

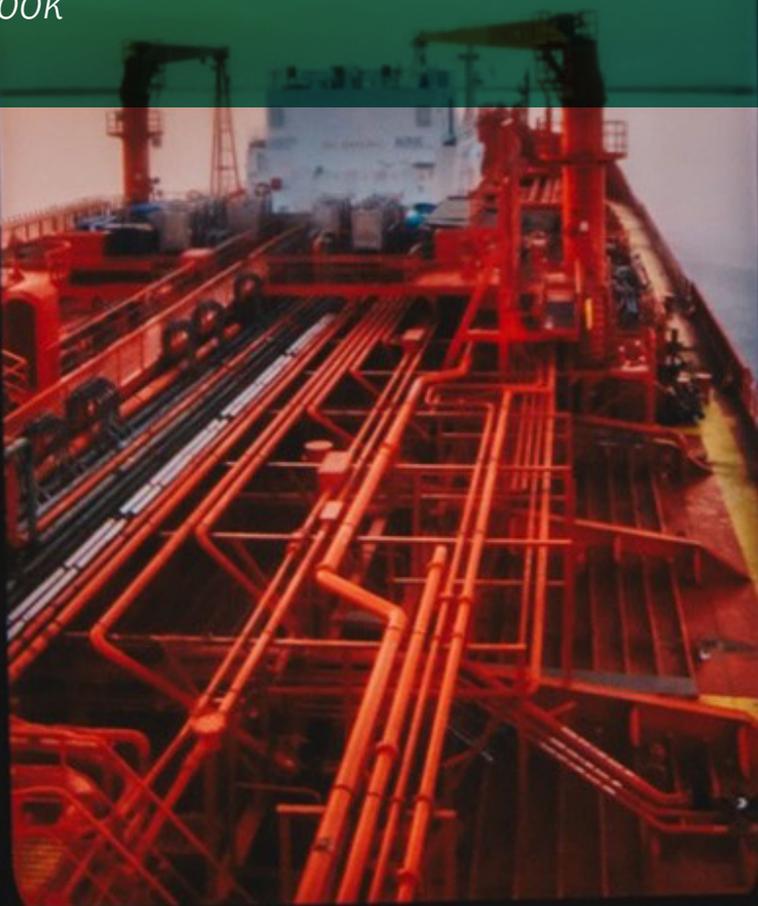
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SIBOS 2018:

'Pulse check' of Digital in Trade Finance

An industry outlook



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SWIFT and the International Chamber of Commerce (ICC) also provided significant input to this paper.

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'Pulse check' of Digital in Trade Finance

An industry outlook

**By Sukand Ramachandran, Ravi Hanspal, Alexandra Vedernikova, and Huny Garg
(external contributor)**

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Introduction

In the aftermath of the 2008 financial crisis, the persistent growth of global trade since WWII slowed and then reversed, reducing 2016 flows to the pre-crisis level of US\$15.8 trillion. In 2017, however, trade grew 8.7%, well outpacing global GDP growth. And, despite the trade skirmishes between the USA and China, there is cautious optimism that global trade will return to steady growth.

This growth would be impossible without trade finance, which oils the engine of global trade by providing supply chain participants with timely financing and risk-mitigation solutions. However, this facilitation mechanism remains complex, with a large number of players (banks, corporates, shippers and other facilitators) exchanging numerous data points across multiple locations and links in the value chain. A single transaction can involve approximately 5,000 data field interactions.

Processes are still largely paper-based. An end-to-end process can include 10-20 documents with a total of more than 100 pages, but containing as few as 60-80 unique data fields. These are then re-used and duplicated across documents at various stages in the process, leading to errors, discrepancies and large amounts of wasted manual effort. As a result, a trade transaction can take up to 2-4 weeks, creating costly bottlenecks in physical flows of goods. Fraud is another concern, with paper forgery and duplicate invoicing common in many locations.

The digitisation of trade, therefore, presents a long-awaited solution to the complicated and cumbersome interactions of paper-based trade. New technologies can address trade pain points in three ways: by making paper-based trade easier (digitising data at entry points to bank, corporate and facilitator systems), by eliminating the need for paper documents in parts of the process (e.g. electronic bills of lading) or more fundamentally transforming trade processing by moving to fully digital and decentralised data exchange.

However, trade finance must overcome significant barriers before large scale digitisation becomes possible. Despite a healthy appetite for digital investment, the highly-fragmented trade ecosystem and the resulting difficulty of getting everyone on-board creates an obstacle to the adoption of digital technology.

In our work with trade finance clients, we see a wide spectrum of opinions on the future of digital trade. Consequently, banks, corporates and facilitators are responding to the challenge in very different ways, which makes the outcome of the complex “coordination game” of digital adoption yet more uncertain.

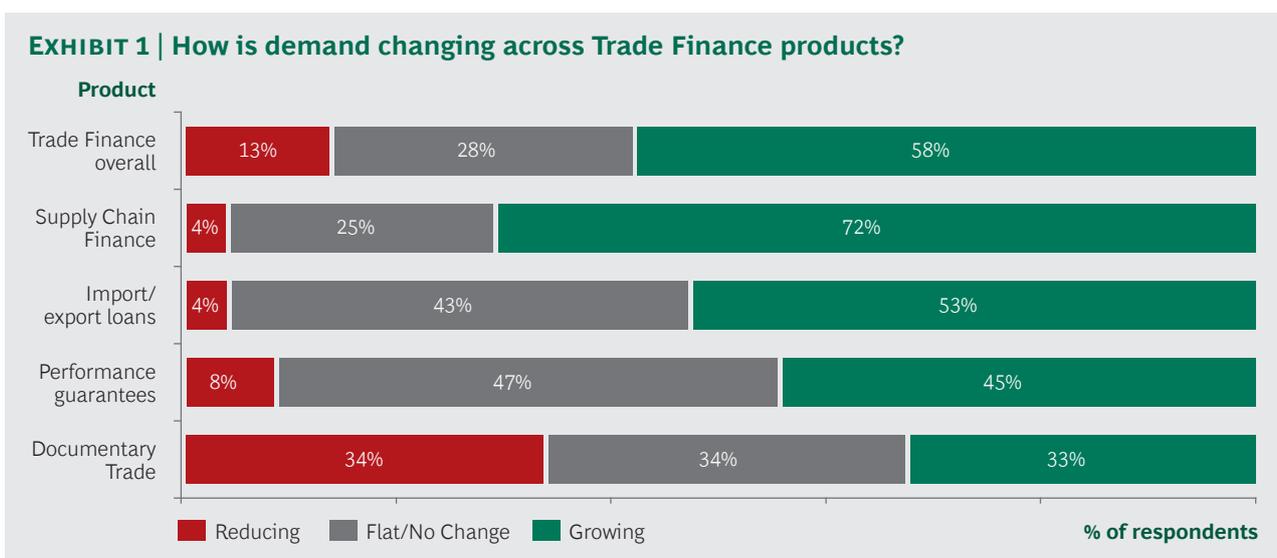
To try to understand this diversity of opinion, we conducted a survey earlier this year in collaboration with the support of SWIFT and the International Chamber of Commerce (ICC). It aimed to get a “pulse check” on the current beliefs of banks, corporates and facilitators regarding the state of digital in trade finance. The survey centred on the following key questions, which we explore in the rest of this report:

- How will demand for trade products evolve?
- What are customers’ needs and are banks meeting them?
- Where are the opportunities from digital and how are banks investing?
- What are the barriers to digitisation and how can they be overcome?

How will demand for trade products evolve?

Demand for trade finance products is growing as global trade continues to expand. Supply chains are becoming more complex and international, and corporates are turning to banks and other facilitators for efficient financing and risk mitigation solutions.

Supply Chain Finance is among the fastest growing trade product groups (see Exhibit 1), reflecting the gradual shift towards open account trade caused by improved transparency and bank offerings in this space. Nevertheless, documentary trade (most notably, Letters of Credit) remains an important part of the trade finance business, and its use will continue to grow in some regions. Because demand for documentary trade is linked to importers’ and exporters’ perception of risk, its use tends to increase during times of economic and political uncertainty. Despite the ease and simplicity of other instruments, they cannot match documentary trade for risk mitigation.

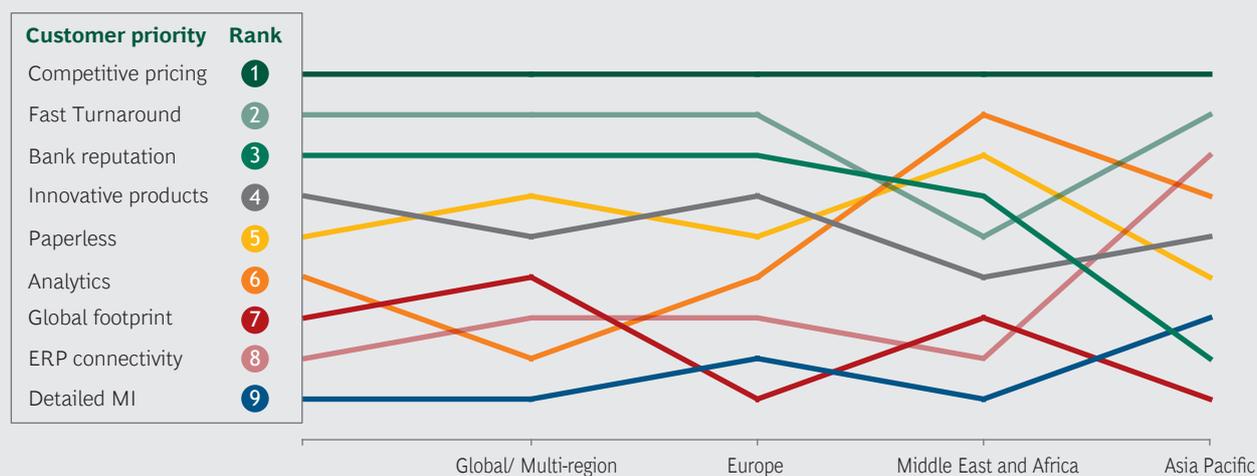


What are customers' needs and are banks meeting them?

Banks see competitive pricing and fast turnaround times as their customers' top priorities, closely followed by personal relationships, the bank's reputation and offering innovative products. (See Exhibit 2). Corporate customers do indeed prioritise price and turnaround time. However, anecdotal evidence suggests that banks overestimate the importance corporates place on personal relationships with bankers and on innovative products. And they may underestimate the importance of fully digitised customer journeys and advanced digital features, such as analytics.

This does not mean that reputation and relationships are unimportant. Rather, it signals that trade finance customers may not be as sticky as banks imagine, and are willing to shop around for a better digital experience or price.

EXHIBIT 2 | How do banks perceive their customers' priorities and how does it vary by region?



Customers' priorities can vary significantly by region, and banks must take this into account when designing their propositions. For example, fast turnaround times, despite being a priority in most regions, are less important in the Middle East.

What are the opportunities from Digital and how are banks investing?

In our experience, the biggest gaps between banks' delivery and customers' priorities lie in the space of digitised customer journeys and digital features, such as using advanced analytics to improve cycle times or reduce transaction friction. Improving digital delivery is not only the key to customer satisfaction but can also help banks reduce their operational costs, manage risk better and adapt rapidly to changing market conditions. Banks can make progress with three "clusters" of digital technology: what we call Value Drivers, Nascent Unicorns and Wild Cards.

VALUE DRIVERS

Value drivers are technologies that “dematerialise” internal processes usually by replacing paper with digital alternatives. These are the easiest wins, because the operations are well defined, the pay-off is clear and results can be achieved by the bank alone, with no need for cooperation or interoperability with other entities.

Digital Channels

Providing access to trade finance products and information through online and mobile platforms is fast becoming a key offering in many markets. Digital channels are not only convenient for customers but help banks provide value-adding, differentiating functionalities. This builds customer loyalty and compels customers to originate transactions and submit documents digitally, reducing time-consuming and expensive manual processing of paper documents. The implementation path for this technology is well understood and not highly dependent on other players in the trade ecosystem. For these reasons, building digital channels tends to be the first step on the digitisation journey. Most banks have already invested in them or are planning to invest (see Exhibit 3).

Optical Character Recognition

Basic optical character recognition (OCR) converts text from trade documents into digital format, allowing a human operator to copy and paste it into the back-end fields. It has been deployed by banks for many years. Though undoubtedly useful, it delivers only small efficiency improvements.

Intelligent OCR, on the other hand, can increase efficiency by up to 50%, eliminating the need for a human operator by learning to recognise the document type and automatically populating the back-end fields.

While intelligent OCR does not remove paper from the trade process, it helps banks reduce turnaround times and costs by automating the transition from paper to digital and then back to paper as information moves through systems.

As with digital channels, the implementation of OCR – while it has its own challenges – is straightforward compared to fully digitising trade. Banks can adopt mature solutions and realise gains without waiting for other players to adopt the same technology. Most of our survey respondents agree that investments in OCR are worthwhile, in part because they doubt that paper will be eliminated from trade processes any time soon.

Many global banks, such as HSBC, Citi and Standard Chartered are now investing heavily in intelligent OCR. For example, HSBC has partnered with IBM to automate the processing of paper documents in trade finance transactions, starting with import and export bills in English. Yet many others, though optimistic about OCR, are not investing in it (see Exhibit 3). These are typically banks that have only recently started their digital journey. As shown in BCG’s recent Digital Banking Benchmarking, such players start with channels as their top priority investment, gradually shifting to

other digital areas (such as OCR) once they have succeeded in laying the technology foundations. The issue of scale also comes into play, as some players may feel their trade business is too small to justify the necessary technology investment in OCR.

A distinct group of banks is choosing to invest in distributed ledger technology as their second digital priority after channels. They may take a different view about the persistence of paper in trade processes and aim to “leapfrog” to a position that renders OCR redundant.

NASCENT UNICORNS

Nascent unicorns are promising technologies that are not yet mature and still face barriers to implementation.

AI and RPA

Artificial Intelligence (AI) and Robotic Process automation (RPA) have the potential to greatly ease the digitisation of trade, especially when used together. RPA allows routine, rule-based tasks to be automated, in a way that resembles “macros” working across multiple applications and screens. While RPA has been around for several years, returns have been modest because the technology can automate only relatively simple tasks. However, combining RPA with AI can be much more fruitful, allowing automated systems to apply judgements based on self-learning algorithms. Combining RPA with AI has proven particularly effective in automating processes that require near-real time decision-making and the analysis of diverse data streams. For example, AI can help trade banks manage commodity financing risk by accurately monitoring the bank’s collateral positions. Singapore’s OCBC is trialling deep learning satellite technology to estimate the levels of financed oil by analysing tanker images. Similar methods could be applied to other commodities, such as metals, minerals and agricultural produce.

The Internet of Things

The Internet of Things (IoT) brings the physical, digital and financial supply chains together. Intelligent sensors can relay the state and location of physical goods to any party in a transaction. While sensor and geolocation technology have been used by shippers for many years, financial institutions have only recently started exploring its potential at scale in the trade space. Proven use-cases are coming to light, particularly around risk, collateral management and fraud prevention. Ultimately, IoT can help banks exercise tighter control and automate many parts of its risk management process. And it could soon facilitate smart contract execution, with the automatic release of funds upon a signal from a geolocation tracker.

IoT technology is mature and its value is widely accepted by the supply chain community. However, banks have been slow to adopt it. To be useful, the vast amount of data available through IoT technology needs to be structured, analysed and transformed into valuable insights and automated action triggers. The success of banks’ IoT initiatives will be determined by how well they can harness it to the power of AI and automation technology.

WILD CARDS

Wild card technologies are still unproven at scale and depend on coordination and network effects. They could lead to a “big bang” or turn out to be an “empty shell”.

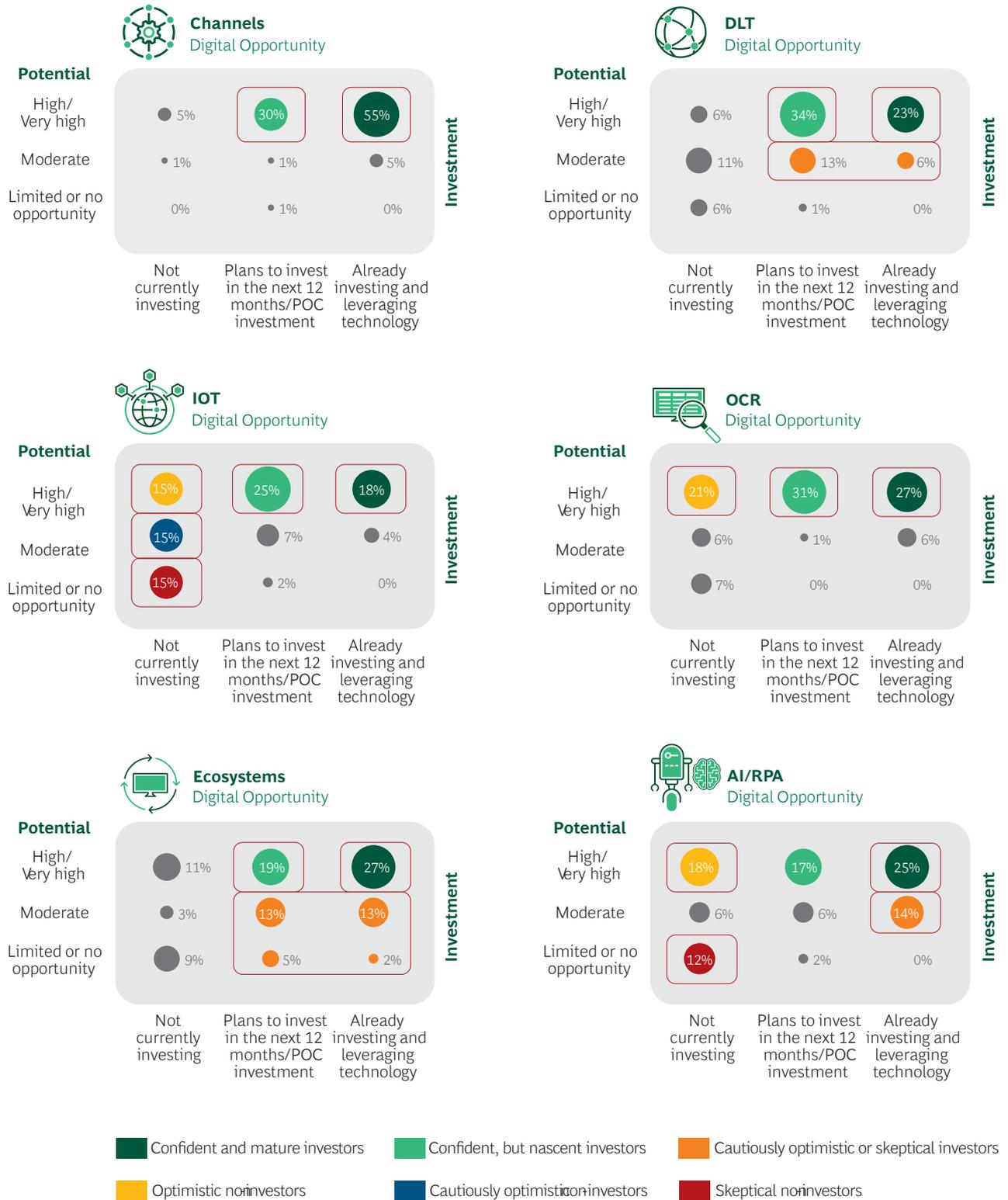
Distributed Ledger Technology

Distributed ledger technology (DLT) is one of the hottest digital topics in the trade finance space. Many claim it will revolutionise trade by providing indisputable records of transactions and accompanying metadata. Trade processing is now slow, paper-heavy, opaque and risky. DLT promises to make it fast, paperless, transparent and safe.

However, this application of DLT is still far from delivering tangible value because its success depends on network effects. To maximise its value, trading parties around the world need to subscribe to the model. This requires fundamental changes to the global legal framework, and to local commercial law. For example, a DLT-based, digitised letter of credit is of little use if it is not legally binding in both the importer and exporter countries. Moreover, complex technical coordination is required to establish standardised platforms and ensure the interoperability of systems.

Despite these structural challenges and the fact that DLT is yet to deliver any significant value for banks, many are investing heavily in it, often prioritising it over investments in more dependable technology, such as OCR. While we understand that larger banks may be seeking a first-mover advantage, this makes less sense for smaller players who have limited potential to shape the uptake of DLT across the global trade landscape.

EXHIBIT 3 | Perceived opportunity vs. investment behaviour



What are the barriers to digitisation and how can they be overcome?

Despite notable investment in the trade finance value chain, attempts at digitising trade finance continue to be isolated and sporadic, and digitisation has yet to achieve scale. The barriers arise from distinctive features of the trade landscape, as well as disparity in legal jurisdictions.

As mentioned, global trade value chains are highly fragmented, involving a great variety of actors with different scale, capabilities and appetite for digitisation. Compare, for example, highly-digitised global banks and fintechs with paper-based customs authorities in developing markets. End-to-end digitisation is difficult when many links in the chain are not yet digital. And even if all parties digitised internally, there would still be no guarantee that trade finance would become fully digital. All actors along the value chain would first need to agree on the common legal, operational, and data standards: that is, on how exactly the trade ecosystem will go digital. The risk of digital gaps or incompatibilities reduces the expected returns to investment in digital technology, and hence discourages it, creating a vicious cycle of under-investment.

Concern over cybersecurity can further discourage adoption. The number of actors and interactions involved in trade heightens the cyber risk to which banks, corporates and facilitators are exposed – as revealed in our survey (see Exhibit 5).

EXHIBIT 4 | Barriers to trade finance digitisation

Barrier to trade finance digitisation

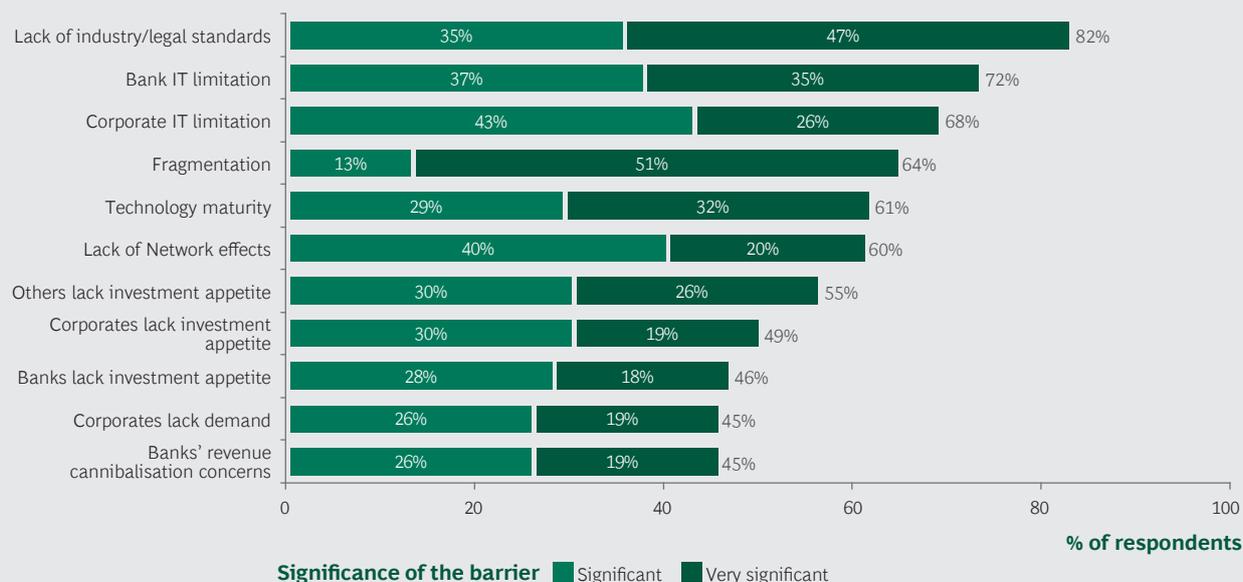
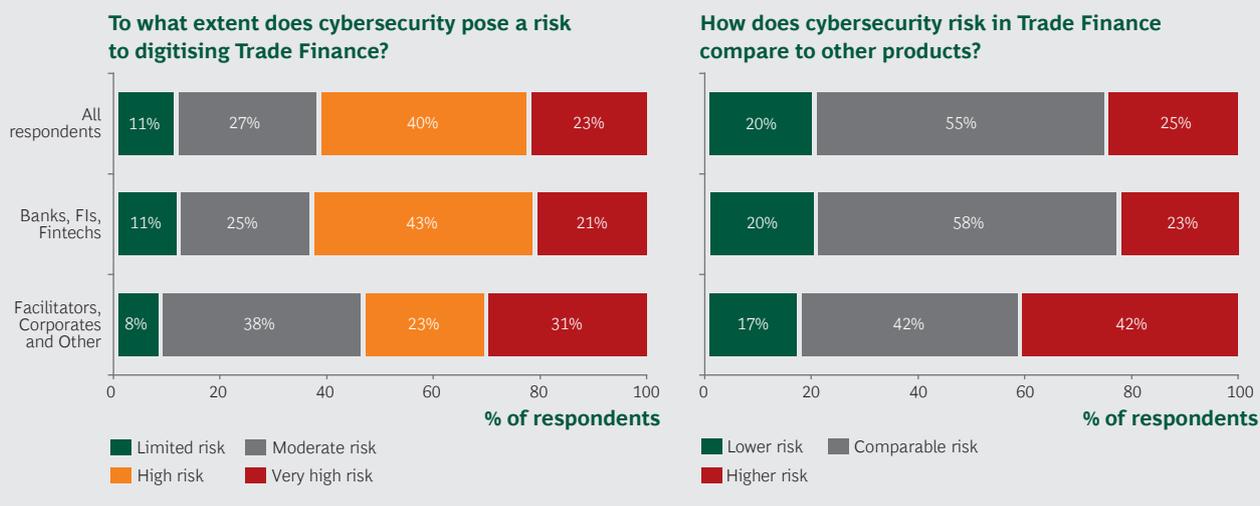


EXHIBIT 5 | Cybersecurity risk in Trade Finance



Conclusion: What needs to happen over the next three years to move the needle

The uncertainty and complexities surrounding the digitisation of trade are reflected by the variety of strategies being pursued, and by the disagreement among respondents to our survey.

Of course, some divergence makes sense; the optimal approach will vary from institution to institution. However, from our experience, we would typically recommend that banks begin by investing in things within bank’s direct control, which do not depend on complex coordination with other players, such as channels and OCR. Returns on investment here are more certain, and more quickly realised. If the appetite exists, banks should then invest in “nascent unicorn” technology, such as AI and IoT. This should often be pursued through cooperation with non-banks that can bring cutting-edge solutions and agile implementation.

Blockchain and other DLT should be pursued only by banks seeking to be pivotal trade finance players. Smaller banks are likely to enjoy superior returns from investing in more mature, proven technology. Banks that do pursue DLT should prioritize establishing common legal frameworks and system interoperability over flashy technology, which is more important for marketing than underlying efficiency.

While fully digitised trade, at scale, still appears to be many years away, progress is clear: the “nascent unicorns” of yesterday, such as intelligent OCR, are now “value drivers”, and today’s “wildcards” may eventually make the same transition into the mainstream.

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