

# CBDC: New Motivations, Design Challenges and Cooperation

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The views expressed here are mine and do not necessarily reflect those of the Bank of Canada

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## Plan for today

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1. BoC **motivations** for a CBDC
2. CBDC **design challenges**
3. Public-private **cooperation** for implementation

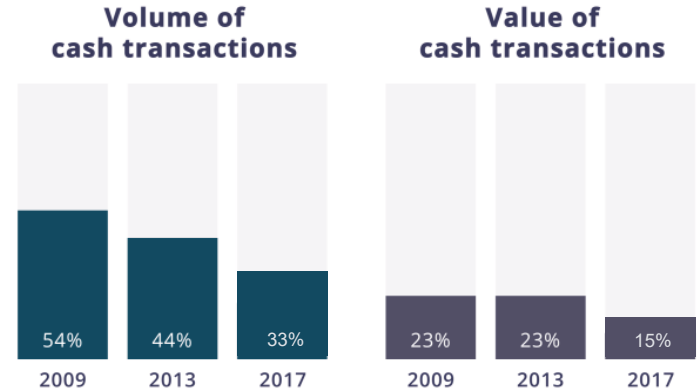
Disclaimer: the Bank of Canada has not decided to issue a CBDC, instead developing capabilities to issue if needed

# Motivations for a CBDC in Canada



## BoC motivations to explore issuing a CBDC

1. Cash at the point of sale is in decline
  - Risk of not being useful for a wide range of transactions
  - COVID-19 likely accelerated this trend
  - ↑ market power of incumbents



Source: [Henry et al. 2019](#)

2. Threat of alternative digital currencies (Bitcoin, Diem, eCNY)
  - Loss of monetary sovereignty and/or loss of seigniorage
  - Privacy concerns

## More **proactive** motivations have been gaining ground...

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- Financial inclusion, seen as  $\approx$  to universal access
  - Canada has many remote communities with little connectivity
  - Marginalized communities
- Spur innovation of financial services (e.g. IoT, programmability)
  - Is a CBDC *necessary* for smart contracts or are stablecoins good enough?

## More **proactive** motivations have been gaining ground... (ctd)

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- Promote the digital economy and/or enhance competition
  - Economic activity is rapidly moving online
  - Lack of public payment option could increase market power of incumbents
  
- Provide privacy in payments
  - Big Tech entry to payments could intensify privacy problems
  - Externalities in use of data analytics

## Alternative policies

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- For each motivation, impediments and alternative policies should be discussed. Examples:
  - Financial inclusion
    - Open up the wholesale payments system to new FinTechs
    - Develop new Fast Payments Systems
  - Programmability
    - Help coordinate standards
    - Apply PFMI to the new crypto world

# Design challenges





## Design: CBDC must be a liability of BoC always and everywhere

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- Settlement has to occur in the CBDC system
- Main uses cases: PoS, online, P2P
- Some functions can be delegated via *tiered arrangements*
  - Onboarding (identity verification for KYC/AML)
  - Key management (wallets)
  - Messaging (for payment initiation and clearing)

## Design challenges and their implications

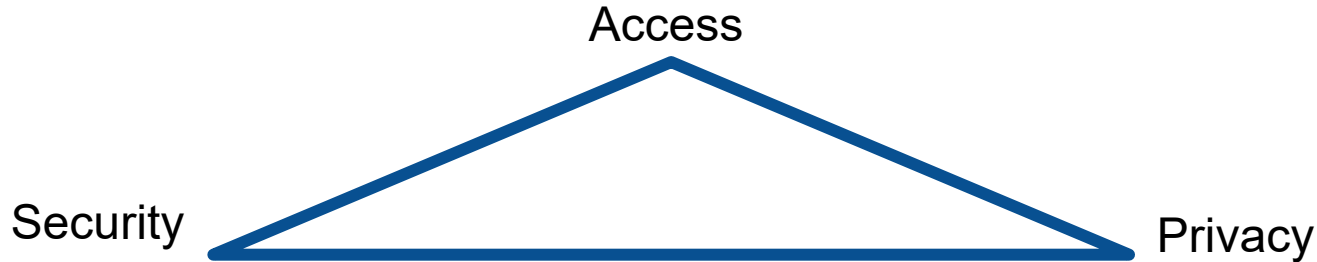
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- Who should distribute CBDC (and how)?
  - Access via new non-bank firms, ensuring safety/compliance
- How should CBDC be integration with existing payment systems?
  - Implications for adoption and interoperability
- Right balance between privacy and compliance
  - What would be the incentives for distributors?
- Off-line: how long can devices be de-networked and how much

## Tradeoff: access vs. security vs. privacy

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- Design must balance the extent of **access** with **security** risks (from potentially admitting risky distributors/participants), with **privacy** (relinquished by users to help control the risks)



See: [Kahn et al. \(2020\)](#)

# Cooperation: adoption, competition and financial stability challenges



## Potential implications of a CBDC for banks and card networks

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- As a safe store of value and efficient means of payment, CBDC would compete with bank deposits and card networks
  - CBDC could force banks to increase deposit rates, increase fees, take more risk
  - CBDC could force card networks to increase/decrease fees, block interoperability

## Banks, competition and financial stability

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Banks/networks have market power in deposit and payment markets

- Desintermediation does matter
  - How to balance the stability provided by current funding structure with issues of competition?
  - Uncertain/complicated effects in lending and payment markets
- Cooperation of incumbents (for interoperability) will matter to achieve adoption
  - How to incentivize participation of incumbents?

# Thanks / Merci!



## Additional resources

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- Deputy Governor Timothy Lane's speech: [Money and Payments in the Digital Age](#) and [Background note](#) explaining our official position
- Bank's Digital Currencies and Fintech dedicated [microsite](#):



RESEARCH



PROJECTS



COLLABORATION ON THE  
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