



CENTRAL BANK DIGITAL CURRENCY BANK OF JAMAICA'S EXPERIENCE

DIGITAL CURRENCY GLOBAL INITIATIVE:
RETAIL CBDC WEBINAR

Virtual Meeting – 19th November 2021

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DISCUSSION POINTS

1. What is a CBDC?
2. Motivating Factors
3. Benefits
4. How will it work?
5. Design Requirements
6. Project Status
7. Project Initiation
8. Pilot Design
9. What Have we Done?
10. Where Are We Now?
11. Risks
12. Lessons Learned
13. Key Success Factors
14. What's Next?

WHAT IS A CBDC?

- Central bank digital currency (CBDC) is a digital form of central bank issued currency and is therefore legal tender.
- It is not to be confused with cryptocurrency, which is privately issued and not backed by a central authority.
- CBDC is fully backed by the Central Bank, the sole issuer.

Different Models:

- **Cross-border CBDC** entails digital currency issued by the central bank to commercial banks, which can be used for foreign exchange transactions across jurisdictions.
- **Wholesale CBDC** entails digital currency issued by the central bank directly to commercial banks, which is in turn distributed by commercial banks in the retail market.
- **Retail CBDC** entails digital currency issued by the central bank directly to all users. This would mean that all users would have CBDC wallets at the central bank.
- **Hybrid CBDC** combines the benefits of both wholesale and retail in various forms, and falls somewhere on the spectrum between the wholesale and retail models.

CBDC? WHERE AND WHO?

The CBDC to be issued by Bank of Jamaica (BOJ) is **solely for domestic use** and will not be used for cross border transactions.

The Hybrid Model will be used.

- The BOJ will issue CBDC to **Deposit-Taking Institutions** licensed under the Banking Services Act (commercial banks, building societies and merchant banks).
- In addition, CBDC will also be issued to **Payment Service Providers (PSPs)** that are operating in the Bank's Fintech Regulatory Sandbox (the Sandbox).

CBDC? WHERE AND WHO?

CBDC is not a deposit, it is cash in your purse/wallet, in this case your digital purse or digital wallet.

Jamaica's CBDC will not earn interest, cash in your pocket does not earn interest.

It is issued on a 1:1 basis with cash, i.e. J\$1.00 of cash is equivalent to J\$1.00 of CBDC.

MOTIVATING FACTORS

- There are a number of motivating factors that propelled the drive to introduce CBDC in Jamaica.
- **One of Bank of Jamaica's (BOJ's) key objectives is to support Jamaica's digital transformation by facilitating access for each citizen to quick, safe and reliable digital retail payment mechanisms.**

Other points of interest:

- **Enhanced financial inclusion** additional means of efficient and secured non-cash payment.
- **Increased efficiencies for banks** as they relate to the costs for handling cash and courier cost for distribution.
- **Greater efficiency in the currency management process of BOJ.**
- **Providing a socially optimal mix of retail payment instruments.**
- **Interoperability** between existing electronic retail payment systems.

BENEFITS OF CBDC

- **Financial inclusion**
 - Holds the possibility to mass recruit persons to the formal financial system given simplified KYC.
- **More efficient than cash**
 - Instantaneous, even for remote transactions – P to P, P to B and G to P
 - Just like cash, it will not cost you to use it.

BENEFITS OF CBDC

- **Safety**

- Users can benefit from enhanced safety when compared to physical cash.
- Even if device is lost, your money can be still be accessed.

- **Data Collection**

- The CBDC solution provides real time data on usage numbers, volume, as well as other key values for CBDC.
- Data provides additional accuracy for policy decisions.

HOW WILL CBDC WORK?

- **TIER 1:** BOJ will “mint” and “issue” CBDC to commercial banks just as we now do with cash, as well as payment service providers.
- **Tier 2:** Commercial banks and payment service providers will in turn “distribute” CBDC to businesses or to individuals through CBDC wallets.
- Individuals and businesses will “hold” their CBDC in wallets at their respective banks and payment service providers and “make purchases” or “receive payments” phone to phone or through some other device such as a payment card.

BOJ SYSTEM DESIGN REQUIREMENTS

Digital fiat currency
that is non-interest
bearing

Tailored for Jamaica

User-centric and
easy-access

Interoperable

Satisfy AML/CFT

Operational
24/7/365

Instant process of
transactions &
settlement finality
(online and offline)

Improve the
currency
management process

Ensure cyber-
security, data
protection & privacy

Support further
access and usage for
P2P, P2B, and P2G
and vice versa.

THE PROJECT INITIATION

- In May 2020, Bank of Jamaica took the decision to introduce a CBDC as an additional means of payment and launched it in July 2020.
- Since then we have had a number of meetings with stakeholders, inclusive of the 2 telecom providers, Digicel and Flow and the regulator - OUR – discussion role, infrastructure: telecoms to provide the communication infrastructure that underpins the deployment and usage of the CBDC.
- The GOJ procurement process was implemented in August 2020.

THE PROJECT INITIATION

- **PROCUREMENT PROCESS:** On 16 July 2020, the Bank extended an invitation to providers of technological solution for the provision of a CBDC in the Bank's Fintech Regulatory Sandbox.
 - Phase 1: Of forty three (43) submissions, six (6) vendors were shortlisted;
 - Phase 2: The six (6) shortlisted vendors were invited to conduct a product demonstration/presentation of their solution;
 - Phase 3: Vendors were further shortlisted to four from six for the final assessment phase;
 - eCurrency Mint Limited came out ahead as the technology solution provider and approved by Cabinet in March 2021.

THE SOLUTION

A turnkey product that clearly establishes the currency management process: minting, issuing, redemption and destruction;

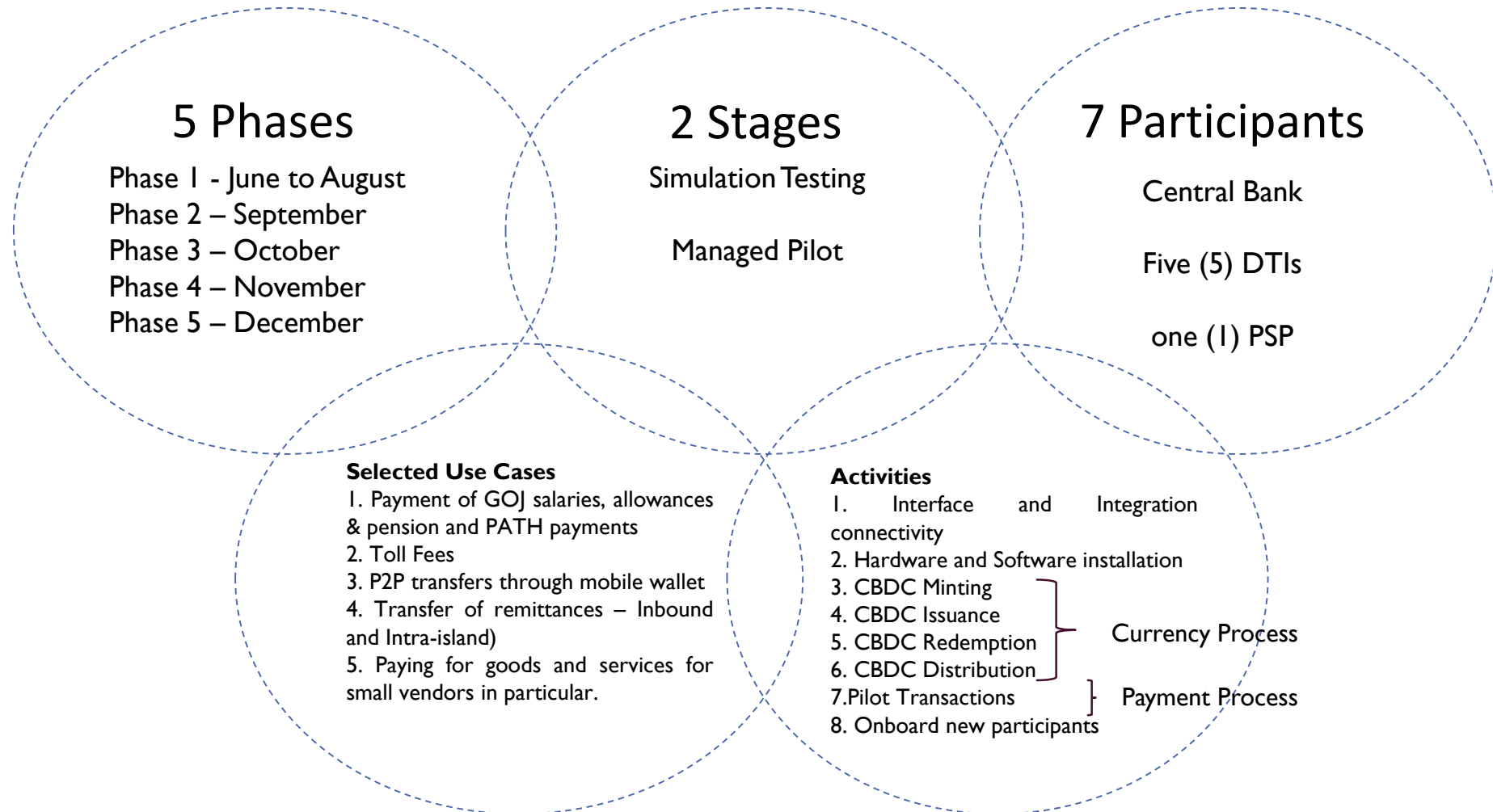
Seamlessly interfaces with the national payment and settlement system (RTGS);

Supports distribution of the CBDC through financial intermediaries' payment solution and facilitates immediate integration with existing legacy and payment systems;

Facilitates delivery to end-user on mobile devices, cards;

Facilitates robust risk management tools established to support real-time monitoring for AML at the transaction level and audit capabilities and is configurable for BOJ use.

CBDC PILOT DESIGN - 2021



CBDC PROJECT STATUS – JULY – DECEMBER 2021

CBDC Pilot technical aspect is broken-down into the following:

1. Project Initiation and Pilot Design
2. Sandbox Testing
3. Managed Pilot, and
4. National 'Roll-out'

WHAT HAVE WE DONE?

- Training for initial pilot participants on system integration and CBDC solution (user interface).
- Simulation testing facilitated with pilot participants to test connectivity with currency plates (digital vault) and test transactions.



- BOJ designed and developed a CBDC wallet system and application for BOJ staff.

WHAT HAVE WE DONE?

- Engaged pilot participants who committed to enter during the pilot period which ends December 2021.
- National Commercial Bank, as well as the BOJ Banking Department are the first entrants into the pilot.
- The Bank has deployed a phased approach for entry into the pilot for additional pilot participants during October to December 2021.

WHAT HAVE WE DONE

- BOJ on 9 August 2021 minted \$230 million worth of its CBDC to be issued to deposit-taking institutions and authorized payment service providers which initiated the start of the pilot exercise expected to end in December.



- On the 29th October 2021, the Bank issued \$5 million worth of CBDC to National Commercial Bank. Marking this as the first issuance of CBDC to a external wallet provider, with \$1 million issued to our¹⁸ Banking Department,

CBDC PROJECT STATUS – JULY – DECEMBER 2021

- CBDC Pilot project is on target at 65% with both initiation (Phase 1) and planning (Phase 2) phases completed.
- Currently at Phase 3 - Implementation.
- Phase 4 (Final) is closing – reporting on results of CBDC Pilot and national ‘roll-out’.

WHERE ARE WE NOW?



- **Technical** - Ongoing work on system integration with existing systems. In October–December, facilitation of transactions and conduct end-to-end testing of the solution.
- **Communication** – Advising on the decision regarding naming, logo, tagline and design competition; Procurement of External Ad Agency; National Survey.
- **Legislation** – Amendments to BOJ Act for CBDC being undertaken – for recognition as Legal Tender²⁰ – scheduled for completion by end of FY 2021/2022.

WHAT ARE THE RISKS OF A CBDC?

■ **AML/CFT**

- The design of the CBDC will continue to allow for tracking of all payments by the FIs and by the relevant authorities, under the proceeds of crime act (POCA), when required.

■ **Data Privacy**

- Bank of Jamaica's CBDC solution supports the protection of personal identity through built in solutions such as encryption techniques, digital signatures and multi-factor authentication mechanisms.

WHAT ARE THE RISKS OF A CBDC?

- **Disintermediation**

- The Bank's design of its system implicitly mitigates against disintermediation as it employs a two-tier model.

- **Cyber Security**

- The CBDC solution has high levels of administrative, physical and logical controls, allows for role-based user management in the minting and issuing processes by BOJ.
- External Independent vulnerability assessment and testing.

WHAT ARE THE RISKS OF A CBDC?

- **Slow Take Up**

- To mitigate slow take up, the Bank has implemented a robust Communication Plan.

- **The CBDC Project communication to date includes:**

- I. External exposure in the print media, radio and television;
- II. Internal Survey Focus Group sessions & survey; and
- III. Naming, tagline, logo and currency design competition.

- **Next Steps**

- I. Engage key stakeholders to assist in educating and promoting CBDC.
- II. National Survey in November 2021 to gauge understanding and expectation.
- III. National Roll-out of the Name, tagline, design and logo.

LESSONS LEARNED

Dedicate Resources

- Often not enough resources dedicated towards project, by wallet providers and by the Bank

Build Technical Capacity

- Train technical team.
- Draw from experiences shared.
- Seek support from countries that already executed CBDC projects.

Develop Business Requirements

- Identify key requirements
- Draft basic business requirements.
- Analyse the business operations

LESSONS LEARNED

Continuous Risk
Assessment

- Assign officers with responsibility to monitor and report on risks from Risk and Audit Team

Manage Project
Conflict

- Ensure pilot participants and Central Bank are properly aligned to deliver outputs.

Manage Change

- Identify key processes for change.
- Plan for change of operations and provide support

LESSONS LEARNED

Continuous
Communication and
Marketing

- Develop an effective Communication and Marketing Plan.
- Implement plans at project initiation and storyboard message to stakeholders.

Document at each
stage

- Ensure a dedicated member document the process.
- Engage impact assessment as this is critical during the project.

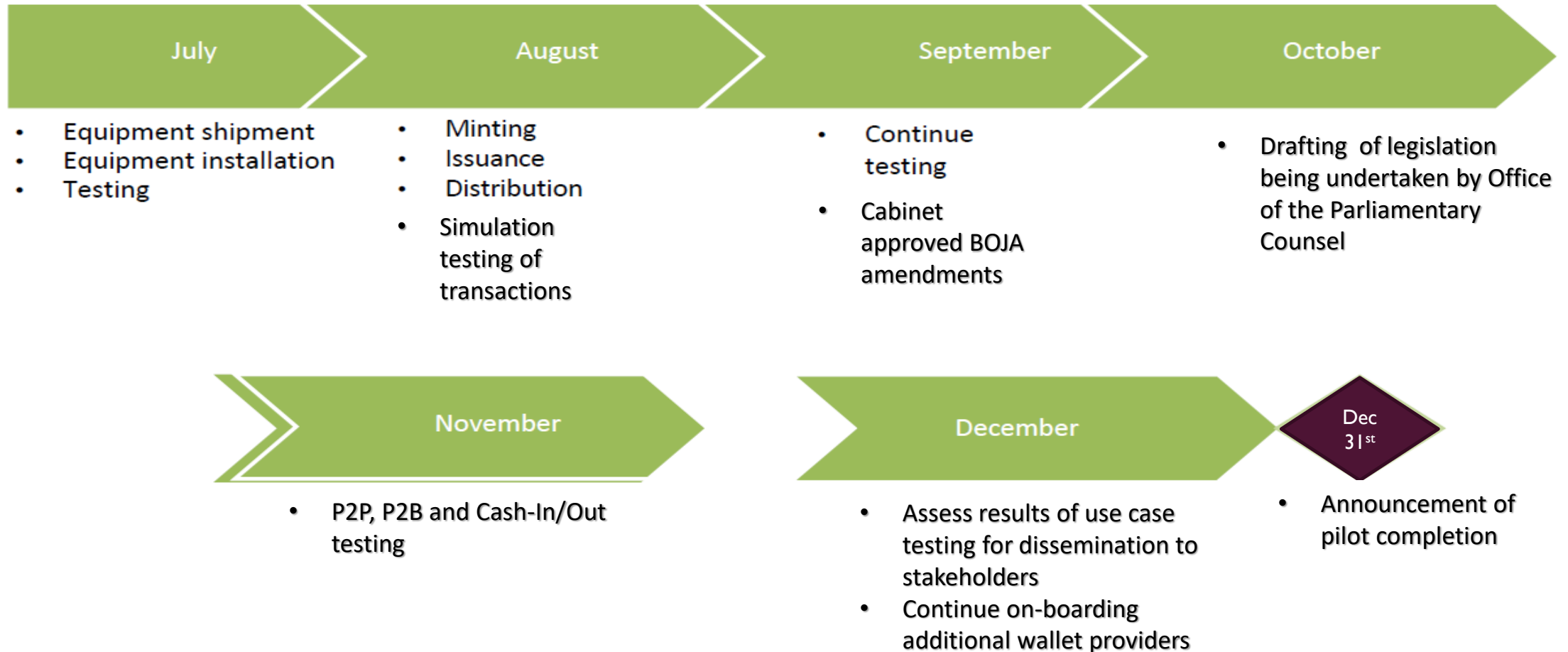
Manage Vendor

- Have continuous project meetings with vendor.
- Resolve issues (legal or technical) early.

PILOT SUCCESS CRITERIA

1. 5% of CBDC circulation as a percentage of CBDC minted.
2. 80% of committed participating institutions on-boarded.
3. At least two active wallet providers in the pilot.
4. 1,000 total registered users.
5. 50% of registered user active.
6. Average of at least two transactions per active user.
7. 100 beneficiaries from the Ministry of Labour and Social Security Programme onboarded.
8. At least one merchant onboarded from each category group. Category groups are:
 - Small Garage operators,
 - Coconut vendor,
 - Sky-Juice; and
 - Jerk Chicken vendors.
9. 100% of participating institutions trained.
10. Large merchants will be subsequently onboarded after pilot. Subsequent onboarding for GOJ payments and receipts eg. Welfare, Taxes, Toll.

TIMELINE - PILOT



WHAT'S NEXT

- The pilot is scheduled for completion December 2021.
- National 'Roll-Out' scheduled for first quarter 2022.

THANK YOU

Questions?



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