BRIDGING TRADE FINANCE GAPS THROUGH TECHNOLOGY

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Trade finance provides working capital and a means to reduce payment risk in trading across borders

Degrees of risk by transaction type

- Open account
- Documentary collection
- Unconfirmed documentary credit
- Confirmed documentary credit
- Cash in advance

Source: ADB, based on Malaket (2014)

**Market structure, 2017**

<table>
<thead>
<tr>
<th>Inter-firm Trade Credit (60%)</th>
<th>Bank-Intermediated Trade Finance (40%)</th>
<th>ECA-supported</th>
<th>MDB-financed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open account</td>
<td>Letters of credit 20%</td>
<td>13%</td>
<td>0.12%</td>
</tr>
<tr>
<td></td>
<td>$7.1 trillion</td>
<td></td>
<td>$2.3 trillion</td>
</tr>
<tr>
<td>Cash in advance</td>
<td>Documentary collections 8%</td>
<td></td>
<td>$20.9 billion</td>
</tr>
<tr>
<td></td>
<td>$3.5 trillion</td>
<td></td>
<td></td>
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<tr>
<td>Global Merchandise Export, 2017</td>
<td>Supply chain finance 6%</td>
<td></td>
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<tr>
<td></td>
<td>$1.4 trillion</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>$1.1 trillion</td>
<td></td>
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<tr>
<td></td>
<td>Guarantees 5%</td>
<td></td>
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<tr>
<td></td>
<td>$1.0 trillion</td>
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</tr>
</tbody>
</table>

ECA = Export Credit Agency, MDB = Multilateral Development Bank
Unmet demand for trade finance remains huge

Global Trade Finance Gap, 2014–2018

Rejection by Region, 2016

Source: ADB Trade Finance Gaps, Growth, and Jobs Survey
SMEs have the highest rejection rates for trade finance applications

Trade finance rejections by firm size, 2018

- Small and medium-sized enterprises: 45%
- Large corporations and Mid-cap: 39%
- Multinationals: 17%

Possibility of finding alternative sources of finance

- Unable to find appropriate alternative financing: 44%
- Used informal financing: 17%
- Used formal alternative financing successfully: 15%
- Found formal alternative financing but opted not to use it: 9%
- Found informal financing but opted not to use it: 6%
- Found digital finance but opted not to use it: 1%
- Used digital finance successfully: 1%

Source: ADB Trade Finance Gaps, Growth, and Jobs Survey 2019
MDBs bolster international trade through trade finance programs

Trade finance programs in international organizations, 2017

<table>
<thead>
<tr>
<th>Program Title</th>
<th>ADB</th>
<th>AfDB</th>
<th>EBRD</th>
<th>IDB</th>
<th>IFC</th>
<th>ITFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Finance Program (TFP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of countries of operation</td>
<td>22</td>
<td>49</td>
<td>26</td>
<td>21</td>
<td>85</td>
<td>51</td>
</tr>
<tr>
<td>Value of transactions since commence</td>
<td>$36.3 billion (2009–2018)</td>
<td>$6.65 billion</td>
<td>$18.5 billion</td>
<td>$5.9 billion supporting $9.1 billion underlying transactions</td>
<td>$64 billion</td>
<td>$40.2 billion</td>
</tr>
<tr>
<td>% of SMEs in portfolio</td>
<td>81%</td>
<td>58%</td>
<td>78%</td>
<td>84%</td>
<td>n.a.</td>
<td>15%</td>
</tr>
</tbody>
</table>


Source: ICC (2018)
Challenge 1

Process inefficiencies arise from *paper-based* documentary transactions

Risks in Letter of Credit transactions

Source: ADB, based on ICC (2014); World Economic Forum and Bain & Company (2018b).
Challenge 2

*Regulatory compliance requirements* increase the cost of supplying trade finance

**Obstacles and Concerns to Trade Finance Growth**
(% of respondents agreeing on barriers to trade finance)

- AML/KYC requirements: 76%
- High transaction costs or low fee income: 59%
- Low credit ratings of company/obligor’s country: 52%
- Issuing bank’s low credit ratings: 51%
- Global economic uncertainty such as trade tension: 48%
- Clients’ lack of familiarity with products: 43%
- Basel capital regulatory requirements: 41%
- Low company/obligor credit rating: 32%
- Lack of dollar liquidity: 29%
- Bank staff’s lack of familiarity with products: 26%

**Expected Impact of Regulatory Requirements (%)**

- AML
  - Small and medium-sized enterprises: 80%
  - Large corporation: 20%
  - Multinational corporations: 10%

- Basel III
  - Small and medium-sized enterprises: 85%
  - Large corporation: 15%
  - Multinational corporations: 5%

Source: ADB Trade Finance Gaps, Growth, and Jobs Survey 2016, 2019
Challenge 3
Requirements to reduce *information asymmetry* adds more challenges to SMEs access to trade financing

**Reasons Banks Reject Trade Finance Applications** (% of rejections)

- **Low bank profits**: 15%
- **Know-Your-Customer (KYC) concerns**: 29%
- **Not suitable for financing**: 20%
- **Need more collateral/information**: 21%

Source: ADB Trade Finance Gaps, Growth, and Jobs Survey 2017
Digitization and automation holds great promise for more inclusive international trade

Trade Flows and Technologies

AI = artificial intelligence, ML = machine learning, OCR = optical character recognition.
Sources: ADB-ESCAP Asia-Pacific Trade Facilitation Report 2019
Emerging Technologies Facilitating Trade

**Internet-of-Things:**
Asset tracking in supply chain management, e-commerce

**Blockchain:**
Transactions verified and approved by consensus, prevents fraud

**Drones:**
Used by customs for surveillance and monitoring

**Artificial Intelligence:**
Detects and predicts patterns more accurately; used in customs audits, classification of products

**Biometrics:**
Verify identities, control access

**Virtual, augmented, mixed reality:**
Used to project visual assistance in the physical world, e.g. physical inspection, visualize big data

**3D printing:**
3D solid products printed domestically from a digital file
## Role of technology in addressing challenges in trade finance

### Potential Benefits of Available Technology

<table>
<thead>
<tr>
<th>Technology</th>
<th>Challenge 1: Process inefficiency</th>
<th>Challenge 2: Regulatory requirements</th>
<th>Challenge 3: Information asymmetry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud-based invoicing solutions</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Optical character recognition</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Electronic bills of lading</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Distributed ledger technology such as blockchain-based platforms</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Artificial intelligence and big data</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Single window</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Internet-of-things and GPS</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Application programming interfaces</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

AML = anti-money laundering, GPS = global positioning system, KYC = know-your-client.
Source: ADB compilation.
Digital technology can enhance efficiency in trade finance transactions

Technology’s Effects on Banks’ Ability to Conduct More Transactions

- 79% Facilitate easier, cheaper, quicker KYC
- 73% Deepen data mapping for SMEs
- 70% Develop new products
- 46% Reduce rejection rate of proposals from SMEs

Source: ADB (2019a).

Open Account under a digital platform

1. Initiates purchase order with 30/60/90d payment terms
2. Ships goods & sends invoice
3. Confirms the receipt of goods
4. On maturity day, payment is automatically triggered by smart contract (and delivered through SWIFT)
5. Asked to provide bank guarantee with exporter as a beneficiary

Source: ADB, based on Simmons and Simmons (2015); Morris (2018); we.trade website n.d.

KYC = know-your-customer, SMEs = small and medium-sized enterprises
However, progress in digitalization is far from complete, and cost of technology adoption is high. 

State of digitization

- Not on our agenda at this time: 7%
- Not on our agenda for the next 1–2 years: 30%
- Don’t know: 3%
- Successfully implemented solutions but benefits not yet evidenced: 3%
- Successfully implemented resulting in a reduction of time and costs: 9%
- Struggling to implement technology solutions: 13%
- Implemented technology solutions but there is room for improvement: 35%

Source: ICC (2018)

Reasons to Not Use Technology (% of responding banks)

- High cost of technology adoption: 57%
- Lack of global, established standards, laws, and rules for digital finance: 43%
- Lack of expertise in technology because it is too complicated and fast moving; and too many platforms: 14%

Source: ADB (2019)
National ECAs can help improve SMEs’ access to trade finance by identifying challenges

Government collaboration with the private sector as well as other governments is critical

Regional initiatives can stimulate investments and spreading innovative technologies in developing economies
How to promote technology adoption

Three Initiatives to Build an Environment Conducive to Technology Adoption

- Support Digital Standards for Trade Initiative
  - Identify and develop digital standards
  - Develop digital standards
  - Create a scorecard to benchmark industries

- Global Adoption of the Legal Entity Identifier
  - Verify who’s who, who owns whom, and who owns what
  - Enhanced transparency on AML/KYC concerns

- Implement Legislation and Rules in Digital Trade
  - Global laws in place to support adoption of digital trade
  - Important roles of UNCITRAL and ICC Banking Commission

Source: ADB compilation.
How to reduce knowledge gap

• Raise awareness of various instruments and sources of trade financing among SMEs

• Improve monitoring of trade finance provision to identify and respond to gaps

• International communities can strengthen an open dialogue with regulators
ASIA-PACIFIC TRADE FACILITATION REPORT 2019:
BRIDGING TRADE FINANCE GAPS THROUGH TECHNOLOGY

2019 TRADE FINANCE GAPS, GROWTH AND JOBS SURVEY