

Subject: #1 Email for Identified Individuals

Dear [name]

You are invited to express an interest in becoming a member of the Reserve Bank's CBDC Forum – an external stakeholder advisory group.

In 2021, the Reserve Bank published three [Future of Money – Te Moni Anamata](#) issues papers, one of which canvassed a potential Central Bank Digital Currency (CBDC) for New Zealand. The Reserve Bank's initial considerations have been focused on the public policy case for, or against, a CBDC, and no decision has yet been made on whether to introduce a CBDC in New Zealand. However, our starting point is that a CBDC could be a useful development for central bank money, because it would both support the value anchor role of central bank money, and support the ability of central bank money to act as a fair and equal way to pay and save.

We recently published a [summary of responses](#) to the 2021 issues papers. We outlined that developing a deeper understanding of stakeholders through targeted engagement will be an important part of further investigation into the CBDC design principles. As part of this commitment, the Reserve Bank will be establishing a CBDC stakeholder advisory group – the 'CBDC Forum' – to engage key stakeholders and gather input on various functional, system governance, technology and operational aspects of a CBDC. The Forum will help us determine how a CBDC could be designed to best meets the needs of New Zealanders. Membership of the CBDC Forum would be on a voluntary basis and could take up to half a day per month. Further details on the CBDC Forum, such as its purpose and scope, membership, and responsibilities and activities, are outlined in the attached Terms of Reference. We intend to hold the first meeting in June 2022.

The CBDC Forum will have a limited membership number and are running an expressions of interest process to help confirm membership. We would welcome an expression of interest from you. If there is someone else within your organisation that you think is better suited, please feel free to pass this email on to them and encourage them to express an interest. This involves providing a few basic details, a copy of your CV, and a outline of your suitability and interest in joining the CBDC Forum. The application portal can be found [here](#). We will be fielding expressions of interest until **[time + date]** and we plan to announce our selections by [date]. Further details on this process and the membership criteria we will consider when evaluating applications can be found in the Appendix of the attached Terms of Reference.

For any further questions, please contact [Samuel Kirk-Reeve](#) (Money & Cash Policy, RBNZ) in the first instance.

Nāku iti noa, nā,

Subject: #2 Email for Organisations

Dear [organisation]

Do you know someone that would be a valuable member of the Reserve Bank's CBDC Forum – an external stakeholder advisory group?

In 2021, the Reserve Bank published three [Future of Money – Te Moni Anamata](#) issues papers, one of which canvassed a potential Central Bank Digital Currency (CBDC) for New Zealand. The Reserve Bank's initial considerations have been focused on the public policy case for, or against, a CBDC, and no decision has yet been made on whether to introduce a CBDC in New Zealand. However, our overall belief is that a CBDC would be a useful development for central bank money, because it would both support the value anchor role of central bank money, and support the ability of central bank money to act as a fair and equal way to pay and save.

We recently published a [summary of responses](#) to the 2021 issues papers. We outlined that developing a deeper understanding of stakeholders through targeted engagement will be an important part of further investigation into the CBDC design principles. As part of this commitment, the Reserve Bank will be establishing a CBDC stakeholder advisory group – the 'CBDC Forum' – to engage key stakeholders and gather input on various functional, system governance, technology and operational aspects of a CBDC. The Forum will help us design a CBDC that best meets the needs of New Zealanders but it will not have any decision-making responsibilities. Further details on the CBDC Forum, such as its purpose and scope, membership, and responsibilities and activities, are outlined in the attached Terms of Reference. We intend to hold the first meeting in June 2022.

We would welcome recommendations from you on individuals that could be useful members of the CBDC Forum – including those from outside your organisation. We are looking for individuals that are passionate about the future of money and payments in New Zealand, and meet the following criteria:

- **Relevant knowledge and experience** – the stakeholder has knowledge and experience on issues of relevance to the design and implementation of a CBDC. This could be experts in technical areas (such as economics, technology, blockchain, finance, banking, payments or law) or representatives of industries and stakeholder groups that will be important to the successful delivery of a CBDC (such as retailers/merchants and consumers).
- **Time** – the stakeholder is willing to commit to participating in Forum sessions and engaging with the Reserve Bank team on CBDC issues according to the expectations set out in the draft Terms of Reference.
- **Commitment** – the stakeholder is committed to exploring what would be needed to successfully design and implement a CBDC and is willing to represent their own perspectives, rather than those of their organisation. Further, the stakeholder is willing to be bound by the Terms of Reference in relation to the release of information from participating in the CBDC Forum.
- **Diversity** – the stakeholder will contribute to the overall diversity of the CBDC Forum, both in terms of the individuals and the institutions they work for. At an individual level, the Forum should reflect the diversity of New Zealand's population by consisting of members with different backgrounds and experiences to encourage diversity of thought. At the institutional level, members should come from a variety of different organisations that represent various industries, regions and sizes.

Please let us know if you have anyone in mind you would recommend be involved in the Forum or send this email to them directly and suggest they express an interest. This involves providing a few basic details, a copy of their CV, and a brief cover letter outlining of their suitability and interest in joining the CBDC Forum. The application portal can be found [here](#). We will be fielding expressions of interest until **[time + date]** and we plan to announce our selections by **[date]**. Further details on this process and the membership criteria we will consider when evaluating applications can be found in the Appendix of the attached Terms of Reference.

For any further questions, please contact Samuel Kirk-Reeve (Money & Cash Policy, Reserve Bank of New Zealand) in the first instance.

Nāku iti noa, nā,

CBDC Forum.

Terms of Reference

May 2022



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Terms of Reference

Purpose and scope

The purpose of the CBDC Forum will be to provide an opportunity to engage key stakeholders and gather input on various user needs, system governance, technology and operational aspects of a CBDC. The Forum will offer a structured mechanism for obtaining expert views and advice on a potential New Zealand CBDC.

The Reserve Bank has not yet made a decision on whether to introduce a CBDC. The CBDC Forum will not focus on whether to introduce a CBDC, rather its focus will be on how to design and implement one effectively. As such, the CBDC Forum will help us through Phase 2 of our CBDC work programme, which aims to progress work on the design and testing of a possible CBDC. CBDC Forum input is expected on issues, such as:

- The tasks the CBDC system needs to perform (CBDC use cases);
- The functional needs of CBDC users;
- The various key roles in the CBDC system;
- Data, privacy and anonymity considerations;
- Digital and financial inclusion issues; and
- Other practical challenges associated with designing, implementing and operating a CBDC.

The CBDC Forum will also help us to connect with other key stakeholders or forums to explore policy and design issues in detail.

The CBDC Forum will provide input that helps us to design a CBDC that best meets the needs of New Zealanders but will not have any decision-making responsibilities. For example, issues identified and views raised by the Forum will feed into our wider CBDC work programme and, where appropriate, be considered and discussed with our engagement partners and influencers and raised up to decision-makers.

Complex or thematic issues identified by the Forum – like privacy and financial inclusion concerns – could be explored further in regulatory, policy or technology deep dives. We could also run public forums or deliberative workshops on these issues. The Forum will not be a substitute for running public consultations or publishing informational releases on our CBDC work programme: these will be undertaken as needed.

The CBDC Forum purpose, scope and membership will be reviewed annually by the Reserve Bank. This will help to ensure that the Forum remains fit for purpose as the work programme on CBDC progresses and evolves through the various stages over time.

Membership

Participating in the CBDC Forum is at the invitation of the Reserve Bank, following an expressions of interest process. Members will be drawn from the relevant range of CBDC stakeholders from banks, payment service providers, fintech organisations, retailers, businesses, consumers, civil society organisations and academia.

The CBDC Forum will comprise a diverse set of knowledgeable participants with relevant background and experience. Members will either be senior figures within their industry or institutions or have work or life skills or experience useful to the issues the CBDC Forum will be engaging on.

Members will be expected to commit to taking a constructive and open-minded approach to a CBDC. By joining the Forum, members will need to commit to exploring *how* a CBDC could be successfully deployed in New Zealand. To help facilitate this, membership will be on an individual basis (rather than an organisational basis). This means that a member that permanently steps down from the Forum, or is unable to attend a particular meeting, will not be able to automatically pass on their seat to another person within their institution. However, in the case of a member being unable to attend a scheduled meeting, they will have the opportunity to provide written feedback on the papers or issues being discussed ahead of the meeting.

To ensure that there is representation from experts in the topics being discussed at any particular CBDC Forum meeting, external stakeholders may be invited to attend by the Chair, in consultation with the Forum.

Responsibilities and activities

The Reserve Bank will engage with members of the CBDC Forum on material issues related to the CBDC work programme, including user needs, system governance, technology, and operational aspects of a CBDC. To promote open discussion and to allow members to provide frank and robust comments, meetings will be conducted under the Chatham House rule.

Members of the CBDC Forum will be expected to prepare for and participate in CBDC Forum meetings, as well as share information, perspectives and opinions on the discussed topics that reflect a broad perspective (rather than only representing the interests of their individual organisations).

Members will also be able to provide input into the agenda of future meetings and request that specific topics are included for discussion. These requests should be communicated to the Secretariat in advance of the meeting to which the request relates. The Chair of the Forum will ultimately decide on what is included in the final agenda.

The Secretariat will circulate minutes of the discussions held at the CBDC Forum with members after the meeting. Members will be able to provide feedback and suggest changes to the contents of the minutes to the Secretariat.

Meeting frequency and duration

The CBDC Forum will meet approximately five to six times a year. The Forum could meet more frequently as and when the need arises, at the discretion of the Chair and with consultation of members. CBDC Forum meetings will be held in-person (if COVID-19 settings permit) and virtually via Microsoft Teams. It is anticipated that meetings will alternate between in-person and virtual.

To ensure sufficient time for substantive discussions, in-person meetings will be scheduled for approximately half a day. Virtual meetings will likely be for a shorter duration.

For more technical aspects of the discussion, these may be conducted through a working group where interested members meet if the Forum identifies complex or thematic issues to explore in further depth. Such working groups will then report back to the wider group at the main CBDC Forum meetings.

Chair and secretariat

The CBDC Forum will be chaired by the Manager of Money and Cash Policy at the Reserve Bank of New Zealand. The Reserve Bank will also provide the Secretariat.

The Chair will be responsible for:

- Setting the strategy for the CBDC Forum its forward agenda;
- Moderating the discussions in meetings; and
- Inviting any external stakeholders to attend meetings, where appropriate.

The Secretariat will be responsible for:

- Circulating minutes of the meetings with members;
- Reminding members of meeting practice and hygiene, such as competition guidelines.
- Coordinating responses to any public inquiries in relation to the CBDC Forum, including publication of materials discussed at the CBDC Forum;
- Preparing the agenda and materials for the meetings; and
- Coordinating any outreach to other external stakeholders, if required.

Conflicts, competition law and information sharing

Members will be responsible for disclosing any conflicts of interest that may arise from their involvement with the CBDC Forum. As part of mitigating conflicts of interest, members will be expected to withdraw from the Forum before entering into any part of a procurement process with the Reserve Bank related to the CBDC work programme (e.g. proof of concept).

Members should refrain from using the Forum as an opportunity to promote products or services to the Reserve Bank or other members, and from publicising their involvement with the Forum for the purposes of marketing in other jurisdictions.

Members must ensure that they comply with their obligations under any applicable competition law. If members are unclear about their obligations, they should seek further guidance from their respective organisations.

Members must also ensure that any information that they share with the Forum is not protected by their organisation. In cases where a member is unsure of the level of protection of the information, then it is the member's responsibility to not share such information.

Relationship Charter

The Reserve Bank aspires to build and maintain the best 'regulator/regulated' supervisory relationships possible, with all its regulated entities. As part of this, the Relationship Charter was established in 2018 for working effectively with our regulated entities and represents a mutual undertaking of how the parties will work together to achieve this aspiration.¹

¹ See here for further details on the Reserve Bank's Relationship Charter <https://www.rbnz.govt.nz/regulation-and-supervision/statements-of-approaches/statement-of-relationship-management-approach>

UNCLASSIFIED

The Reserve Bank is committed to upholding the values of the Relationship Charter when we engage with members of the CBDC forum – including with non-regulated entities. These include a commitment that our behaviours will be honest, diligent, achievement focused, open-minded and professional; and that our communication will be clear, consistent, targeted and timely. This will help ensure that the CBDC Forum’s work is underpinned by the principle of ‘te hunga tiaki’ – the combined stewardship of an efficient system for the benefit of all.

We expect members of the CBDC Forum to also be willing to commit to upholding the principles of the Relationship Charter.

Annex: Expressions of interest process and membership criteria

The CBDC Forum should have a sufficiently broad membership to get a comprehensive view on CBDC issues. These include, for example, representatives of banks, payment service providers, fintech organisations, retailers, businesses, consumers, civil society organisations and academia.

We will run an expressions of interest process to gauge interest from stakeholders in participating in the CBDC Forum and to select members, which will close on Friday 20 May 2022. As part of this process, stakeholders will be asked to provide some basic personal details, and outline their suitability, experience, and interest in joining the CBDC Forum (by way of a covering letter or curriculum vitae). We intend to hold the first meeting in June 2022.

The CBDC Forum membership will be limited to a small subset of stakeholders – approximately 15 to 20 in total, with limits on the number of representatives from any particular sector or group. This will help to facilitate open and productive discussion.

When evaluating applications, we will consider the selection criteria set out below. In addition to these criteria, we will also factor in the importance of ensuring that the CBDC Forum has a balanced representation of sectors, expertise and individual characteristics.

- **Relevant knowledge and experience** – the stakeholder has knowledge and experience on issues of relevance to the design and implementation of a CBDC. This could be experts in technical areas (such as economics, technology, blockchain, finance, banking, payments or law) or representatives of industries and stakeholder groups that will be important to the successful delivery of a CBDC (such as retailers/merchants and consumers).
- **Time** – the stakeholder is willing to commit to participating in Forum sessions and engaging with the Reserve Bank team on CBDC issues according to the expectations set out in the Terms of Reference.
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- **Diversity** – the stakeholder will contribute to the overall diversity of the CBDC Forum, both in terms of the individuals and the institutions they work for. At an individual level, the Forum should reflect the diversity of New Zealand's population by consisting of members with different backgrounds and experiences to encourage diversity of thought. At the institutional level, members should come from a variety of different organisations that represent various industries, regions and sizes.



Central Bank Digital Currency (CBDC) - Aparangi ā Te Pūtea Matua

CBDC Forum Session 1 : Friday, 29 July 2022



Mihi Whakatau / Welcome

Ngarimu Parata – Kaiarahi Māori
Ian Woolford – Director of Money and Cash

Housekeeping

Peter Northcote

Health and safety

COVID-19

- Mask wearing optional, except for foyers and lifts
- Please sanitise, shield, report

Fire Evacuation

- In the event of a fire, please evacuate the building via the nearest safe fire exit (*there are two stairwells, at the front and rear of this floor*)
- Follow instructions from your host, floor wardens, or security

Earthquake

- DROP down on your hands and knees
- COVER under a desk, table, or other furniture
- HOLD on to your shelter (or position) until the shaking stops

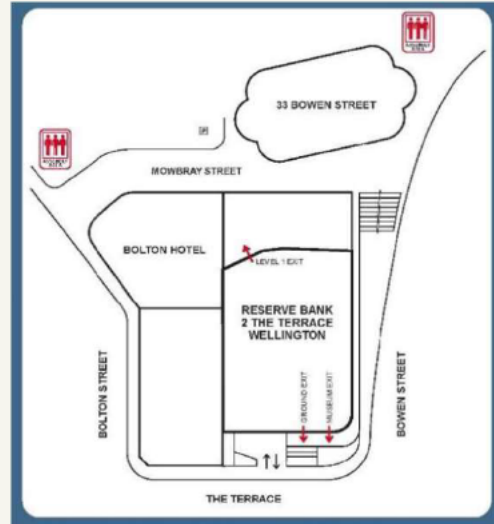


Health and safety

Assembly Point

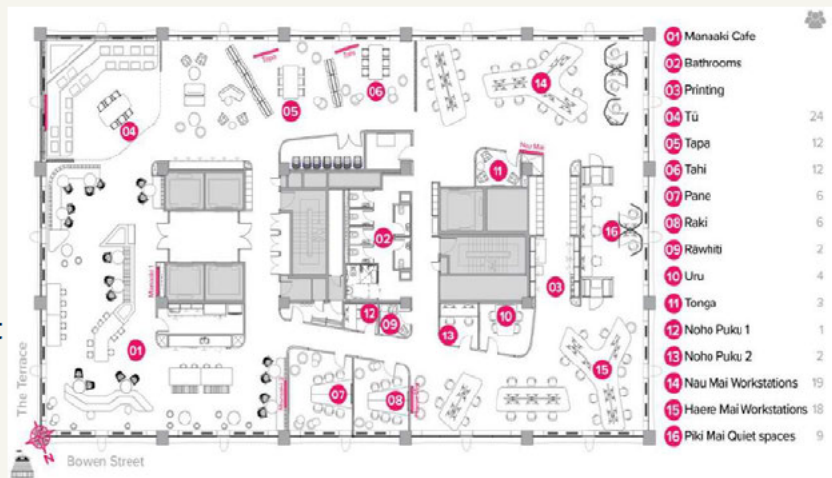
Grassed area by the cemetery behind the Ministry of Education building

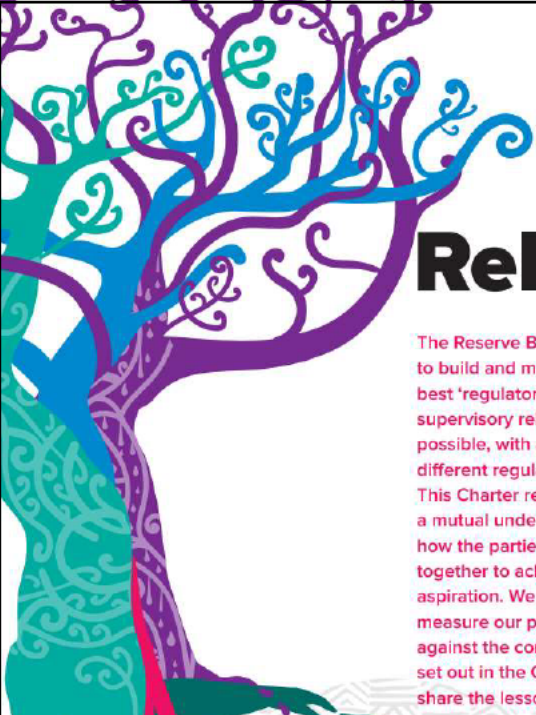

For all other emergencies, please follow instructions from the floor wardens, hosts or security



Facilities

- Floor layout
- Toilets
- Kitchen
- Catering
- Wifi RBNZ_Guest
- Security



Relationship Charter

The Reserve Bank aspires to build and maintain the best 'regulator/regulated' supervisory relationships possible, with all the different regulated entities. This Charter represents a mutual undertaking of how the parties will work together to achieve this aspiration. We will regularly measure our performance against the commitments set out in the Charter and share the lessons.

Our mutual commitments

Our behaviours will be		Our communication will be	
Honest positions are openly stated, constructively, freely and frankly	Open-minded each other's perspective is constructively sought and understood	Clear easily understood, with decisions explained	Consistent one organisation, one message, one tone
Diligent provide clear expectations and deliver on them	Professional disagreements can happen on issues, not people	Targeted made to the right people in governance and management	Timely communication with no surprise
Achievement focused work together to achieve sound and efficient outcomes			

Ground rules

Relationship charter

- Respecting diversity of background, thought and expression
- Encouraging participation and fun
- Chatham House rules

Probity

- No anti-competitive behaviour (price-setting, division of markets, agreements lessening competition, cartels etc), and raise a hand if concerned
- This is a "sales pitch free zone"
- Mis/representing CBDC Forum membership or its work



CBDC Forum members

Name	Organisation	Name	Organisation
Adrian Smith	BlinkPay	Alexandra Sims	University of Auckland
Brian Bonar	ANZ	Conrad Morgan	Worldline
David Corbett	PowerFinance	Fran Strajnar	Techemy
Jane Retimana	Payments NZ	Jennifer Ferreira	Victoria University
Joanne Dacombe	Disabled Persons Assembly	John Warwick	Foodstuffs
Michelle Kitney	Volunteering NZ	Mitchell Pham	FintechNZ
Paul Quickenden	EasyCrypto	Simon Jensen	Buddle Findlay
Steve Mander	BNZ	Additional members	TBA



Chair and secretariat

Chair	Robbie Taylor
Secretariat	Sam Kirk-Reeve - liaison
	Marion Peni - logistics
	Peter Northcote - facilitation
	Makoto Seta – policy lead



CBDC SWOT – WRITE IT / POST-IT!

1. What is a big **strength** of NZ Inc that could **help ensure good decision making** on whether a CBDC is right for New Zealand
2. What is a big **weakness** that could **undermine good decision making** on whether a CBDC is right for Aotearoa
3. What is a **big opportunity a CBDC could offer** Aotearoa
4. What is a **big threat a CBDC could pose** to New Zealand



What we're here for

Robbie Taylor, Manager, Money and Cash Policy

Purpose of this forum

To provide an opportunity to engage key stakeholders and gather input on various user needs, system governance, technology and operational aspects of a CBDC – i.e., how to design and implement a CBDC

The CBDC Forum will also help us to connect with other key stakeholders or forums to explore policy and design issues in detail




Issues covered in this forum

Input is sought on issues such as:


- The tasks the CBDC system needs to perform (CBDC use cases);
- The functional needs of CBDC users;
- The various key roles in the CBDC system;
- Data, privacy and anonymity considerations;
- Digital and financial inclusion issues; and
- Other practical challenges associated with designing, implementing and operating a CBDC



Participation in the CBDC Forum

- Focus on design to inform a future decision on whether to have a CBDC
- No policy decisions made on CBDC; open to new ideas
- This Forum will not determine the final CBDC design, but the outcome of the discussions will impact the design that RBNZ proposes
- All members have an equal say on CBDC. End-goal is to have a coherent design that most likely meets the need of the public
- Members are asked to speak as individuals, not as a representative of the organisational affiliation
- Chatham House Rule applies, to allow an open and constructive debate
- Good meeting practice: not speaking over others, respecting different views 

Programme schedule for today

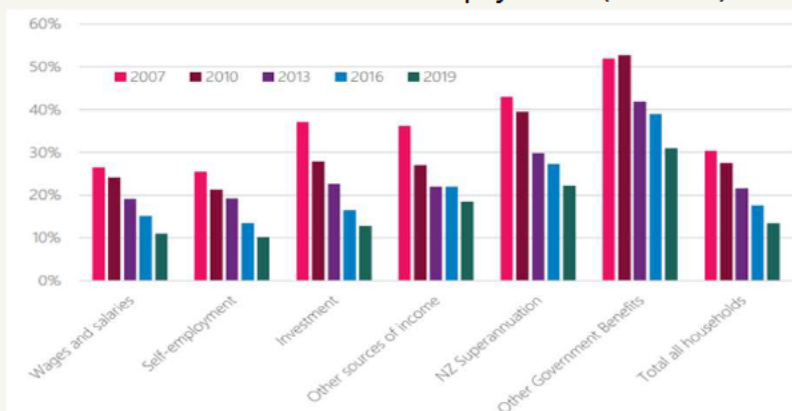
1. Background: our work on Future of Money so far, our motives for exploring a CBDC
 2. Main topic – Privacy workshop: exploring various aspects of privacy and ways to design a privacy-centric CBDC for New Zealand
 3. General discussion on privacy
- 

Our motives for exploring a CBDC

Makoto Seta, Advisor, Money and Cash Policy

Declining use of cash in New Zealand

Cash as % of the number of household payments (2007-19)

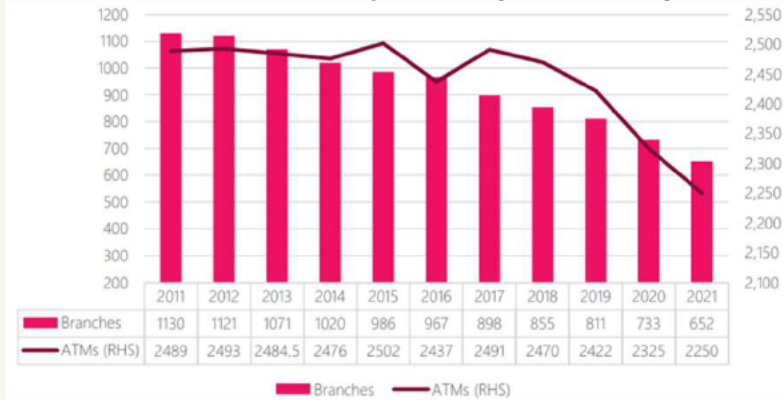


Source: RBNZ 2021 The Future of Money – Stewardship Issues Paper



Declining cash services

Number of branches and ATMs operated by the five major banks (2011-21)



Source: KPMG NZ Financial Institutions Performance Survey 2011-21, RBNZ



Public access to central bank money

Figure 4: Why central bank money matters

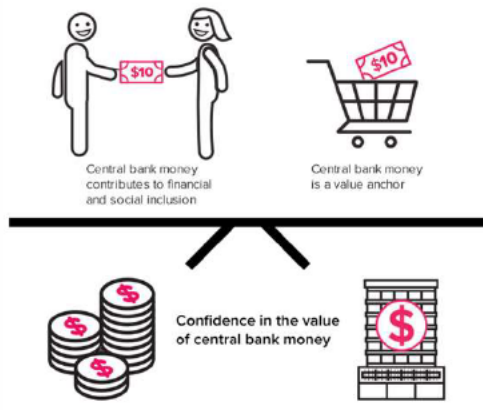
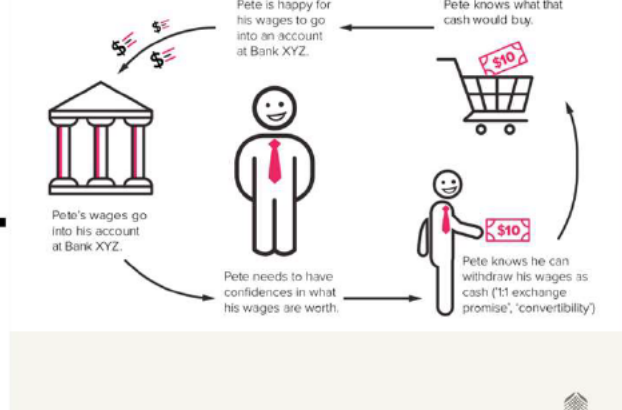


Figure 5: The value anchor provided by central bank money

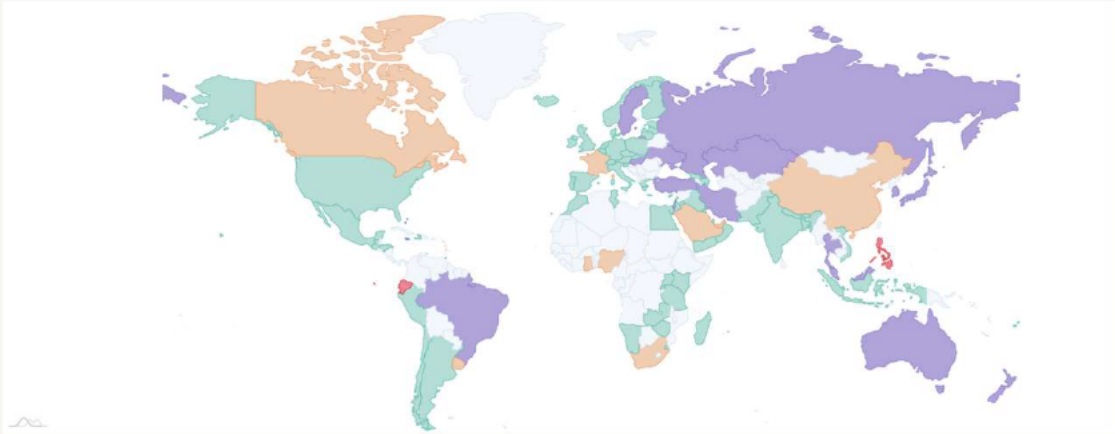


Many central banks are exploring CBDC

Today's Central Bank Digital Currencies Status

Database updates: July 2022 • News updates: Jul, 26 22

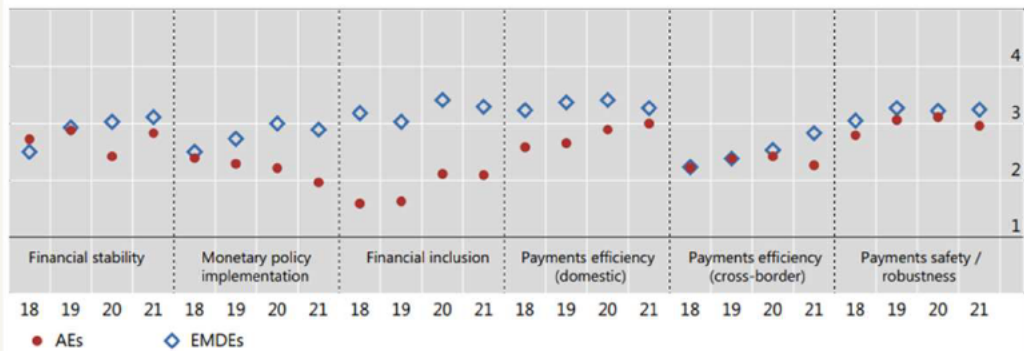
Cancelled Research Proof of concept Pilot Launched



Motivations for issuing a retail CBDC

Average importance

Graph 3



(1) = not so important; (2) = somewhat important; (3) = important; (4) = very important.

Source: 2021 BIS central bank survey on CBDCs and digital tokens.

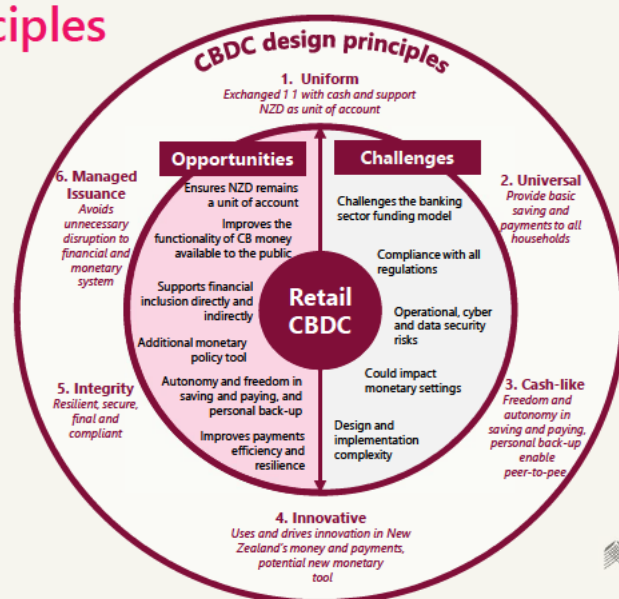
Issues paper and public consultation on CBDC

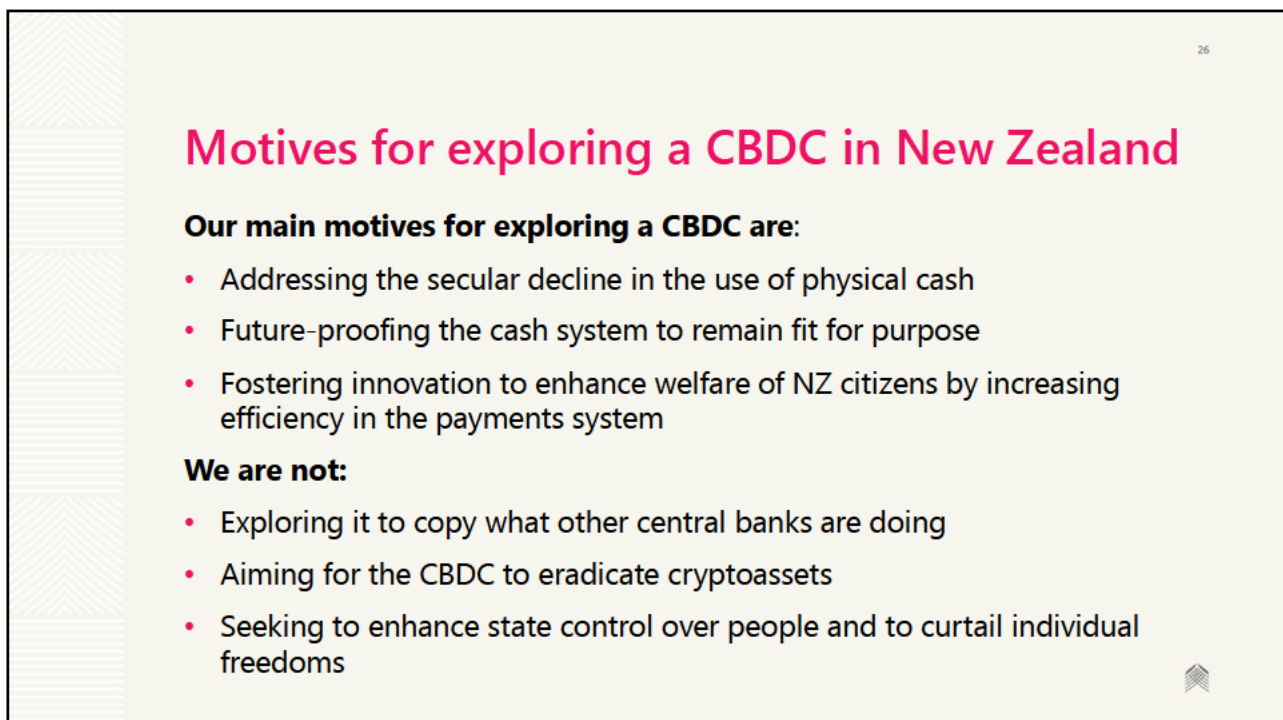
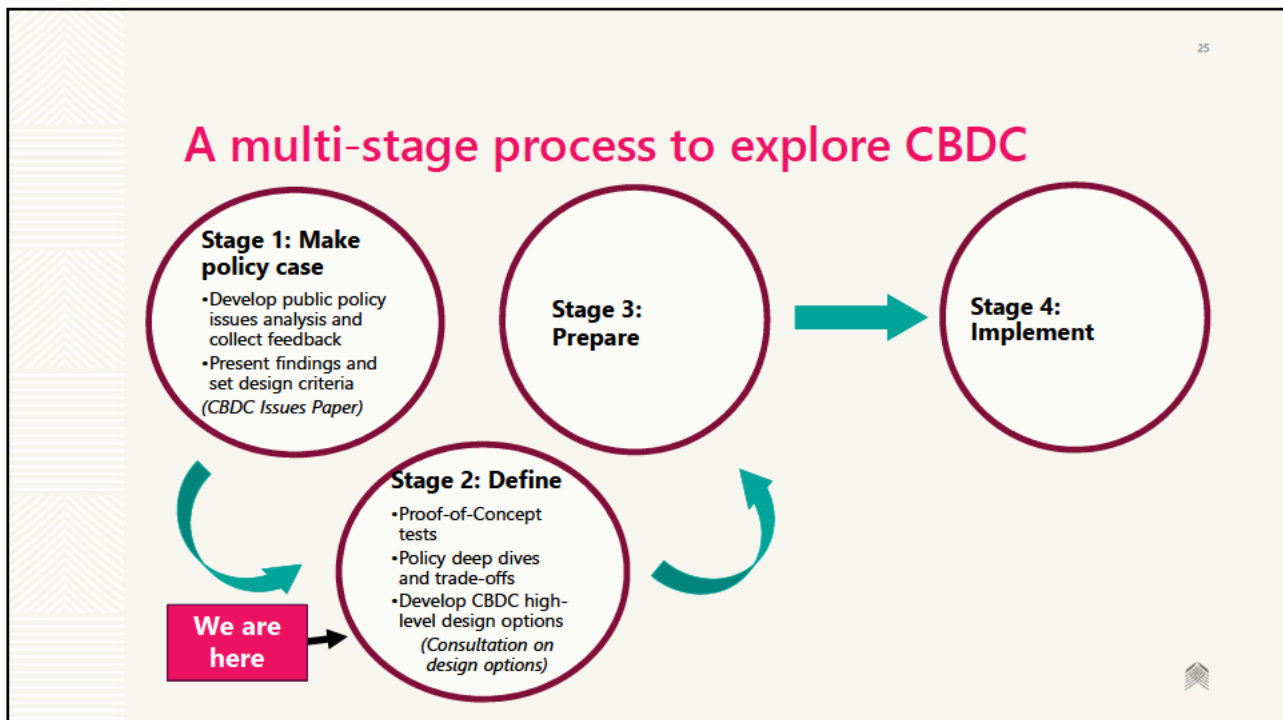
- A high-level analysis of CBDC and how RBNZ might design one
- Over 6,000 responses received
- Our preliminary conclusions (per feedback statement)
 - Affirmation of the importance of privacy and autonomy. Further focus of policy work and technical testing to better understand what these means to New Zealanders, and how a CBDC can support privacy and autonomy while meeting legal requirements. Also prioritise further work on how a CBDC can support inclusion and innovation
 - A need for deeper understanding of stakeholders through further engagement



CBDC design principles

1. Uniform
2. Universal
3. Cash-like
4. Innovative
5. Integrity
6. Managed issuance





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Objectives and desired outcomes for a CBDC

Our objectives for a CBDC

To ensure that central bank money is available to New Zealanders and allow it to be used digitally (Primary)

To contribute to the innovation, efficiency and resilience of New Zealand's money and payments ecosystem (Secondary)

The outcomes we are seeking

Central bank money continues to remain relevant in the digital age and used by individuals and business

Central bank money supports wider digital financial inclusion and wellbeing

Central bank money continues to provide a stable anchor of value and confidence and convertibility of our money

Enable a money and retail payments ecosystem that is more open, innovative and competitive

Contribute to the development of New Zealand's digital economy



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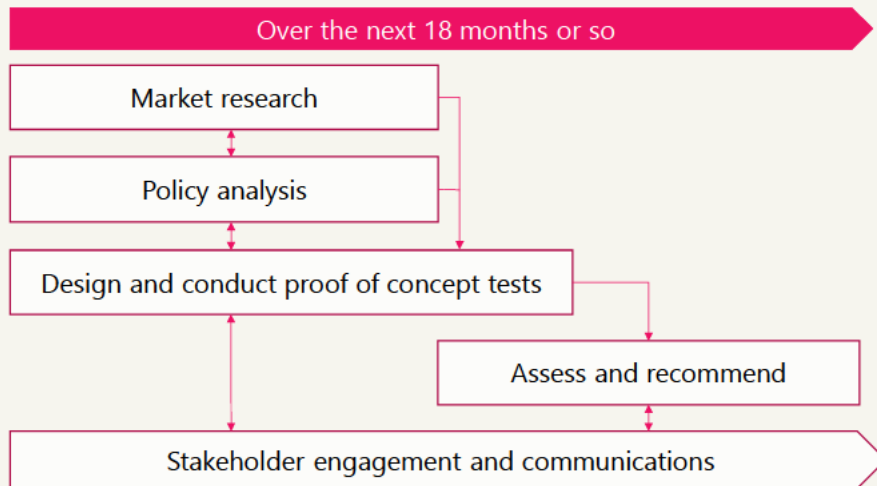
RBNZ specific perspective on CBDC

The CBDC project arose from our concerns towards declining physical cash use

- CBDC should provide a new payment option for people and cash should remain a meaningful choice
- RBNZ role to provide a CBDC that serves the needs of the public broadly, allowing the private sector and others to serve the more sophisticated / specialised needs
- NZD-CBDC should reflect the societal value of the New Zealand people



High level schedule for Stage 2



Proof-of-concept (PoC) tests

As part of Stage 2 work, we are also planning to do PoC tests

'In vitro' testing platforms to gauge viability of technologies that may enable new functionalities to be included in the putative CBDC

The discussions in CBDC Forum will feed into the PoC test designs

Question: What functionalities/technologies would you recommend including in the PoC tests?



Proof-of-concept (PoC) tests (cont'd)

The POC will assess technical and operational feasibility, CBDC design options and the development of high-level technical and operational requirements

The process of operating a CBDC will be considered, from minting, issuing, distributing, withdrawing, making and receiving payments, with varying design features such as holding limits, transaction limits, fees and interest, offline payments and smart money

Depending on the cost and available capability, we may also test:

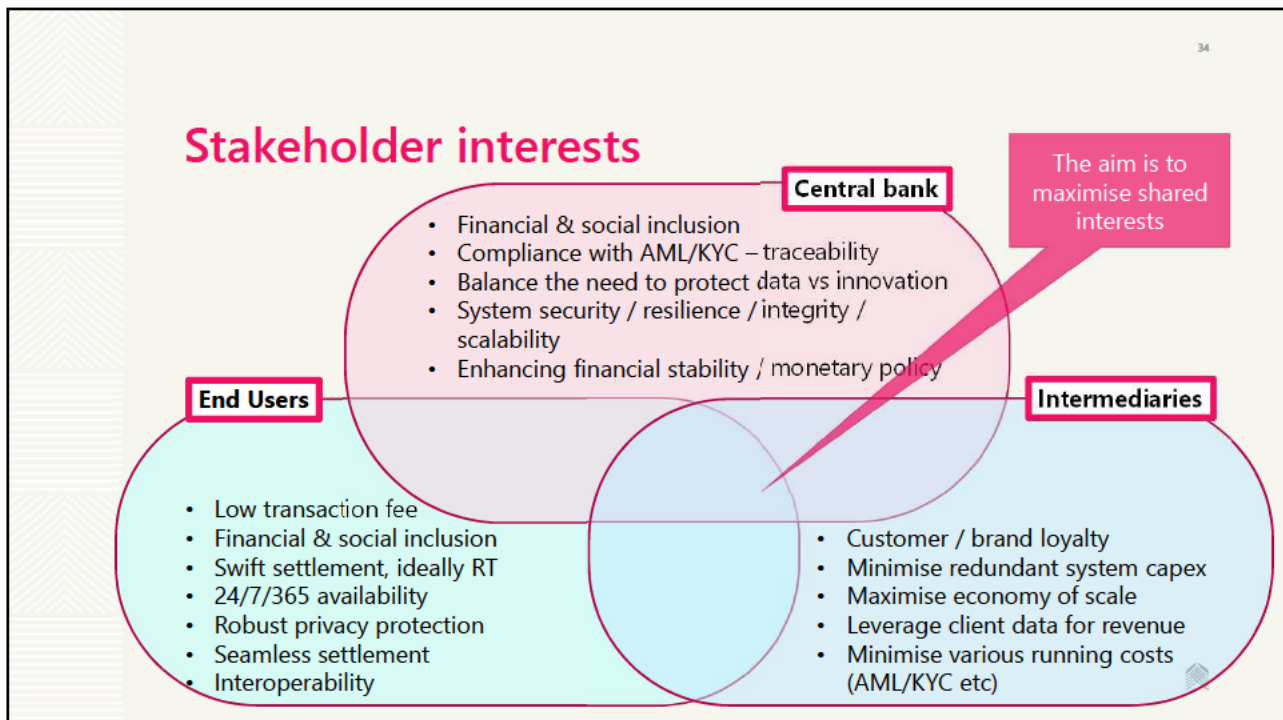
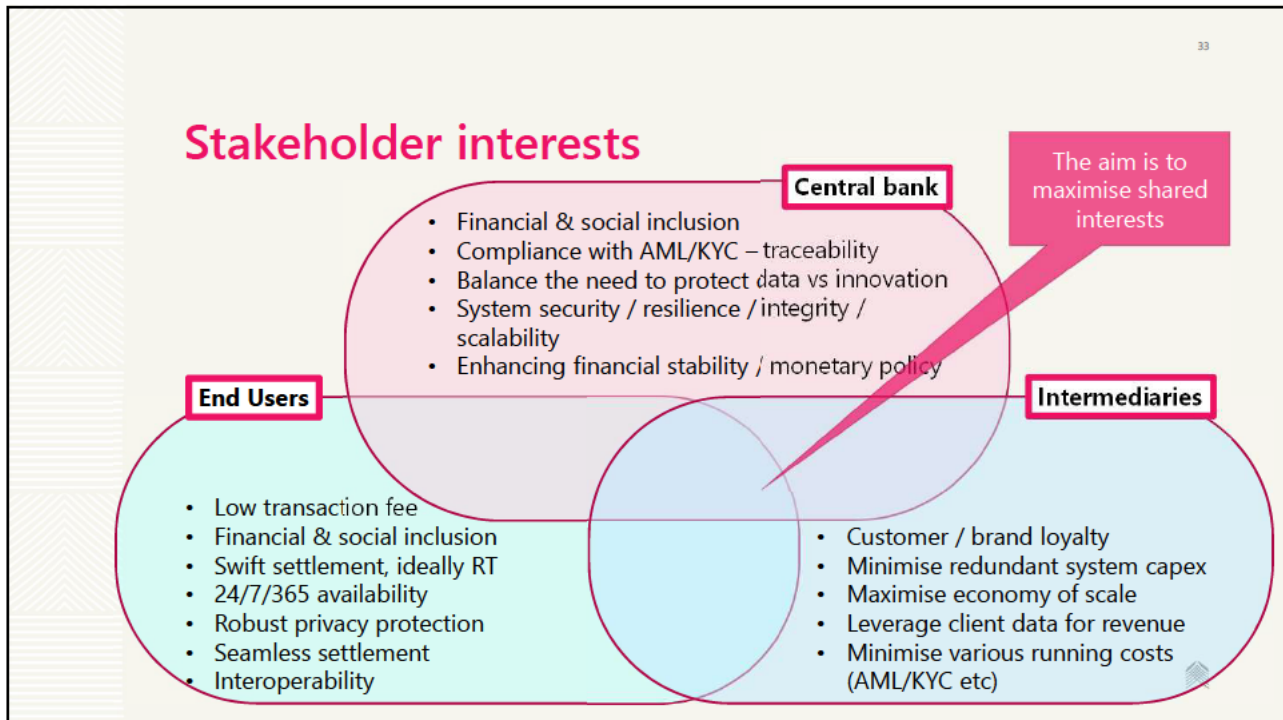
- Interoperability with others such as third party wallets, digital identity products, commercial bank money, POS (Point of Sale) devices, and existing payments switches and systems
- Other specific use cases e.g., G2P (Government to Person) payments



Various stakeholder groups

	Instrument layer		Payment Service layer		Infrastructure layer	
Stake-holders	New Zealanders	Business	Distributor	Payment Providers	Central Bank	
Principles	<i>Uniform</i>	<i>Universal</i>	<i>Cash-like</i>	<i>Innovative</i>	<i>Integrity</i>	<i>Managed Issuance</i>
Likely Needs					<ul style="list-style-type: none"> • Safe and trusted payment means • Resilient system with 24/7 availability • Manage data security and privacy • Processes large transaction volume in real-time • ...etc 	
Design Questions	Key Attributes		Ecosystem Architecture		Governance	
					<ul style="list-style-type: none"> • Roles and responsibilities of various stakeholders in the system • Rules, regulations and standards • Risk management and compliance with existing requirements • ...etc 	





What does privacy mean in New Zealand?

Bella Di Mattina-Beven, Analyst, Money and Cash

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Objectives

At the end of this session, we will have:

- Normalised terms to discuss privacy together
- Surface discussed the tensions and gaps in definitions of privacy
- Considered trade offs that impact privacy decision making
- Looked at different models of CBDC and the preferences of stakeholders for each



Activities

Activity 1.1: Privacy as a mind map

Activity 1.2: Place examples of privacy on the taxonomy (printed for those in person, whiteboard for those online)

Activity 2: Value statements – when do we prefer privacy, and when do we give up privacy? Group discussion and survey monkey

Activity 3: role play the value of potential privacy solutions and the potential views of stakeholders, in small groups



What is privacy in a
money context?

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Activity 1.1: Privacy as a mind map

- Using **online whiteboard**, we will add the words you associate with privacy into a mind map
- What words might you associate with privacy?
- Some examples: human rights, freedom, security, anonymity, protection



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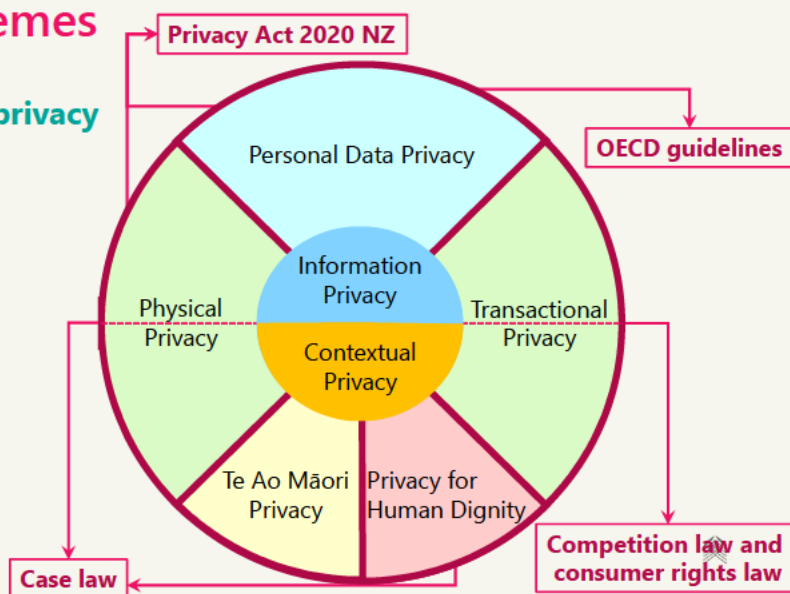
Taxonomy themes

Information / data privacy

- Information privacy
- Transactional privacy

Contextual privacy

- Physical privacy
- Privacy in dignity
- Te Ao Māori Privacy



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Activity 1.2: Fit these examples on the taxonomy

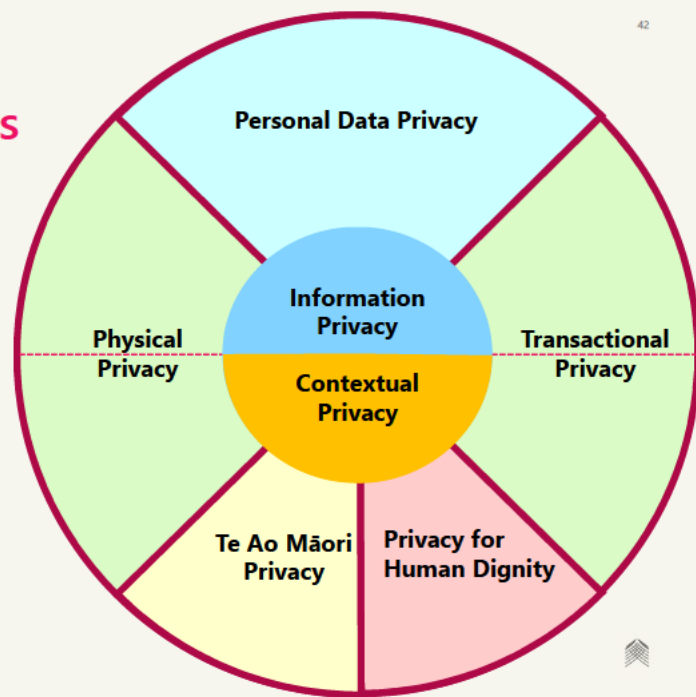
- This will be done with paper cut outs of the statements and posters of the taxonomy for those in person
- For those online, the whiteboard function will be used for those online to situate the statements on the taxonomy



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Taxonomy themes

Where do these statements fit on this wheel?



Why would people give up their privacy, or not?

Activity 2: Value statements

How important are the following statements to you?

Disagree



Agree

We will discuss one statement from each section as a group

Then a surveymonkey will be provided for you to consider your views on each statement

The results of the surveymonkey will be aggregated and shared



Statements of personal privacy #1



45

"I want my financial information to be integrated across mobile apps and services upon my permission"

"I am willing to allow security camera footage of me entering and leaving shops"

"I have given my personal debit card information to online shopping sites"

"I want to leverage my data to access small loans at lower interest rates"

"I want my bank to know my e-wallet details, so they can help me log back in when I have trouble"



Statements of personal privacy #2



46

"The meta data around transactions creates opportunities for governments to leverage that data and exert control"

"I do not want to be identified by my personal data"

"Surveillance and security are designed to target difference"

"Cyber security and privacy breaches are of massive concern"

"When there is a cyber incident I lose trust in the organisation affected"



Statements of collective privacy



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"I want my large transactions to be reported to an agency that stops money laundering"

"I want all New Zealanders to pay their taxes"

"I am willing to permit Inland Revenue to view my transaction account to ensure that all New Zealanders pay their taxes"

"I want the New Zealand Police to stop the financing of terrorism"

"I don't think my transactions should be reported to a financial crime unit without my consent"



Statements of privacy protection



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"It matters who holds my data – a government agency or a company"

"I trust technology to help protect my privacy"

"I think legislation that remediates data breaches is sufficient to protect my privacy"



SurveyMonkey



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<https://www.surveymonkey.com/r/TCLLFZ6>

Results dashboard



Submission quotes

In surveymonkey submissions to our issues paper, privacy was included in 1764 out of 5848 responses (30%)

"Cyber security and privacy breaches are of massive concern and such events destroy trust in organisations"

"Surveillance and security are fundamentally designed to target difference"

"the meta data around transactions within the context of a digital currency, creates unlimited opportunities for governments to leverage that data and exert control"

"I would feel much more comfortable with a CBDC if there was legislation in place that ensured the safety, privacy & sovereignty of New Zealand people regarding their money"



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How to address (contextual) privacy needs in a CBDC?

Activity 3: potential solutions and the views of stakeholders

There are several ways that privacy can be protected by a CBDC. Bearing in mind the different needs and interests discussed in the previous brainstorm, what benefits and trade-offs can you see from these approaches?

In groups of four, each person should consider privacy protection from the position/role of either:

1. A previous victim of credit card fraud
2. Someone who lives and shares their life online
3. Independent bookstore owner
4. A payments service provider e.g. bank, e-wallet provider



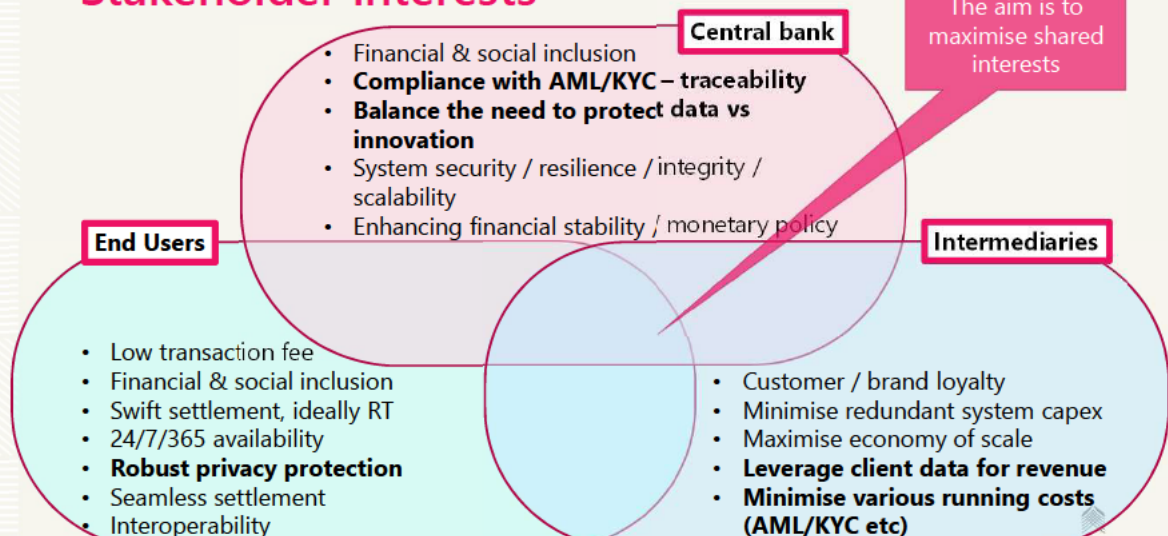
Solutions to protect privacy

	Technological	Governance	Legislative
Low Privacy	Transactions are tied to identity, and shared with all parties to transaction	Operator and Reserve Bank have data ownership and access, can see all transactions	No legal rights of consumers to data or how it is used
Medium Privacy	Tiered CBDC, with anonymous and non-anonymous transaction streams	Operator has data access, can see all transactions, Reserve Bank has data access for law enforcement, taxation	Right of consumers to remediation when data is shared or used without consent
High Privacy	No identity is shared with other parties to payment	Operator has limited data access	Strict regulation on data access and use, with strict penalties

General discussion

Wrap up

Stakeholder interests



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Next session

- Scheduled for the last week of September 2022
(either Monday 26, Wednesday 28, or Friday 30, 09:00-13:00)
- Main topics: Inclusion discussion; update on the PoC design
- Any suggestions to address other topics?



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Workshops

- To engage with stakeholder groups more intensively on particular aspects of CBDC
- To collect facts and insights that will inform the policy process and discussion at the CBDC forum
- Diverse membership
- Fall within two categories:

Industry and technical	Grassroots hui / community
<i>i.e. on innovation, interoperability and resilience aspects of a CBDC ecosystem</i>	<i>i.e. on user needs, and views around privacy and wellbeing</i>



Final thoughts – round or whiteboard

1. How am I feeling about CBDC Forum's potential to help answer the big questions?
2. My biggest insight / Eureka! Moment or learning today was?
3. What's my most burning question about whether a CBDC is right for NZ right now?

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Thank you

Lunch is served!

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Technological solutions to protect privacy

We will explain a few of these technical solutions. Then discuss in your groups how each role/person might react to or preference these options.

Table 3.: Comparison of privacy-oriented CBDC solutions.

	ECB (2019) Anonymity Vouchers	Chaum et al. (2021) Blind signatures	Tun and Drlach (2021) P-hybrid CBDC	Choi et al. (2021) Banking* and Cash*	Veneris et al. (2021) CBDL	Our approach UAS model with ZKPs
Privacy						
Anonymity of the sender	●	●	●	◐	●	●
Anonymity of the receiver	●	○	○	○	●	●
Privacy of transaction amount	○	●	○	○	●	●
Trustless privacy (privacy by design)	○	●	●	○	◐	●



Governance solutions to protect privacy

Governance considers responsibility for maintaining the CBDC system. In this case, your team might consider the preferences of each role for where data should be held.

Table 1: Exemplary and simplified privacy scenarios

	Operator	Government agencies	Third parties
Low privacy	Data access	Data access	No data access
Baseline privacy	Data access	No data access (with exceptions for law enforcement)	No data access
High privacy	No data access (if technically feasible)	No data access	No data access



Legislative measures that protect privacy

The Privacy Act 2020 governs how organisations and businesses can collect, store, use and share your information.

It ensures that:

- you know when your information is being collected
- your information is used and shared appropriately
- your information is kept safe and secure
- you can get access to your information and correct it

There are also Privacy Codes of Practice that have privacy rules for personal information in specific areas, such as health, telecom, and credit reporting.

How might each role in your group perceive legislation that protects privacy?

- Is it too reactive to privacy breaches?
- Does it act as an effective deterrent?
- Does it serve as a liability or risk for an e-wallet provider?



Minutes

Subject	CBDC Forum
Meeting Date	29 July 2022
Meeting Time	9:00am
Venue	Reserve Bank of New Zealand and Microsoft Teams
Attendees	<p>Members: Adrian Smith, Alexandra Sims, Brian Bonar, Conrad Morgan, David Corbett, Fran Strajnar, Jane Retimana, Jennifer Ferreira, Joanne Dacombe, John Warwick, Michelle Kitney, Mitchell Pham, Paul Quickenden, Simon Jensen, Steve Mander.</p> <p>Reserve Bank: Amber Wadsworth, Bella Di Mattina-Beven, Duncan Gibb, Ian Woolford, Kate Johnson, Kosta Hahladakis, Makoto Seta, Peter Northcote, Robbie Taylor, Samuel Kirk-Reeve.</p>
Apologies	None.

1. Mihi Whakatau and Introductions

Members were welcomed with a mihi whakatau from Kaiārahi Māori, Ngarimu Parata. This was followed by Ian Woolford, Director of Money & Cash, outlining his vision of how the CBDC Forum will fit into the Reserve Bank's wider CBDC work programme. The Reserve Bank has moved from a watching brief, to talking about CBDCs, to getting more real about it, which is why it is exciting that this group is being formed. He encouraged members of the group to be bold. Peter Northcote, Senior Adviser Stakeholder Engagement, then provided an overview of health and safety protocols and other housekeeping matters.

Members then took turns introducing themselves to the Forum. As part of their introduction, they were encouraged to identify either a strength or weakness to ensuring good decision making on introducing a CBDC for New Zealand, or an opportunity or threat of a CBDC.

Some common themes were raised in this SWOT analysis. Opportunities that were identified included a CBDC driving a new innovation cycle, similar to the development of EFTPOS, which could help make the payment infrastructure more efficient and less costly. It could also be an opportunity for improving how industry and government work together. Risks included the challenge of creating something that is scalable, as well as ensuring that those that are digitally excluded are not disadvantaged from not being able to fully realise the benefits of a CBDC.

2. Reserve Bank's Motives for Exploring a CBDC

Makoto Seta, Advisor Money & Cash Policy, discussed the Reserve Bank's motives for exploring a CBDC. These include addressing the decline in use of physical cash, future proofing the cash system to ensure it remains fit for purpose, and fostering innovation to enhance the welfare of New Zealanders by increasing efficiency in the payments system.

Some questions were raised by members. The first was on the importance of cash acting as a value anchor when banks already have significant NZD balances in Exchange Settlement Account System (ESAS) accounts. Reserve Bank staff clarified that if you take away public access to central bank money, then other measures (such as trust) would need to be relied upon to ensure exchange between different forms of private money would continue to take place at par value. In extreme situations, this might to start breakdown if there is no backstop for consumers. Additionally, the value anchor role is one important part, but there are also efficiency and inclusion elements too. While central bank money does provide a value anchor, the Reserve Bank will need to explore the interactions between cash and CBDC going forwards.

Members also raised that when talking about the money layer, it is easy to think about individuals or institutions holding money. But there is a third case of financial instruments holding money (i.e. non-human holders of money) – an aspect that could be included in the proof of concept. Reserve Bank staff noted that they are doing some thinking around the ecosystem and its layers, and this will be a topic discussed in a future Forum meeting.

Members also asked for further information on the problem statements a CBDC would seek to address. Reserve Bank staff noted that the Reserve Bank’s high level drivers for looking at a CBDC are strategic, not commercial ones, but that a CBDC would need to be attractive to users and this would be the focus of future work.

3. Privacy Workshop

Bella Di Mattina-Beven, Analyst Money & Cash Policy, outlined the objectives of the session on considering what privacy means in New Zealand. This began with an activity where members outlined what they associate with privacy. These were noted on the following whiteboard:



Comments from members during this activity highlighted that the root cause of the strong opinions on privacy expressed in the submissions to the issues papers is the growing distrust in

institutions. This distrust might arise because there is not a clear understanding of who has access to what data. There are concerns about combining a digital currency with digital identities and a member noted that data would always be created in digital systems (i.e. traces of events). In terms of privacy, it is important to consider protection and control – who sees those traces and who has access.

Members were asked what else privacy means to people in New Zealand, other than from a transactional sense. Members highlighted that privacy is not a binary concept and that different levels of access could help manage some people's concerns. Others pointed out that self-determination is an important component. From a Te Ao Māori view, there is some distrust in the government – particularly around government having access to certain kinds of data. Privacy and security also works until it doesn't – there are still frequent breaches and hacks that compromise trust. Lastly, there is a physical aspect to privacy, whereby individuals using a CBDC might expose themselves to harmful online behaviours. With people's data being available, there are risks that impacts in the digital space might flow into the physical space too.

For the second activity, members were asked to consider and discuss several value statements related to privacy. The first was:

"I want my financial information to be integrated across mobile apps and services upon my permission."

Members noted that while they might be comfortable giving permission, they also need to be able to easily remove the permission too. Others highlighted that they would be comfortable if data was given through a delegated account (i.e. in a contained environment that is linked to a person's identity) – illustrating the different levels of privacy that people might need across the system. It was also pointed out that this statement is related to consumer data rights, and is an extension of open banking data sharing but in a CBDC context.

The second statement discussed was:

"The meta data around transactions create opportunities for governments to leverage that data and exert control"

Members noted that if there was an ability to share data, then information on the organisation or institution becomes important as the data owner. To be an informed decision maker, people will want to know how well placed those organisations are to protect their data.

Robbie Taylor, Manager Money & Cash Policy asked whether changing the wording from 'governments' to 'corporates' changes anyone's thinking. Some said it wouldn't. Others said that it would – a lot of people very willingly give up their data to corporations (which might be because they can exert less control over people than governments e.g. imprisonment).

Members noted that in their breakout session they discussed all the ways that information leaks out into the world. They questioned whether it could be valuable to have a design principle outlining that a CBDC would have no additional leakage – subject to democratically valid reasons (e.g. serving warrants) that come through law.

It was also noted that there is a difference between trustable and trusted and, as long as cash is available as an alternative, a CBDC doesn't need to win over everyone. Therefore, the design doesn't need to meet everyone's needs. However, Amber challenged the point of view that technology won't win over someone that doesn't trust centralisation. She asked how, thinking

more laterally, we could address contextual needs – for example, the fact that people don't trust the government.

Members responded that trust comes down to who will put things right. People trust their banks because if something goes wrong, the bank sorts it out for them. From a Māori perspective, the more government demonstrates that they will put something right, the more that balance changes. Concerns were raised on how a data breach would be managed. People can trust you all they like, but if you break that trust then it becomes very difficult to win it back.

On designing trust into the system, members noted that AirBnB were the forebears in this. Their key problem was how to trust that a person won't rob you when renting out a spare room. Behavioural studies showed that people were concerned when guests arrived that did not look like them. But when someone had ten or more five star ratings, what the guest looked like was irrelevant. So, through social proofing and star ratings, they solved their key problem. This could also be designed into any CBDC system.

The third activity involved considering privacy protection from the position / role of various groups in society. Members were asked about their views on what benefits and trade-offs they could see, bearing in mind the different needs and interests discussed in the previous brainstorm session.

The in-person group highlighted that, in a world with CBDC, someone desiring complete anonymity (like cash) might want to forgo the safety nets that are in place today. It was also pointed out that this was an example of a binary conversation – but adding new actors (like an identity custodian) allows you to break out of that. For example, a starting point might be that everything is anonymous, except people have nominated an entity to have read-only access to all their data. When that person enters into a situation where there is a need for detail, there is now a port of call (this might be for AML/CFT purposes or serving a warrant). There would have to be many different trusted entities people could select from to fill that role – for example, there might be one for each iwi, or it might be a bank, public trust, or some new entity. Regardless, these trusted entities connect with the individual, who can trust them to follow the rules.

4. Conclusion and Next Steps

Robbie concluded the first meeting. He thanked members for engaging in the conversation and asked for suggestions for other topics, which the Reserve Bank could look to work into our planning for future meetings.

Suggestions included:

- Further content on context including, for example, what other countries are doing and any risks they may have encountered;
- Further content on the problem statement;
- Highlighting the work going on elsewhere in the Reserve Bank that feeds into this work including, for example, on cash policy;
- Evaluating the 'size of the prize' and the opportunities of a CBDC and the value it might unlock;
- Discussing inclusion as the central theme of the next meeting; and
- Outlining the program overview of how the Forum will work over the next 18 months.