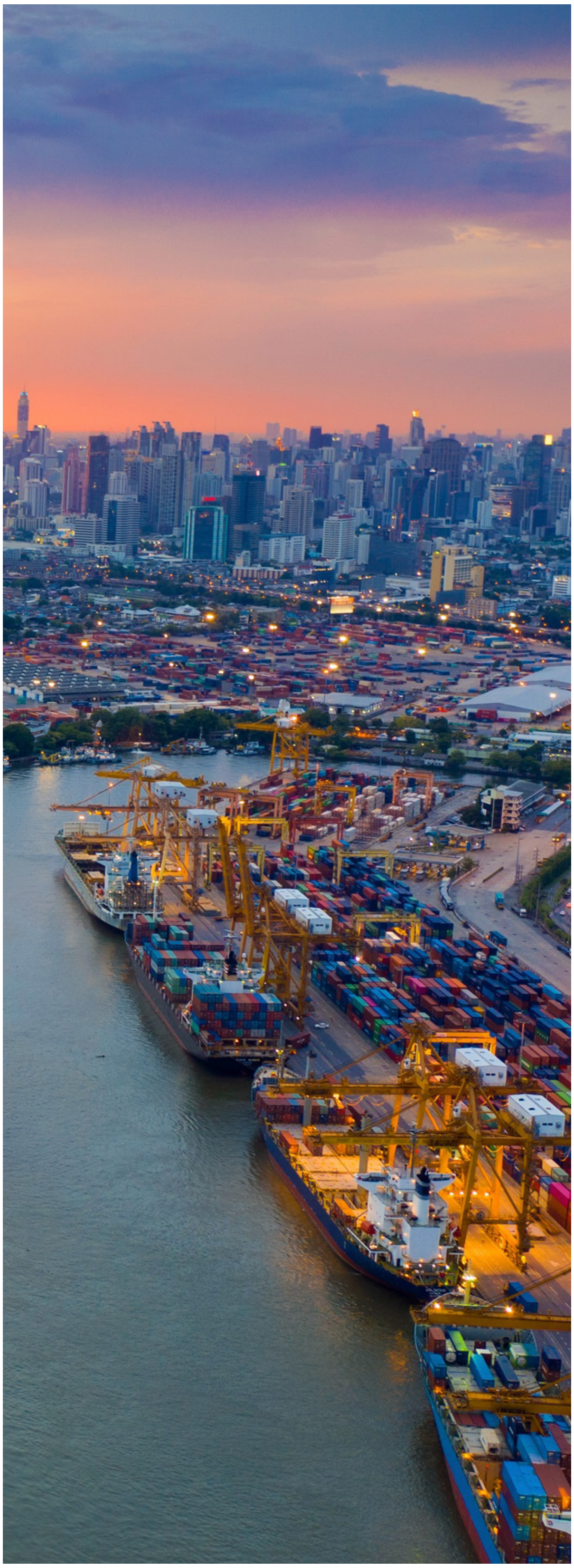

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Introduction

Amidst rapid globalisation and complex supply chains, businesses worldwide have found supply chain finance (SCF) to be one of the most essential tools for their day-to-day business activities. As businesses deal with challenges in managing working capital, ensuring liquidity, and optimising cash flow, the need for SCF is rising steadily across various industries. In the global landscape, businesses are mostly dependent on international suppliers and distributors, leading to longer payment cycles and higher financial risks. SCF can help to mitigate such risks by providing financial solutions that enable faster payments to suppliers and extended payment terms for buyers.

The need for SCF in the Indian market is much more pronounced due to a range of factors. India’s economy is characterised by a considerable number of micro, small and medium enterprises (MSMEs) that often faces difficulties with cash flow issues and delayed payments. Apart from helping MSMEs meet their financial needs, SCF provides efficient to manage the complexities of cross-border trade. This, along with the increased integration of Indian businesses with the global supply chain, necessitates an efficient SCF solution within its ecosystem.

1.1

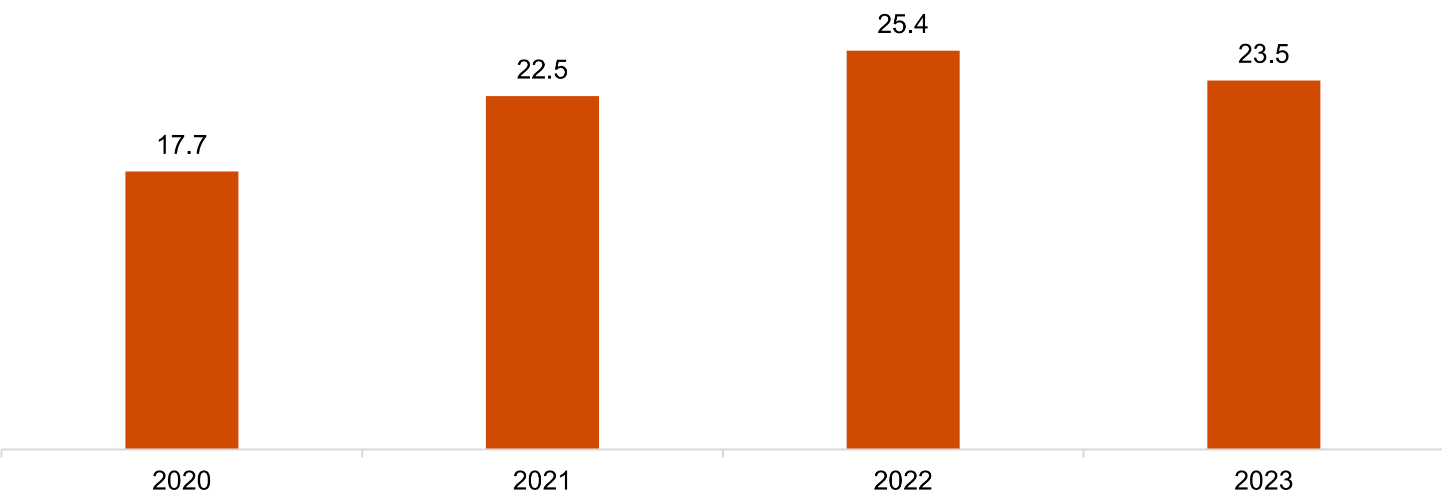
Understanding the landscape of SCF

Global overview of SCF

SCF has emerged as a critical financial tool globally, especially in the context of increasing economic volatility and the need for resilience in supply chains. The necessity for SCF is driven by numerous factors such as liquidity constraints, the need for improved cash flow management and the overall stability of supply chains.

Over the past decade, SCF has been extremely useful for companies, especially MSMEs, helping them to address their financial needs in a timely manner and thus build a more solid network in their supply chains and bridge their working capital needs to meet their order requirements on time. Global trade volumes have a direct correlation with SCF volumes. Global SCF volumes have surged in recent years, exhibiting robust growth and bolstering the global market.

Figure 1: Value of global trade (USD trillion)



Source: PwC India, 'VIKSIT: An approach for India to achieve USD 1 trillion exports'

The above graph shows that the value of global trade has grown at a CAGR of 7.46% between 2020 and 2023, indicating that global trade is set to experience a positive headwind. This development will have a positive impact on the SCF ecosystem across the world. Increase in trade will facilitate growth in demand for SCF solutions amongst participants of this ecosystem as they would require enhanced financing solutions to facilitate trade requirements.

These developments will compel SCF solution providers to come up with innovative solutions that not only address the financial needs of this ecosystem but also provide an enhanced experience.This will give a boost to the SCF ecosystem across the globe.[1]

1. PwC India, https://www.pwc.in/assets/pdfs/viksit-v1.pdf

Overview of SCF in India

India is home to over 63 million MSMEs, making it second only to China, which has around 140 million such enterprises. The MSME segment is hailed as the growth engine of our country's economic landscape as it plays a significant role in the Indian economy, **contributing 30% of the nation's GDP and 40% of its exports**. MSMEs have also generated employment for more than 110 million people across the country.[2]

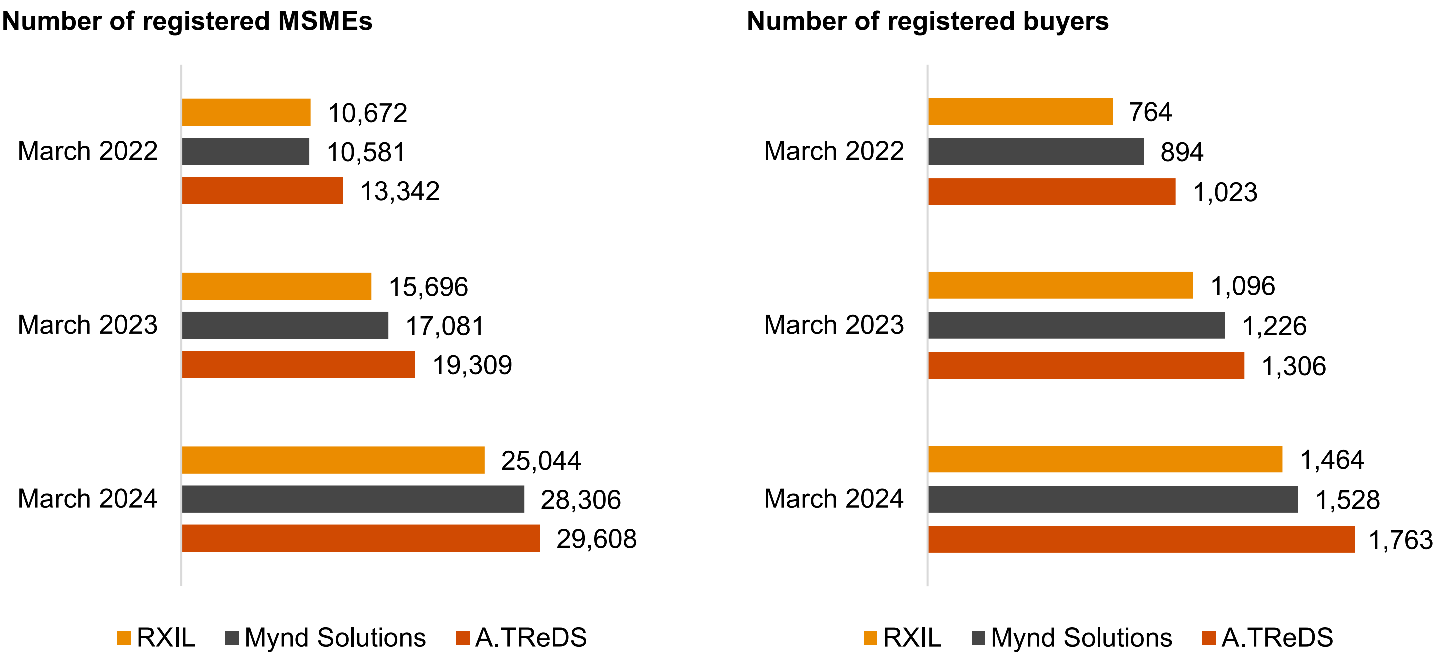
Despite the significant role of MSMEs, they face multiple challenges and one of the biggest hurdles they encounter is in accessing formal credit and financing. A 2022 Finance Committee report reveals a credit gap of INR 20–25 lakh crore in India, indicating significant funding shortages in the MSME sector.[3]

Delayed payments to MSMEs amount to a staggering INR 10.27 lakh crore, which is roughly 7.8% of the nation's GDP.[4] It is therefore essential to strengthen policies in this area. Ensuring timely and easier access to finance is not merely a matter of convenience for MSMEs; it is a crucial factor that can determine their survival and growth.

With the help of technological advancements and regulatory support, SCF in India is evolving rapidly. SCF comprises various financial instruments and solutions such as factoring, reverse factoring, inventory financing and trade credit. The Reserve Bank of India (RBI), which is the financial regulator of India, has been instrumental in promoting SCF through various initiatives, one of which is the Trade Receivables Discounting System (TReDS). The TReDS platform helps MSMEs in India by facilitating financing of trade receivables. As of now, the RBI has given in-principle approval to three entities for setting up of the TReDS platform, namely Axis Bank, Gurgaon-based Mynd Solutions and a joint bid by an investment management company and Small Industries Development Bank of India.[5] Along with MSMEs, banks and non-banking financial companies (NBFCs) also play a crucial role in the Indian SCF ecosystem. Banks and NBFCs offer a wide range of SCF products tailored to the needs of different industries and business sizes. This, along with integration of digital platforms and FinTech solutions, has enhanced the efficiency and accessibility of SCF, which has allowed real-time transaction processing and improved risk management.

The number of MSMEs (sellers) and buyers on the three platforms associated with TReDS have increased steadily over a period, indicating that the Indian business ecosystem is increasingly adopting the SCF ecosystem.

Figure 2



Source: PwC analysis of RBI data

2. https://www.thehindubusinessline.com/economy/anticipating-budget-2024-msmes-seek-strategic-policies-for-growth-and-innovation/article67792995.ece
3. https://loksabhadocs.nic.in/lsscommittee/Finance/17_Finance_46.pdf
4. https://www.thehindubusinessline.com/economy/anticipating-budget-2024-msmes-seek-strategic-policies-for-growth-and-innovation/article67792995.ece
5. https://www.thehindubusinessline.com/money-and-banking/rbi-gives-inprinciple-nod-to-3-entities-to-set-up-trade-receivables/article7912967.ece

The above charts indicate a positive trend, with RXIL recording a growth rate of approximately 60% in the number of registered MSMEs (sellers) between FY23 and FY24. Similarly, Mynd Solutions experienced approximately 66% growth, and A.TReDS saw around 53% growth in the number of registered MSME (sellers) on their respective platforms during the same period.

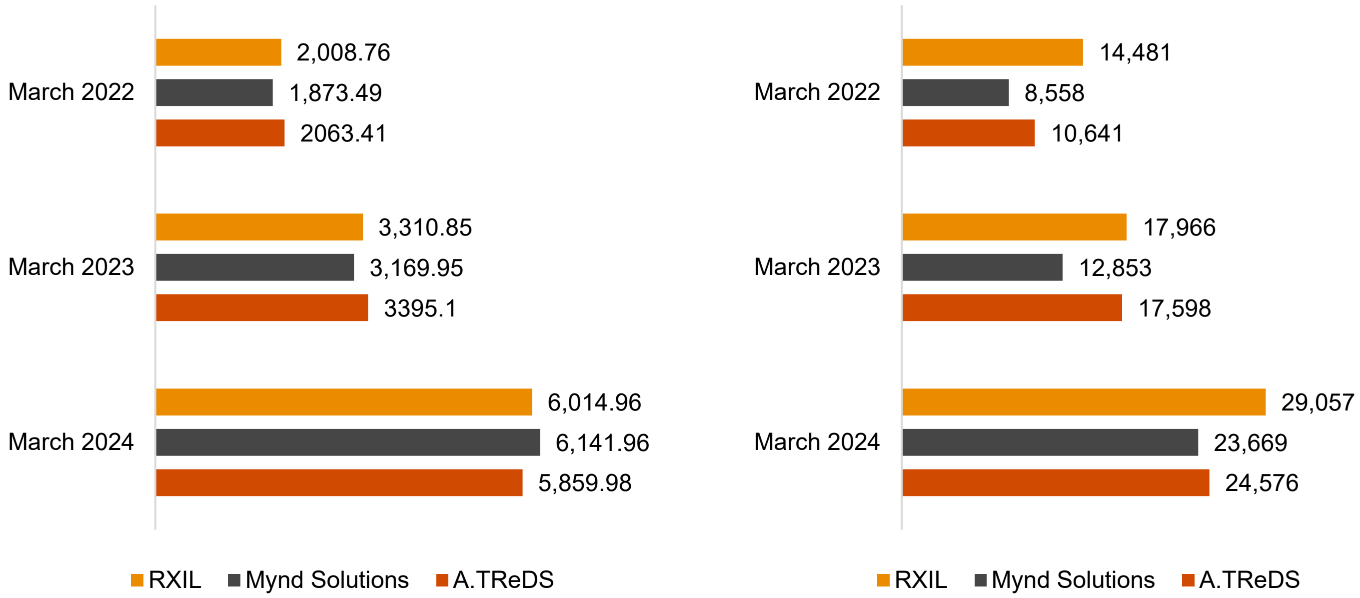
In terms of registered buyers, a growth trend has been observed across all platforms. RXIL recorded a growth rate of approximately 34% between FY23 and FY24, while Mynd Solutions and A.TReDS recorded approximately 25% and 35% growth respectively in the number of registered buyers during the same period.

With an increasing number of sellers and buyers in the Indian SCF ecosystem, the total number of invoices discounted has risen over the years (as is evident from the charts below), and the need for SCF is also rising steadily.

This creates a positive environment amongst Indian businesses to adopt SCF as an effective way to manage their supply chain.

Figure 3

Number of factoring units financed **Amount financed (in INR crore)**



Source: PwC analysis of RBI data

Considering the rapid growth of the SCF ecosystem in India, the total business throughput is projected to reach INR 40,000 crore in FY24 across the TReDS platforms hosted by Mynd Solutions and RXIL.[6] This is evident from the fact that overall value of amount financed has grown by 82% between FY23 and FY24 on the RXIL platform and by 94% and 73% respectively on the Mynd Solutions and A.TREDS platforms during the same period.

As we have seen, SCF offers substantial benefits in terms of liquidity, risk management and operational efficiency. However, the real potential of SCF can be explored through strategic implementation of various business models that can be tailored to meet specific needs of various banks or financial institutions. In the following chapters, we will explore various models of SCF along with the key features of various SCF ecosystems. These models will allow us to better appreciate the opportunities and understand the constraints that come with digitising SCF in today's dynamic business environment.

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6. https://www.thehindubusinessline.com/data-stories/data-focus/treds-platforms-in-india-thrive-with-a-remarkable-70-transaction-surge/article67371756.ece

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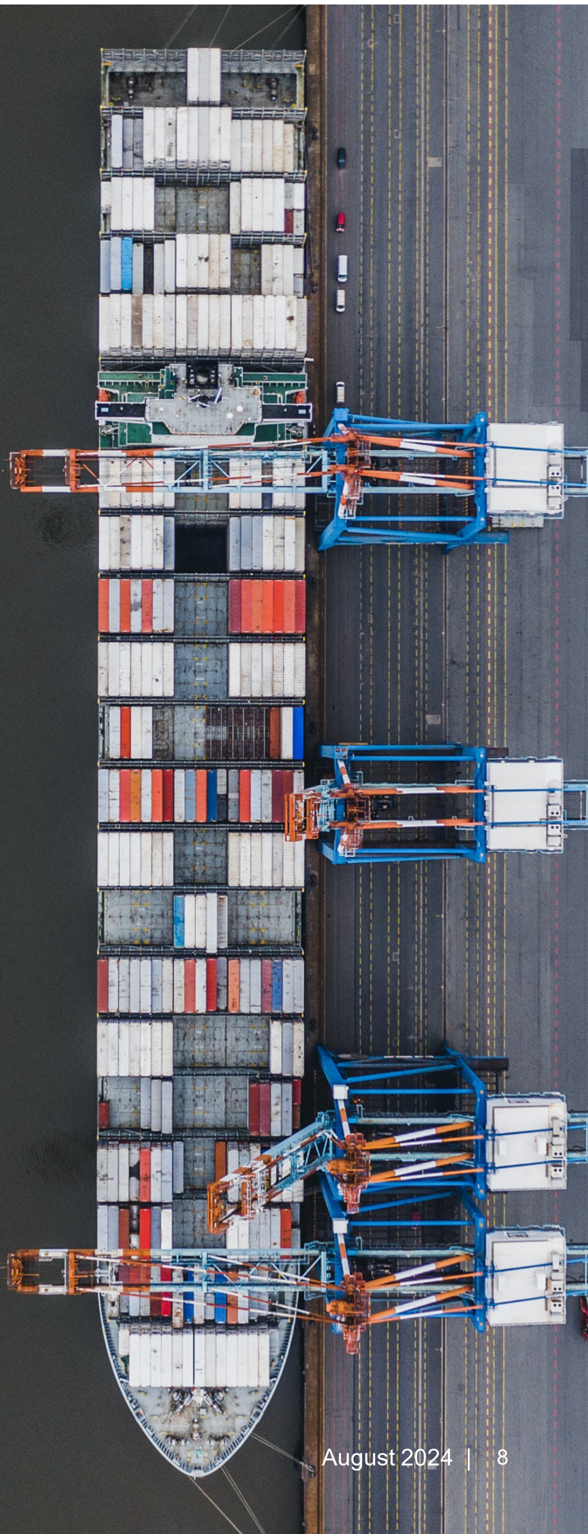
Pioneering business models in SCF



SCF is typically associated with trade finance (i.e. the financing of transactions across national borders where options for recourse are fewer and more difficult to enforce). With trade finance, partnering financial institutions may step in to undertake risk on behalf of clients they know well, serving as a surrogate source of trust among established bank networks, and enabling the transaction to take place.

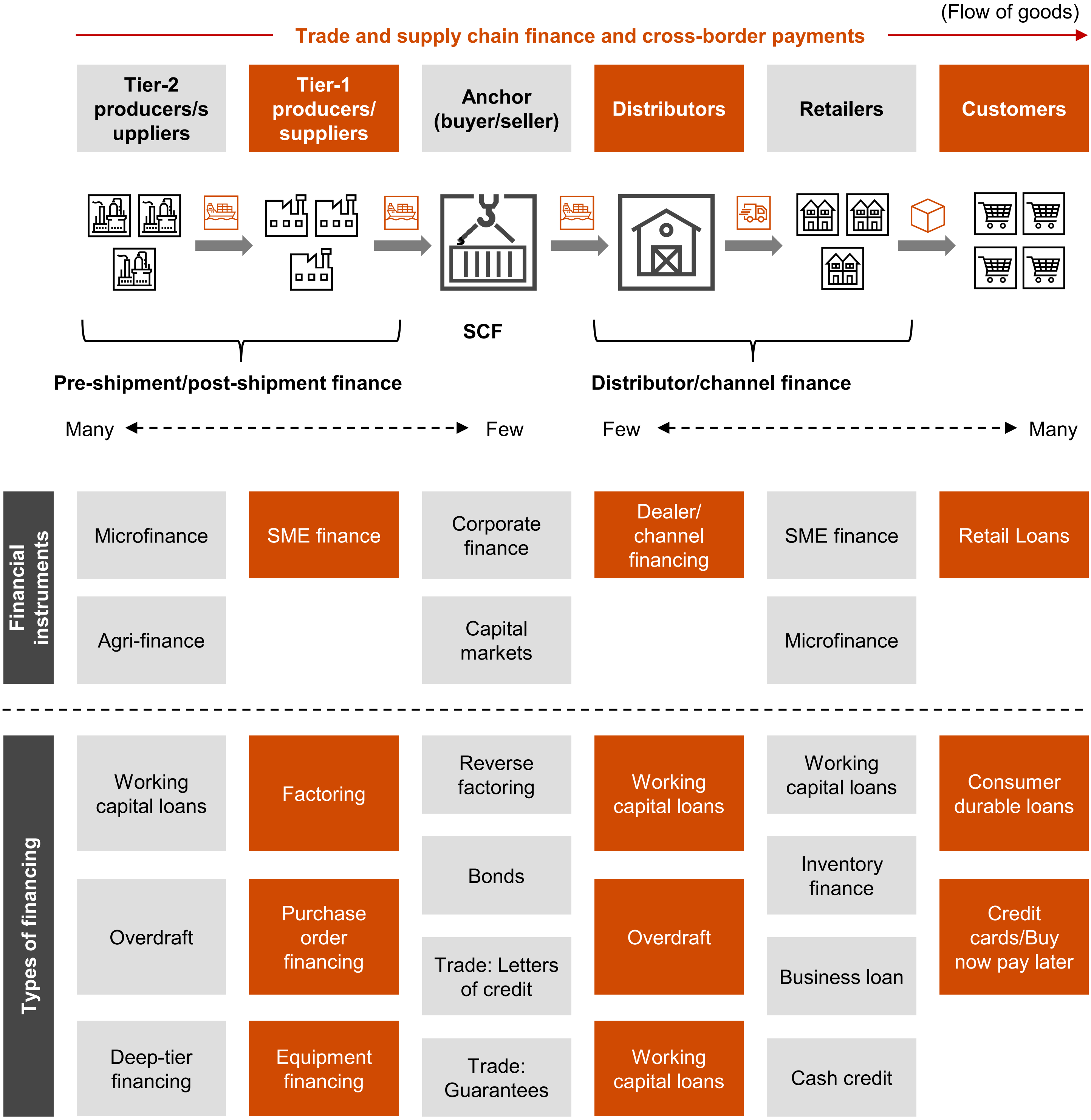
SCF consists of the provision of credit linked to open account transactions between a seller and a buyer, where the sale happens through the submission of an invoice and without a guarantee of a third party, a contract or an immediate payment. Conventionally, open account terms involve an understanding between a buyer and seller for payment within 30, 60 or 90 days from the submission of an invoice. There is no involvement of a bank or financial intermediary in this type of agreement until the invoice is either purchased or leveraged for financing. SCF solutions refer to the financing of an outstanding receivable or payable to a buyer or seller for a period of 30 to 90 days.

SCF solutions are cheaper than traditional working capital lines or open lines of credit. While working capital lines have greater flexibility, they also have greater associated risks and come at greater expense in terms of origination costs. By assessing the risk of payment between two parties in an open account transaction, SCF transactions are typically less costly than other working capital financing solutions. In traditional working capital loans, in fact, financial institutions assess risk based on the borrower's credit history, historical financial performance and availability of collateral. This has often made lending unfeasible for small and medium enterprises (SMEs) in emerging markets, as such information is expensive to gather and assess, and the costs of monitoring and collecting also exceed potential returns for banks. Additionally, lengthy application procedures, multiple documentary requirements and high turnaround time for assessments may only partly address the working capital needs of the business.

Increased information barriers and high onboarding costs have traditionally limited SCF options for SMEs and the value chain of mid-size corporate anchors. However, recent technology and business model innovations are rapidly eliminating these obstacles and providing new opportunities for actors across the ecosystem, which include financiers, technology providers, anchors and borrowers.

Figure 4 depicts the various financial instruments available to participants across the trade and supply value chain.

Figure 4: Supply chain financial flows



Source: World Bank, 'Technology and digitization in supply chain finance'[7]

In today's dynamic financial ecosystem, SCF is evolving through three primary models: **bank-led programmes, emerging FinTech solutions, anchor-led ecosystems, and deep-tier SCF.**

7. https://documents1.worldbank.org/curated/en/310261613738371600/pdf/Technology-and-Digitization-in-Supply-Chain-Finance-Handbook.pdf

2.1

Bank-led SCF programmes: Driving financial empowerment

Traditional financial institutions have been leading these SCF projects for a long time by using their vast resources and well-established reputation. Reverse factoring, dynamic discounting and inventory financing are just a few of the financing options that banks provide in bank-led SCF. In addition to providing optimal cash flow and lower risk for all supply chain partners, these initiatives are supported by the bank's creditworthiness and regulatory compliance.

Conventional banks serve as both lenders and facilitators in these SCF initiatives. They offer a range of financing choices by utilising their vast resources, regulatory compliance and superior credit assessment skills. For seamless financial transactions and better supply chain cash flow management, they usually work in tandem with both buyers and suppliers.

A large private sector bank has collaborated with an SCF-focused FinTech company for implementing its digital SCF solution

The FinTech company offers an end-to-end digital SCF solution which facilitates digital pre- and post-shipment financing for dealers and suppliers of corporate clients. This solution enables MSMEs to optimise their working capital needs and improve cashflow requirements. This in turn enables corporates to achieve greater supply chain stability and strengthen vendor partnerships.

Key features of bank-led SCF programmes

Trust and reliability

- Banks have established reputations and regulatory oversight, offering a high level of trust and reliability.
- This is particularly important for large corporations and multinational enterprises.

Comprehensive solutions

- Banks offer a variety of SCF offerings tailored to unique needs within the supply chain which address both payables as well as receivables financing, channel financing, etc.
- These solutions are backed by sophisticated risk assessment and management tools.

Global reach

- Many banks operate internationally, providing SCF solutions that support global supply chains.

2.2

FinTech-driven SCF: Innovating the future of finance

The entrance of FinTech players has changed the SCF market. The original ecosystem, with a financial institution funding the approved invoices of an anchor buyer's selected suppliers through a proprietary origination SCF platform, has now evolved into multiple models related to the number of relationships in the network and to the value distributed in the system.

FinTech-led SCF solutions can include real-time invoicing, dynamic pricing, marketplaces, and peer-to-peer lending platforms, providing SMEs with better access to working capital and fostering a more inclusive financial environment.

A leading FinTech platform is serving as India's first enterprise credit marketplace for SCF solutions

A leading Indian FinTech enables vendors and buyers to avail SCF from an array of lenders and banking institutions. The platform works with joint support from the FinTech's partner businesses, non-banking financial institutions and the Indian capital market.

It is highly flexible and supports a wide range of products which are used across the Indian financing space by banks and other lending institutions.

Currently, the platform is being used by multiple banking and non-banking financial institutions as a one-stop solution for financing their entire supply chains.

Key features of FinTech-led SCF models

Technological innovation

- FinTechs use the latest technologies such as blockchain for secure, transparent and immutable transactions.
- They use artificial intelligence (AI) and machine learning (ML) for predictive analytics and risk assessment, and robotic process automation for routine tasks.

Flexibility and agility

- FinTechs can rapidly adapt to market needs and customise solutions for different businesses.
- They offer more flexible financing terms compared to traditional banks.

Enhanced transparency and accessibility

- These models enable improved trust and accountability through real-time visibility and transparent processes.
- Lower barriers to entry and quicker onboarding processes enable easier access to financing for underserved MSMEs.

2.3

Anchor-led SCF ecosystems: Building synergy and resilience

In this model, large creditworthy anchor buyers take the lead in arranging SCF programmes for their suppliers. By leveraging their strong credit profiles, anchor buyers can negotiate favourable financing terms with financial institutions and FinTechs on behalf of their suppliers. This creates a win-win scenario: suppliers benefit from improved liquidity and lower financing costs, while anchor buyers strengthen their supply chain stability and foster long-term supplier relationships.

In an anchor-led SCF ecosystem, the anchor buyer collaborates with financial institutions and FinTech companies to create a financing programme that supports its suppliers. The suppliers can access funds at lower costs due to the anchor's strong creditworthiness. The financial institutions provide the necessary capital, while the anchor ensures timely payments and reduces the risk of default.

A leading Indian automobile manufacturer – a subsidiary of a large conglomerate – has partnered with an upper-layer NBFC to provide SCF-based solutions to its EV dealers

The company aims to leverage the NBFC's wide reach to help dealers access funding with minimum collateral. Through this partnership, the anchor aims to strengthen the access of dealer partners to working capital which in turn will help the company seize the opportunities offered by a growing passenger vehicles market.

Key features of anchor-led SCF ecosystems

Credit leverage

- The anchor's robust credit rating is leveraged to negotiate better financing rates.
- Suppliers benefit from lower financing costs as the risk is mitigated by the anchor's creditworthiness.

Risk mitigation

- The anchor's involvement reduces the risk of non-payment, making it easier for financial institutions to extend credit.
- This provides a safety net for suppliers, ensuring they receive timely payments.

Enhanced cash flow

- Suppliers gain quicker access to funds, improving their cash flow and operational efficiency.
- The anchor can negotiate extended payment terms, optimising its own working capital.

2.4

Deep-tier financing: Pushing the frontiers of SCF

Deep-tier supply chain finance (DTSCF) involves extending financing options beyond first-tier suppliers to second-, third- or even fourth-tier suppliers within a supply chain. This approach leverages the creditworthiness of large anchor buyers to provide financing to smaller suppliers further down the chain. By ensuring that these smaller suppliers have access to affordable financing, deep-tier financing enhances the overall health and efficiency of the supply chain.

An RBI sandbox approved FinTech in India

A FinTech company has developed a blockchain-based deep-tier vendor financing solution that enables financing for MSMEs which are part of the procurement supply chain of large enterprises. The solution enables conversion of receivables from anchors into blockchain-based tokens which can be redeemed by MSMEs for availing credit from banks/NBFCs. The solution aims to make easy and affordable credit accessible to lower tier/small MSMEs.

Key features of anchor-led SCF ecosystems

Extended financial reach

- Deep-tier financing extends support to second-, third- and fourth-tier suppliers, ensuring even the smallest suppliers have access to needed capital, thereby enhancing overall supply chain stability.

Use of anchor buyer creditworthiness

- The creditworthiness of large anchor buyers is leveraged to secure better financing terms for lower-tier suppliers, reducing financial risk for lenders and providing smaller suppliers with favourable financing conditions.

Reduced supply chain risk

- By ensuring financial stability for lower-tier suppliers, deep-tier financing reduces the risk of supply chain disruptions, leading to a more resilient and efficient supply chain with fewer delays and bottlenecks.

DTSCF not only unlocks finance at favourable rates for deeper tiers in a supply chain, but it also promotes an ecosystem of financial stability, risk management and sustainability throughout the entire supply chain. DTSCF has the potential to reshape and strengthen traditional relationships by fostering more resilient; transparent; and environmental, social and governance (ESG)-aligned trade relationships.

3

Technological innovations driving SCF

SCF has always been complex, requiring the integration of multiple processes, applications, technologies, and collaboration among supply chain participants. However, adopting emerging technologies can reduce these challenges significantly. It's time to move on from legacy monolithic systems and embrace digital transformation with solutions built on composable architecture. Digital transformation in SCF will play a crucial role in empowering financial institutions to provide SCF services at lower costs and at a higher efficiency level. There are multiple technology trends such as digital infrastructure, distributed ledger technology, AI, robotic process automation (RPA), the internet of things (IoT), and advanced analytics which are changing the SCF landscape for the better for all stakeholders and have made the entire process efficient.

3.1 Digitisation trends in SCF

The realm of SCF has been significantly transformed by technological advancements, each bringing in new capabilities and efficiencies. These innovations not only enhance SCF processes but also address key challenges such as transparency, risk management and operational efficiency. Given below are some of the pivotal technologies which are driving this transformation:

1. **Digital infrastructure:** Digital infrastructure is the cornerstone of modern SCF solutions. It encompasses cloud computing, robust API integrations and advanced enterprise resource planning (ERP) systems. In the Indian context, several digital public infrastructures can be leveraged to enhance SCF.

2. **Goods and Services Tax Network (GSTN):** GSTN provides a unified platform for tax administration, enabling real-time invoice verification and compliance. By integrating SCF solutions with GSTN, financial institutions can access verified invoices, reducing the risk of fraud and improve the accuracy of financing decisions. The GSTN network can also streamline the reconciliation process by providing a single source of truth for tax-related data, which can be critical for financing decisions.

3. **TReDS:** TReDS is an institutional mechanism set up in India for facilitating the financing of trade receivables of MSMEs through multiple financiers. It provides a digital platform where MSMEs can get their trade receivables financed by various financiers. TReDS platforms such as RXIL and A.TReDS, are instrumental in providing liquidity to MSMEs, ensuring timely payments and reducing the working capital gap.

4. **National Logistics Portal (NLP):** The NLP integrates multiple logistics stakeholders onto a single platform, providing end-to-end logistics solutions, real-time tracking and data analytics. By leveraging NLP, SCF platforms can gain real-time insights into logistics activities, enhancing the accuracy of financing decisions and reducing supply chain risks.

5. **Distributed ledger technology:** Blockchain's distributed ledger ensures that all transactions are immutable and verifiable, significantly reducing the risk of fraud. Each participant in the supply chain can access a single, tamper-proof version of the truth, enhancing trust and collaboration.

6. **Tokenisation:** The replacement of sensitive data with a non-sensitive equivalent symbol to ensure security enables the creation of a digital identity for goods in transactions such as labelling goods for supply chain transparency and traceability.

7. **Smart contracts:** Smart contracts are self-executing contracts with the terms of the agreement directly written into the code. In SCF, smart contracts can automate processes such as invoice financing, payment settlements and contract enforcement. For example, once goods are delivered and verified, a smart contract can automatically trigger payment to the supplier.

   Distributed ledger technology (DLT) is well suited to eliminate some inefficiencies in trade and supply chains through the following features:

   - faster credit risk assessment from the transaction history
   - minimised human error in document checks.
   - instant verification and reconciliation of records
   - automatic execution of workflow steps through smart contracts
   - instant, secure and low-cost exchange of data.

8. **AI and machine learning (ML):** AI and ML are revolutionising SCF by enabling predictive analytics and enhanced risk management. These technologies analyse vast amounts of data to forecast demand, optimise inventory levels, and assess the creditworthiness of suppliers. By leveraging AI and ML, businesses can make data-driven decisions, reduce operational costs and mitigate risks associated with supply chain disruptions.

Key features

- Improves demand forecasting and inventory management
- Enhances risk assessment and credit scoring
- Automates routine tasks and decision-making processes

9. **IoT:** IoT is another significant trend driving the digitisation of SCF. IoT devices, such as sensors and **radio frequency identification (RFID)** tags, enable real-time tracking and monitoring of goods as they move through the supply chain. This real-time data provides valuable insights into the condition, location and status of shipments, allowing businesses to enhance visibility, improve efficiency and respond swiftly to any issues that may arise.

Key features

- Enables real-time tracking and monitoring of goods
- Enhances logistics and inventory management through connected devices
- Improves supply chain visibility and operational efficiency

10. **Advanced analytics:** Big data and analytics are at the forefront of the digital transformation in SCF. By harnessing the power of big data, companies can analyse massive datasets to uncover patterns, trends and correlations that were previously hidden. Advanced analytics tools enable businesses to gain deeper insights into their supply chain operations, optimise procurement strategies and enhance decision-making processes. This data-driven approach not only improves operational efficiency but also allows companies to anticipate market changes and adapt proactively.

Key features

- Facilitates data-driven decision-making
- Provides insights into supply chain performance and trends
- Enhances predictive analytics for better risk management and forecasting

New technologies enable digitisation of trade and supply chain across the value chain. They also provide multiple digitisation benefits in trade and SCF.

Figure 5 summarises how some of the latest technologies optimise the entire value chain and address the challenges of SCF.

Figure 5: Key features across SCF transactions flow

New technologies	Key features across SCF transaction flow							Addressing the challenges of trade and supply chain finance				
	Pre-transaction		Transaction processing			After transaction		Process efficiency challenges		Regulatory requirements		Information asymmetry
	Product selection	**Data entry**	**Workflow management**	**Document check**	**Compliance check**	**Problem resolution**	**Client management, information systems**	**Decreased human errors**	**Improved speed of transactions**	**Improved flexibility to change in market and/ or regulatory requirements**	**Improved AML and KYC efforts**	**Improved credit scoring tools**
DLT	Create smart letter or credit as **smart contract** on distributed ledger - auto notifications	Replace documentation, checks, data entry, validation, with **single digital record**	Real-time **verification and reconciliation,** workflow executed through smart contract conditions, replace payment and funds transfer with **cryptocurrency**					✓		✓	✓	✓
AI	**Intelligent** and **personalised** marketing: Offer new product sales or client promotions based on insights on client's needs and behaviours	**Populate fields** with text extracted from documents (**integrate optical character recognition (OCR) with transaction process**)		**Validate/remediate data** with cross-references, ML	**Contextual filtering:** Identify unusual or suspicious activity and block suspicious transactions based on predictive indicators	**Intelligent problem resolution**: Track individual error rates and flag users in need of remediation		✓	✓	✓	✓	✓
RPA			**Bridge data flow and communication**: Integrate data from different systems into a single interface					✓	✓	✓		
IoT			**Ease of trackin**g goods and documents, **dynamic pricing** and financing triggered by shipment events, **automated payments release** based on smart contracts			**Track document locations**; Track goods (location, volume, quality)		✓	✓			
Advanced analytics (AA)	**Intelligent** and **personalised** marketing: Offer new product sales or client promotions based on insights on client's needs and behaviours	**Enhanced KYC** (e.g. web scrape)	Efficient process and productivity **monitoring** and predictive analytics to **detect patterns**		**Contextual filtering:** Identify unusual or suspicious activity and block suspicious transactions based on predictive indicators		Reports enable enhanced **operational and strategic decisions**	✓	✓			✓
Optical character recognition (OCR)		**Text recognition** from trade documents to minimise data entry		Check for **completeness** of documents based on transaction/ product type	**Scrape documents** from AML keyword hit			✓	✓		✓	

Source: PwC analysis

Case studies

1

Blockchain-based SCF solutions are helping banks to develop digitised SCF products which are contributing towards their cost savings.

- A Chinese firm is utilising an enterprise-level blockchain platform to provide digital supply chain solutions. The firm aims to help bring digital certificates and supply chain traceability to the ecosystem, driving value for participant firms.
- The solution provided by this firm has enabled multiple banks in China to send their electronic credential with electronic signatures in the platform, which can then be stored, hashed and encrypted to support transactions and issue electronic credentials with absolute data credibility and traceability. This initiative has enabled banks to achieve considerable cost savings due to the reduction of paper credentials.

2

A large-scale PSU bank in India has implemented a digitised SCF solution with the help of its technology partner to grow its revenue from their corporate customer base.

- A PSU bank in India, which has a significant number of corporate and SME customers, was facing challenges in offering SCF products to its customers due to manual origination and transaction processing. This manual process resulted in significant delays resulting in corporates and their vendors/suppliers to explore alternate sources of financing.
- To resolve this issue, the PSU bank, with the help of their technology partner, developed a customised SCF solution for their corporate customers and vendors/suppliers. This solution enabled the bank to provide an automated SCF solution to their corporate customers. It also helped in streamlining their functions and automate daily operational tasks resulting in improved efficiency and achieve significant cost savings.
- The automated SCF solution helped the bank to increase Its capability and process larger volumes of transactions. Additionally, the bank was able to expand rapidly and achieve considerable growth. Through post-transaction history, the bank was able to make decisions on providing ad-hoc limits to the dealer.

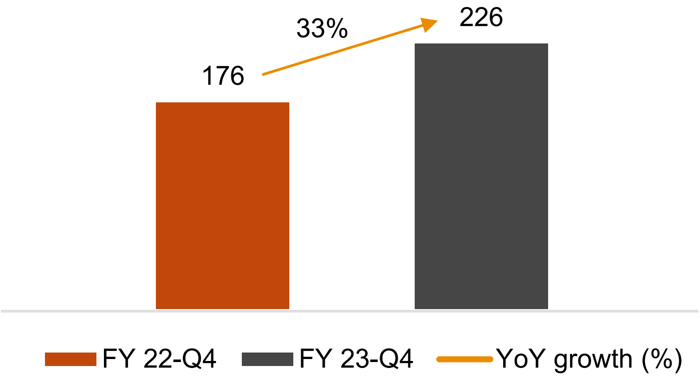
4

Strategic considerations for financial institutions venturing into SCF

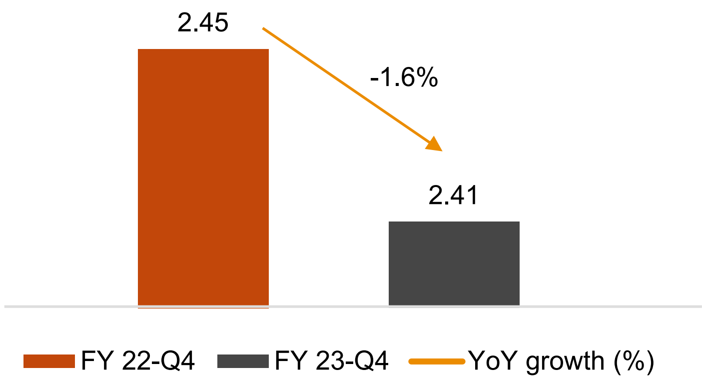
There has been a significant supply and demand mismatch in the MSME lending ecosystem. With an inherent demand for financing from MSMEs, commercial credit volumes have shown 33% increase from Q4 FY22 to 23 whereas the supply has been declining in the same period. There have been disbursals of only 2.4 lakhs in Q4 FY23 – i.e. nearly 2% decrease during the same time period in the previous year.[8]

Figure 6

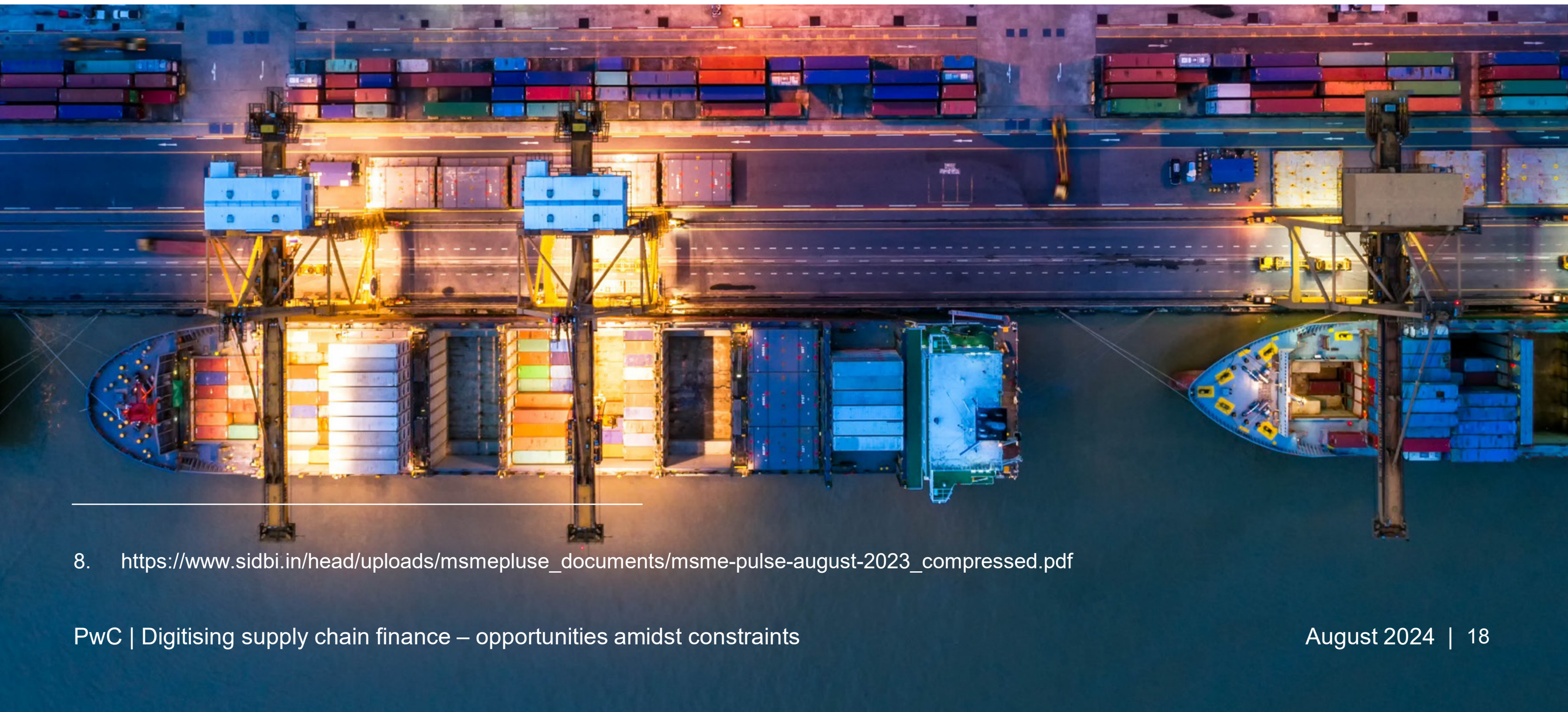
Demand (commercial credit inquiry volumes) indexed to FY20 Q3 = 100



Supply (MSME disbursement amounts in INR lakh crore)



Source: SIDBI, MSME Pulse August 2023



8. https://www.sidbi.in/head/uploads/msmepluse_documents/msme-pulse-august-2023_compressed.pdf

This highlights the narrative of MSMEs being credit starved, and one of the ways to plug this gap is by adopting SCF solutions and financial institutions enhancing their service offerings and revenue streams by participating in SCF programmes.

Benefits for banks by running an SCF programme

- Easier/less risky entry point into enterprise financing
- Strong networks of financial providers which can lead to a broader portfolio of business services
- Strong financing networks which can help support better cross-selling opportunities and penetration of consumer markets
- Greater potential to expand lending while mitigating risk exposure through shorter term, directed credit
- Increased revenue streams, newer ways for interest and fee income – regulatory and compliance benefits as regulatory frameworks encourage support for SMEs, and running SCF programmes aligns with these regulatory goals.

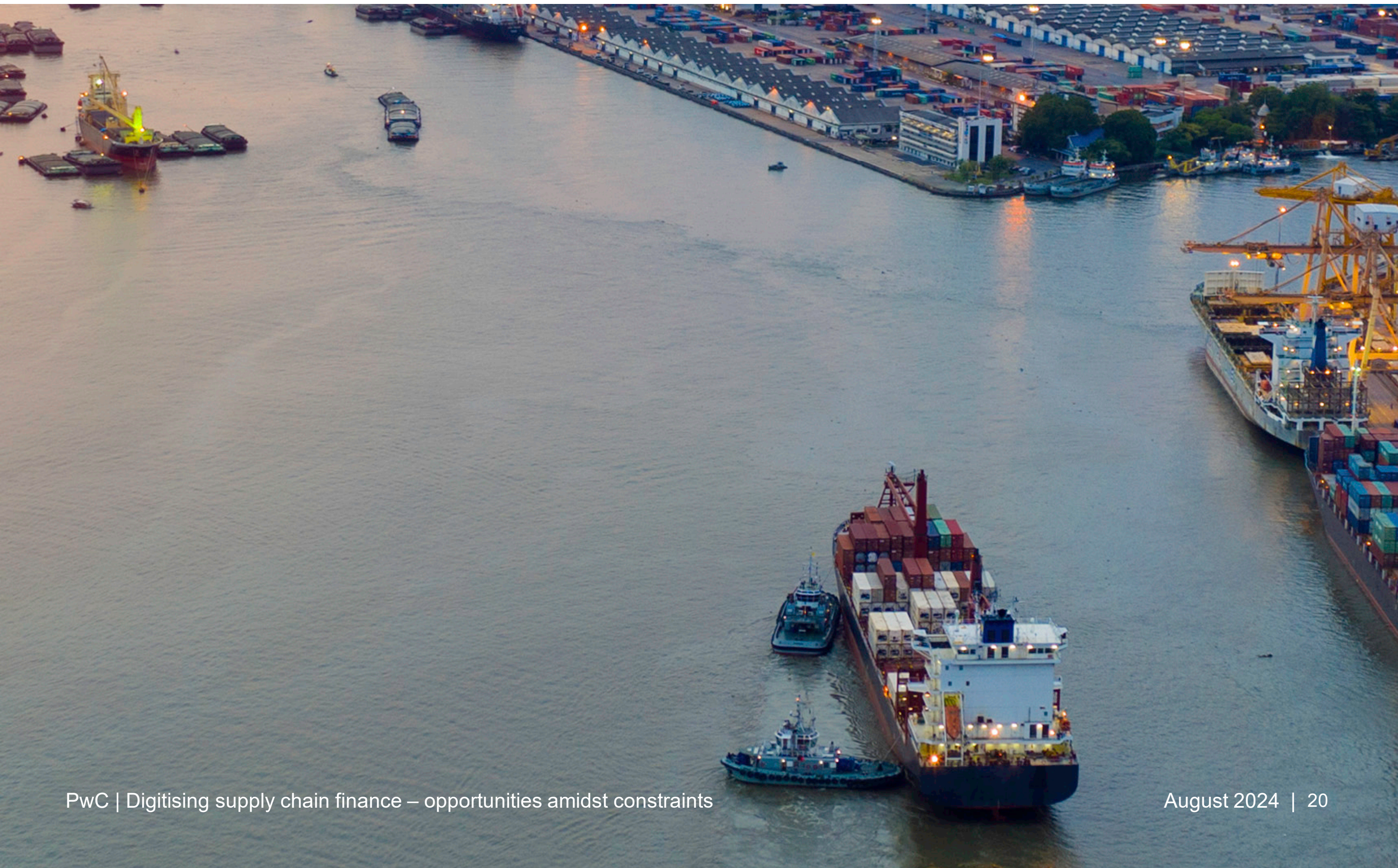
Banks can either run their own SCF programmes, leveraging their existing client relationships and financial expertise to offer tailored financing solutions, or they can collaborate with FinTech companies and marketplaces, or operate by combining the two. By partnering with FinTech companies, banks can integrate advanced technology and innovative solutions into their offerings, providing seamless, efficient and scalable financing options to businesses. This dual approach allows banks to support their clients' working capital needs while staying competitive in a rapidly evolving financial landscape.

Types of SCF programme participation by banks

Considerations	SCF programme participation types		
	Bank-led own programmes	**FinTech/business correspondent (BC) partnerships**	**Combination of bank-led and FinTech partnerships**
Go-to market and client management	Bank sales teams need to target and onboard new anchors and corresponding suppliers, as well as manage the relationship and servicing.	FinTech/BC partners source business as well as manage client servicing. Banks can also onboard their corporate clients via FinTech platforms.	Banks source through banks' sales team or FinTech partners/marketplaces.
Time to market	Moderately higher time to market	Lower time to market and simple to participate in	Lower time to market and simple to participate in

Considerations	SCF programme participation types		
	Bank-led own programmes	**FinTech/business correspondent (BC) partnerships**	**Combination of bank-led and FinTech partnerships**
Technology investment	Moderately high as banks must deploy their own SCF platform (build/buy) to manage the book.	Low, as banks can run on the platform provided by the FinTech partner. However, banks can deploy their own platform as well and integrate it with the FinTech platforms.	Moderately high as banks must deploy their own SCF platform (build/buy) to manage the book and additionally invest in partnerships.
Profitability	High margins as offerings can be targeted as customised.	Lower margins, due to pricing pressure, competition and riskier customer segment. First Loss Default Guarantee (FLDG) can be a mechanism to mitigate risk.	High as the bank will be participating in their own programmes as well as additional revenues from partnerships.
Control	Very high as banks work directly with clients	Very little control as FinTech partners holds the primary relationship	Moderate to high

Source: PwC analysis



Irrespective of whether banks run their own SCF programme or partner with FinTechs to begin with, they need to consider a few points for the successful implementation of the programme.

Figure 7: Programme pillars

Business channels and strategies

- Opportunity sizing
- Operating model design and strategy
- Anchor selection, sales and onboarding, partner onboarding

Products, policies and processes

- SCF product strategy
- Product programme design
- Processes – product, ops and integrations
- Credit policies
- Credit application scorecards
- Early warning mechanisms
- Risk-based pricing
- Collections framework

Technology systems and people

- Platform selection and technology integration
- Training needs assessment, sales incentives and compensations

5

Way forward and conclusion

5.1

Shaping the future: Emerging trends and innovations for SCF

In 2023-24, the Indian economy demonstrated remarkable resilience and growth, with real GDP growth accelerating to 7.6% from 7% in the previous year. One of the standout performers was the MSME sector, which saw a 20.9% increase in the outstanding credit by scheduled commercial banks, amounting to INR 26 lakh crore. However, the total business throughput of the SCF ecosystem across TReDS in 2023 was approximately at INR 18,000 crore which is projected to reach INR 40,000 crore in FY24.[9]

By 2030, the SCF landscape in India is poised to achieve a transformative growth which will reflect the country's rapid digital transformation and burgeoning FinTech sector. The global SCF landscape is expected to undergo significant transformations primarily driven by **technological advancements, supportive policies, government initiatives** and **evolving economic environments**.

The widespread adoption of digital payment systems and Government initiatives as part of digital public infrastructure like Agri Stack and the Goods and Services Tax (GST) will enhance transparency and efficiency across supply chains. Indian banks are likely to increase their collaboration with FinTech firms to offer innovative SCF solutions tailored to the unique needs of SMEs, which form the backbone of the Indian economy. Regulatory support from the RBI and other global financial bodies will drive the standardisation and adoption of SCF practices, ensuring a stable and secure financial environment.

Key growth drivers of SCF

Technological advancements

Blockchain and smart contracts

Increased adoption and integration of blockchain technology and smart contracts will streamline SCF processes, enabling greater transparency, security and efficiency.

Digital public infrastructure

Initiatives like Agri Stack and Open Network for Digital Commerce (ONDC) continue to drive financial inclusion.

AI, ML and IoT

These technologies will improve demand forecasting and inventory management, and assist in enhanced credit scoring and risk mitigation through real-time data analysis to further enhance the effectiveness of SCF solutions.

9. https://economictimes.indiatimes.com/small-biz/sme-sector/45-day-payment-rule-new-fund-will-work-with-banks-to-help-msme-units-says-fm-sitharaman/articleshow/112084944.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Supportive policies and government initiatives

Economic corridors and liberalisation

Initiatives like India-Middle East-Europe Economic Corridor (IMEC), liberalisation of foreign direct investment (FDI) norms, the introduction of production linked incentive (PLI) scheme, and the National Infrastructure Pipeline (NIP) will foster trade and SCF penetration in India.

Pro MSME policies

The Government is establishing a new fund with banks to help MSMEs which are facing financial issues due to delayed payments. Traders must now clear MSME bills within 45 days according to Section 43B(h) of the Income Tax Act.

Small Industries Development Bank of India's (SIDBI's) expansion

Government of India has also provisioned for SIDBI to open new branches across major MSME clusters.

Standardisation and compliance

Improved regulatory procedures will pave the way for SCF by streamlining regulatory procedures to ease the adoption of new technologies and improve financial inclusion.

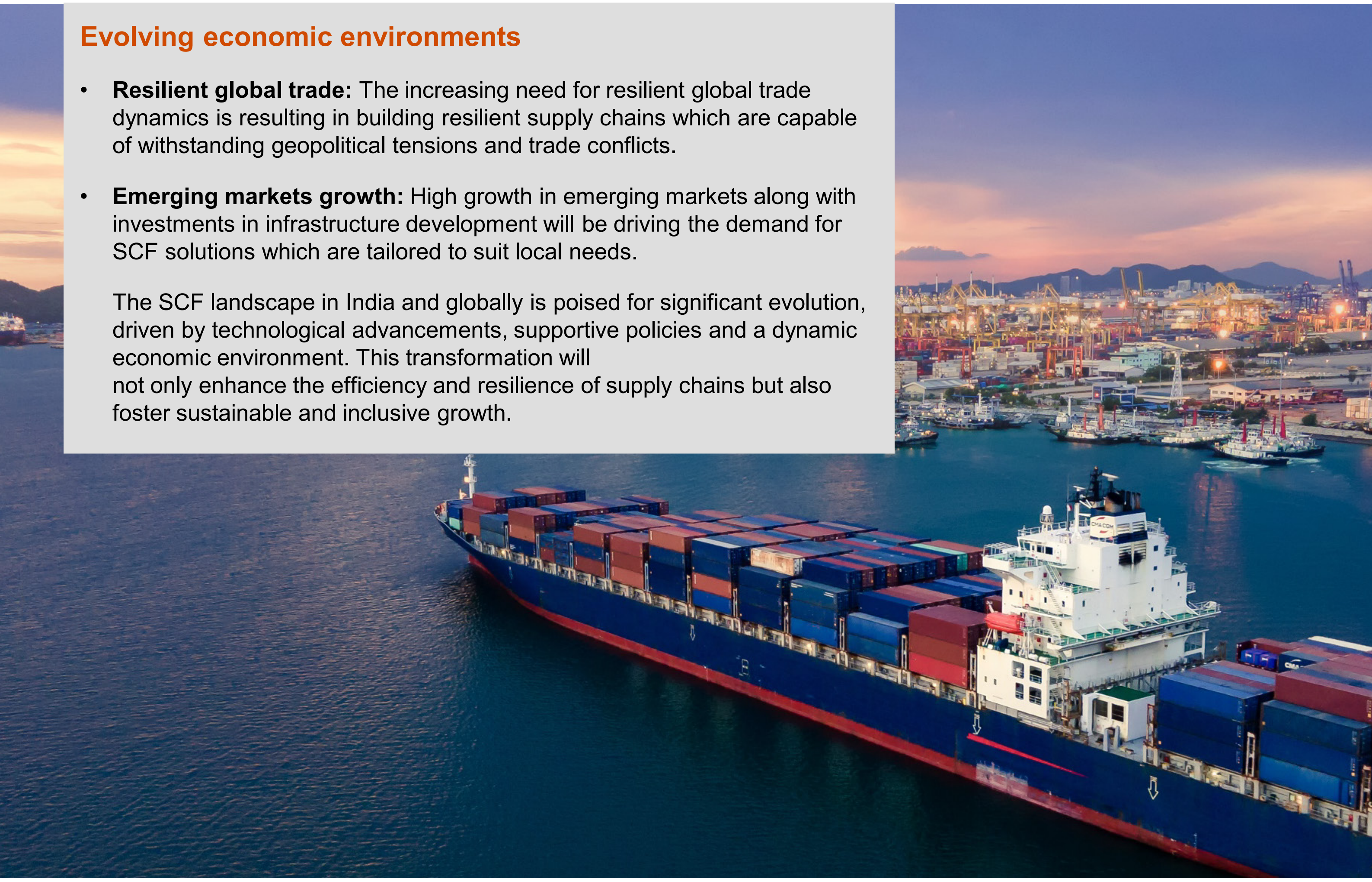
Sustainability

Sustainability will become a key focus, with SCF programmes increasingly incorporating ESG criteria to promote responsible sourcing and production practices.

Evolving economic environments

- **Resilient global trade:** The increasing need for resilient global trade dynamics is resulting in building resilient supply chains which are capable of withstanding geopolitical tensions and trade conflicts.
- **Emerging markets growth:** High growth in emerging markets along with investments in infrastructure development will be driving the demand for SCF solutions which are tailored to suit local needs.

The SCF landscape in India and globally is poised for significant evolution, driven by technological advancements, supportive policies and a dynamic economic environment. This transformation will not only enhance the efficiency and resilience of supply chains but also foster sustainable and inclusive growth.



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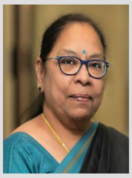

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Data Classification: DC0 (Public)

In this document, PwC refers to PricewaterhouseCoopers Private Limited (a limited liability company in India having Corporate Identity Number or CIN : U74140WB1983PTC036093), which is a member firm of PricewaterhouseCoopers International Limited (PwCIL), each member firm of which is a separate legal entity.

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PR/August 2024-M&C 40297