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CEMLA: II MEETING OF THE FINTECH FORUM

Fintech and the Bank of Canada

Research on Digital Currencies, Fintech Experiments
and Collaboration on Regulatory Agenda

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Bank of Canada: work on fintech and digital currencies



RESEARCH

Understanding the benefits and risks of digital currencies and electronic payments is important. That's because they could have an impact on our core central bank functions.

For the past few years, we have researched private and central bank digital currencies. More recently, we've been studying other uses of Distributed Ledger Technology (DLT).



EXPERIMENTS AND PROJECTS

With many possible applications of DLT, we need to look at a range of questions. Test cases between authorities and the private sector can help deepen our understanding.

The Bank works with academics and the private sector to build and test this technology.



COLLABORATION ON THE REGULATORY AGENDA

Managing the benefits and risks of financial technology through a global regulatory framework is essential.

The Bank of Canada contributes to this agenda through the Financial Stability Board, the Committee on Payments and Market Infrastructures, and the Basel Committee on Banking Supervision.

Plan of the talk

- 1. Research on Digital Currencies**
2. Fintech Experiments
3. Collaboration on Regulatory Agenda

The views expressed are my own and not necessarily those of the Bank of Canada

Digital currencies

- Why is the Bank of Canada interested?
 - Emerging new technologies (e.g. blockchain, mobile computing)
 - Rise (and fall) of private digital currencies
 - Potential implications for monetary policy, financial stability, currency issuance and payments systems safety and efficiency
- Should the Bank of Canada issue its own digital currency?
- If it does, how should it be done?

Central bank digital currency: what are the objectives?

- **Monetary policy objectives**
 - Improve monetary policy effectiveness
 - Break below the effective lower bound
- **Financial system objectives**
 - Provide, regulate or oversee safe and efficient payments systems
 - Ensure financial stability (with macro/micro regulation of institutions and markets)

Central bank digital currency: what are the objectives?

- **Other public policy objectives**
 - To acquire reserve currency status
 - Reduce tax evasion and crime (by eliminating cash)
 - Broaden financial inclusion (with cheaper financial instruments)
 - Spur innovation of financial services (e.g. micropayments)
 - Provide or restrict anonymity

Central bank digital currency: trade offs

- What are the trade offs in the issuance decision?
 - Monetary policy issues
 - Payments systems issues: access and efficiency, contestability
 - Financial system: effects on commercial deposits, lending, and response of banks, financial stability
 - Cyber risk: hacking can have catastrophic consequences
- If it does, which form should it have?
 - Universal central bank accounts or electronic tokens

Plan of the talk

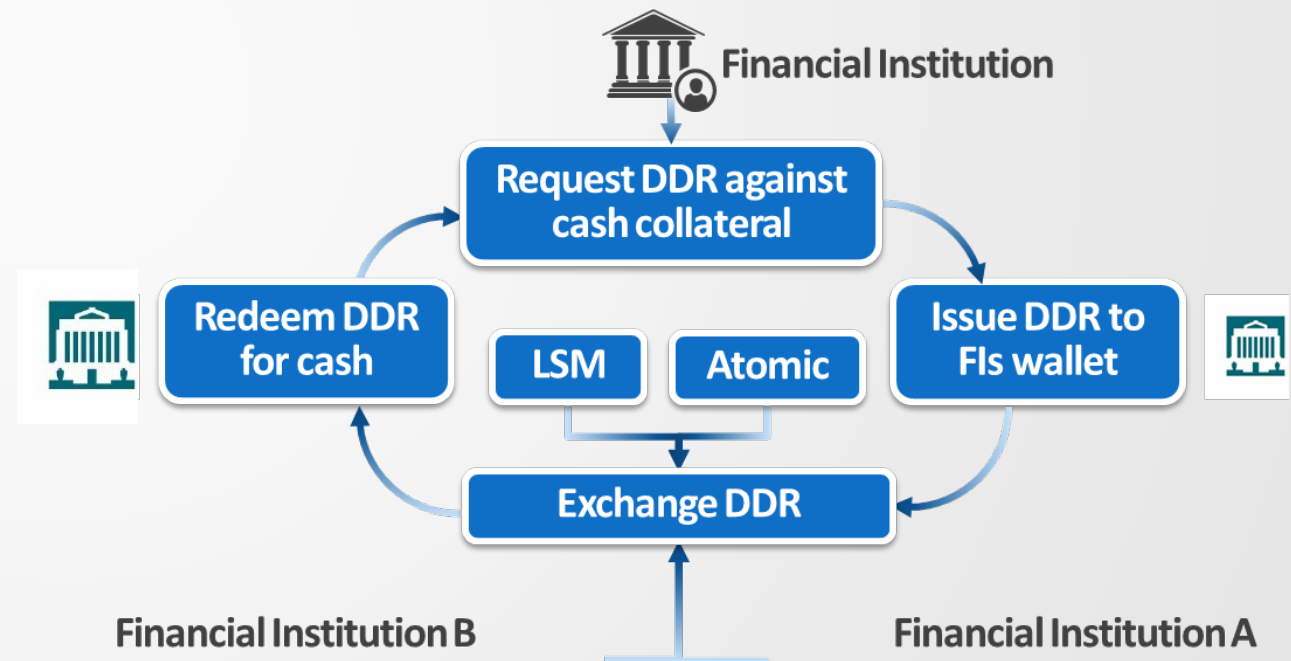
1. Research on Digital Currencies
- 2. Fintech Experiments**
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Project Jasper – Phases 1 and 2: use of DLT for LVPS


What would a DLT-based large value payment system mean for PFMLs, costs, transparency and access?


Lessons learned:


- DLT unlikely to yield net benefits for the *sole* purpose of interbank payments
- Benefits more likely to come from efficiencies via simplified processes (e.g. back office reconciliation)




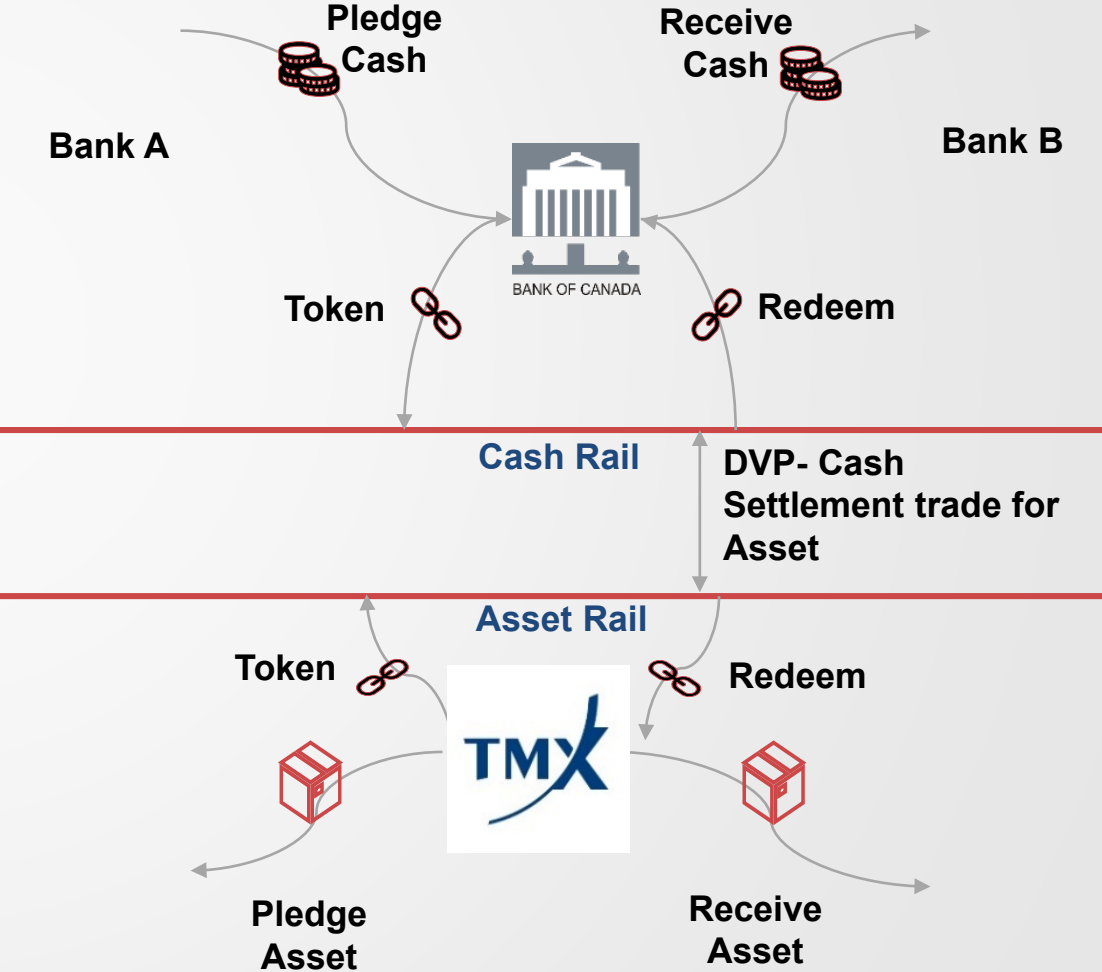
Project Jasper – Phase 3: cash and securities settlement

 **Tokenisation** Cash is tokenised on-ledger as Digital Depository Receipts (DDR) similar to Phase II of Jasper
Equities are tokenised on-ledger as asset tokens in an analogous manner

 **Participants** Bank of Canada, CDS, Payments Canada, LVTS member banks and CDS members

 **Post Trade Settlement** The lifecycle of post trade settlement is represented on ledger

 **Credit Extension** LVTS members extend credit to CDS members on ledger



Project Jasper – Phase 3

Lessons learned:

- DLT cost savings for participants still uncertain when only post-trade settlement is on ledger
- More complex when cash and equity systems have different participants: solved through combination of doorman service, notary involvement, and smart contracts
- Credit extension needed in current system and DLT system to ensure necessary liquidity
- A wider scope of the DLT system may be required to realize significant value (e.g. multiple assets, functionality)

Project Jasper – Phase 4

Next steps:

- Partnership with Monetary Authority of Singapore and the Bank of England
- Objective: examine cross-border payments using DLT
 - Project Jasper meets Project Ubin

Plan of the talk

1. Research on Digital Currencies
2. Fintech Experiments
3. **Collaboration on Regulatory Agenda**

Regulatory agenda

- Canada has a vibrant fintech sector
- Bank of Canada is not a banking or securities regulator
 - Monitors developments for financial stability considerations
 - Coordinates with international bodies like FSB and CPMI
- Regulation on crypto
 - Canadian Securities Administrators guidance on crypto, CRA guidance, Dept. of Finance new AML/CTF proposed regulations



Flavours of fintech

Established companies:

1. Develop it inside
 - Adopt startup culture (Scotia “Digital Factory”)
 - Mobile banking, chatbots
2. Acquire it
 - Scotia bought ING Direct (now Tangerine)
3. Collaborate
 - CIBC and Borrowell “one-click lending”

New companies:

1. Fintechs becoming “bank-like”
 - Start-ups seeking banking licenses
 - N24, Facebook
2. Firms with new financial applications
 - Square: analytics of small firm’s accounting data and loans
3. Input providers (BaaS)

Regulatory sandboxes

- Canadian Securities Regulators have a program for registration or exemptive relief
 - Faster and more flexible process
 - Intended for a time-limited testing
- International cooperation
 - Australian Securities and Investment Commission
 - Global Financial Innovation Network

| Fintech companies using sandboxes (partial list) | |
|---|---|
| Coin and token offerings | <ul style="list-style-type: none">• Impak• TokenFunder |
| Cryptocurrency investment funds | <ul style="list-style-type: none">• First Block Capital• 3iQ |
| Lending platforms | <ul style="list-style-type: none">• Lending Loop• Lendified/Vault Circle |
| Online advisers | <ul style="list-style-type: none">• Wealthsimple |
| Online venture capital raising platforms | <ul style="list-style-type: none">• AngelList |
| Trading platforms | <ul style="list-style-type: none">• FinMatch/Disintermediate Technologies |

Open banking consultation

- Open banking is a framework where authorized third-party financial service providers can access financial transaction data
- Objective: “empower consumers to share their financial data between their financial institution and other third party providers through secure data sharing platforms” (Federal Budget 2018)
- Prompted by
 - Desire to facilitate new services and competition
 - UK, EU (GDPR) and other jurisdictions
 - Possible move towards proprietary solutions by established banks

THANK YOU

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