Disrupting trade finance: blockchain, banks and freight forwarders

This article provides an overview of:

- The importance of trade finance to international supply chains and how it works
- Why the sector in its traditional form is failing shippers in many parts of the world
- The opportunities this has provided for innovators and new technologies
- Some of the market entrants which are developing new trade finance products and platforms
- Blockchain and the role of 'smart contracts'
- Opportunities for freight forwarders in their role as supply chain intermediaries

Although trade finance may not seem to be the most exciting aspect of international commerce, it is one of the most essential. For many centuries, Letters of Credit, insurance and guarantees have facilitated cross-border trade by assuring that the necessary levels of trust exist between parties within supply chains, backed in the main by banks and their correspondents. In other words, the system gives exporters the assurance that they will be paid by customers who could be located anywhere in the world. And buyers have a guarantee that goods will be delivered when and where the exporter says they will.

Despite the model seemingly working well over the years (after all, it enabled globalization), the sector is on the verge of a revolution, set to become a key competitive battleground shaken up by new technologies. There is also the hope that this disruption will provide an opportunity for freight forwarders to cash in on their role as intermediaries in the supply chain allowing them to break out of their present low margin business model.

For although trade finance works well for multinationals (which generate the majority of global goods flows), many small and medium-sized enterprises (SMEs), especially in the developing world, are being increasingly excluded.

It is for this reason that organisations such as the World Trade Organization, World Economic Forum and International Monetary Fund are encouraging changes to the system and in this article we will explore the reasons why and the opportunities this will create.

What is trade finance?

Trade finance is often described as the 'lubricant' of international commerce due to its role in bridging the gap between importers' and exporters' expectations on when payment for goods should be transferred.

Trade finance typically falls into two categories:

Inter-company credit

This type of relationship involves the advance of credit by either the buyer or seller who effectively take on the risk of the transaction. If there is complete trust between the parties then transactions could be settled on an 'open account' basis. Although figures are hard to come by, it is thought that this type of arrangement accounts for 40-50% of agreements.

Bank-intermediated finance

When such levels of trust do not exist, intermediaries become involved to facilitate the transaction and typically 'Letters of Credit' are used to specify the terms of the contract. The 'Letter of Credit' sets out a commitment by the buyer's bank to pay for the purchased goods if a number of obligations are met by the seller. These can include the conditions of delivery and the relevant documentation. Banks can even go further and provide finance to the exporter which allows it to buy goods from its suppliers and progress the order. This type of finance perhaps accounts for a similar proportion of the market as inter-company credit – around 40%.

Although statistics vary, the World Trade Organization estimates that up to 80% of global trade is supported by finance or credit insurance (the two categories above), the rest being comprised of 'cash-in-advance'.

Why does the sector need shaking up?

According to a report by the Asian Development Bank, '…where trade finance functions well, it enables firms which would otherwise be considered too risky, to link into expanding global value chains and thus contribute to employment and productivity growth.'

However, it does not seem to be working well everywhere. This is a conundrum for many in the industry as trade finance is seen as a particularly low risk form of finance. The International Chamber of Commerce asserts that the default rate is only 0.021% of which over half is recovered by the sale of the asset on which the bank has a call i.e. the merchandise.

According to the World Economic Forum, problems accessing trade finance are a consequence of the 2009 financial crisis, which led to increased levels of risk assessment and enhanced due diligence. This has been compounded by diverse terrorist threats which have led to tightened regulations.

The upshot of this is that the lack of trade finance is one of the main barriers to international trade particularly affecting emerging markets in Africa, the Caribbean, Central Asia and parts of Europe. The International Monetary Fund believe that this is due in part to money-laundering regulations and the cost of compliance which makes financing trade deals unattractive to many commercial banks. It says the withdrawal of these banking services, '…[could] disrupt financial services and cross-border flows, including trade finance and remittances, potentially undermining financial stability, inclusion, growth and development goals.' The WTO also says, '…in the post-financial crisis era global banks are less inclined to invest in many developing countries.'

What is more, there is a perception that this squeeze on trade finance reinforces the competitive advantage of the larger shippers due to their preferential access to banks and intermediaries. Another problem is the administrative burden. Small and medium-sized companies, in developed as well as developing countries, are hampered by the levels of bureaucracy involved, or, at least, are less able to deal with it. The WTO says that half of all trade finance requests from SMEs are rejected by banks compared with just 7% of multinational companies.

This has led to what is called a 'financing gap' which has proved to be a headwind for the growth of global trade. The gap is particularly evident in Africa and other developing regions although it is very difficult to put an actual figure on its scale.

Trade finance innovators and disruptors

The mismatch between supply and demand which these systemic problems have caused has created an opportunity in today's digital world. However, first the paper-heavy trade documentation systems have to be digitized. If the process underpinning bills of lading and Letters of Credit can be made more efficient and faster, then meeting the needs of regulations such as 'Know Your Customer' and anti-money laundering can be more easily met. An electronic audit trail is fundamental to ensuring effective compliance.

If the high level of shipment data which is generated can be harnessed, risk levels can be assessed and this allows companies to innovate, not least in the provision of trade finance.

Creating supply chain visibility through layers of software also has other benefits. The trust it can engender in the transaction has led to the development of derivative products in the trade finance sector, building on the concept of invoice factoring. Investors can pool their capital into an asset class which can be provided to SMEs to help fund their exports.

In an increasingly crowded sector, here are some examples of just a few trade finance innovators:

essDocs provides SaaS fintech and supply chain technology solutions for the export, trade and logistics industries with a goal to enable paperless trade. Solutions are provided through its CargoDocs platform, which digitizes the creation and approval as well as exchange of electronic original documents, and also enables users to apply for, sign, stamp and receive back original certificates required for global trade. CargoDocs combines title, quality, condition, location and other key data to reduce risk and improve visibility and control. Key electronic documents covered include: bills of lading, warehouse warrants, certificates of origin, commercial invoices and inspectors' certificates.

Bolero (which has been around since the 1990s) is another solutions provider working to digitize the sector. In conjunction with an enterprise software company, R3, it has embarked on a new electronic bill of lading (eBL) service that it says will connect multiple trade networks. Relevant parties will be able to endorse and verify an eBL's title without needing to revert to paper.

A more recent market entrant is **Interlinkages**, based in Hong Kong. It describes itself as, '…a cross-border trade finance-bidding platform that endeavours to democratize the international trade finance marketplace by providing the most efficient, cost effective and bank-neutral solutions for trade finance transactions of corporates and SMEs.' The platform matches 'buyers' (those with money to lend) with 'sellers' (those who need to borrow to finance their trade deal) using an 'eBay model' (as described by the founders). It allows lenders to reach markets in which they might not have a physical presence and allows exporters and traders to access funds which otherwise would not be available to them. The platform matches supply and demand, but does not bear the risk of the transactions.

Chained Finance is a recent joint venture between a subsidiary of manufacturer Foxconn and online lending marketplace Dianrong. In its launch communication, it said its aim was to '…meet the hugely underserved needs of supply chain finance in China.' The company went on to say that it believed that the existing trade finance arrangements only served about 15% of suppliers needing financial resources affecting 40 million Chinese SMEs. Its focus will be on electronics, automotive and fashion manufacturing sectors and its platform will employ the latest blockchain technology thereby eliminating many of the trust issues faced by counterparties and deliver automated execution.

In Europe banks are also stepping up their presence in this sector. Eleven banks, including Deutsche Bank, HSBC, Rabobank, KBC, Commerzbank and Société Générale have asked IBM to build a platform which will provide similar services to 'Chained Finance' based on blockchain technology and aimed at European SMEs. The consortium has been named **Batavia**. Speaking to the Financial Times, Rudi Peeters, CIO of KBC commented that blockchain was the obvious technology for trade finance as existing processes were paper-based, complex and expensive. He said that initially the banks would target cross-border road based trade routes although the product would subsequently be expanded to inter-continental shipping routes. The platform will be accessible to shippers and freight forwarders as well as other banks and credit agencies, allowing SMEs to track shipments and using smart contracts which trigger payment when invoices are raised or delivery completed. Other banks are establishing similar platforms.

It is interesting that IBM initially plans to focus on cross border trade with plans to expand internationally at some point after that. This approach might appear unduly conservative in a sector where venture funded start-ups are known for their ambition and desire for scale. Obviously, IBM is a well-established enterprise that understands the consensus building approach and has to be deliberate in building alliances that do not conflict with their existing commercial arrangements. But they are disadvantaged when trying to compete in the same pool with smaller companies who do not have those concerns.

As an example, it is instructive to look at the number of cross border digital payment companies that have come from nowhere in the past five years and evolved into significant forex players before being acquired for billions of dollars by established banks. The established technology companies could match them with technology, but could not keep up with their aggressive and agile business development approach.

Blockchain and 'smart contracts'

The concept of 'smart contracts' has been around for much longer than blockchain technology. A 'smart contract' has been defined by lawyers, Allen and Overy, as '…a set of promises, agreed between parties and encoded in software, which, when criteria are met, are performed automatically.' They don't exclusively involve trade finance contracts, but due to many of the issues set out above (trust, complexity, time and paper-based inefficiencies) the benefits which smart contracts can deliver to the sector are substantial. As the legal company says, blockchains conveniently provide an underlying trusted network conveniently and efficiently.

By 'hardwiring' the financial transaction process into software code, certain events can be triggered at specified milestones. The most obvious of these is at the point when the goods have been delivered. When the final delivery is made and a scan or electronic proof of delivery is generated, a signal can automatically be sent back up the supply chain, authorising, for example, the release of funds to the exporter.

This all assumes that the 'smart contract' works in the way that both the exporter and importer intended. Whilst they may reduce human error by eliminating human intervention, this is not to say that errors cannot be made in programming the hard code in the first place. How this plays out in legal terms has really yet to be seen. According to lawyers, there is a reversal of the burden of litigation with the exporter having to pursue a claim for damages, as the shipment will have already been delivered and the importer will be in possession of the merchandise. At present it would fall to the importing party to pursue a claim or damages when delivery had <u>not</u> been made under the terms of a contract.

In addition, there are legal question marks over what happens when the 'smart contract' becomes impossible to perform or there is misrepresentation or illegality. In some cases a 'smart contract' may not be a 'contract' at all as it is not recognised by certain jurisdictions.

However, more positively, the way that blockchain works in creating a single and unalterable record means that documentation duplication and even fraudulent invoice financing will become impossible.

Will on-demand trade finance become the new competitive battleground for freight forwarders?

Freight forwarders are critical parties in the international supply chain process and so it would seem obvious for them to be at the forefront of the trade finance revolution. In 2009, DHL in partnership with Standard Chartered Bank in India provided a first step in digitizing trade documents by scanning them in specially equipped courier vans and sending them digitally to the requisite bank, reducing the time it took to courier these documents physically.

But it is new market entrant, Flexport, which is now capturing the headlines. The relatively new start-up has raised $110 million in Series C funding and part of its investment plans include rolling out a new trade finance offering to its customers. It believes that the huge amount of supply chain data it is able to generate and analyse will allow it to assess the risk of making temporary loans to many manufacturers and other exporters. This would be a step change in the level of sophistication of services available through forwarders to SMEs and a huge competitive advantage.

If this additional product were rolled out, it would allow freight forwarders to increase their value add by leveraging their own balance sheets. Forwarding is a low margin business and operators in the sector are always looking to increase profitability, some more successfully than others. If they are to achieve this goal, however, forwarders will have to move fast and partner with companies which have the appropriate levels of expertise. There is no reason why trade finance could not become a powerful USP for forwarders, not only generating a new revenue stream but also attracting the volumes of higher margin SMEs. If they do not move quickly it will be left to the many other trade finance innovators to disrupt the market and gain this particular prize.

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