Public call – "The Digital Shekel Challenge"

The Bank of Israel calls on various entities to join an initial trial to develop innovative and varied use cases as part of the work plan for the potential issue of a digital shekel.

The Digital Shekel Challenge draws inspiration from the Rosalind project carried out in 2022–2023 by the BIS Innovation Hub (London Centre).

1. Background and Objectives

The aims of the Challenge are: to involve the payments ecosystem in Israel and in the world in the thought process of the characteristics that are required for a Digital Shekel system so that such a system will be able to support a variety of innovative use cases in the world of payments; analyze and demonstrate the Digital Shekel's potential to offer such use cases in the Israeli economy; and enable to Bank of Israel's Steering Committee, for the Potential Issuance of a Digital Shekel, to receive feedback about certain components of the digital shekel's emerging design.

The Challenge refers to the two-tier model for the issuance of a CBDC by the Bank of Israel. That model is centered on an API layer that provides a set of functional capabilities that will enable payment service providers and additional service providers to connect to the Digital Shekel system and offer end users among the public a broad and innovative variety of services, while maintaining the privacy of end users, the security and reliability of the payment system.

2. What is done in the Digital Shekel Challenge?

Contestants in the Challenge will be asked to technologically develop various use cases for a digital shekel, while using the API layer provided by the Bank of Israel.

Preference will be given for use cases with innovative characteristics in the payments market, whether they are improvements to existing applications or completely new applications. The use cases can offer a solution to existing or future problems in the market, they can be adapted to the unique needs of certain population groups, or they can provide a response to potential consumer fields and capabilities that can be enabled through a Digital Shekel and developing or future technology that could help in the field.

While some of the use cases may be universal by nature, it is important that they are specified and presented in the context of uses that are relevant to the Israeli economy.

3. Examples of use cases that can be developed in the Digital Shekel Challenge

The system can support payments between a variety of end user types (individuals, businesses, government and the public sector, nonprofits, and so forth) in a variety of access technologies (smartphone, Internet application, feature phone, POS proximity card (NFC), smart card, QR code, etc.) and in a variety of payment cases that already exist (large and small amounts, receiving wages, payment of rent, in-store or Internet purchases, bill payments, receiving transfer payments, public transit, peer-to-peer transfers, donations, and so forth). The APIs also support RequestToPay transactions and applications derived from this ability.

In addition, the APIs can enable advanced and innovative use cases, for example:

Use scenario	Definition	How is it supported in the Challenge?	Examples of user journey
Split payment	Payment split between two or more beneficiaries	"SplitPayment"	The end user makes one payment, which is then separated automatically between the involved businesses. For instance, a delivery company, the

Use scenario	Definition	How is it supported in the Challenge?	Examples of user journey
			delivery person, and the restaurant.
			A private individual who splits one payment among a number of private beneficiaries. For instance, to refund an expense incurred by a group.
			A merchant splits payment to two beneficiaries, such as a service provider and an agent.
Micropayments	Transactions worth small amounts	Support of transactions with low denominated amounts of up to one-thousandth of a shekel	Payment through a pay-as-you-go method for a service or product that is highly divisible, such as parking time or lines of an article that are read.
Conditional payments	Payment that begin with the payer "locking" the money for the beneficiary, and ends with the lock being released if a prearranged condition is met.	"TwoPartyLock" – a lock in which two system participants are involved	A Delivery versus Payment (DvP) transaction in which the payment is locked and transferred (in whole or in part) to the beneficiary only once the product or service is provided. For instance, payment upon receipt for a

3

Use scenario	Definition	How is it supported in the Challenge?	Examples of user journey
			supermarket delivery
		"ThreePartyLock" – a lock in which three system participants are involved	A DvP transaction that enables an additional party (other than the payment provider, the payer, or the beneficiary) to make a transfer against a locked balance. For instance, a shipping company in the case of a complex import transaction.
		"HTLC" – a mechanism to lock a balance and release it against use of a unique "key" used to break a "hash".	A DvP transaction that is realized based on exposure of a "key" between users of another network, for instance on the basis of a smart contract that conditions the key's exposure on the release of the asset. For instance, a smart contract to transfer ownership of a vehicle against exposure of the "key" on one network and use of the "key" to release the locked balance to the seller on the Digital Shekel network.

Use scenario	Definition	How is it supported in the Challenge?	Examples of user journey
			A Payment versus Payment (PvP) transaction for the conditional transfer of money over two different networks. For instance, for payment transactions between entities involved in a cross-border transaction, or a payment of digital shekels from one party against the payment of a cryptographic asset from another.
Subwallets	A wallet that is connected to the main wallet and can be supervised by it	"OpenSubWallet"	A children's wallet supervised by the parent, who can decided whether to permit or suspend its operation. For instance, as a financial education tool, payment of allowance, etc.
			A wallet for a business unit supervised by the company's headquarters.
Advanced information-based services	The activity of the simulated users in the challenge will generate information that can be used to make		Presenting Digital Shekel balances for end users close to balances of the user's types of money or other financial assets.

Use scenario	Definition	How is it supported in the Challenge?	Examples of user journey
		various services accessible.	Budget management services for private individuals and merchants.
			Cash flow management services for merchants.

4. The stages of the challenge

<u>In the first stage</u>: Entities interested in contesting in the Challenge will submit their request through a Registration Form attached (hereinafter - the Registration Form) in which they will concisely present the same idea that they wish to implement in the Challenge. For this purpose, it is recommended to use the Accompanying Document, (hereinafter - the Accompanying Document), which includes a description of the framework architecture of the experimental Digital Shekel system that will be implemented in the Challenge, as well as a functional description of the APIs.

All the relevant documents are on the <u>Digital Shekel Challenge website</u>.

Additionally, interested parties who wish to apply the challenge will approve the document of Participation Terms attached to the call for entries (hereinafter- the "Participation Terms"). Approval of the Participation Terms constitutes a prerequisite for participation in the challenge.

<u>In the second stage</u> (*): Contestants who are chosen from among all registrants will receive the necessary technological details and access to the API layer that will be used in the experimentation, to examine the applicability of the proposed idea.

The development itself will be done in the independent technological environment of each contestant, and the contestant will need to present a full implementation of the

proposed use case, including the front-end interface that is used by the end users, while operating the Digital Shekel system core using the APIs layer.

The Bank of Israel will select a small number of applicants, who will be invited to contest in the second stage, at the Bank's sole discretion, partly based on a number of criteria:

i. The innovation in the proposed use scenario;

ii. The proposed use case's compatibility with the needs of the Israeli economy;

iii. The proposed use case's ability to support the motivations presented by the Bank of Israel for the potential issuance of a Digital Shekel (competition, innovation, redundancy and resilience of the payments array, cross-border payments, privacy, reducing the use of cash by making the Digital Shekel more accessible to population groups that frequently use cash) ;

iv. How the APIs functionality is used to implement the solution;

v. Preference will be given so that contestants in the project will be from a wide variety of entities (banks, payment service providers, fintech and bigtech firms, academia, government, civil society).

The Bank of Israel has the right to condition the transition to the second stage on the signing of an additional agreement, to the extent necessary, in accordance with the Bank of Israel's sole discretion and full satisfaction.

(*) The Bank of Israel is permitted to limit the number of contestants in the second stage, or to stop participation of any contestant in the second stage, or to decide not to hold the second stage or to change it, at any time, at its sole discretion.

5. The Judges

The Bank of Israel has established a team of experts for the Challenge. The team includes:

- **Mr. Oded Salomy**, Director of the Bank of Israel Payment and Settlement Systems Department
- **Mr. Daniel Idan**, Senior Advisor to the BIS Innovation Hub (Swiss Centre)
- **Ms. Oranit Shinar**, Partner, RAIN Venture Finance
- **Ms. Merav Harnoy**, Managing Partner, Moneta VC

The committee of experts will judge and rank the outstanding projects, according to the following criteria:

i. The originality of the proposed solution, in general and in reference to the existing payment solutions in Israel and abroad;

ii. The innovation of the proposed solution;

iii. The use of the APIs' functionality in implementation of the solution;

iv. How the solution supports one or more of the motivations that the Bank of Israel has published for the potential issuance of a digital shekel;

v. The quality of presentation and demonstration of the solution;

Trying to decide whether to compete? Do you want to ask us any questions? Join the webinar at the following link "The digital shekel challenge – Ask Us Anything" that will be held on 9.6.2024. You can also send questions to the following email address: digitalshekelchallenge@boi.org.il

6. Who can compete in the challenge?

The invitation to submit an application to be a contestant in the Challenge is open to anyone interested in studying or experiment in the use of the Digital Shekel. We emphasize that competing in the Challenge includes technological development, and requires appropriate capabilities, as detailed in the Accompanying Document to this Public Call. The competing teams may include commercial banks, financial service

providers, payment service providers, fintech firms, academic innovation labs, public sector and nonprofits, or any other field.

Registration is open to entities from Israel and abroad. Preference will be given to uses that are relevant for the Israeli payments array and ecosystem.

7. How to submit an application to compete in the Digital Shekel Challenge

Teams interested in competing in the Challenge are asked to fill out a Registration Form, including a presentation of the team members, a brief description of the idea for use in the challenge, and more. Additionally, candidates are requested to confirm the document of Participation Terms in the challenge on the registration form.

The registration form should be sent by email to digitalshekelchallenge@boi.org.il, no later than 11/7/2024.

The Bank of Israel may request additional information to examine the request at its sole discretion.

8. Expected timeline
- Publication of the public call-28/5/2024
- Webinar " The digital shekel challenge - Ask Us Anything" - 9/6/2024
- Registration deadline -11/7/2024
- Publication of the list of selected contestants- 22/7/2024
- Technological workshop for contestants - 5/8/2024
- Progress monitoring
- Product presentation meetings to the judging panel - 25-26/9/2024
- Summary conference and demo day - Final date TBD

9. Clarifications and reservations

a. This public call does not constitute a Request for Proposals and is not part of tender procedures. Therefore, it does not create any obligation of the bank towards any of the respondents to purchase any product or service, and it is not subject to the tender laws applicable in Israel. To the extent that a tender procedure takes place in the future, the bank will be entitled to change or add conditions and requirements, all according to its professional judgment and according to its needs.

b. Respondents to the public call will bear the expenses of preparing the response, and will not be entitled to any compensation or indemnification for said expenses.

c. The bank may reply to all of the replies received, to some of the replies, or not to reply to any reply at all. In any case, any reference by the Bank to this document will not be valid, unless given in writing.

d. The bank will be entitled to contact the respondents to this public call, all or some of them, with a request to complete information and receive clarifications for the answer that is to be submitted, and any additional information that the bank believes it has to help it understand the answer.

e. The bank reserves the right, at any time, to make changes or amendments to this call, whether on its own initiative and whether following the appeal of any third parties. The changes or corrections in the public call will be made in a written notice, and will be published on the bank's website. It is the responsibility of the respondents to check from time to time the bank's website, if there have been changes in the wording of the public call and to adjust their answer to changes, as they apply.

f. It is clarified that participation in the challenge does not give the contestants any right to contract and/or any other future cooperation with the bank, and the bank will not be obligated to any such contract and/or cooperation.