Trade Tech – New Age for Trade Finance
World Economic Forum in collaboration with Bain & Company
Agenda

• Current trade finance value proposition

• Baseline trade growth

• Impediments to more growth

• Distributed ledger technology (DLT)
Current trade finance value proposition: Trade finance processes have multiple pain points, i.e., human error, delays, verification challenges

EXAMPLE: LETTER OF CREDIT

Contracting

Goods handling

Documents handling

B2B Payments

A Prompts Bank B to issue LC

B issues and sends LC to C

Costs incurred by significant manual labour

B releases goods to payer A

Delays incurred in sending across multiple geos.

A pays bank B value of goods + LC issuing fee + transfer fee

B issues and sends docs to A

Manual procedures; risk of delays due to human errors and add, re-processing

B rechecks and sends docs to A

B performs an international transfer to C via correspondent banking of invoice amount + transfer fee

B performs an international transfer to C via correspondent banking

C Hands over LC to D, once documents are accepted

C checks docs and sends them to B

C transfers D invoice amount - LC advising fee

C checks docs and sends them to B

C transfers D invoice amount - LC advising fee

D provides documents attesting proof of shipping & product quality to C

D provides documents attesting proof of shipping & product quality to C

Country: Importer 🟢 Exporter 🟦

Source: Bain FS Practice
Current trade finance value proposition: Trade finance has been moving to open account solutions

Letter of credit are losing share

<table>
<thead>
<tr>
<th>Share of global trade finance</th>
<th>$ trillions</th>
<th>%</th>
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<tbody>
<tr>
<td>1970</td>
<td>2</td>
<td>100%</td>
</tr>
<tr>
<td>2000</td>
<td>6</td>
<td></td>
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<tr>
<td>2010</td>
<td>15</td>
<td></td>
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<tr>
<td>2014</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>17</td>
<td></td>
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<tr>
<td>2016</td>
<td>16</td>
<td></td>
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</tbody>
</table>

While open account solutions surge

<table>
<thead>
<tr>
<th>Value of global trade, $ trillions</th>
<th>2016</th>
<th>2020E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primarily cash advance payments</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Primary open accounts solutions</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Non-financed</td>
<td></td>
<td></td>
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<tr>
<td>Other financing</td>
<td></td>
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<tr>
<td>Bank trade financing</td>
<td></td>
<td></td>
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<tr>
<td>(letters of credit, document collections)</td>
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Causes and consequences

- Cost factor, along with rising trust in supply chains, has prompted some companies to shift from traditional trade to trade facilitation and working capital finance solutions through open account trading.
- That increases risk for the exporter, who also needs more financing of working capital.
- Letters of credit and guarantees are particularly unattractive for small-ticket transactions and SMEs.

Source: World Bank; ICC Global Survey Rethinking Trade and Finance (annual reports 2010-2015); MISYS Financing Future Supply Chains
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Baseline trade growth: Global trade reached US$16T in 2016 with largest contribution from Europe and Asia

Legend:
- Africa
- Australasia
- Middle East
- Asia Pacific
- Latin America
- North America
- Europe

Intra-region trade value (US$ M)
Inter-region trade value (US$ M)

Note: Only trade routes with highest value are shown (based on export merchandise)
Source: WTO, IMF, World Economic Forum, Euromonitor
Baseline trade growth: APAC region will be the main growth driver for Global Trade

Legend:
- Africa
- Australasia
- Middle East
- Asia Pacific
- Latin America
- North America
- Europe

Intra-region trade growth (%)
Inter-region trade growth (%)

Note: Only trade routes with highest value are shown (based on export merchandise)
Source: WTO, IMF, World Economic Forum, Euromonitor
Baseline trade growth: Doc Trade expected to have ~9% market share in 2026

OPEN ACCOUNT WILL GROW FASTER; DOC TRADE WILL REMAIN SIGNIFICANT

Global Trade merchandise volume

CAGR (16-26E)
- Cash adv. 23.7
  4%
  -1.5%

4%

Global Trade merchandise volume

2016

16.0

15.0

14.0

13.0

12.0

11.0

10.0

9.0

8.0

7.0

6.0

5.0

4.0

3.0

2.0

1.0

0.0

$25T

2021E

19.4

2026E

Open Account

Doc Trade

1.1%

Doc Trade as % to Total

2016

12%

2021E

11%

2026E

9%

Source: Bain FS Practice Estimates. WTO, ICC, ADB

DRIVEN BY ASIAN DEMAND FOR DOC TRADE PRODUCTS

Usage of Doc Trade (proxy: % of LCs)
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Impediments to more growth: $1.6T unmet trade finance gap currently; Access to financing is a major barrier to Global Trade

~$1.6T UNMET TRADE FINANCE DEMAND TODAY; ~40% FROM DEV. ASIA

Global trade finance gap (2016)

- $8.1T Global Trade Finance market ($6.5T)
- $1.6T Unmet Trade Finance demand ($1.6T)
- Developing Asia including India and China ($0.7T)
- Others ($0.9T)

ACCESS TO TRADE FINANCE IS A KEY BARRIER TO TRADE TODAY

Barriers to Export 2016 % of responses (Africa Example)

- Access to trade finance: 16%
- Identifying potential markets and buyers: 13%
- Difficulties in meeting quality/quantity requirements of buyers: 11%
- Inappropriate production technology and skills: 9%
- Burdensome procedures and corruption at foreign borders: 9%
- High cost or delays caused by domestic transportation: 9%
- Access to imported inputs at competitive prices: 8%
- High cost or delays caused by international transportation: 8%
- Tariff barriers abroad: 7%
- Technical requirements and standards abroad: 6%
- Rules of origin requirements abroad: 4%

Source: ICC; WTO; ADB
Impediments to more growth: DLT can improve some of the pain points faced today in Doc Trade, especially for SMEs.

DLT COULD ADDRESS KEY BARRIERS E.G. KYC/AML, COLLATERAL REQ, TXN COSTS

Significance of barriers to TF according to respondent banks

SMEs LIKELY BENEFIT THE MOST FROM ADDRESSING THESE PAIN POINTS

TRADE FINANCE REJECTIONS BY SEGMENT

- SMEs face higher rejection rates driven by greater riskiness and lack of collateral
- SMEs: Accepted 48%, Rejected 52%
- Large Corporates: Accepted 79%, Rejected 21%
- MNCs: Accepted 87%, Rejected 13%

Source: ICC; WTO; ADB
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**DLT: New technologies enable the digitalization of trade**

<table>
<thead>
<tr>
<th>New technologies</th>
<th>Pre-transaction</th>
<th>Transaction processing</th>
<th>After transaction</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Product selection</td>
<td>Data entry</td>
<td>Workflow management</td>
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<tr>
<td>Optical character recognition (OCR)</td>
<td>Text recognition from trade documents to minimize data entry</td>
<td>Check for completeness of documents based on transaction/product type</td>
<td>Scrape documents for AML keyword hit</td>
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<tr>
<td>Artificial intelligence (AI)</td>
<td>Intelligent and personalized marketing: Offer new product sales or client promotions based on insights on clients’ needs and behaviors</td>
<td>Populate fields with text extracted from documents (integrate OCR with transaction process)</td>
<td>Validate/mediate data with cross-references, machine learning</td>
</tr>
<tr>
<td>Advanced analytics (AA)</td>
<td>Enhanced KYC (e.g., web scrape)</td>
<td>Efficient process and productivity monitoring, and predictive analytics to detect patterns</td>
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<tr>
<td>Robotic process automation (RPA)</td>
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<td></td>
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<tr>
<td>Internet of things (IoT)</td>
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<tr>
<td>Distributed ledger technology (DLT)</td>
<td>Create smart letter of credit as smart contract on distributed ledger auto notifications</td>
<td>Replace documentation, checks, data entry, validation, with single digital record</td>
<td>Real time verification and reconciliation; workflow executed as per smart contract conditions; replace payment and funds transfer with cryptocurrency</td>
</tr>
</tbody>
</table>

**Source:** Bain & Company
DLT: Distributed-ledger-based letters of credit could yield cost savings and real-time document checking

**INITIATION**
Letter of credit (LC) creation and transmission to all participants on the same day

1. Exporter sends invoice and his account details to the importer
2. Importer prompts Bank A to issue LC, via an app or online (confirms with his DL password and exporter's account details)
3. Bank A checks importer's credit worthiness and creates an LC as a smart contract on the DL, linked to both the importer and exporter via their account details
4. Both exporter and Bank B are notified when the LC is created on the DL

**SHIPPING AND PROCESSING**
Transmission of shipping proof to all participants in real time

5. ShipCo D automatically updates LC on DL with validated proof of shipping, using its DL private password, triggering execution of smart contract conditions (e.g., partial payment)
6. Exporter sends goods via ShipCo D, providing his account details
7. ShipCo D triggers DL status update when goods arrive

**SETTLEMENT**
Simultaneous validation of shipping proofs and payment via distributed ledger platform

8. ShipCo C triggers DL status update when goods arrive
9. Bank A and Bank B instantly receive shipping proof update from the DL, and LC's status is automatically updated based on smart contract conditions
10. Importer, confirms payment on app or online account via his DL password
11. Importer, confirms payment on app or online account via his DL password
12. Seller gets notified that he has received the payment on his account
13. ShipCo C releases good to Importer, once status on DL states he has fulfilled all obligations (e.g., payments)

**Note:** Account details refer to DL user's public key and password refers to DL user's private key

Source: Bain & Company