



## RBNZ Consultation Paper ‘Digital Cash in New Zealand’ – DSG Submission

### About DSG

1. DSG is a New Zealand-based startup specialising in bringing traditional financial assets, such as shares and bonds, on-chain. Our platform leverages blockchain technology to provide a secure, transparent, and efficient settlement infrastructure.
2. Our platform is built on the Ethereum blockchain, utilising the ERC-3643 token standard. This standard is enhanced by the layer-2 solution Polygon, which allows for high-speed transactions with lower fees. ERC-3643 integrates Decentralised Identity (DID) protocols, ensuring that all users are verified, and all transactions comply with AML/KYC regulations. This permissioned access control ensures that only authorised individuals can hold and trade tokens, maintaining the integrity and security of the marketplace.
3. DSG is deeply committed to regulatory compliance with financial services regulations and Anti-Money Laundering and Countering Financing of Terrorism rules. Our vision is to enable seamless and secure digital transactions that can foster economic growth and financial inclusion.
4. We support RBNZ Digital cash initiatives and agree with the opportunity stated in the RBNZ dossier:

*4.1.1. Tokenised Asset Ecosystem CBDC would create a new, more efficient settlement infrastructure for Capital Markets by enabling settlement in CB money and speeding up time to market for security issuances. CBDC are an essential component of a Tokenised asset ecosystem, enabling instant settlement of assets reducing risk and liquidity required to execute transactions.<sup>1</sup>*

5. In the context of the RBNZ consultation on digital cash, DSG hopes to offer some insights into the strategic design phase and wants to focus our submission on questions 8-12:

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<sup>1</sup> List of CBDC benefits, page 16 [cbdc-insights-dossier-for-public-1.pdf \(rbnz.govt.nz\)](https://www.rbnz.govt.nz/assets/Uploads/cbdc-insights-dossier-for-public-1.pdf)

**Q8 Do you have feedback on the digital cash design models and the Reserve Bank's preferred approach set out in section 6?**

6. We favour a position that is more akin to 'supporting the market' for functionality and 'market led' for control with respect to the design model<sup>2</sup>. We believe RBNZ and treasury should focus on establishing a regulated wholesale market for digital cash and on-chain treasuries. A private sector-led approach to the development of payments and digital cash, supported by government-issued digital collateral and a clear regulatory framework leverages the strengths of both the private and public sectors, promoting innovation while ensuring financial stability and consumer protection.
  
7. To summarise the difference in RBNZ proposal of Centralised CBDC and Government-Issued Digital Collateral to create a regulated wholesale market:
  - 7.1. **Centralised CBDC:** The Reserve Bank's proposal involves the issuance of a centralised CBDC directly by the central bank, which would be used by the public for payments and as a store of value. This model centralises the control and issuance of digital currency within the central bank, potentially limiting private sector innovation. In a centralised CBDC model, the central bank maintains control over the issuance and distribution of the digital currency. While this may provide greater control, it could stifle innovation and limit the diversity of potential products available to consumers.
  
  - 7.2. **Government-Issued digital collateral using distributed ledger technology (DLT) for regulated wholesale:** Under this proposal, the RBNZ, in conjunction with the treasury, would issue digital collateral (e.g., digital cash and treasuries that uses DLT) to a regulated wholesale market so that innovative new business models, such as challenger banks, online deposit takers and money market funds could access new infrastructure. We understand that wholesale digital central bank money is not new, but importantly we consider that the opportunity to modernise

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<sup>2</sup> We also consider mapping of functionality on the horizontal axis in Figure 7 and 8 of the [RBNZ Consultation Paper](#) assumes that greater control achieves greater functionality. We think this is inconsistent to the current development smart contract applications in blockchain. Although network effects are essential for adoption, having greater emphasis permissionless innovation and interoperability ensures consumers have access to the best blockchain functionality that the world has to offer.

the infrastructure using distributed ledger technology will allow new business models to be developed, while retaining the monetary anchor of central bank money.<sup>3</sup>

This collateral could be used by the private sector to develop payment solutions and other financial services without the need to access and store physical cash or build complex legacy settlement infrastructure. The approach leverages blockchain technology to ensure transparency and trust in the private market by providing a stable foundation for innovation. It also encourages competition, fosters technological advancements, and ensures that the digital currency ecosystem evolves in response to market demands and consumer needs. The commercial incentive will ensure these developments continue to be well resourced.

### **Regulation and Financial Stability**

8. While there are several key differences, we understand that DSG's proposal of a developing a regulated wholesale market to support the issue of digital private money would open the door for the adoption and use of NZ stablecoins. We agree with RBNZ's concern that stablecoins are subject to unnecessary credit risk and systemic concerns over monetary sovereignty.<sup>4</sup> However, in our view, these risks stem from centralised custody and the use collateral which is not part of the monetary base, in a manner that lacks transparency, real time verification and regulatory oversight.
9. By utilising blockchain technology, the collateral backing digital cash issued by regulated wholesale participants will be transparent and publicly verifiable. This reduces the counterparty risk, as all transactions and collateral holdings are recorded on a tamper-proof digital ledger. The use of on-chain risk free collateral, such as digital treasuries, eliminates the opacity associated with traditional paper-based collateral that stablecoins use.<sup>5</sup>
10. Regulation can establish clear rules for collateralisation ratios, interest rate risk and ensure that private digital cash remains fully backed by risk-free collateral. It could also introduce standards to ensure fungibility across the network. Implementation of the regulatory framework could be

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<sup>3</sup> The distinction between the current of wholesale digital cash, and a more modern equivalent is discussed in a speech by Fabio Panetta, Member of the Executive Board of the ECB, [Demystifying wholesale central bank digital currency \(europa.eu\)](https://www.ecb.europa.eu/press/pr/date/2018/html/pr180912_1.en.html)

<sup>4</sup> Page 17 of the [RBNZ Consultation Paper](#)

<sup>5</sup> The largest stable coins, Tether and USDC, have centralised, largely unregulated paper-based collateralisation mechanisms.

hard coded by design and monitored in real time to ensure stability of the digital currency ecosystem. Unlike traditional prudential regulation, where credit risk is managed through capital requirements recorded and tracked on internal databases, the use of blockchain technology allows for real-time monitoring and verification of collateral. This makes regulatory oversight more efficient and effective, ensuring that all digital cash in circulation is adequately backed by high-quality collateral without imposing heavy administrative burdens on regulatory bodies.

11. We note there would have to be a similar type of consideration for the impact on the banking system as with a centralised CBDC design. System limits could be imposed and any issue of on-chain collateral by the government should be incremental but ultimately, providing wholesale access to government backed digital securities would enable greater competition in payments and banking by lowering barriers to entry for digital services.

### **Ensuring Sustainable and Customer-Centric Innovation**

12. Having a regulated private sector issue digital cash ensures that the ongoing burden of developing and maintaining a secure and interoperable payment infrastructure is driven by commercial incentives. This approach leverages the competitive nature of the private sector to continuously innovate and improve payment solutions.
13. Private sector-led development places the focus on the customer, ensuring that digital cash solutions are user-friendly, efficient, and responsive to consumer needs. Interest payments and other financial returns could be automated through smart contracts, ensuring timely and transparent distribution of benefits to digital cash holders. This approach leverages blockchain technology to enhance efficiency and trust in the financial ecosystem.
14. This customer-centric approach encourages the creation of value-added services and features that enhance the user experience.
15. Allowing commercial incentives to dictate the development of smart contracts and applications ensures that the solutions remain relevant and efficient. This approach encourages continuous innovation and adaptation to emerging technologies and market needs, similar to how private companies have led advancements in fintech and digital payments (Brunnermeier & Niepelt, 2019).

16. The Commerce Commission, in its draft preliminary findings on competition in the retail banking sector, noted a reliance legacy systems constrained the ability of the major banks and Kiwibank, as well as fintechs, to innovate and compete.<sup>6</sup> Our contention is that if new financial services were permitted to build on DLT, it would disrupt the current complex legacy banking infrastructure which we agree is acting as a barrier to innovation and competition.

### **Distribution of Digital Cash**

17. For DSG's proposal, only regulated entities would manage the distribution and infrastructure necessary for kiwis to access and use digital cash. This is more likely to ensure a secure and interoperable network driven by commercial incentives.

18. The equivalence of private and public money, as discussed by Brunnermeier and Niepelt (2019)<sup>7</sup>, highlights that private digital currencies, when properly collateralised and regulated, can function effectively alongside traditional forms of money. The issuance of digital collateral by the government can bridge the gap between private innovation and public trust, fostering a robust and resilient digital currency ecosystem.

### **Q9 What role might your firm or organisation take in the digital cash ecosystem, and what support would you require from the Reserve Bank?**

19. We think regardless of whether the design favours the CBDC approach or digital cash created by the private sector, self-custody of digital cash could allow instantaneous settlement of on-chain securities and would support DSG's vision of tokenisation of capital markets. This would increase efficiency of operations and reduce counterparty risk as custody of the settlement funds does not need to be performed by intermediaries.

20. With our proposal, we see that a design and testing phase could be started much earlier than the RBNZ proposed timeframes for implementing a retail CBDC, as both the level of risk and required resource to issue the digital collateral to a regulated wholesale market is minimal by comparison. The relative risk of starting with a wholesale design was discussed in a 2022 paper

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<sup>6</sup> See Chapter 9 Digital disruption and impediments to innovation | Te tauwhatinga matihiko me ngā ārai ki te auahatanga [5BPUBLIC5D-Draft-report-Personal-banking-services-market-study-21-March-2024-Amended-10-April-2024-.pdf \(comcom.govt.nz\)](#)

<sup>7</sup> Brunnermeier, M. K., & Niepelt, D. (2019). "On the Equivalence of Private and Public Money." *Journal of Monetary Economics*, 106, 27-41.

'An update on rationales for issuance and systemic design considerations' supporting the RBA research project into CBDCs:

*...it seems unlikely that there will be actual issuance of retail CBDCs in higher-income countries anytime soon. For example, the European Central Bank's timetable would suggest possible issuance around late 2026 at the earliest. However, we conjecture that wholesale CBDCs could potentially be implemented sooner than that. This reflects a number of factors including: (i) conceptually, a wholesale CBDC would arguably represent only a modest technological modification to the settlement/reserve accounts that central banks currently provide; (ii) wholesale CBDCs might be less of an issue politically than retail CBDCs; and (iii) there has already been significant experimentation involving wholesale CBDCs that gives some confidence that implementation could be feasible and not overly subject to significant risks.<sup>8</sup>*

21. DSG could assist with the issuance and servicing of on-chain collateral and could support Treasury and RBNZ during testing and phased implementation.
22. While New Zealand could pioneer in this space, we wouldn't be the first to issue digital bonds. The Hong Kong Special Administrative Region (HKSAR) Government successfully issued approximately HK\$6 billion worth of digital green bonds in February 2024. This digital bond issuance builds on Hong Kong's inaugural tokenised green bond offering from February 2023. The initial tokenised bond was the first of its kind issued by a government globally and was part of Project Genesis, an initiative by the Hong Kong Monetary Authority (HKMA) in collaboration with the Bank for International Settlements Innovation Hub.
23. *What products and services would you build off the options?*
24. If the private market is supported to develop reliable infrastructure for digital cash, DSG could facilitate instantaneous transactions in capital markets (primary or secondary) without the need to custody client assets.
25. *What design functionality would you need to support you?*

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<sup>8</sup> At page 14 [Central-Bank-Digital-Currencies-CBDCs-An-update-on-rationales-for-issuance-and-systemic-design-considerations.pdf](https://dfcrc.com.au/Central-Bank-Digital-Currencies-CBDCs-An-update-on-rationales-for-issuance-and-systemic-design-considerations.pdf) (dfcrc.com.au)

26. In our view digital collateral should use a well-established global standard for on-chain securities such as ERC3643. This would ensure maximum interoperability and competition.

27. *What core functionality should be provided by the digital cash platform and what should be provided by the market?*

28. Standards should be developed to ensure interoperability of digital cash. Key security measures, just as freezing and restoring access to customer assets, should also be in place.

29. *What key governance measures would you expect the Reserve Bank to provide in the digital cash ecosystem?*

30. For our proposal the governance measures should be imposed on the regulated wholesale market in a way that would leverage existing privacy, AML and financial services regulation.

**Q10. Third party intermediaries will own the customer relationship including managing onboarding and AML/CFT requirements. What support or enabling functionality would you require as a potential third party?**

31. Under DSG's proposal, consumer facing functionality will be developed and maintained by regulated third parties. Freezing and restoring client assets is essential and already possible using new standards applying to blockchain infrastructure.

**Q11. Do you expect interest to be paid on digital cash holdings?**

32. We believe this is something competitive markets will develop if a wholesale market price exists across the term structure.

33. Private sector entities could offer interest rates to holders based on the yield of the underlying digital treasuries. This model ensures that digital cash holders benefit from interest earnings, similar to traditional savings accounts.

**Q12. Do you think there should be holding limits for digital cash or any other controls on issuance?**

34. We think initial stages of testing and implementation of any system design would involve an assessment on the impacts to the banking system. Limits on customer balances and transaction

sizes could be managed by the regulated wholesale market and through limiting the amount of digital collateral available to the wholesale market in a phased approach.