Today’s discussion

Drivers and Trends

Traditional Models

External Influences

Emerging Models

Simplifying Global Payments
What are the **drivers** and **trends** affecting the cross-border payments ecosystem?
Global trade drives the world economy

Exports

- United States: 1.45
- China: 2.10
- Germany: 1.34
- United Kingdom: 0.41
- Japan: 0.64
- France: 0.49
- Hong Kong: 0.52

Imports

- United States: 0.61
- China: 1.59
- Germany: 1.06
- United Kingdom: 0.64
- Japan: 0.56
- France: 0.55
- Hong Kong: 0.55

Sources: International Trade Statistics 2016, TradeMap and Celent analysis
Small businesses represent 97.5% of exporters and 36.2% of export value

Value of U.S. Exports of Goods

Source: U.S. Census Bureau, A Profile of U.S. Importing and Exporting Companies, Celent Analysis

Note: Small and Medium Exporters are defined as those companies with fewer than 500 employees, those with missing employment data, nonemployers, and companies that reported annual payroll but did not report any employees on their payroll.
Payment types

**C2C Examples**
- Peer-to-peer
- Remittances
- Personal services payments

**C2B Examples**
- Bill payments
- Online purchases/e-commerce
- Payment at POS
- Charitable donations

**B2C Examples**
- Employee payroll
- Contractor payments
- Reimbursements
- Rebates & refunds

**B2B Examples**
- Supplier payments
- Capital purchases
- Intercompany lending
- Bank-to-bank

Source: Celent
B2B accounts for the majority of cross-border volume and revenue

Global cross-border payments flows, 2015, US$ billion

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<tr>
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<tbody>
<tr>
<td>Flows</td>
<td>$405</td>
<td>$765</td>
<td>$135,815</td>
<td></td>
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Global cross-border revenues/ margin as percentage of lows, 2015, US$ billion

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<tbody>
<tr>
<td>Revenue</td>
<td>$25</td>
<td>$20</td>
<td>$240</td>
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<tr>
<td>Margin</td>
<td>6.2%</td>
<td>2.6%</td>
<td>1.5%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

Total 2016 global payments revenue: $1.6 Trillion

Source: McKinsey Global Payments Map, Celent analysis
Borders still matter when it comes to making and receiving payments.

Are traditional cross-border payment services adequately positioned for today’s challenges?
Traditional cross border payment process using correspondent banks

Source: Celent
Critical elements of uncertainty

- When will payment reach the beneficiary?
- What amount will be received after fees are deducted?
- What costs will the originator incur including fees and FX rate margins?
- How many intermediary banks will be involved?
- Will the beneficiary have enough information to easily record and reconcile to accounts receivable?
Potential expenses and savings associated with B2B cross-border payments

International payment servicing cost breakdown

Traditional Cross-Border Payments
- Currency Hedging: 2.0 bps
- Treasury Operations: 5.6 bps
- Liquidity: 4.8 bps
- Payment Operations: 4.4 bps
- Basel III (LCR): 1.6 bps
Total: 20.9 bps

Ripple
- Currency Hedging: 2.5 bps
- Treasury Operations: 5.6 bps
- Liquidity: 1.7 bps
- Payment Operations: 2.3 bps
- Basel III (LCR): 0.0 bps
Total: 14.1 bps

-33% savings

Source: The Cost-Cutting Case for Banks-Ripple, February 2016
Lack of disruption in the cross-border payments space

- Relatively high revenue margins persist due to a lack of external downward pressure.
- Regulation and increased competition forced providers to reduce fees on domestic payments, resulting in operational cost improvements through front-end automation, process simplification, standardization and outsourcing, along development of new applications for existing payments products.
- With healthy margins, banks and providers have had little incentive for structural changes to cross-border payment models, back-end systems, and operational processes.
- As a result, operational cost per transaction for international payments continues to average well above $20.

Source: Global Payments 2015: A Healthy Industry Confronts Disruption, McKinsey Global Payments Map
What are the **external influences** affecting the cross-border landscape?
The promise of blockchain

SWIFT Messaging Network

Process friction

Process optimization
Fintech firms face a dizzying array of regulatory bodies

Money services business (MSB) example

Source: Celent Analysis (Illustrative), 2017
How are emerging payment models creating innovation from inefficiency?
A dizzying array of non-bank segments and providers in the cross-border payment space

<table>
<thead>
<tr>
<th>Segment</th>
<th>Providers</th>
</tr>
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<tbody>
<tr>
<td>P2P Remittances (C2C)</td>
<td>Western Union, Ria, MoneyGram, azimo, WorldRemit, uphold, TransferWise</td>
</tr>
<tr>
<td>Cross-Border Card Networks (C2B)</td>
<td>MasterCard, Visa, JCB, Discover, American Express</td>
</tr>
<tr>
<td>Cross-Border Payroll (B2C)</td>
<td>CELERGO, transpay, ADP, Ceridian, bluemarble, Hyperwallet</td>
</tr>
</tbody>
</table>

Source: Celent Analysis (Non-Exhaustive), 2018
A dizzying array of non-bank segments and providers in the cross-border payment space, continued

<table>
<thead>
<tr>
<th>Segment</th>
<th>Supply Chain Networks (B2B)</th>
<th>Foreign Exchange Brokers (B2B)</th>
<th>Cross-Border Payment Networks (B2B)</th>
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<tr>
<td></td>
<td>SAP Ariba</td>
<td>INTL FCStone</td>
<td>VISA</td>
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<td>basware</td>
<td>FXCM</td>
<td>Tipalti</td>
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<td>TRADESHIFT</td>
<td>THOMSON REUTERS</td>
<td>Paycommerce</td>
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<td>invapay</td>
<td>IG</td>
<td>earthport</td>
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<td>Octet</td>
<td>Travelex</td>
<td>INPAY</td>
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<td>kantox</td>
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<td>Cambridge Global Payments</td>
<td>EQUINITI</td>
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<td>Currency//UK</td>
<td>Ebury</td>
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<td></td>
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<td>SWIFT</td>
<td>Align Committee</td>
</tr>
</tbody>
</table>

Source: Celent Analysis (Non-Exhaustive), 2018
B2B Cross Border Payment Models

**Visa B2B Connect**
- Building Visa B2B Connect using Chain’s Core blockchain infrastructure
- Private blockchain
- Near real-time transactions
- Targeting high-value payments

**Ripple**
- Cross-border payment platform
- Private blockchain using proprietary digital currency (XRP) as a bridge currency
- Real-time transactions
- Registered money service business
- Targeting low-value payments

**Paycommerce**
- Cross-border payment network
- Connects to correspondent banks
- Clients include banks and corporates
- Supports payments and acceptance
- Real-time transactions via Federated Ledger
- Targeting low-value payments

**Earthport Payment Network**
- Cross-border payment network
- Connects to domestic ACHs
- Real-time transactions via Ripple
- Registered money service business
- Targeting low-value payments
How can collaboration between fintechs and banks **simplify global payments?**
Collaboration is key

Rapid growth in cross border transactions has led to both banks and FinTechs working together to best support the growing demand and optimize commercial opportunities.

- **$150 Trillion**: Valuation of the cross border payment industry with expected growth to $218tn by 2022.
- **91% of Banks**: Incorporate collaboration with FinTechs in their future growth strategies.
- **75% of FinTech**: Agree their primary business objective to collaborate and enable traditional firms.
Opportunities not threats

The trust and scale of the incumbents combined with the speed, UX and function of FinTechs creates significant value

Key reasons FinTechs partner with traditional financial services firms, 2017

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Brand equity</td>
<td>66.4%</td>
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<tr>
<td>Achieving Economies of Scale</td>
<td>60.0%</td>
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<tr>
<td>Gaining Customer Trust</td>
<td>59.1%</td>
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<tr>
<td>Better Distribution Infrastructure</td>
<td>55.5%</td>
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<tr>
<td>Access to Capital</td>
<td>31.8%</td>
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<tr>
<td>Expertise in Regulations</td>
<td>20.9%</td>
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<tr>
<td>Expertise in Risk Management</td>
<td>17.3%</td>
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<tr>
<td>Others</td>
<td>30.0%</td>
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</tbody>
</table>

Introducing Earthport

Our global network, international expertise and years of experience allow us to give your business the freedom to grow

- UK FCA regulated
- Largest independent ACH Network
- Robust & Sophisticated Compliance
- FX & Treasury Management
- Settlement management
- Payment tracking/SLAs
- No credit risk
- Flexible connection options

Settling billions of dollars in payments annually direct to over 200 countries

Regulated by the FCA – Licensed by the NYDFS
Earthport Model

One integration
multiple benefits

✓ Flexible funding & FX options
✓ Superior Compliance, risk and regulatory experience
✓ Message validation and enrichment
✓ A suite of settlement methods
✓ 200+ countries
Global connectivity

Payment instructions

- Format transformation
- API
- Direct connection
- SFTP
- SWIFT

Receiveables & Exception flow

- Format transformation
- Admin portal
- Web services
- SFTP

- Process via appropriate route
- Credits (received funds and returned transactions)
- Earthport Partner bank
The value of knowledge

Best in market risk, regulatory and compliance expertise is a significant differentiator

• Specialized risk and fraud tools to allow growth rather than restrict it

• Maximize growth potential while minimizing operational overheads and risk

• Ensure complete adherence to the complex regulatory requirements in all markets
Compliance at our core

Robust and sophisticated risk, regulatory and compliance services to suit the needs of any global business

- Risk assessment tools
- Sanctions screening
- Counterparty risk assessment tool
- Suspicious activity reporting
- Transaction monitoring & incident management
- Segregation of accounts
- Externally audited
- Client funds in a separate ‘trust’ account
The world's largest independent ACH network

North Americas
- Canada
- USA

South Americas
- Argentina
- Bahamas
- Barbados
- Brazil
- Chile
- Colombia
- Peru
- Jamaica
- Trinidad & Tobago
- Uruguay

ME/Africa
- Cameroon
- Gabon
- Central African Republic
- Chad
- Congo
- Equatorial Guinea
- Senegal
- Cote d'Ivoire
- Benin
- Burkina Faso
- Guinea-Bissau
- Niger
- Togo
- Egypt
- Morocco
- South Africa
- Zambia
- Ghana
- Nigeria
- Kenya
- UAE
- Uganda
- Tanzania

Euro-Zone+
- Austria
- Belgium
- Cyprus
- Estonia
- Finland
- France
- Germany
- Greece
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Portugal
- Slovakia
- Slovenia
- Spain

Other Europe
- Albania
- Bosnia-Herz.
- Bulgaria
- Czech Rep.
- Croatia
- Denmark
- Hungary
- Israel
- Liechtenstein
- Norway
- Poland
- Russia
- Sweden
- Switzerland
- Turkey
- United Kingdom

Asia
- Australia
- Bangladesh
- China
- Hong Kong
- India
- Indonesia
- New Zealand
- Pakistan
- Philippines
- Singapore
- Sri Lanka
- Thailand
- Vietnam

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Countries via local ACH
200+ countries total
Seamlessly manage payments globally through a single relationship with Earthport, reducing complexity and meeting your customers’ expectations for cost, predictability and transparency.

World’s Largest International ACH Network
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