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Global Payments Trends and Payments Modernization Case Studies

February 13, 2018

Agenda



Payments Trends (10 min)



Global Case Studies (15 min)



Payments Modernization Overview (15 min)



Impacts and Opportunities (10 min)



Closing Remarks and Q&A (10 min)



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Soumak Chatterjee

Payments Trends

Introduction



Canadian Market in 2016



21.3 B

Consumer and Business transactions



\$9.2 T

Total Payments Market Value

Evolution of Payments

1960's



Paper Payments

1970's



Credit Cards

1980's – 1990's



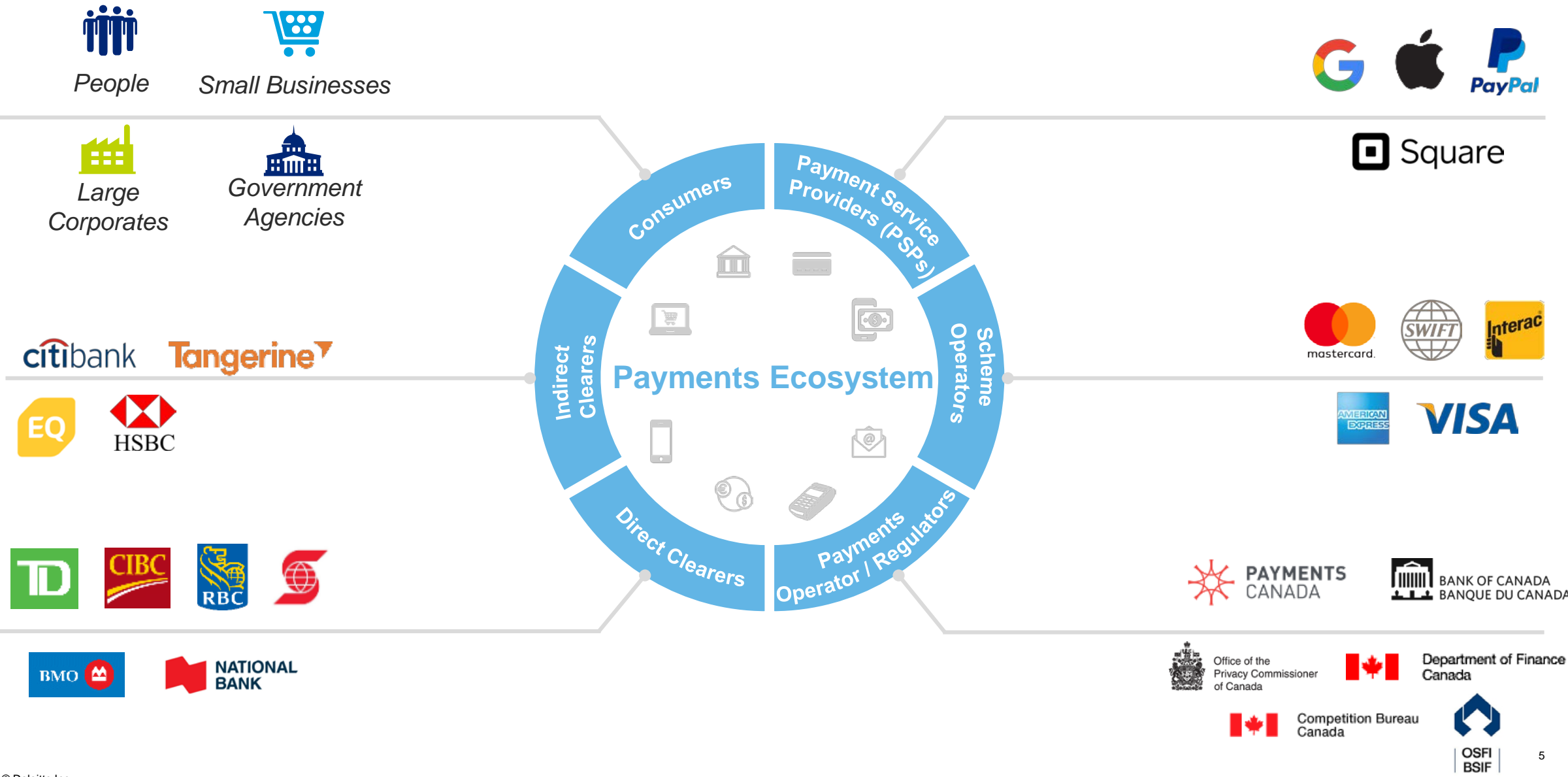
Available & Secure Payments

2000's - 2020's



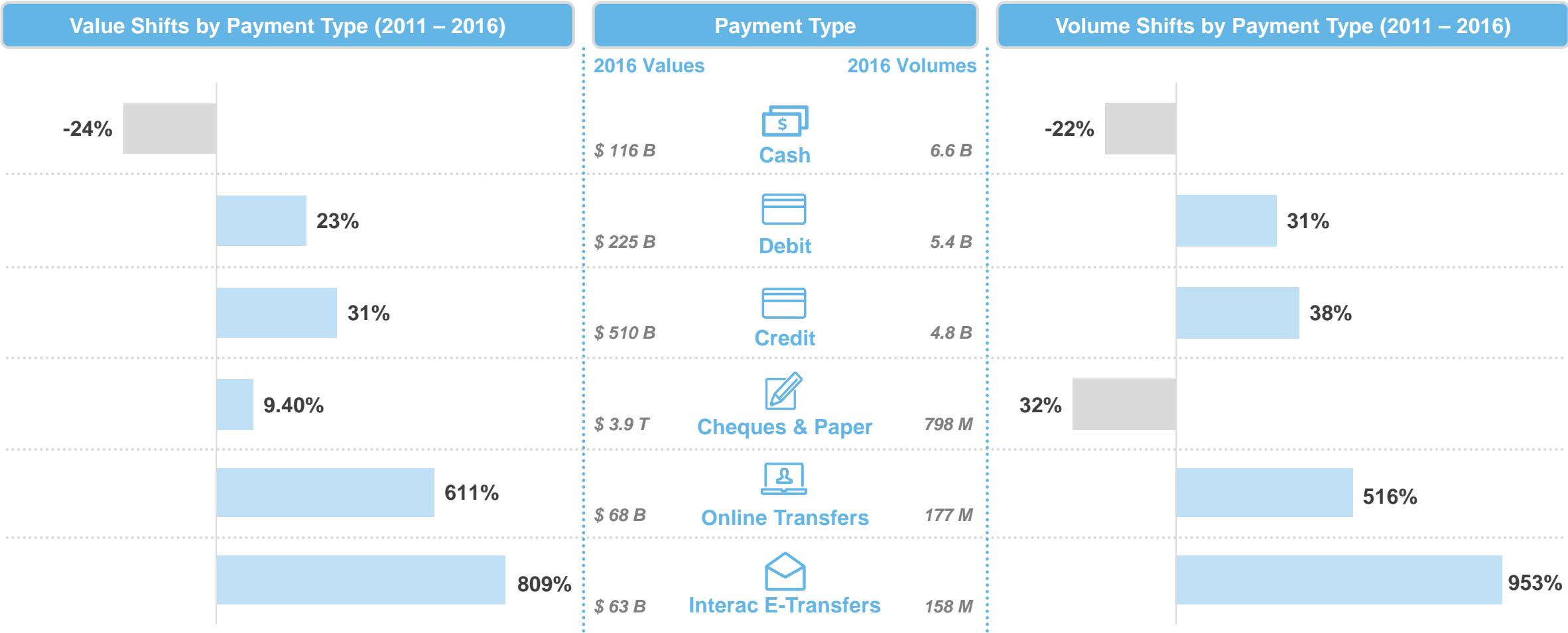
Digital and Mobile Payments

Canadian Payments Ecosystem



Canadian Payments Value and Volume Shifts

Emergence of new digital channels and contextual commerce continue to drive volume increases for credit, debit, and online transfers, while cheque usage continues to decline, the average value per cheque has increased



© Deloitte Inc. Sources: Payments Canada, 2017 Canadian Payment Methods and Trends, December 2017 – https://www.payments.ca/sites/default/files/cpmt_report_english_0.pdf, Central1 – Alternative Payments: volumes continue to skyrocket for Interac e-Transfer, 2011, Interac - Interac e-Transfer volumes reached record levels in 2016

Payments Trends (1 of 2)

Customer Expectations

Contextual commerce is leading to payments becoming invisible²



FinTechs and non-traditional players are redefining customer payments experiences²



Business Payments Innovation

10% decrease in business cheques³

New B2B networks providing improved reconciliation, flexibility, and lower costs⁴



Open Banking

Introduction of **PSD2 in Europe** driving open banking⁵

63% of banks believe open banking is critical for competition⁶

Richer Transactional Data

\$4.5B cost savings anticipated over 5 years in Canada via ISO⁷

FinTechs are using new **data sets and analytics** that capture consumer insights for **lending decisions**



Payments Trends (2 of 2)



Government Led Initiatives



The 'Policy on Open APIs for the Government of India' enables innovation through the **availability of data**¹

In emerging markets, initiatives to boost financial inclusion is **fueling rapid growth in e-payments**²

Federal Reserve Bank, and **NACHA** are leading efforts to accelerate payments³



Evolving Regulatory Posture



OCC will now allow FinTechs to apply to become “special purpose national banks”⁴

RegTechs are emerging to **digitize and scale compliance solutions**⁵



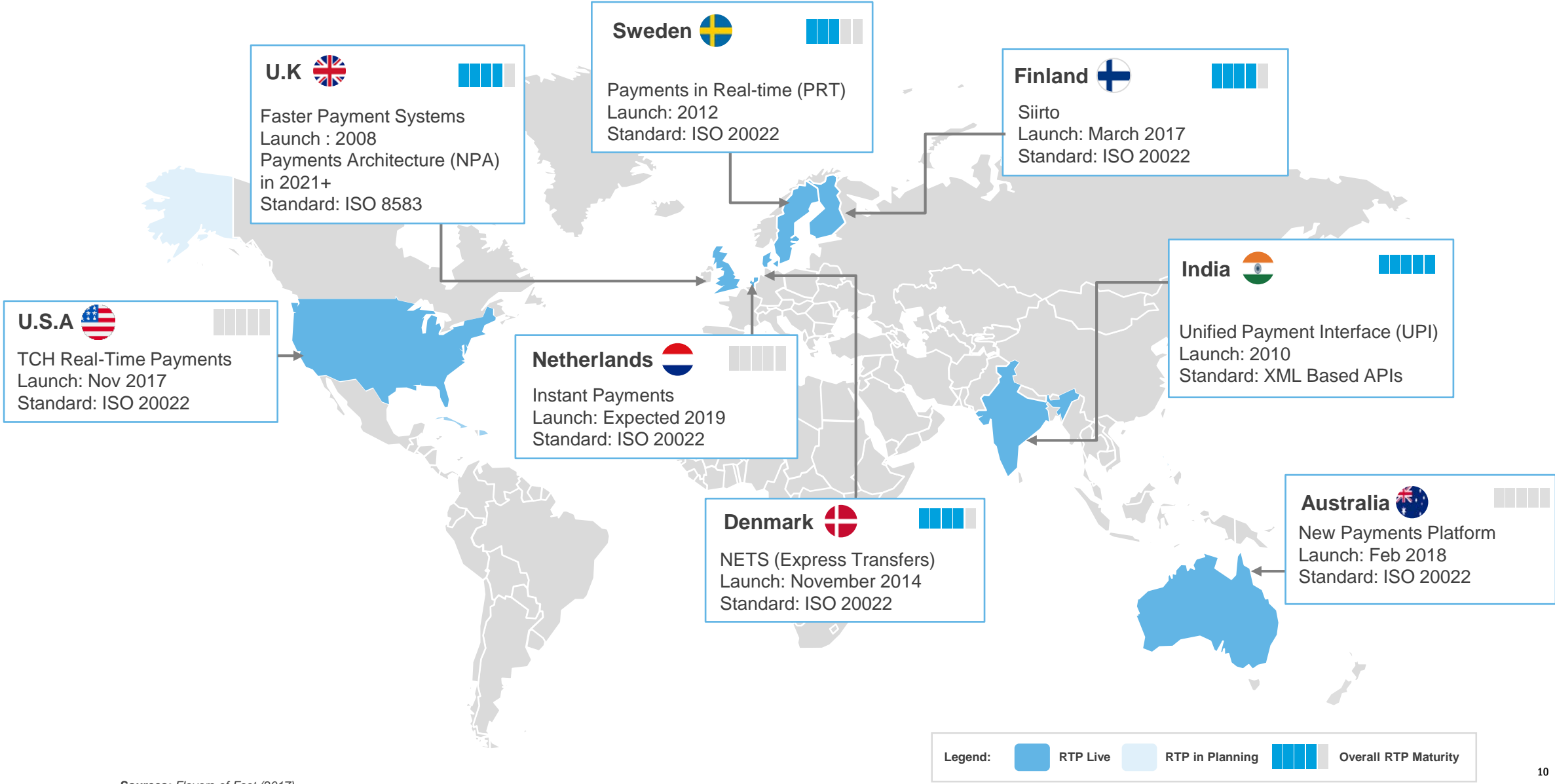
The OSC LaunchPad is a regulatory **sandbox** working with Blockchain FinTechs⁶

Sources: 1. Ministry of Electronics & Information Technology – Policy on Open APIs for Government of India, 2015, 2. PwC – Emerging Markets: Driving the Payments Transformation, 3. The Federal Reserve Banks, 2015, 4. OCC – Exploring Special Purpose National Bank Charters for Fintech Companies, 2016, 5. PwC – The Changing Landscape – How to Use RegTech and Make Regulatory Compliance, 2016, 6. Deloitte – Regulatory Sandbox, 2017

Global Case Studies

Global Real-time Payments

As of Feb 2018

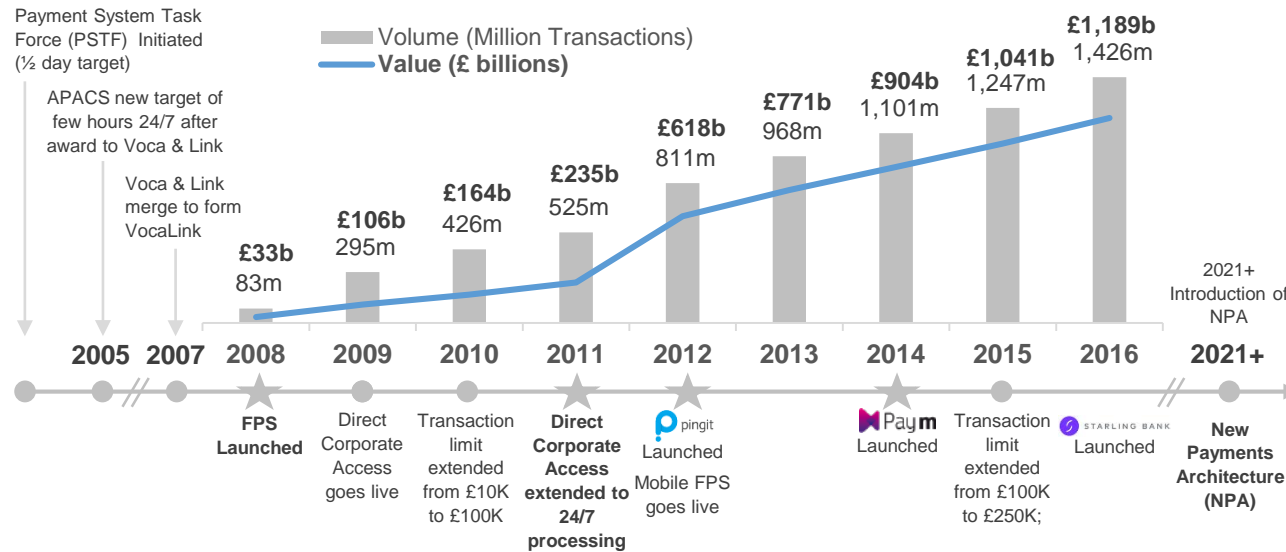


Faster Payments Service

The UK implemented its Faster Payments Service (FPS) in 2008 with the vision of enabling a multi-device 24/7 payment, the first new payment service to be introduced in more than 20 years

FPS Adoption and Recent Developments

Value & Volume Transaction Timeline



UK Open Banking regulation in January enables accessibility of customer data via APIs¹



GOV.UK stated in a recent survey that corporates are not ready to implement GDPR²



New Payments Architecture (NPA) is set to reshape the UK payment infrastructure³

1.7 B transaction volume processed in 2017⁴

£1.4 T transaction value processed in 2017⁴

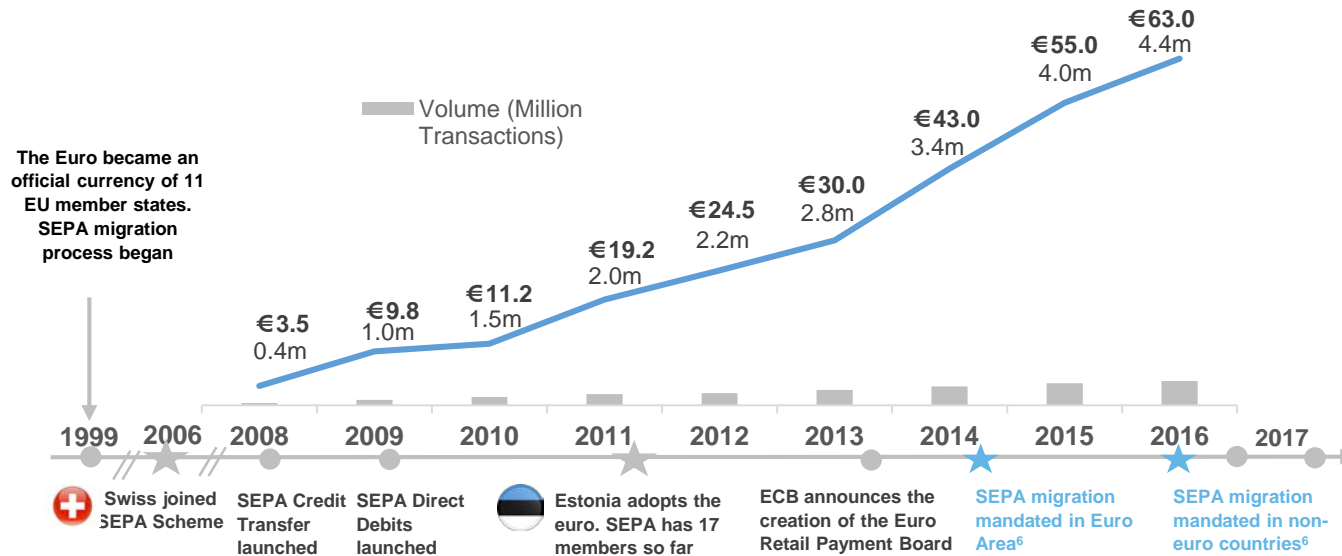
19% of total transaction volume in 2017⁵

Single Euro Payments Area

The Single Euro Payments Area (SEPA) is an EU initiative with the vision of an integrated euro payments area, which now includes 34 countries / territories, with the introduction of the Credit Transfer scheme in 2008

SEPA Adoption and Recent Development

Value & Volume Transaction Timeline



* The figure in this graph is the approximate figure based on SEPA Statistics from 2008 to 2016



Cashless Society Project encourages a shift away from paper-based payments in Europe¹



Belgian Federal Government was a principal driver of early adoption in 2012 (in 2008, tax authorities sent 500K transfer forms a month)



Payment Services Directive (PSD2) is set to disrupt payment services in Europe³

122B

annual electronic transaction each year⁴

€21.9B

in annual savings due to price / process efficiency⁵

€237M

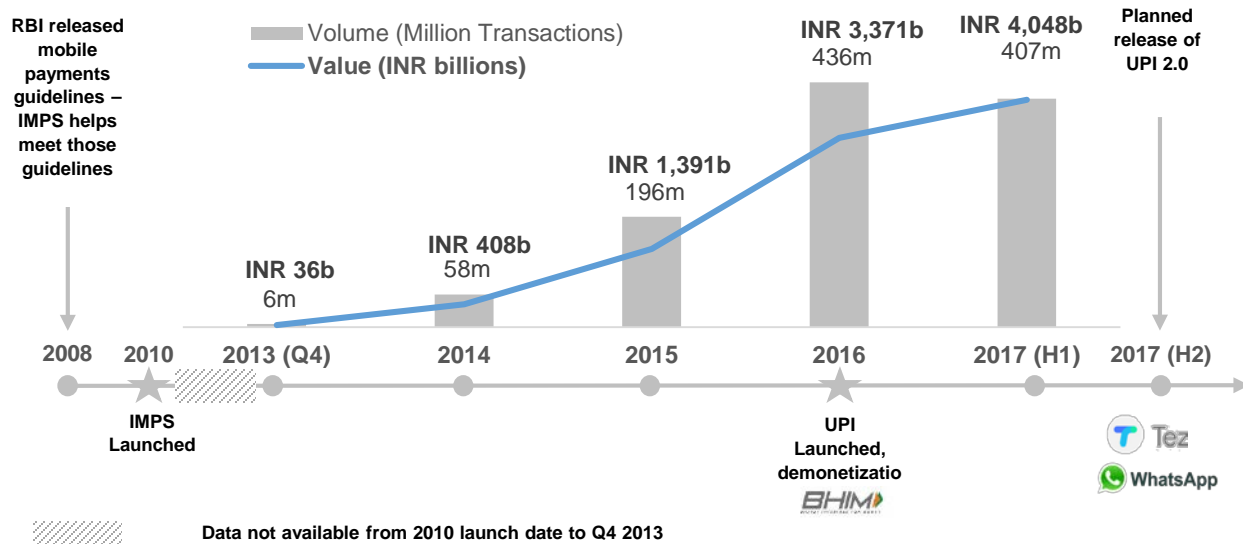
reduction in labor costs⁵

Unified Payment Interface 'India'

India's Unified Payments Interface (UPI) was recently launched via the Immediate Payment Service (IMPS) to facilitate instant payments via virtual payment addresses

UPI Adoption and Recent Developments

Value & Volume Transaction Timeline



Aadhaar¹ Card Program is the world's largest biometric ID system with 1.19 B members in 2017²



Increased Adoption via FinTechs: Whats App, Google Tez, Samsung and Amazon Pay³



Tax Subsidies in consideration by gov't as an incentive for merchants to use digital payments⁴

150M

mobile wallet service provider users⁵

97%

growth of real-time transactions in 2017⁵

25M

targeted electronic transactions displacing cash⁶

Other Global Initiatives



TCH

Real-time Payments (RTP)

25 member banks

RTP provides features such as speed, enhanced messaging capabilities, and immediate transaction statuses



Go-Live:
November 2017



APCA

New Payments Platform (NPP)

13 member banks

NPP is industry led by 13 members and provides a fast, versatile, and data-rich payment system, with open access and multiple overlay services



Expected Go-Live:
February 2018



Fed Reserve

Faster Payments

400+ members

The Faster Payments Task Force is currently building a faster, ubiquitous, inclusive, secure, and efficient **faster payments** system



Expected Go-Live:
2020

Payments Modernization Overview

Overview of Payments Canada

Established in 1980 by the Canadian Payments Act, Payments Canada is a not-for-profit member based association responsible for and legislated to:

- 1. **Establish and operate national systems** for the clearing and settlement of payments
- 2. **Facilitate the interaction** of its clearing and settlement systems
- 3. **Facilitate the development of new payment methods** and technologies

Payments Infrastructure

Standards, Rules, and Policies

Network Operator



Large Value Transfer System (LVTS)

Canada's real-time electronic funds transfer system providing finality of payment and certainty of settlement










Retail System / Automated Clearing Settlement System (ACSS)

Tracks the retail payment items exchanged between participants and determines the balances due

Payments Modernization - An Overview




Payments Canada’s vision is to build a Modern Payments System that is fast, flexible and secure, promotes innovation, and strengthens Canada’s competitive position

 Faster Payment Options	 Data-Rich Payments	 Transaction Transparency	 Easier Payments
 Activity-Based Oversight	 Open and Risk-Based Access	 A Platform for Innovation	 Cross-Border Convenience

Payments Modernization – Key Pillars

Lynx	Real-Time Rail (RTR)	Automated Funds Transfer (AFT)	SOE	Rules Framework
<i>Replace LVTS with a new high-value system</i>	<i>Enable a real-time capability, operating 24/7/365</i>	<i>Enhance AFT with additional exchange windows & faster funds availability</i>	<i>Replace the ACSS and USBE with SOE</i>	<i>Develop a modern rule set for high value & retail payments</i>

Major Changes

 Contextual Data	 Faster Payments Capabilities	 Open Access
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Impacts and Opportunities

Anticipated Impact to Government Payments in Canada

Payment modernization is anticipated to benefit government payments and processing efficiency, due to faster payments, proxy aliases, and enriched contextual data



Real-time Payments

- Faster **government disbursements** for special circumstances, such as emergency relief funding
- Reduce costs associated with **credit card processing** and **banking fees**, due to new real-time payment options



Proxy and Data

- Allow government payments to be made via a **proxy and aliases**, such as an emails or phone numbers, resulting in a convenient and inexpensive option for unbanked individuals



Enriched Data

- **Inbound government payments** can include relevant documentation (e.g., tax forms, receipts, etc.) improving reconciliation and STP
- **Outbound government payments** can be consolidated and standardized, resulting in reduced operational costs and customer inquiries

Starting the Journey



Understand and Educate



- Identify **current trends** and **impacts** to the existing landscape, such as Payments Modernization, Open Banking, Blockchain, Cloud, etc.



Forward Thinking Strategy



- Analyze and develop **ideas / concepts** to enhance current and/or develop new capabilities
- Identify **new opportunities** against overall enterprise strategic priorities



Impacts



- Identify and understand areas where **customers, services, and business models** are impacted
- Understand all **business, operational, and technology impacts** (e.g., ERP systems, ops processes, etc.)



Enablement Plan



- Develop **technology and operational** roadmaps and plans to outline key initiatives, dependencies, and milestones in the next 2 to 3 years

Closing Remarks and Q&A

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