Supply-chain finance: A case of convergent evolution?

The complexity of the supply-chain finance industry poses difficulties in a time of economic turmoil, but innovative players have opportunities to seize.

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Significant value in the global supply-chain finance (SCF) market remains untapped. Nearly 80 percent of eligible assets do not benefit from better working-capital financing, and the remaining one-fifth of assets are often inefficiently financed. Despite improvements made in recent years, advances have been largely incremental.

We now see change accelerating in the market in response to a convergence of factors: an increased focus on working capital, structural changes in financing for small and medium-size enterprises (SMEs), a step change in digital adoption, and the potential geographic relocation of $2.9 trillion to $4.6 trillion in spending on cross-border supply chains (for 16 to 26 percent of global goods exports) over the next five years. Could these events spur the long-anticipated transformation of the landscape?

The answer may be yes. In this chapter, we outline key drivers and how they could lead to real change in access to and availability of SCF. We then offer a vision of what such a transformation could look like and what it would mean for market participants.

Supply-chain finance: An age-old need

Supply-chain finance may well be one of the earliest commercial-payments activities. It has enabled every major trade and supply-chain flow through time, from trade exchange in early Mesopotamia to receivables credit in the 1800s Industrial Revolution, to letters of credit and even blockchain for global supply chains today (see sidebar "What is supply-chain finance?").

The industry fulfills banking's basic promise of financing the working capital necessary to run any business. When successfully delivered, supply-chain finance benefits the entire ecosystem: it enables corporate buyers to secure inventory by extending payments terms, and it improves certainty on forward orders for suppliers. Banks and nonbank SCF providers generate stable, short-duration (and hence lower-risk), often recurring transaction volumes while creating an avenue for broader offerings such as foreign exchange, cash management, and capital-markets products.

SCF has only partially delivered on this promise, however. Often it is focused on larger, well-financed multinational corporations and their supply chains, whereas smaller and less well-financed enterprises face barriers to access. Many catalysts—including digital delivery, fintech innovation, industry utilities, blockchain, and API technologies—could stimulate cheaper and more accessible SCF, but change has been slow. Now in 2020, the impact of COVID-19 has contributed to accelerating digital adoption and reconfiguration of trade and supply chains—for example, to improve resilience and diversify sourcing.[1]

A promise made but not (yet) kept

While supply-chain finance fulfills an age-old need, its potential continues to be limited by its complexity. We can measure this complexity along four major axes: fragmentation of delivery, fragmentation of the underlying assets, limited credit and expertise, and geopolitical turmoil.

[1] See "Risk, resilience, and rebalancing in global value chains," McKinsey Global Institute, August 2020, on McKinsey.com.

What is supply-chain finance?

The overall trade finance market can be roughly differentiated into three segments, each with unique product dynamics (Exhibit A):

— **Documentary business** includes traditional off-balance-sheet trade finance instruments, such as letters of credit, international guarantees, and banks' payments obligations. These instruments are typically used to cover the two corporate parties against potential transaction risks (e.g., an exporter protecting against country-related risks of its importer's domestic market).

— **Seller-side finance** includes two main financial instruments: factoring and invoice finance.[2] These instruments address the financing needs of corporate sellers by anticipating liquidity related to commercial transactions.

— **Buyer-side finance** (referred to as supply-chain finance throughout this article) is typically aimed at large buyers and their suppliers. It covers the financing needs of suppliers originated by large buyers, like reverse factoring, where suppliers can access third-party financing for buyer-approved invoices, as well as dynamic discounting, where buyers pay suppliers early in exchange for discounts on the invoice. This has traditionally been a smaller and more fragmented market (roughly $500 billion of turnover financed), but is now growing at double-digits, driven by increasing interest and new offerings by players

Exhibit A

Buyer-led solutions are the fastest-growing part of the $7 trillion trade and supply-chain finance landscape.

	Value of assets financed, $ trillion	Expected CAGR, 2019-24	Description	Model
Total trade and SCF turnover	7.3			
Documentary business	3.8	**1-2%**	Seller provides all transaction-related shipping documents to their bank, which works with the buyer's bank to process the payment	
Seller-side finance	3.0	**3–5%**	Seller provides all information linked to receivables financing; suppliers typically sell/borrow against full accounts receivable	BUYERS, SELLER, FUNDER
Buyer-led SCF				
Reverse factoring	0.4	**15–20%**	Platforms facilitate financing on the basis of buyer-approved invoices Platforms can be supplied by individual banks, fintechs, and other industry players (eg, consortia)	BUYER, SELLER, PLATFORM, FUNDER
Dynamic discounting	0.1	**25–30%**	Platforms facilitate modified payments terms (invoice discounts) between buyers and suppliers directly No funding involvement – "platforms" are typically supplied by fintechs	BUYER, SELLER, PLATFORM

Source: McKinsey Global Transaction Banking service line

[2] Some market participants also include variations of invoice finance, including receivables finance, pre-shipping finance, and even commercial overdrafts and commodities finance.

Fragmentation of delivery

While SCF providers are increasing in scale and product range, delivery tends to be fragmented. A fully digital, seamless experience is held back by several remaining barriers:

- *Manual and fragmented process flows.* There are technology solutions that can streamline the financing process, e.g., by allowing automated data flow via integration with enterprise-resource-planning (ERP) and procurement systems and with core systems. However, many corporates shy away from fully digitizing procure-to-pay and invoicing processes. For example, ERP integration of a single SCF system usually takes two to four months or more and requires upfront investment and resources, which increases the difficulty of justifying automation and speeding up supply-chain financing triggers.
- *Fragmented data sharing.* Companies continue to work on developing data-sharing utilities such as standard application programming interfaces (APIs) and arm's-length data repositories. But these solutions have not yet demonstrated sufficient ease of use and earned the confidence customers seek before they will share ERP and invoice data at scale. As a result, SCF providers must bear the costs and delays of cleansing and shaping invoice data before making onboarding and financing decisions.
- *Slow onboarding and credit decisions.* SCF processes still involve long cycle times and uncertain time to decisions. As payments expectations move to real time, SCF will need to accelerate the typical multiday cycles that inhibit corporates from accessing working-capital relief.

Fragmentation of underlying assets

Along with delivery, underlying assets tend to be fragmented. Payables and receivables vary widely in terms, duration, and underlying creditworthiness. Much of SCF has focused on higher-rated, larger corporates and recurring, high-value invoices, especially given the higher costs attributable to fragmented delivery. Often, less than half of total spend is eligible for financing, with uptake at about 60 to 70 percent of eligible volumes. Furthermore, small and medium-size corporates, as well as one-off, more variable invoices, struggle to access SCF.

Limited credit provision and SCF expertise

With a limited secondary market, provision of supply-chain financing is restricted by the number of individual banks and nonbank providers with sufficient risk appetite and know-how. Many institutions cannot offer the full range of SCF assets, because they have limits on exposure or risk and limited expertise in underwriting and because they lack existing processes. As a result, large segments of corporates—for example, those where most SMEs are customers of small banks—have no access to SCF.

Fundamental shifts in global trade

Global trade volume grew by 6 percent (CAGR) between 1990 and 2007. From 2011 to 2018, the trade volume grew at a 3 percent CAGR, pushing the absolute trade volume to new heights, according to the World Bank. According to McKinsey's latest report [3] on global trade and value chains, in 2017, total global trade stood at $22 trillion, with trade in goods at $17 trillion. Trade in services, though smaller at $5 trillion, has outpaced growth in goods trade by more than 60 percent over the past decade (CAGR of 3.9 percent).

We believe there are three fundamental forces that will affect global value chains in the near future:

- As domestic consumption grows in countries like China, global demand—which historically has tilted toward advanced economies, is shifting to a greater focus on developing nations. Emerging markets are expected to consume almost two-thirds of the world's manufactured goods by 2025, with products such as cars, building products, and machinery leading the way. By 2030, developing countries are projected to account for more than half of all global consumption.
- Developing economies are building comprehensive domestic supply chains, reducing their reliance on imported intermediate inputs and thereby reducing cross-border trade flows.
- Global value chains are being reshaped by cross-border data flows and new technologies,

[3] Susan Lund, James Manyika, Jonathan Woetzel, Jacques Bughin, Mekala Krishnan, Jeongmin Seong, and Mac Muir, "Globalization in transition: The future of trade and value chains," January 2019, Mckinsey.com.

Exhibit 1

Supply-chain leaders will focus on resilience and digitization.

Percent of total respondents

93%	Plan to increase **level of resilience** across supply chain
54%	Expect changes to **supply-chain planning** after COVID-19
90%	Plan to increase in-house **digital supply-chain** talent

Source: McKinsey survey of 60 senior supply-chain executives , 2Q 2020

including digital platforms, the internet of things, automation, and AI.

Why this time is different

While many of the drivers of SCF growth are long-standing, ongoing changes might signal a structural shift in the ecosystem. Corporates, both small and large, have structurally increased their use of supply-chain finance, systematically considering how to support smaller suppliers' working-capital needs. In a May 2020 McKinsey survey, 93 percent of global supply-chain leaders expressed plans to increase supply-chain resilience, with 44 percent willing to do so at the expense of short-term savings (Exhibit 1). This could double historically low SCF eligibility and uptake levels from below 40 percent to as much as 80 percent.

Unsurprisingly then, the recent supply shock from COVID-19 led to the increased use of supply-chain financing. For instance, Prime Revenue saw growth of more than 25 percent in the number of corporate users in the first half of 2020 relative to the prior year, with the share of financed invoices exceeding 90 percent in some months, compared with the more typical 70 to 75 percent.

Supply-chain diversification as a catalyst for holistic SCF

A once-in-a-generation supply-chain diversification creates a catalyst for modern, holistic SCF solutions. The McKinsey Global Institute estimates that up to $4.6 trillion of global exports (26 percent of the total and up to 60 percent in industries such as pharmaceuticals) could be in scope for relocation over the next five years. This will structurally shift the ecosystem, likely in favor of players with holistic offerings across receiving corridors, whether in intra-domestic trade, in regional trade, and/or across a more diverse set of global corridors. This may result in additional support for solutions catering to the needs to domestic bank customers. Examples include Deutsche Bank and Commerzbank targeting automotive value chains.

Tackling fragmentation with digitization

Digitization resolves issues arising from fragmentation of delivery as corporates are actively focusing on their supply chains. The aforementioned 2020 survey across industries identified 79 percent of respondents planning investments in digital supply chains. One corporate executive stated that COVID-19 has forced "a change of mindset" from the historically slow pace in digitizing supply-chain activities. Similarly, banks are forced to develop truly end-to-end digital capabilities, from onboarding and application through approval and execution to improve servicing, capacity, and ability to automate underwriting and risk management.

Changing competitive forces

Many nontraditional players are aggressively targeting attractive niches in this business, threatening banks' revenue streams:

— Fintechs are developing value propositions centered on digital platforms to provide

Room for growth in supply-chain finance?

Conceptually speaking, the potential market for supply-chain finance encompasses every invoice and receipt issued by corporates—up to $17 trillion globally (Exhibit B). In practice, however, there is a large global gap in trade finance, estimated to be $1.5 trillion, rising to $2.5 trillion by 2025. This estimate was forecast by the World Economic Forum before the start of the COVID-19 pandemic. The trend is likely accelerating as the pandemic and trade conflicts prompt further reshuffling and nearshoring.

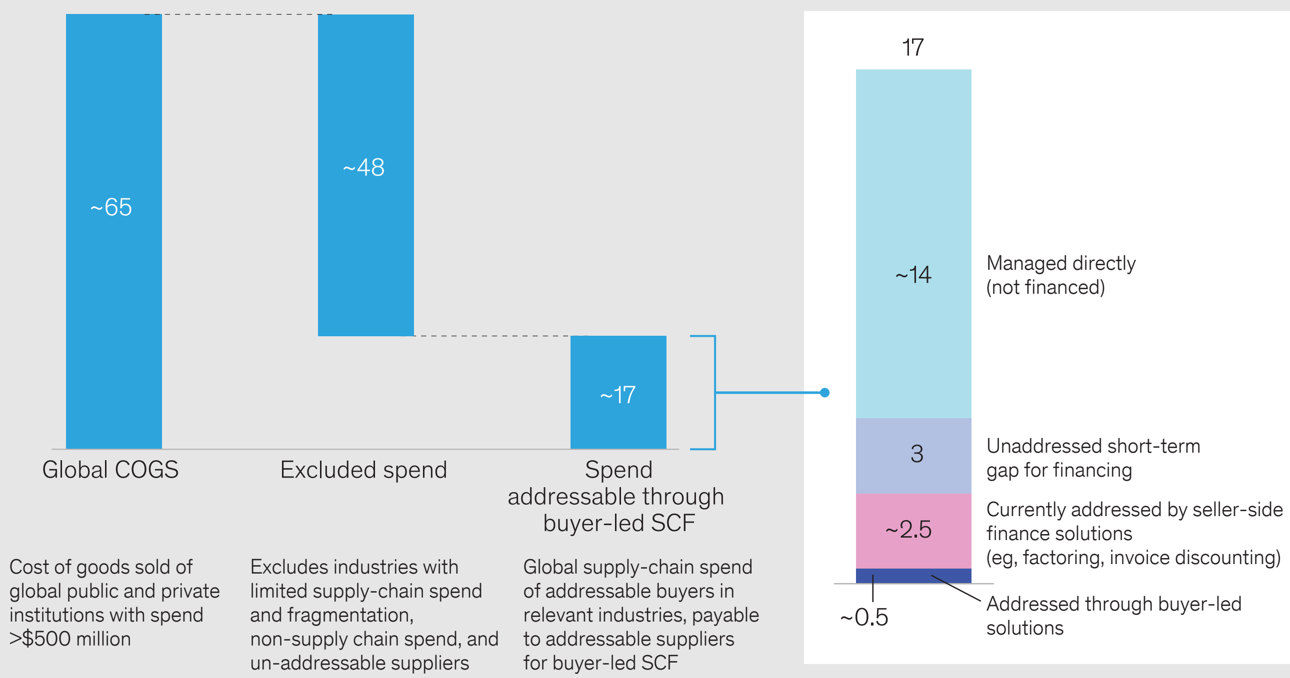
To date, several practical constraints have impeded the financing of these balances:

- lack of coverage of buyer-led solutions, which typically target only the largest suppliers
- manual and fragmented processes for supplier-led solutions, leading to inefficiencies that erode the business model for many financing opportunities
- inability to address invoices for non-investment-grade suppliers, less than 10 percent of which are financed

Exhibit B

There is significant room for growth in supply-chain finance programs.

Assets eligible for SCF programs
$ trillion, 2018



Source: McKinsey Global Transaction Banking service line

non-financial services, directly connecting corporates. For instance, fintechs (e.g., Us-based C2FO) are offering dynamic discounting, an innovative nonlending-based supply-chain finance product enabling buyers to make early payments to suppliers in return for a discount. Tradeshift, another example, offers an integrated platform to large buyers and SME suppliers spanning the procurement value chain. Recent partnerships and investments in companies like these are signs that model is catching on.[4]

[4] For example, Taulia received a new strategic funding round led by Ping An and JPMorgan, and Deutsche Bank invested in Traxpay, an SCF fintech.

— Several consortia have emerged in trade finance leveraging technology such as blockchain to make processes faster, simpler, and more transparent. Marco Polo has onboarded roughly 30 banks and offers an API-based platform for banks and corporates. Logistics company Maersk partnered with Tradelens and IBM to offer real-time, blockchain-powered supply-chain tracking and optimization via event tracking and distributed document sharing. Komgo, a consortium of 15 financial institutions including Dutch banks, trading companies, and oil giant Shell, was leveraged by MUFG to conduct its first transaction on blockchain.

— E-commerce companies like Amazon and Alibaba have moved into the SME value chain and now the supply-chain as well. Companies leveraging these solutions are generally digitally active and receptive to financing via digital workflows and products embedded in payments and process flows. Ecosystems are starting to integrate financing capabilities or partner with banks and other parties to develop such functionality, providing access to corporates previously out of scope for these forms of financing. Alibaba and Kinnek are pursuing this model in traditional B2B marketplaces, while Amazon and Predix are doing so for digital ones.

Innovative decision making

Bank and nonbank providers are innovating in credit decision making, especially through rapid improvement in the application of advanced analytics and machine learning to financing decisions and pricing. SCF platforms and banks are increasingly augmenting payables information with historic information, as well as additional private and public data to drive innovation in financing decisions. This leads to better risk pricing, but also improves speed and certainty of credit provision, two key drivers for corporate customer satisfaction and retention.

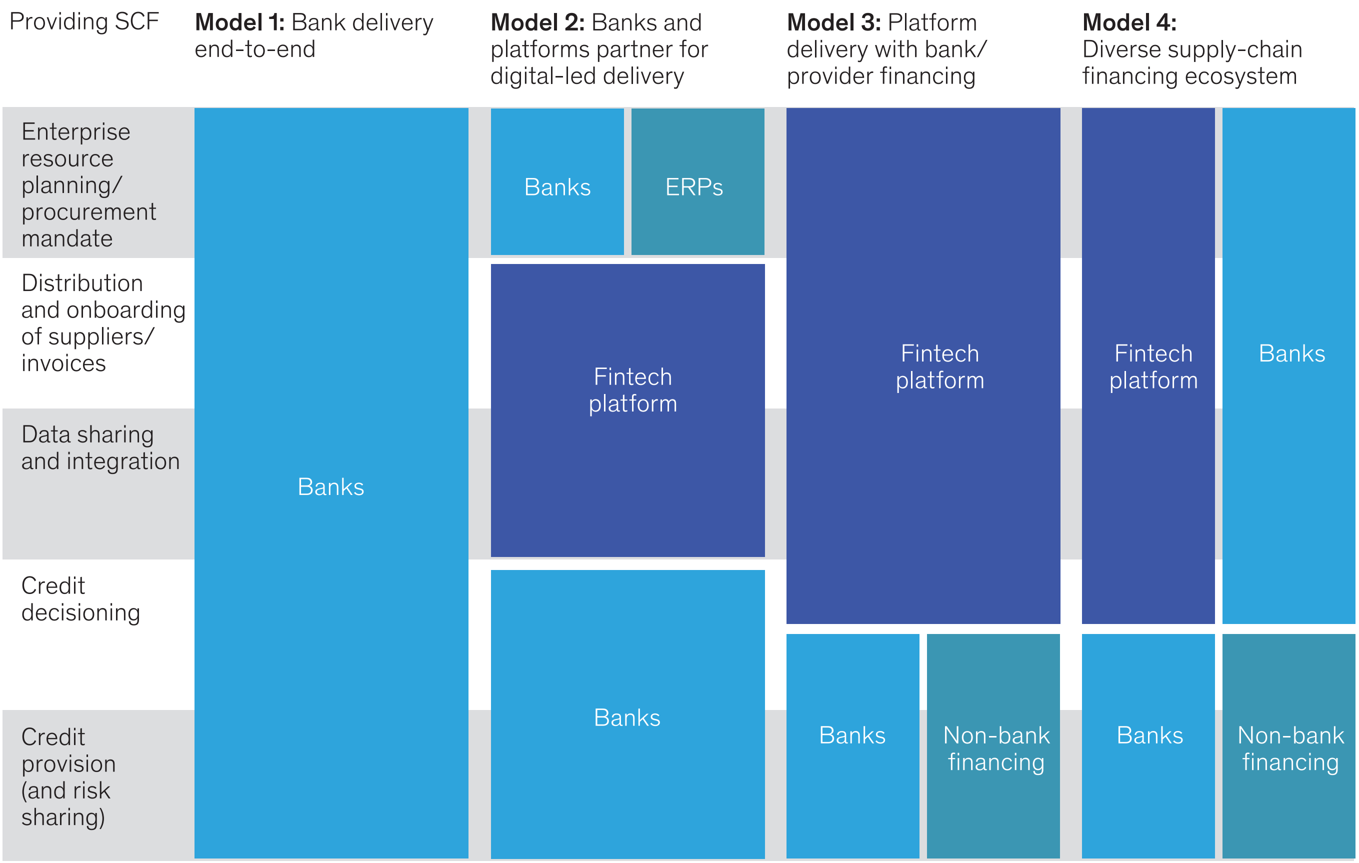
Delivering on the promise: What real change could involve

Given the persistent fragmentation of the SCF ecosystem, our view is that current converging trends will trigger a structural change as corporates accelerate their digitization of supply-chain finance and constantly assess their financing setup to fully benefit from the shifts outlined. Winning them over will likely require heavy focus on their digital interfaces. This could take the form of industry libraries of APIs and data exchanges, or it could involve open standards to make ERP, invoice, and supplier data portable across platforms. Here are four possible future models and what each would mean for market participants (Exhibit 2):

- *Model 1: Bank led.* Banks improve end-to-end delivery by reimagining client journeys, renovating technology, and delivering AI-enabled financing. By effectively drawing upon the strength of their corporate client portfolios and established processes for credit decisioning and provision, they resolve longstanding challenges such as onboarding, distribution across the full set of suppliers and invoices, and scaling of their overall ability to provide credit.
- *Model 2: Bank-led partnerships.* Banks partner with platform providers to develop solutions (ERP integration, third-party data) but retain control of the customer interface. Banks then move beyond numerous (but often superficial) partnerships with fintech or technology platforms to create truly seamless and digital SCF journeys spanning procurement, invoice creation, and financing. This is accomplished through APIs and connectivity across suppliers and buyers in the value chain spanning digitally native, invoice-agnostic SCF platforms covering a buyer's full set of suppliers and the seller's full set of invoices.
- *Model 3: Platform led.* Nonbank platforms scale to provide SCF across the full industry value chain of suppliers and buyers, linking into banks and nonbank financing providers. They draw on established capabilities, including rapid distribution and onboarding of suppliers' invoices and platform flexibility to cater to different invoice types and SCF products and enable the platform providers to become the go-to source for invoicing data and financing. In this model, banks and other ERP platforms are reduced to serving as secondary sources and underlying "pipes."
- *Model 4: Diverse supply-chain finance ecosystem.* A broad range of providers coexist, each catering to different needs. Given existing fragmentation, we can envision a continued niche-based evolution of SCF (e.g., in e-commerce or textile distribution), catering to the full set of suppliers and specializing in credit assessment for selected industries.

Exhibit 2

There is room to accommodate multiple future SCF market models.



	Model 1	Model 2	Model 3	Model 4
What will create transformative change?	Reinvest in technology platform Reimagine onboarding and set-up of customers and credit-decisioning process to increase efficiency, decrease risk, reduce cycle time	Better integrate bank and fintech systems and processes Invest in end-to-end customer journey redesign Widen scope of platform to bring full set of SCF products to corporates	Increase platform investment and accelerate coverage for full value chains in key geographies Develop secondary market for SCF assets to increase penetration of non-bank lending	Industry-wide support for common standards and approaches (including API libraries, data sharing) Develop secondary market for SCF assets to increase penetration of non-bank lending

Source: McKinsey Global Payments Practice

Platforms could build out digital, easy-to-use, self-serve management of invoices for SMEs, aggregating the range of SCF products and financing sources.

Platform-led models and diverse supply-chain finance ecosystems are more likely to be multi-bank compared to the current, typically single bank-led models. Multi-bank models allow wider solution penetration across various corridors and customer segments and, by definition, create some solution standardization. They require more effort to implement, however, and finding an approach that satisfies multiple banks' requirements is not a trivial matter. In determining whether to join multi-bank efforts, banks should assess the benefits and risks, including the trade-off of increased scale and reach vs. distinctiveness of the offering. This is especially relevant for those who consider supply-chain finance a differentiating feature for their corporate customers.

Now for the hard part

As highlighted, the existing trends around digitization, platforms, and finance provision are supercharged by COVID-19. Of course, the underlying growth drivers of SCF will remain intact, even if selected niches, particularly along some corridors, are affected by economic or geopolitical developments. Overall, while corporates will benefit from increased, more seamless, and likely cheaper access, this is a fundamental threat for banks. In either case, the likely next phase will see significant shifts between banks and toward nonbanks.

Banks now need to decide whether to fight for a share of a much-expanded bank-led model or whether a retreat is more likely. It is likely that only a few large banks will be able to provide all services described and effectively compete in the bank-led model 1. In servicing their customers, they would need to draw on learnings from fintechs and platforms, e.g., by reimagining onboarding to reduce cycle times to approval by 90 percent while increasing adoption rates, or by fully automating credit decisions. This entails heavy investment in technology, expanded breadth of services, and broad customer reach.

More likely, most banks will need to trigger a shift into the bank-led partnerships of the second model listed. In this scenario, banks would no longer need to be the end-to-end provider of SCF products. For customers in given verticals or for selected steps of the value chain, banks may elect to enter partnerships with other providers to achieve scale and reach. This is likely the default mode for many banks and is particularly suitable for regional and smaller players. However, it still requires significant focus on partnerships, integration, and digitization, as banks will need to scale quickly and accelerate their partnerships—not only with fintechs or other technology players, but also with each other in order to gain scale. Success in this model cannot be achieved alone: banks should foster the development of a secondary market for SCF products, as well as initiatives to enable the financing journey, including common standards for data sharing and API integration.

Meanwhile, platform providers should aim to displace banks at scale in a platform-led model. It requires them to scale coverage across several key value chains (e.g., major automotive suppliers in North America, major textile intermediaries in Southeast Asia), integrate a broader range of financing providers to cover the full set of invoices, and develop a secondary market for SCF assets to increase penetration among corporates. They will likely need to link into banks as sources of funding. Particularly for smaller banks, this may appear to be an attractive route to generate income without building an SCF engine. It is possible that large e-commerce orchestrators (such as Alibaba and Amazon) will coalesce into this model over time and gain significant SCF market share, particularly in serving SMEs. Other providers, particularly fintechs and consortia, will likely have a tougher time achieving scale but should not be counted out, as they can always partner with bigger players or banks.

All said, we expect this will not be a "winner takes all" market and that different solutions will co-exist in the future landscape. There is sufficient market breadth for multiple networks, technologies and business models to succeed. A comparison can be seen in FX trading market automation, where mono-bank, multi-bank and network solutions have evolved to address historical inefficiencies. Even in the multi-polar model, however, participants will need to focus heavily to retain and potentially improve their positioning.

It's worth noting that the past decade has been a period of persistent economic growth and relatively stable supply chains. Volatility will cause much greater market turbulence. This pressure may be felt most strongly among banks that did not focus their sizable SCF franchises in recent years. Time will tell whether their stand-alone status proves to be a sustainable or model or—more likely—drives corporate customers to other SCF providers. In the end, a multi-trillion-dollar financing opportunity is at stake.

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