



Digital Shekel Project Progress Report 2025



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Bank of Israel – Steering Committee for the Potential Issuance of a digital Shekel
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Executive Summary

In recent years, the Bank of Israel has been working on a project examining the possibility and implications of issuing a Central Bank Digital Currency (CBDC), which in Israel will be referred to as the “Digital Shekel” (abbreviated as “DS”). In March 2025, the Bank published a preliminary design for the Digital Shekel system. Upon completion of the design process, a two-year work plan was established for the project, designed to enable the Bank to reach a decision by the end of 2026 regarding the potential issuance of a digital shekel in one form or another. As part of this plan, the project’s activities in 2025 focused on several core areas. This document provides the public with a comprehensive update on the project’s work during 2025, and explains how its outcomes support the Bank’s capacity to make an informed decision regarding a possible issuance of a digital Shekel. The chapters of the document describe the principal areas of work and their respective findings.

Chapter One presents a cost-benefit analysis of issuing a digital shekel. It outlines the expected costs for the Bank of Israel—establishment, operation, and maintenance of core infrastructure—as well as costs for various system participants, including Funding Institutions (FIs), Payment Service Providers (PSPs), Additional Service Providers (ASPs), point-of-sale manufacturers, merchants, and government and public entities. The analysis also considers indirect costs, primarily the potential implications of transferring funds from the banking system to the Digital Shekel and the resulting effects on banks’ liquidity, profitability, and credit supply in the economy. On the benefits side, the chapter details a range of potential advantages, including maintaining public access to central bank money in the digital era, enhancing competition among means of payment and within the deposit market, supporting innovation, improving privacy in digital payments, and strengthening the resilience and redundancy of the payments system. The analysis indicates that, given the current assumptions and design of the Digital Shekel, the expected macroeconomic benefits are likely to exceed the associated costs.

Chapter Two addresses the regulatory framework for the Digital Shekel system. It begins with the issue of oversight of the system manager—a function that will reside within the Bank of Israel. The system manager will be responsible for establishing system rules, managing the ecosystem, supervising participants’ compliance, and managing risks arising from participants’ activities and from the operation of the infrastructure. The manager will be supervised by the Payment and Settlement Systems Oversight Division at the Bank of Israel, in accordance with the Principles for Financial Market Infrastructures (PFMI).

The chapter then examines alternative supervisory structures for system participants and presents the decision to adopt a decentralized model, under which supervision of participants' activities within the DS system will be carried out by the existing financial regulators overseeing entities active in Israel's payments market. To mitigate risks of regulatory arbitrage, the system operator will establish a uniform system rule book and a mandatory minimum standard, and will implement coordination mechanisms with the relevant regulators.

Finally, the chapter discusses the legislative measures required for the issuance and operation of the Digital Shekel, including amendments to primary legislation to authorize the Bank of Israel to issue digital legal tender. The legislation formalizes the two-tier structure and the division of responsibilities between the Bank and system participants. The chapter also discusses complementary regulation of issues such as privacy protection, Anti-Money Laundering (AML), financial stability, and the authority to set holding limits and interest rate policy.

Chapter Three examines the concept of a multipurpose Digital Shekel—namely, a single system that would support both retail and wholesale payments. The chapter analyzes the fundamental differences between these use cases, the requirements for central bank money in each, and the manner in which they could be implemented on a unified technological infrastructure while differentiating between authorization levels, operational rules, and regulatory requirements. The analysis suggests that, should both retail and wholesale DS be issued, there is no clear rationale for maintaining separate systems for these use cases. Moreover, significant potential advantages exist in unifying them on a single platform, particularly in terms of efficiency, integration, and innovation.

Chapter Four assesses the technological feasibility of implementing the Digital Shekel design. It summarizes an extensive consultation process conducted by the project team with representatives from the technology sector - industry and academia, and presents findings regarding the ability of existing technologies to support the system requirements outlined in the design—such as scalability, high availability, cybersecurity, privacy, payment finality, and support for offline transactions. The chapter does not recommend a specific technological solution, but demonstrates that there is a fundamental technological feasibility for implementing the DS design.

Chapter Five presents findings from a survey conducted among businesses in Israel regarding potential adoption of the Digital Shekel. The survey examines business attitudes toward the new means of

payment, the conditions that would facilitate its adoption, and the features perceived as advantages or barriers. The findings indicate that businesses express general interest in the digital shekel, particularly if it integrates seamlessly with existing systems and offers operational and economic benefits. However, they remain sensitive to implementation costs, operational complexity, and uncertainty.

Chapter Six summarizes public responses to the Digital Shekel design document. Overall, the feedback received from the public reflects support for the proposed digital shekel model. The chapter presents the main themes raised during the public consultation process, ranging from issues of privacy and trust to technological and business considerations.

In 2026, the project continues its work toward enabling the Bank of Israel to make a well-founded decision regarding the potential issuance of the DS.

Introduction

Similar to many central banks around the world, the Bank of Israel has for several years been examining the possibility of issuing a Central Bank Digital Currency (CBDC), which in Israel will be referred to as the “Digital Shekel” (abbreviated as “DS”). In 2018, the Bank published a report by the Interdepartmental Team for the Study and Examination of Central Bank Digital Currencies.¹ At the end of 2020, the Governor of the Bank of Israel appointed the Steering Committee for the Possible Issuance of a digital Shekel, chaired by the Deputy Governor, marking the formal launch of the “Digital Shekel Project.” Since no decision has yet been made—either then or now—on whether the Bank of Israel will ultimately issue a digital Shekel, the project has been defined as an “action plan.” This means that if, in the future, conditions arise under which, in the Bank’s assessment, the benefits of issuing a digital Shekel outweigh the potential costs and risks, the Bank will be ready and able to implement the program without delay.

At its inception, the project focused primarily on internal research—examining technological, business, and policy aspects, as well as the potential implications of issuing a digital Shekel for the financial system, the payments ecosystem, and the broader economy. Over the past four years, the Bank has shared extensive information with the public regarding the project’s progress through its official website.² By late 2022, the project began focusing on the initial design of the Digital Shekel, building on the “draft model” presented in the consultation paper that the Steering Committee published in 2021.³ In March 2025, the Bank of Israel published the Preliminary Design for the Digital Shekel System.⁴ According to this design, the Digital Shekel will be a digital means of payment constituting a direct liability of the central bank to its holders—individuals, businesses, organizations, and government entities. The DS will join other forms of money that represent liabilities of the Bank of Israel—physical cash and digital balances held by commercial banks in their accounts at the Bank of Israel. Together, these constitute the monetary base, or “sovereign money.” The Digital Shekel will also complement existing means of payment—cash and various forms of “private money” such as bank transfers, payment cards, payment applications, and checks.

¹ Bank of Israel (2018). [*Report of the Team to Examine the Issue of Central Bank Digital Currencies.*](#)

² [*Bank of Israel – The digital shekel Project.*](#)

³ Bank of Israel (2021). [*A Bank of Israel digital shekel: Potential Benefits, Draft Model, and Issues to Examine.*](#)

⁴ Bank of Israel (2025). [*Preliminary Design for the digital shekel System.*](#)

The Digital Shekel system will be based on a two-tier model, under which the Bank of Israel will serve as the system manager, while private entities will provide end-user services and act as intermediaries between users and the central bank. These entities will supply the technological, operational, and business infrastructure connecting end users to the system. Responsibilities of Payment Service Providers will include conducting Know Your Customer (KYC) procedures, issuing and recovering access technologies for Digital Shekel wallets, and providing customer support. End users will not be able to access the system without engaging with these intermediaries. Alongside them, the ecosystem will include Funding Institutions (FIs)—entities managing users' non-DS payment accounts—and Additional Service Providers (ASPs) offering complementary services.

The Digital Shekel is designed to be multipurpose, with the capability to support both retail payments (e.g., payments by individuals and businesses) and wholesale payments (transactions between financial institutions) through a single technological infrastructure, with differentiated requirements and rules tailored to the characteristics of each user group and payment type.

The Digital Shekel is designed to provide a higher level of privacy than existing digital means of payment (though lower than that of cash). The system will be built according to principles of *Privacy by Design* and will be technologically structured so that neither the Bank of Israel nor any other central authority will have access to personally identifiable information about end users or the technical ability to obtain such information. In addition, it may be possible to allow anonymous payments up to a defined threshold.

The Digital Shekel will be interoperable with other means of payment in Israel, with national information systems, and with regulated digital asset platforms. It will also enable innovative payment functionalities, such as conditional payments based on time or external triggers, and support user-based restrictions, such as parental controls on children's wallets.

The Digital Shekel will also support offline functionality, allowing payments to be made in areas without connectivity or in the event of widespread infrastructure disruptions.

Following the completion of the design process, a two-year work plan was set out for the project, aimed at enabling the Bank to reach a decision by the end of 2026 regarding the possible issuance of a digital shekel in one form or another. As part of this plan, in 2025 the project focused on several key tasks: cost-benefit analysis; examining the regulatory framework for the Digital Shekel system; analyzing the

feasibility of a multipurpose Digital Shekel; and examining the technological feasibility of implementing the design.

In addition, the project team conducted an in-depth analysis of public feedback received in response to the 2025 design document and carried out a survey among businesses on their preferences regarding potential use of the Digital Shekel—building on a 2024 study conducted among private users.

The project team maintains a strong commitment to transparency regarding the topics under review and the project’s progress. Extensive information is published on the Bank’s website, including summaries of the quarterly public engagement Forum—the Financial Industry Forum⁵ and the End-User Forum.⁶ This document provides the public with a detailed update on the project’s 2025 activities and findings, and explains how they support the Bank’s ability to make an informed decision regarding a possible issuance of the Digital Shekel.

In 2026, the project continues its work toward this decision, focusing on the following areas:

- 2 **Prioritization:** The Digital Shekel described in the design document supports a wide range of use cases, system participants, and end-user types. The team is now examining whether certain features and components should be prioritized based on considerations such as time, cost, and risk management. This prioritization may result in a decision to issue the Digital Shekel initially with only some of the described features, adding others later, or alternatively, to limit the system to a subset of the specified functionalities.
- 3 **Detailed design:** Based on the prioritization process, the team will begin developing a detailed design to enhance readiness for a potential issuance.
- 4 **Issuance roadmap:** The team will prepare a roadmap outlining the processes and activities required—both within the Bank of Israel and externally—should a decision be made to issue the Digital Shekel.

The insights derived from these workstreams, from additional planned technological experiments, and from all the knowledge accumulated since the project’s inception, will be consolidated into a

⁵ [Summaries of the Financial Industry Forum](#) – Bank of Israel website (in Hebrew).

⁶ [Summaries of the End-User Forum](#) – Bank of Israel website (in Hebrew).

recommendation document to be submitted by the project team and the Steering Committee to the Governor of the Bank of Israel toward the end of the year.

1. Cost-Benefit Analysis of Issuing a Digital Shekel

A decision regarding the issuance of a Digital Shekel must be based partly on a comprehensive cost-benefit analysis that considers the costs at the level of the entire economy, as well as the potential benefits that the Digital Shekel is expected to generate. The following are the main findings of the cost-benefit analysis conducted to assess the economic feasibility of issuing the Digital Shekel for the Israeli economy as a whole, in accordance with the design published in March 2025.

Under the cost dimension, the analysis first examined the establishment, maintenance, and operational costs of the DS system for the Bank of Israel. It then assessed the expected costs for direct participants in the ecosystem. These costs were evaluated partly as a basis for examining whether there may be a business model that could support their participation in the ecosystem. In addition, the analysis considered indirect costs for users and providers who will need to integrate the DS into the economy, the implications of potential disintermediation—i.e., the transfer of funds from the banking system to the Digital Shekel—and the associated macroeconomic effects. The benefit dimension focused on identifying the economic and systemic contributions that the DS could generate and weighing them against the costs, with the aim of providing a sound basis for decision-making regarding the feasibility of issuing a Digital Shekel.

The methodology for estimating costs comprised three main components:

1. **Benchmarking against comparable projects:**

Given that fully operational CBDC systems are still quite rare and detailed public information on their costs is limited, this comparison was inherently complex. Nevertheless, a range of projects in Israel and abroad were examined, including instant payment systems that only partially resemble CBDCs in general and the digital shekel design in particular. Additional reference points included other payment systems established or planned by central banks worldwide, as well as various financial infrastructures developed in Israel in recent years.

2. **Consultation with industry:**

As part of the technological consultation process (see Chapter 4), preliminary cost estimates were obtained regarding the scale of investment required to establish the technological infrastructure. In

addition, discussions were held with financial institutions in Israel to gain insights into the costs they expect to incur in their roles as Payment Service Providers (PSPs) and Funding Institutions (FIs).

3. **Internal assessments:**

Independent cost estimates were developed based on an analysis of the systems each participant would need to build, the ongoing operational and maintenance requirements, and the approximate scale of human resources needed.

The methodology with regard to expected benefits was based on insights gathered throughout the work of the Digital Shekel Project, cross-referenced with findings and assessments from similar initiatives around the world. The quantification process proved more complex than that of the cost estimates, due to the difficulty of defining a clear and consistent methodology for measuring each benefit in quantitative terms.

The analysis, estimates, and data presented are based on information collected from a variety of sources and on working assumptions designed to align the data with the context of the Digital Shekel. These should not be regarded as precise forecasts of actual costs or the monetary value of the benefits that may materialize, and should therefore be interpreted with the appropriate degree of caution.

1.1. Expected Costs within the Ecosystem

1.1.1. Bank of Israel

The Bank of Israel will bear the costs of establishing the DS core systems, including the development of the technological infrastructure and database, supporting systems such as the Alias Management System⁷, fraud prevention mechanisms, and the messaging system, as well as their ongoing operation and maintenance. The estimated cost range depends on several variables, including the chosen technological model:

- A cloud-based centralized solution is expected to involve relatively low setup costs.
- An on-premises model would require higher investment due to technological complexity and physical infrastructure needs.

⁷ See the Glossary at the end of this document.

- The adoption of off-the-shelf or open-source solutions could reduce development costs compared to building proprietary software from scratch.

Maintenance and operational costs will also depend on how the chosen architecture is developed. In this regard, a cloud-based solution is expected to entail higher maintenance expenses but require fewer personnel. Additional costs considered include investments in staff training and public information campaigns. The estimated workforce size (30–50 employees) was derived from preliminary assessments of the roles likely required for system operation, monitoring, and oversight.

1.1.2. Funding Institutions (FIs)

These entities will need to adapt their core systems to enable integration with the DS system for the purpose of funding and defunding customers' Digital Shekel wallets. Among other things, costs include development of interfaces between internal systems and the DS system; the creation of testing and simulation environments; updates to internal operational processes and data tables; liquidity management mechanisms, and so forth. The estimated cost per institution is expected to range in the millions of Shekels, depending on the institution's size, system complexity, and scope of operations. Beyond the one-time setup cost, no significant change is expected in ongoing maintenance and operational expenses as a result of the introduction of the Digital Shekel.

1.1.3. Payment Service Providers (PSPs)

These entities will be required to establish new dedicated infrastructures, which may only partially rely—if at all—on their existing systems. Among other things, costs include the development of API interfaces for connecting to the DS system; the establishment of a payment engine, ledger, and transaction logging system; the development of cybersecurity, risk management, and compliance systems; and the creation of digital customer interfaces (UI) and customer relationship management (CRM) systems. Additional costs include investments in hardware or cloud infrastructure, marketing expenditures, and contingency reserves. Operational and maintenance estimates also account for staffing needs across various functions, such as software development, compliance, customer service, finance, marketing and sales, and management. Alongside PSPs, another category of participants—Technical Service Providers (TSPs)—will operate within the ecosystem. These entities will develop and provide technological infrastructure to PSPs that choose not to build their own independent systems. (See Box 1 for further details.)

BOX 1 – The number of PSPs required in order to have a competitive market

The cost–benefit analysis of the Digital Shekel highlighted the need to determine the minimum number of Payment Service Providers (PSPs) required to operate within the digital shekel ecosystem in order to ensure that the DS promotes competition and fosters innovation in the payments market.

This question led to a related one: what are the entry barriers (i.e., obstacles preventing new participants from entering the market) faced by PSPs, and how should the system be designed to minimize these barriers as much as possible?

To address these questions, an in-depth analysis was conducted of several markets in Israel that are currently considered competitive, as well as of the reforms that transformed them into competitive markets. The markets examined included the cellular communications market, the home internet market, and the electricity market.

This analysis reviewed the challenges and successes of the reforms implemented in these sectors, focusing on the ways in which entry and switching barriers were reduced. The main finding was that the key to lowering entry barriers in all three markets was the separation between infrastructure providers and service providers that do not own the infrastructure, combined with allowing the latter to operate in the market by leasing access to the infrastructure from the infrastructure owners.

This approach enabled an increase in the number of service providers offering services to end users, without the need to duplicate physical infrastructure.

Building on these insights, a proposal was developed to adopt and expand the indirect PSP model mentioned in the design document, by introducing a new participant into the Digital Shekel ecosystem – the Technical Service Provider (TSP).

The TSP would provide technological infrastructure to PSPs that are either unwilling or unable to develop their own independent infrastructure, thereby reducing entry costs and encouraging the participation of additional PSPs in the market. This, in turn, would strengthen competition within the financial ecosystem.

In addition, a direct PSP that possesses its own technological infrastructure could choose to offer access to that infrastructure to other PSPs, thereby also functioning as a TSP. The Bank of Israel will need to establish the regulatory framework that enables and governs TSP activity.

To maintain competition in the infrastructure market, it will be necessary to have more than one TSP, ensuring competition among TSPs themselves. If TSPs also operate as PSPs, it will be important to assess whether potential conflicts of interest arise in practice, and, if necessary, to implement regulatory interventions by setting rules for the provision of infrastructure services.

The analysis concluded that, in order to achieve a competitive and innovative environment for the Digital Shekel once the market reaches equilibrium, approximately 15 PSPs—operating either directly or indirectly—will be required. It is assumed that some of these PSPs will be existing market participants, such as banks and credit card companies, while others will be new entrants.

These PSPs are expected to operate alongside approximately 3–4 TSPs, which will facilitate easier market entry for PSPs that lack, or choose not to develop, their own technological infrastructure.

1.1.4. Additional costs in the ecosystem

1.1.4.1. *Costs to point-of-sale manufacturers and merchants*

In order for the digital Shekel to become a highly respected and widely accepted means of payment in the retail payment segment, it must be integrated into point-of-sale (POS) terminals and cash register systems, alongside other payment instruments such as cash and payment cards. This integration will occur only if and when terminal and cash register software providers adapt their interfaces accordingly. The cash register industry in Israel features a large number of suppliers, and implementation costs are therefore expected to be borne primarily by the register manufacturers. From the perspective of merchants, since the SHAKED (Digital Shekel) is expected to be integrated into already existing cash register software and hardware (computers, POS terminals), the conclusion is that the expected implementation cost for merchants will be negligible.

1.1.4.2. *Costs to government ministries*

To promote the credibility and acceptance of the Digital Shekel, it must be recognized as a valid means of payment for various government services. This integration will involve the Accountant General's Office and the National Digital Agency, in order to update public payment interfaces. This will include, for example:

- Updating payment websites of various agencies;
- Modifying accounting tables and interfaces to support DS transactions;

- Revising business contracts and related documentation.

The process is expected to require personnel in roles such as software development, regulation, project management, and operations. In addition, implementation will be required among statutory corporations, and local authorities—some of which operate independently, while others share common suppliers that provide their cash register software services. Operational and maintenance expenses are not expected to change significantly as a result of the integration.

1.1.4.3. Costs to Additional Service Providers (ASPs)

Compared with PSPs and FIs, Additional Service Providers (ASPs) are expected to face lower regulatory obligations. The relatively low regulatory threshold will be reflected both technologically and operationally. In practice, this threshold represents the minimum cost required for an ASP to operate within the DS system. Naturally, the broader the range of services an ASP provides and the larger its user base, the higher its costs will be. It is estimated that the setup and operational costs for an ASP will be approximately 20 of those of a PSP.

1.1.4.4. Offline payments

Unlike online payment systems—whose models already exist and operate successfully—offline payments, which are instantaneous and do not require synchronization with a central system, have not yet been fully implemented anywhere in the world. Consequently, it is difficult to estimate the potential cost range. Nevertheless, establishing the infrastructure for offline payments is expected to involve the following components:

- Bank of Israel: Management of licenses/tokens, risk monitoring, security and privacy standards, device compatibility, and regulatory coordination with payment service providers and hardware manufacturers. The main cost component will be access licenses to the secure element (SIM/SE) of mobile device manufacturers and cellular companies. (At this stage, potential costs for dedicated smart cards have not been included.)
- PSPs: Development of User Interface (UI) components and support for POS terminals.
- ATMs: Addition of NFC (Near-Field Communication) functionality to enable proximity-based payments.

1.2. Implications for the Banking System and Credit in the Economy

At present, central bank money is available only in physical form—cash. In the digital domain, the only available means of payment is “private money”, namely, demand deposit accounts held at commercial banks.⁸ As a nonbank digital form of money, the Digital Shekel would introduce competition for banks—both as a means of payment and as a liquid store of value. This competition, to the extent that it improves the quality and pricing of payment services and potentially increases the interest paid on demand deposits, would enhance consumer welfare. At the same time, due to holding limits on DS balances, this competition is not expected to materially harm banks’ profitability or their compliance with liquidity requirements. In recent years, the banking system has enjoyed relatively high levels of liquidity.

According to the model developed by the project team for determining appropriate holding limits⁹, these limits will ensure that the banking system’s liquidity level does not fall to a point that would endanger banks’ ability to meet regulatory liquidity ratios in general, and the Liquidity Coverage Ratio (LCR) in particular. Therefore, no reduction is expected in banks’ capacity to extend credit. However, liquidity surpluses may be lower in the future. In such circumstances, the holding limits set may allow outflows of funds that exceed banks’ liquidity surpluses. The following analysis considers two possible scenarios:

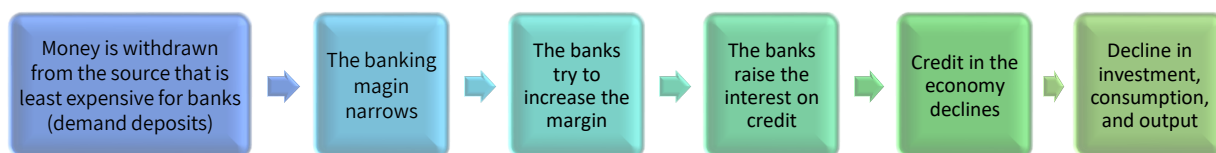
Scenario 1: The Banks have Liquidity Surpluses

In this case, banks would not face a liquidity problem as a result of deposit outflows to the DS, and could continue to provide credit. However, bank profitability could be affected. It is likely that the funds transferred from banks to the DS would primarily come from non-interest-bearing demand deposits. These deposits currently represent the banks’ cheapest source of funding: banks hold against them deposits at the Bank of Israel and receive the Bank’s policy interest rate on them, while paying no interest to depositors. When the public withdraws part of these deposits to convert them into DS, banks will need to reduce their deposits at the Bank of Israel and will therefore lose the interest income earned on those

⁸ Most common payment instruments—such as debit cards, checks, bank transfers, and payment applications—ultimately rely on funds held in demand deposit accounts at banks or payment institutions.

⁹ For details on the determination of holding limits, see: Bank of Israel (2025). *Initial Design for the digital shekel System*, Section 7.6.

balances. Banks may attempt to preserve their profit margins by raising lending rates, which could in turn reduce credit demand and overall output. The following chart explains the process:



A model built to forecast the expected damage (for 2024 data) found that if all the liquidity surpluses of the banking system were transferred to the Digital Shekel, the impact on profitability would not be significant for the banking system as a whole¹⁰. Banks may attempt to compensate for the loss in profitability by raising interest rates on credit. If we assume that a rise in credit rates that would offset half of the profitability loss, then the impact on GDP would be minimal—about 0.03 percent of GDP. Moreover, if the impact on output were to be more severe, monetary policy would likely respond: a reduction in the Bank of Israel’s interest rate, accompanied by appropriate liquidity injections, would return the effective interest rate to its pre-digital-shekel level and offset the impact on output. This process is described in Case 2 below. This process is illustrated in Scenario 2 below.

Scenario 2: The Banks have no Liquidity Surpluses

In a situation where liquidity surpluses are low and the transfer of demand deposits to the Digital Shekel undermines banks’ compliance with liquidity ratios, banks will need to maintain their liquidity ratios by obtaining funding from more expensive sources than demand deposits. They could do so through several possible measures:

1. **Raising long-term funding (deposits and bonds):** This would increase interest rates, which would feed through to long-term rates in the economy and crowd out other firms seeking to raise debt. The impact would be greater to the extent that the funds for these bonds and deposits are withdrawn from DS balances or from cash, rather than from demand deposits.
 2. **Paying interest on demand deposits:** From the banks’ perspective, this would increase liquidity to the extent that it attracts funds from the DS or from cash holdings. However, if paying interest on
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demand deposits causes the public to reduce their holdings in nonliquid, interest-bearing term deposits, the result would be a deterioration in banks' liquidity ratios.

The less banks are able to differentiate between customers, the more they will be required to pay interest on all demand deposit balances, not only on funds returning from cash or DS. Consequently, this option would become relatively costly for them.

3. **Reducing credit:** A reduction in credit would decrease the volume of deposits in the system and, correspondingly, the liquidity requirements associated with them.
4. **Monetary loans:** As a result of reduced liquidity, the Bank of Israel might resume the provision of monetary loans.¹¹ This instrument—cheaper for banks than issuing bonds but more expensive than public demand deposits—would enable banks to maintain adequate liquidity levels. However, its use would depend on the amount of eligible collateral that banks are able to provide.

The Bank of Israel would be able to mitigate or even offset the impact of deposit outflows to the SHAKED by lowering the policy interest rate and injecting liquidity by reducing the stock of *MAKAM* (short-term Bank of Israel bills). This process is illustrated schematically in Table 1. The first column represents the liquidity problem faced by the banks, as reflected in the decline in their balances held at the Bank of Israel following the transfer of funds from demand deposits to DS. The second column represents the offsetting action, in which the Bank of Israel redeems *MAKAMs* held by the public, thereby injecting liquidity into the banking system and replenishing banks' reserves.

Liabilities	Stage 1	Stage 2
SHAKED	+100	
MAKAM		-100
Banks' balances	-100	+100
Total	0	0

Table 1 - Change in the Composition of the Bank of Israel's Balance Sheet Following Absorbing Makam Against Issuing DS

Except for extreme scenarios—in which more than 75 percent of non-interest-bearing demand deposits are converted into DS balances—the overall level of liquidity in the system (reserves plus *MAKAMs*) appears sufficient to absorb a gradual shift of funds from demand deposits to the DS. Accordingly, the risk to financial intermediation disintermediation or to banking stability resulting from the issuance and gradual adoption of the Digital Shekel is assessed to be low. This analysis does not account for crisis scenarios involving a rapid “run” from demand deposits to the DS. In such cases, temporary restrictions on the conversion of funds from demand deposits to the DS may be imposed.

¹¹ In the past, the Bank of Israel conducted loan auctions as part of its regular monetary policy operations. These auctions were discontinued once the banking system began operating with substantial liquidity surpluses.

1.3. Benefits of the Digital Shekel System

The issuance of a Digital Shekel could generate a wide range of economic, operational, and systemic benefits for the Israeli economy.

1.3.1. Preserving Access to Central Bank Money in the Digital Era

As the use of cash continues to decline due to the growing shift of economic activity into the digital environment, the DS would preserve the public's ability to hold and make payments using central bank money, which is the safest form of money. In this way, the DS would provide a sovereign alternative in the digital domain, where all money currently available to the public is private money (demand deposits held at commercial banks), while cash serves as the primary alternative in the physical space. A possible methodology for quantifying the benefit of the DS as risk-free money is to consider the deposit insurance premium paid by banks in advanced economies to insure against bank insolvency. This annual premium typically ranges between 0.03 percent and 0.3 percent, depending on the banks' risk. Given the relative stability of Israeli banks, it is reasonable to estimate the benefit by looking at the lower end of this range.

An additional, nonquantified benefit that should be considered is the preservation of the principle of the uniformity of money, which ensures that all users continue to transact with different forms of money that maintain equal value. The Digital Shekel could also enhance monetary policy transmission, as it would allow for the setting interest on DS wallet balances, to the extent this would be decided.

1.3.2. Enhancing Competition

The most significant competitive impact of the digital shekel is expected to be on bank deposits and existing payment instruments, in the form of improved deposit rates and lower payment costs for the public. According to a study published at the National Bureau of Economic Research (NBER)¹², applying interest to user balances in CBDC wallets is expected to significantly improve household welfare, whereas a non-interest-bearing CBDC would not have much effect on competition in the deposit market.

In the payments market, one of the digital shekel's key features is that user funds represent a liability of the Bank of Israel, meaning that payment service providers (PSPs) will not be subject to capital or liquidity requirements against customers' funds. The removal of this major regulatory barrier is expected to facilitate the entry of new players into the payments market. Furthermore, the system will enable the

¹² P. Paul, M. Ulate, and J.C. Wu (2025). "A Macroeconomic Model of Central Bank Digital Currency", NBER Working Paper No. 33968, National Bureau of Economic Research.

unbundling of financial services into distinct layers, allowing users to assemble a customized set of services from multiple providers and thereby maximize the comparative advantages of each.

The Digital Shekel is also expected to reduce the costs of connection to the payments infrastructure for both service providers and users, thanks to a standardized platform and lower transaction fees than those currently prevailing in the payments market. In addition, the system will enable interoperability between different payment systems, enhance integration and efficiency, and create new opportunities for collaboration among market participants.

1.3.3. Supporting Innovation

Operating as Additional Service Providers (ASPs) will enable entrepreneurs and fintech companies to develop complementary and customized services leveraging the digital shekel infrastructure. Instead of building a full payment solution—including account management and network creation—as is currently necessary in order to offer payment services, these entities will be able to focus on innovative value creation, expanding the range of available services and reaching previously underserved segments of the population. Moreover, the DS will serve as a technological standard for digital assets at the national level, contributing to the creation of a unified ecosystem for a variety of future use cases. The assurance of finality and immediacy in real-time transactions will also reduce credit and operational risks. Together, these features are expected to accelerate innovation in the financial sector and broaden the range of services available to the public. While the quantitative benefit of this component is inherently difficult to estimate, it is reasonable to assume—based on the demonstrated potential of smart payment systems, as shown in the Digital Shekel Challenge¹³ and similar international initiatives, as well as in innovative models emerging in the DeFi market—that establishing such an infrastructure could yield substantial benefits. These benefits would include both direct gains in the domestic payments market and spillover effects for Israel’s fintech industry. Assuming that such innovations, primarily through ASPs, will emerge only if they are economically viable, the analysis estimated their potential benefit as twice the cost of establishing the ASP layer, encompassing both industry profits and consumer surplus, without accounting for additional spillover effects into other sectors.

¹³ See [The Digital Shekel Challenge](#).

1.3.4. Enhancing Privacy in Digital Payments

The Digital Shekel is expected to offer a higher level of privacy than currently available in existing digital payment methods. First, users will have the option to make anonymous payments up to a defined threshold. In addition, the data architecture will enhance end-user privacy compared with the current situation, as no central authority will have access to personally identifiable information about all system activity. Taken together, these features may encourage segments of the population that still prefer cash to adopt the SHAKED, thereby also contributing to the reduction of the shadow economy. To quantify this benefit, the analysis drew on a study from Australia¹⁴ that examined the amount consumers are willing to pay for anonymity in payments vis-à-vis the central bank and commercial banks. Based on the user survey conducted by the Bank of Israel¹⁵ Israelis tend to assign relatively low importance to this issue. Accordingly, the results were adjusted to reflect the willingness of Israeli consumers to pay for anonymity in digital payments.

BOX 2 – The Impact of the Digital Shekel on the Redundancy of the Payments System

As part of the assessment of the potential benefits of the digital shekel, the project examined its possible contribution to enhancing the redundancy and resilience of Israel’s payments system. The analysis included a review of potential failure points in existing payment instruments and a comparison with how similar processes would be executed within the Digital Shekel system—both online and offline—focusing on two main segments:

- 5 The payment segment – failures that could impair users’ ability to execute payments.
- 6 The interbank settlement segment – failures that could delay the flow of funds between financial institutions.

In addition, a comparison was made between different payment instruments in terms of infrastructure requirements, availability, and the ability to ensure transaction completion. The findings indicate that the Digital Shekel could play a central role in strengthening the redundancy and resilience of Israel’s payments system.

Unlike existing payment systems, the DS is designed to operate as an independent infrastructure, in which the completion of a payment—from initiation to settlement—does not depend on exclusive

¹⁴ Z. Fairweather, D. Fiebig, and A. Gorajek (2024). “[Valuing Safety and Privacy in Retail Central Bank Digital Currency](#)”, Research Discussion Paper RDP 2024-02, Reserve Bank of Australia.

¹⁵ Bank of Israel (2025). “[Summary Report – The Willingness of the Public to Adopt a digital shekel](#)”.

intermediaries or on other payment systems. Moreover, the DS enables the completion of transactions even in cases of connectivity infrastructure failures (such as power outages or Internet disruptions). This provides a unique solution for infrastructure-related contingencies and ensures operational and business continuity even under conditions of disconnection or malfunction.

For example, in the case of payment cards, which are a primary means of payment in the Israeli economy, there are two critical nodes in the transaction process—the gateway and the credit switch, and the capacity to process payments relies on their functional continuity. Figure 1 illustrates the payment process using payment cards and demonstrates how the DS enables the execution of a payment without reliance on a POS terminal or gateway to complete the transaction. This is possible because, from a technical standpoint, a transaction can be completed using a wallet address or QR code, without the need to send a payment request through an intermediary.

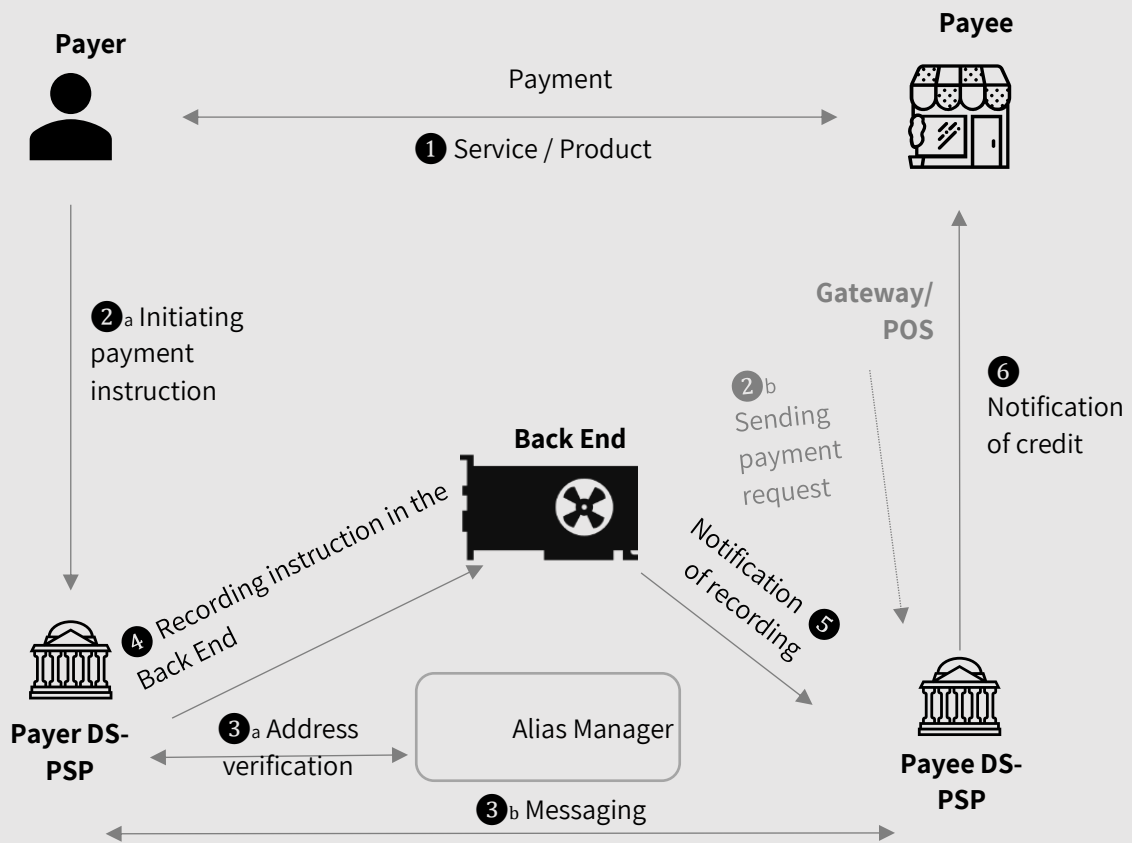


Figure 1 – Executing Transactions in the SHAKED System Without Dependence on POS or Gateway

An additional layer of redundancy is provided by the ability of the Digital Shekel to operate offline. This feature allows transactions to be executed even during power outages, communication failures, or disruptions in central systems—scenarios that, in existing payment systems (other than cash), could paralyze economic activity.

A further dimension of redundancy is reflected in the system's potential to function as a multipurpose CBDC (mCBDC). In this capacity, it could serve as an alternative to the Bank of Israel's RTGS (Real-Time Gross Settlement) system *ZAHAV*—as long as both systems operate in parallel—and support interbank settlement through an independent, immediate, and secure channel.

1.4 Summary

This chapter presented a comprehensive cost–benefit analysis of the potential issuance of the Digital Shekel, aimed at assessing the overall economic feasibility of the initiative for the Israeli economy. The analysis included a detailed examination of the expected cost components across the system's entire life cycle—from the establishment, maintenance, and operational costs borne by the Bank of Israel, through the implementation and operating costs of system participants, to the indirect costs to the broader economy, including potential effects on the banking system and credit supply.

In parallel, the analysis evaluated the main expected benefits of issuing a digital shekel, including:

- Preserving public access to central bank money in the digital era;
- Enhancing competition and innovation in the payments market;
- Strengthening the redundancy and resilience of the payments infrastructure;
- Improving privacy in digital payments; and
- Enhancing the transmission of monetary policy.

The findings of the analysis indicate that, under the stated assumptions and in present value for ten years, the expected benefits of the initiative outweigh the associated costs by a sum equal to about 0.1% of average annual private consumption. Therefore, issuing a digital Shekel is expected to increase total economic welfare in this magnitude, even when applying broad safety margins. Accordingly, the results provide a principled economic justification in favor of the potential issuance of a digital Shekel.

2. Regulatory Structure of the Digital Shekel System

The Digital Shekel will be designed to play a central role in Israel’s payment infrastructure. A situation in which the system operates improperly, inefficiently, or unreliably could undermine the stability of the national payment system. According to its design, payments processed through the DS will be defined as final and irrevocable. For these reasons, and in accordance with the Payment Systems Law, 5768–2008, the system must meet the definition of a “Designated Controlled Payment System.” Given that the system is expected to operate under a two-tier model—where participants serving end users will be private corporations—a regulatory framework will be required to ensure a minimum standard of service quality and operational stability. The Bank of Israel’s role and status as the system manager must be established by law, including the definition of its supervisory responsibilities and oversight mechanisms.

2.1. Responsibilities of the System Manager and Supervisory Oversight

Among the Bank of Israel’s key responsibilities as the system manager will be setting out the Scheme Rulebook and serving as the authorized entity responsible for the proper and continuous management of the ecosystem. Among other things, this responsibility will include monitoring participants’ compliance with the established rules (FI, PSP, ASP, TSP), resolving disputes among participants, and ensuring that all technical conditions required for the system’s full and continuous operation are met.

The system manager will bear ultimate responsibility for compliance with the rules and for managing risks arising both from participants’ activities and from the activities of the system manager itself (the entity responsible for operating the central technological infrastructure, which may be the operator or its designated agent). The system operator will be subject to supervision by the Payment and Settlement Systems Oversight Division within the Bank of Israel’s Payment and Settlement Systems Department.

2.1.1. System Status and Supervisory Framework

System Status: The Bank of Israel will designate the Digital Shekel as a “Designated Controlled Payment System”¹⁶ from the date of its establishment. This status is essential to ensure finality of settlement for payment transactions processed through the system. To qualify for this designation, the system must

¹⁶ The “**Designated Controlled Payment System**” status is required to ensure **finality of settlement** for payment transactions processed through SHAKED, which is essential for system stability and public confidence. This status ensures that the system’s legal framework is **valid, clear, comprehensive, enforceable**, and protected under Chapter D of the Payment Systems Law, 5768–2008.

operate in accordance with the Payment Systems Law and the supervisory directives issued by the Bank of Israel¹⁷, with adjustments reflecting the fact that the system manager is the central bank rather than a private corporation.

Supervision of the System Manager: The Supervision Division within the Bank of Israel’s Payment and Settlement Systems Department (hereinafter: “the Supervision Division” and “PSS”)—constituting a separate unit from the organizational entity expected to operate the Digital Shekel system—will be responsible for supervising the system manager. Supervision will be based on the provisions of the Payment Systems Law and on directives issued by the Division, which implement the Principles for Financial Market Infrastructures (PFMI).¹⁸

2.1.2. Structural Adjustments to Corporate Governance

Since the system operator is a central bank rather than a private commercial entity, the PFMI principles allow for structural tailoring of certain provisions to accommodate systems operated by central banks. For example:

- **Functional Separation:** To maintain a clear functional separation between the system manager and the supervisory unit (PSS), both of which operate within the Bank of Israel, a well-defined organizational separation will be established.
- **Parallel Functions:** Supporting professional roles (such as Compliance Officer, Chief Risk Officer, Legal Counsel, etc.) relevant to the system operator will, unless decided otherwise, be fulfilled by the corresponding officials within the Bank of Israel.

2.2. Alternative Models for Supervising System Participants

To ensure the stability of the system and maintain public confidence, two possible models for regulation, licensing, and supervision of system participants—consistent with the two-tier ecosystem structure—were examined:

1. **Centralized Model:** Establishment or designation of a dedicated regulator for the digital shekel system, which would consolidate licensing, supervision, and enforcement powers over all participants.

¹⁷ See the [Bank of Israel website](#).

¹⁸ BIS (2012). *Principles for Financial Market Infrastructures*.

2. **Decentralized Model:** Allocation of supervisory responsibilities to existing financial regulators, who would oversee the new activities of their respective supervised entities, while designating a default regulator for corporations seeking to operate solely (or primarily) within the digital shekel system.

The discussion of these alternatives was guided by the understanding that regulation should ensure similar treatment of participants whose activities generate similar risks, and prevent regulatory arbitrage based on the identity of the supervising authority. **This approach aims to achieve principled uniformity in regulatory requirements applicable to comparable activities.**

2.2.1. System Participants and Key Risks

As outlined above and in the initial design document, the digital shekel system will include several types of participants (FI, PSP, ASP). Each type of activity will be assessed according to the risks it may pose to the system, and the corresponding supervisory framework will be designed accordingly.

Table 2: Intensity of the risks based on participant type

Obligations regarding Type of participant	Business continuity	Information security / cyber	AML/CFT	Fraud and conduct	Privacy protection	Liquidity
PSP	VVV	VVV	VVV	VVV	VVV	X
	Entities that provide end users with access to operate on their DS balances are exposed to high risk in all risk areas of the system, other than liquidity risk, which does not exist for PSPs since they do not hold the end users money.					
ASP	V	VV	V	VV	VVV	X
	Entities that provide additional services in the DS system that are not defined as payment services, such as application developers and data aggregators, will be exposed to risks arising from their interactions with end users: privacy protection, consumer fraud, and information security/cybersecurity vulnerabilities.					
FI	VV	V	X	V	V	V
	Entities providing funding and defunding services from accounts to DS wallets and vice-versa are rarely exposed to high intensity risks in the system. However,					

	FIs are the only ones exposed to liquidity risk, due to their need to hold DS liquidity to enable funding operations.
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Risk Intensity Key: V – Low, VV – Medium, VVV – High, X – Non-existent

2.2.2. The Centralized Model

This model was examined but ultimately not adopted as the regulatory framework for the Digital Shekel system. Under the centralized model, the Bank of Israel, as the system manager, would have served as the sole and comprehensive regulator of all system participants, regardless of whether a given participant already operates as a financial entity in Israel and is supervised by another regulator. The system operator would have been required to establish rules on a wide range of issues—including those not central to the digital shekel system—and to create an enforcement mechanism to ensure compliance.

The main advantages of this model lay in achieving uniform regulation for all participants, providing regulatory certainty (a single point of contact), and strengthening the reputation of the SHAKED as a “product” of the central bank. Another advantage was the prevention of regulatory arbitrage within the system itself. However, the disadvantages included regulatory duplication and additional burdens on participants engaged in other financial activities (and already subject to financial supervision), as well as unnecessary costs associated with establishing and operating a fourth financial regulator within the ecosystem. Such a regulator would have needed to develop independent supervisory and enforcement capabilities across a wide range of professional domains (e.g., privacy protection, consumer protection, and cybersecurity), in which existing financial regulators already possess expertise. Moreover, concentrating supervisory powers in one entity could have increased regulatory complexity in Israel’s financial system and created inconsistencies (in addition to potential overlaps), potentially harming both participants and the public.

2.2.3. The Decentralized Model

The decentralized model was selected as the preferred regulatory alternative. It stipulates that the existing financial regulatory structure in Israel will remain in force and apply to participants in the digital shekel system. Under this model, ongoing supervision of financial participants (FIs, PSPs, ASPs) providing services to the public through the digital shekel will remain the responsibility of their respective financial regulators, so that each entity continues to be supervised by the authority

overseeing its other financial activities. This choice advances several key regulatory principles and yields significant advantages:

a. Efficient Use of Existing Infrastructure (Regulatory Efficiency)

The model leverages the existing regulatory framework, eliminating the need to establish an additional financial regulator within the Bank of Israel, thereby avoiding supervisory duplication and unnecessary setup costs.

b. Regulatory Neutrality and Alignment with the Supervised Entity

The model fully adheres to the guiding principle of *“same activity – same regulation.”* The existing financial regulators (such as the Banking Supervision Department, the Capital Market, Insurance and Savings Authority, or the Israel Securities Authority¹⁹) possess comprehensive knowledge of the full range of financial activities conducted by the entities they supervise. This enables them to adapt existing regulatory requirements holistically and optimally to the specific needs of the SHAKED system, in areas such as consumer protection, information security, and cybersecurity.

c. Encouraging the Participation and Maintaining Operational Efficiency

The model facilitates the participation of existing supervised entities in the Digital Shekel system, as they will not be required to adapt to an additional financial regulator. Since these entities have already undergone a full licensing process under an Israeli financial regulator, they will only need to obtain an *“operational approval”* from the system operator (rather than a new full license) to participate in the digital shekel. This approval will depend on compliance with the system’s specific infrastructural requirements. This approach will accelerate their integration into the DS ecosystem and encourage additional participants to provide services to the public through the system.

2.2.4. Mechanisms to Mitigate Regulatory Arbitrage and Ensure Supervisory Coordination

The main challenge in implementing the decentralized model lies in the risk of regulatory arbitrage—that is, the concern that different regulators may apply (materially) different standards in terms of scope, requirements, or enforcement rigor, resulting in unequal regulatory burdens among participants engaged in similar activities. This risk may arise from interpretive or requirement-level differences among financial regulators, as well as from potential disparities in enforcement practices. To address

¹⁹ Plus the Ministry of Communications, which supervises the Postal Bank.

this risk and ensure consistent regulatory application across all participants, the Bank of Israel (as system operator) will act through two main mechanisms:

1. System Rulebook

The system operator will establish detailed and binding system rules that will apply equally to all participants. These rules will define the *Minimum Required Standard* for compliance with technological, operational, and regulatory conditions necessary for participation in the Digital Shekel system.

The system rules will cover the full range of participant conduct within the system, including:

- **Access and Participation Conditions:** Objective, risk-based requirements for technological connection and system entry.
- **Operational and Cyber Resilience:** Expectations for managing operational, information security, and cybersecurity risks, in line with a minimum standard set by the system manager (in coordination with relevant authorities, such as the National Cyber Directorate).
- **Infrastructure and Technology:** Rules governing the use of APIs, system availability, business continuity, and technological risk management expertise.

The purpose of setting a minimum standard is to create a uniform regulatory foundation that reduces the likelihood of systemic failures within the Digital Shekel and minimizes regulatory arbitrage, even at the cost of limiting the discretion of financial regulators and system participants in these areas.

2. Coordination Between the System Operator and Financial Regulators

The decentralized model requires supervisory cooperation between the system operator and the financial regulators of the participants.

- **Coordination Mechanism:** The relationship between the system operator and the various regulators will be formalized through a *Memorandum of Understanding (MoU)*. This MoU will define principles of cooperation, removal of barriers, and information-sharing procedures.
- **Handling Violations:** The system operator's direct enforcement authority over participants supervised by other regulators will be limited to enforcing the system rules. For other issues, the main tool available will be to alert the relevant financial regulator to problematic conduct or suspected breaches of the system rules.

- **Preferred Enforcement Channel:** The participant's financial regulator will remain the legally authorized body with the regulatory tools (such as imposing fines or issuing directives) to address violations under the general regulatory framework applicable to that participant, while taking into account the requirements of the system manager. This will ensure proactive and effective enforcement of issues not directly covered by the system rules.
- **Enforcement of System Rules:** The system operator will have the authority to enforce the system rules with regard to participants. These rules will primarily address systemic risk prevention and technological requirements. The system manager will also have the power to suspend or permanently revoke a participant's connection to the system if it poses a systemic risk. This measure will be reserved for severe cases where other enforcement tools have proven ineffective.

2.2.5. Summary and Conclusions: Adoption of the Decentralized Model

The decision to adopt the decentralized model for supervising participants is based on a balance of efficiency, expertise, and the strategic goal of encouraging participation in the system. It reflects two core regulatory principles: (1) leveraging existing supervisory expertise and comprehensive oversight; and (2) reducing the regulatory burden on participants and on the Bank of Israel. At the same time, it allows for the establishment of an effective mechanism to minimize the risk of regulatory arbitrage.

2.3. Legislation and Regulation

2.3.1. Legal Tender Status and Issuance Authority

Issuing a retail Digital Shekel is expected to require amendments to primary legislation. These will grant the Bank of Israel explicit authority to issue legal tender in the form of a direct digital liability to the public.

2.3.2. Anchoring the Two-Tier System Structure and Defining Key Roles

Legislation should enshrine the proposed two-tier structure of the DS system and the corresponding allocation of responsibilities among key entities and their financial regulators.

- **First Tier:** According to the preliminary design, the Bank of Israel will be defined by law as the manager of the Digital Shekel payment system and will be granted clear authority to establish

binding system rules for participants. These rules will focus on ensuring the system's safety, accessibility, and independence under central bank management, and, among other things, will address risk management, definition of core system roles, and the framework for supervision and licensing of participants.

- **Second Tier:** The law will define the areas of responsibility of system participants. Regulation of these entities will be based on the *“same activity – same regulation”* principle described above, ensuring efficient use of existing supervisory expertise among financial regulators, consistent with the advantages identified in the discussion of the decentralized model.

2.3.3. Additional Legislative Aspects

- **Privacy Protection:** Legislation will ensure user privacy by stipulating that neither the Bank of Israel nor any other central entity will have access to the personally identifiable information of end users. Such information will be accessible only to system participants (FIs, PSPs, ASPs) on a need-to-know basis and according to the user's choice of service provider. The legislation will address the issue of permitted uses of information by participants, even with customer consent.
- **Anti-Money Laundering (AML) and Countering the Financing of Terrorism (CFT):** Regulation will ensure that the SHAKED system complies with AML/CFT requirements while maintaining an appropriate balance with privacy protections.
- **Financial Stability and Monetary Policy:** The system manager will be authorized to set holding limits on the amount of digital shekels that users may hold in their (online and offline) wallets, as well as to determine the interest policy on balances, in order to safeguard monetary policy effectiveness, financial stability, and, in particular, to prevent harming the supply of credit in the economy.

3. Multipurpose Digital Shekel

3.1. Background

The design document focused primarily on a retail central bank digital currency (rCBDC). However, it also stated that: *“The digital shekel will be a multipurpose CBDC designed to meet both the retail needs of end users—such as households and businesses—and the wholesale needs of financial institutions. Naturally, different types of users will be subject to different rules and limitations, and there may be significant differences between retail and wholesale users and use cases.”*²⁰

In line with this principle, the feasibility of a multipurpose Digital Shekel (multipurpose CBDC – mCBDC) was examined as a conceptual model for a central bank digital currency built on a unified system capable of serving both wholesale and retail purposes. At present, central bank money exists in two distinct forms:

- Wholesale digital reserves, used by the banking system (and during the business day for settlement and payment purposes through the RTGS system); and
- Physical cash, used by the general public.

The main idea behind the mCBDC approach is the recognition that, with technological advancement—where both forms of central bank money now operate within advanced digital payment environments—the distinction between the two types of use has become increasingly blurred, and the need for strict separation has diminished. It is now technically feasible to design a single integrated system with differentiated access layers for various participants—banks, financial institutions, fintech companies, businesses, and households—each operating according to its own permissions, regulatory framework, and specific needs, without requiring two separate forms of central bank money. In this context, an important policy question arises: whether and why, following the issuance of a digital Shekel, there would still be a need to maintain two separate systems of central bank digital money—one retail (rCBDC) and one wholesale (RTGS and/or wCBDC). This section presents key insights on this issue.

²⁰ Bank of Israel (2025). *Preliminary Design for the Digital Shekel System*, p. 43.

3.2. What is Wholesale Central Bank Money (wCBM)?

Historically, wholesale and retail money were essentially identical. Banknotes and coins issued by the sovereign served both the general public and the banking system. With the development of central banks and the requirement imposed on commercial banks to hold reserves at the central bank, these reserves began to be used for interbank settlement on the central bank's books—initially manually and later digitally. Today, final settlement between financial institutions is carried out through Real-Time Gross Settlement (RTGS) systems (in Israel: the ZAHAV system), which constitute the core infrastructure of wholesale central bank money. The RTGS system ensures real-time transfers and finality of payment, and is used for the settlement of interbank transactions, securities trading, and intraday liquidity management. The introduction of RTGS systems and the ability to perform real-time settlements created a functional distinction within central bank money:

- Physical cash remained the means of payment for the public—referred to as *retail central bank money (rCBM)*; and
- Reserves in the RTGS system became the means of payment used for settlement between financial institutions—referred to as *wholesale central bank money (wCBM)*.

Although the ZAHAV system currently provides the central infrastructure for interbank settlement in Israel, it lacks several key features, making its suitability for the digital era and for the needs of an advanced financial market limited. Many of these features common in the world of cryptocurrencies, and some have already been included in the design of the Digital Shekel. First, the system is not continuously available (24/7). It operates only during defined business hours, with end-of-day and start-of-day adjustments and balance reconciliations. Second, the system lacks programmability. It is based solely on simple payment instructions that do not include logical conditions or smart contracts. This limits the ability to execute conditional payments, automatic settlement of securities transactions, or payment processes across different systems that require real-time coordination.

Third, the system's interoperability—its ability to communicate with other systems—is limited. The ZAHAV system currently operates as a separate infrastructure, without direct interfaces to Distributed Ledger Technology (DLT) systems or other digital platforms. As a result, transactions in digital assets or tokenized instruments cannot be executed directly using central bank money, and instead require intermediaries or separate stages of matching and settlement.

Fourth, in many countries, RTGS systems currently support only a single currency (in Israel—the Shekel), making them unsuitable for cross-border payments or settlements. In a world where central banks are exploring multicurrency solutions based on wholesale CBDCs (wCBDCs), this limitation has become particularly significant.

In addition, transaction messages in the wholesale system are transmitted via the SWIFT network, separately from the actual transfer of funds. SWIFT is a reliable, secure, and widely used infrastructure, but it is primarily designed for message transmission. This contrasts with advanced systems—especially those based on DLT—that integrate the message and the transfer of funds in a unified, secure manner, better suited to smart contracts. Moreover, intraday liquidity and credit management in the system is conducted in a limited format, dependent on end-of-day processes and without the ability to make real-time adjustments between participants or external systems. This lack of operational continuity constrains the potential for fully automated and immediate settlement.

Finally, access to the system is restricted almost exclusively to banks, clearinghouses, and a small number of regulated financial institutions. While there is no fundamental barrier to granting RTGS access to additional regulated entities—such as fintech firms, and Payment Service Providers—many emerging participants in the financial ecosystem, particularly those active in tokenization and decentralized finance (DeFi), are not yet sufficiently regulated to qualify for RTGS access. Nevertheless, these entities require access to “smart money” that enables immediate transactions. Currently, they rely on stablecoins, but from a financial stability perspective, it would be preferable for such transactions to be conducted using central bank money.

Taken together, these limitations highlight the gap between the capabilities of RTGS systems and the requirements of a modern digital financial market, underscoring the need to upgrade the infrastructure for wholesale central bank money. Globally, an active discussion is underway regarding the appropriate path for such upgrades—whether through the expansion and modernization of existing RTGS systems or through the adoption of new technologies based, in one form or another, on distributed ledger technology (DLT).

3.3 Wholesale Central Bank Digital Currency (wCBDC)

A wholesale central bank digital currency (wCBDC) may represent the next stage in the evolution of wholesale central bank money, as a direct evolution of existing RTGS systems. Similar to the reserves

that commercial banks hold at the central bank, a wCBDC constitutes a direct liability of the central bank, enabling final, secure, and risk-free settlement between financial institutions. It is difficult to point to fundamental differences between a wCBDC and the money currently used for settlement within the RTGS system. However, the Bank for International Settlements (BIS) describes wCBDC as central bank money that would continue to serve as a reserve asset for banks and as the means for final settlement at the central bank, while also providing financial institutions with access to new functionalities enabled by tokenization, composability (the ability to bundle multiple interdependent operations executed simultaneously), and programmability.²¹ In professional discourse, a wCBDC is often viewed as replacing the traditional RTGS system with one based on distributed ledger technology (DLT). Such an infrastructure inherently supports the features previously identified as lacking, including:

- Continuous availability (24/7);
- Direct connectivity (or an infrastructure enabling such connectivity, for example through APIs) to asset tokenization platforms, private blockchain networks, and other retail or wholesale payment systems;
- The ability to embed smart contracts and conditional transfers;
- Enhanced liquidity management;
- Operational efficiency and business innovation;
- Built-in programmability and interoperability; and
- Integrated data and information transfer.

Around the world, pilot projects and early implementations of wCBDCs are currently underway. Some focus on integrating DLT systems with existing settlement infrastructures. Examples include European initiatives such as TIPS-Hash-Link by the Bank of Italy and the Trigger Solution by the Deutsche Bundesbank—both of which demonstrated hybrid models that enable direct linkage between existing RTGS systems and DLT platforms while preserving the legal finality of existing wholesale central bank money. Other projects explore the establishment of entirely new platforms based on distributed ledger technologies. Notable examples include:

²¹ A. Di Iorio, A. Kosse, and I. Mattei (2024). “Embracing Diversity, Advancing Together – Results of the 2023 BIS Survey on Central Bank Digital Currencies and Crypto”, BIS Papers No. 147, June.

- Project Helvetia, a collaboration between the Swiss National Bank (SNB) and the SIX Digital Exchange (SDX), which enables the settlement of digital securities using central bank money on a blockchain;
- Project Jura, a joint initiative of the central banks of Switzerland and France, which tested cross-border payments in two major currencies on a shared DLT platform;
- Project mBridge, a multinational initiative involving the central banks of Hong Kong, Thailand, the United Arab Emirates, and China (with Saudi Arabia joining later), aimed at enabling real-time multicurrency payments between different central banks; and
- Project Agora, a collaboration between the BIS, seven major central banks, and more than 40 private-sector financial institutions, designed to explore the feasibility of cross-border wholesale payments using tokenization and other advanced technologies such as smart contracts.

3.4. Multipurpose Central Bank Digital Currency (mCBDC)

The multipurpose Digital Shekel (mCBDC) approach proposes the use of a single unified system for managing central bank money—one that serves both retail and wholesale use cases. In a world where both retail and wholesale central bank money are digital and based on similar technological infrastructures, the need for two separate systems for managing central bank money becomes less evident. There are several key advantages to using a single system rather than maintaining two separate infrastructures:

- **Simplicity and efficiency** – Operating two distinct infrastructures creates unnecessary duplication: separate ledgers, different access rules, and divergent compliance requirements. Integrating both layers of use into a single system allows the central bank to reduce development and operational costs and minimize the need to maintain parallel systems.
- **Unified settlement asset** – Today, there is a clear separation between forms of central bank money: reserves used by financial institutions and cash used by the public. A multipurpose CBDC blurs this distinction by enabling all participants to settle transactions using the same digital central bank asset. This unification reduces reliance on intermediaries, strengthens confidence in the currency, and ensures that every transaction—from large interbank transfers to everyday retail payments—can be based on a liability of the central bank.

- Liquidity management efficiency – In a dual-layer model, liquidity management requires participants to hold separate balances in different systems—one for wholesale settlement and another for retail payments. This separation creates constraints, complicates balance management across platforms, or alternatively requires costly bridging mechanisms. A multipurpose system, with a single pool of digital money, enables financial institutions and payment providers to operate from a common source of liquidity without transferring funds between systems, thereby improving operational efficiency and resource utilization.
- A shared foundation for innovation – A multipurpose CBDC system expands the space for innovation in the financial ecosystem. Advanced features such as programmable money, conditional payments, smart contracts, and settlement of tokenized assets can be designed once and applied across all participants. This eliminates the need to develop separate applications for different layers and allows the entire system to benefit from network effects and accelerated adoption of new technologies.
- Interoperability – Both retail and wholesale components of the system must be capable of mutual connectivity and interaction with external networks—for example, those handling tokenized real-world assets for executing the cash leg of delivery-versus-payment (DvP) transactions. In a multipurpose system, since there is only one infrastructure, a single connection solution is required for each external network, simplifying integration and reducing technological risks.
- Inclusion and equal access – Another major advantage is the democratization of access to central bank money. While wholesale systems are limited to banks and large financial infrastructures, a multipurpose system allows households, businesses, and technology firms to transact using the same digital asset. This preserves the principle of equal access to risk-free central bank money—similar to the role that cash has played in the past—while adding the benefits of digitalization and automation.

Implementing a multipurpose system requires careful and balanced design, as integrating different types of users within a single infrastructure raises significant challenges related to security, privacy, and performance. It is necessary to address issues of permissions, limitations, and differentiated regulatory treatment for various user categories—for example, differences in privacy versus transparency toward the central bank. Such a system must ensure full privacy for retail users while maintaining transparency and oversight for wholesale participants such as banks and licensed financial institutions. Additional

considerations include restrictions on holdings, fraud monitoring, and differentiated permissions such as the ability to write smart contracts.

Furthermore, retail users would operate through intermediaries (“system participants”) under the two-tier model, whereas wholesale users will interact directly with the system. Therefore, clear authorization mechanisms must be defined to distinguish between participant types and their respective operations. Another aspect is the possibility that a wholesale participant may also act as a retail user in certain cases (for example, a bank making direct payments to suppliers or employees), creating overlap between user categories and necessitating internal separation mechanisms. Consequently, the design of an mCBDC system must take into account not only technological layers but also regulatory, access, and legal responsibility aspects at each level of use.

As part of the technological consultation process (as detailed in Section 4), the feasibility of establishing an mCBDC system with the features described above was examined. The conclusion was that such a system is technologically feasible. It is also possible to build two separate systems—for wCBDC and rCBDC—that interface with one another and share a unified user interface. If necessary, the wholesale system could operating on a distributed technology and the retail system being either distributed or centralized.

The Preliminary Design for the Digital Shekel System (2025) focused on a retail DS and noted that the retail CBDC could also serve wholesale purposes. There may be multiple pathways toward a multipurpose currency. For instance, the digital shekel could initially focus on retail use cases and users, with wholesale features added later. Alternatively, the process could begin with the issuance of a wCBDC, followed by the addition of retail functionalities. The latter approach may be simpler—particularly in terms of the legislative requirements (if any) at the initial stage—and would allow system performance to be tested in a limited environment. However, both approaches require special attention during system development to ensure that, whether the system is initially built for wholesale or retail use, it is designed to support the other use case in the future.

To conclude, in the era of central bank digital money, the traditional distinction between retail and wholesale central bank money is becoming increasingly irrelevant. Both forms are based on the same fundamental principle—a central bank’s commitment to a final, secure digital unit of value. Accordingly, it is possible to design a single unified system in which the form of money is identical, but usage

characteristics, permission levels, and supervisory frameworks are tailored to different participants. Such a system could serve as a robust foundation for an advanced, efficient, and open payment infrastructure that supports both the needs of the financial system and those of the general public, and would constitute a central pillar in the evolution of the financial system in the digital age.

4. Examining the Technological Feasibility of Implementing the Digital Shekel Design

4.1 Background

In May 2025, a Technological Consultation document (hereinafter: TC) was published, inviting technological entities to provide information regarding the potential technological implementation of the Digital Shekel components across six distinct areas, as detailed below. The process had several objectives, the primary one being to assess whether it was technologically possible to actually implement the preliminary design of the digital shekel, as published in March 2025. Other objectives included learning and understanding existing technological possibilities in the market – identifying which technologies are available, what they enable, and their level of maturity; further challenging and refining the initial design, in parallel to the public consultation process (see Chapter 6); and supporting the cost analysis of implementing the digital shekel (as detailed in Chapter 1).

4.2. Content of the Consultation

The consultation document covered six distinct technological domains:

- 1. TC1 – Backend Layer (BE).** This layer includes: The minimal database required for system maintenance, enabling transaction execution, policy and limitation enforcement, and statistical data aggregation (including an aggregated statistical database of transaction flows); a stateless clearing engine; integration capabilities with other systems (e.g., RTGS and ATM switch) and with other components of the digital shekel system (such as the offline system, Alias system, and fraud monitoring system); and programmability and flexibility in managing policies within the system. All of the above must be implemented while ensuring privacy protection, such that neither the system nor its operator can identify users or track the activity patterns of specific users.
- 2. TC2 – Secure Messaging System.** This domain requires consideration of message architecture, authentication and authorization mechanisms, information security, availability, and resilience.
- 3. TC3 – Offline Payments.** This domain calls for the presentation of technologies enabling offline transactions, including the access technology and the secure component on which balances are stored and through which transactions are executed.

4. **TC4 – Secure Component.** This domain requires technologies for payment authorization within the backend layer, utilizing cryptographic keys (private and public) and cryptographic signatures within a secure container.
5. **TC5 – Alias System.** A digital identity management system designed to enable a convenient user experience by allowing payments to be made using a memorable identifier rather than a wallet address, while ensuring that the system operator cannot reveal end-user identities or their activities. The system will generate a unique identifier for each end user.
6. **TC6 – Fraud Monitoring System.** A system designed to monitor transactions and activities in real time, detect fraud using AI-based mechanisms, and do so while maintaining privacy and regulatory compliance.

A total of 28 entities submitted responses to various sections of the TC. Entities were permitted to respond to more than one TC, and several did so. The number of responses received for each TC is presented in the accompanying table.

TC	1. Backend layer	2. Secure messaging system	3. Offline payments	4. Secure component	5. Alias system	6. Fraud monitoring system	General
Total	15	13	14	11	8	12	4

Table 3 – Technological Consultation Response Summary

To better understand the technological solutions that were presented, the Digital Shekel team held in-depth meetings with 12 of the responding entities.

4.3. Key Insights

The following section presents the main insights derived from the analysis of the various responses received during the technological consultation.

Backend Layer - Several technological solutions were presented that could implement the initial design of the backend system. Although the proposed solutions differ in certain characteristics, the technology providers asserted that their systems meet the requirements outlined in the preliminary design. The main features of the proposed solutions include:

- **Single system for wholesale and retail CBDC (wCBDC and rCBDC) versus two separate systems:**
Some solutions proposed separate systems that interface with one another to create a unified user

experience—both for the system operator and for end users interacting directly with the backend (e.g., financial institutions).

- **Centralized versus decentralized architectures:** Solutions were presented based on centralized as well as decentralized systems utilizing Distributed Ledger Technology (DLT). Among the decentralized solutions, differences emerged in the choice of network or platform, the consensus mechanism (the method by which transactions are validated), and the practical implementation of the technology.
- **Settlement mechanism:** Settlement may be executed through predefined rules or via smart contracts (in DLT-based networks).
- **System performance:** Respondents presented systems capable of high processing throughput—up to tens of thousands of transactions per second. Reported latency ranged from a few milliseconds to several seconds, depending on the chosen architecture, technology type, and system load.
- **Open-source versus closed-source systems:** Solutions varied between open-source, “code-available,” and closed-source models. Open-source offers advantages such as independent customization, knowledge sharing within the professional community, and reduced licensing costs. However, it may place full responsibility for maintenance and development on the Bank of Israel if community support wanes. Conversely, closed-source systems may create dependency risks if the vendor ceases service provision or raises prices.
- **System scalability:** Two main approaches were presented for scaling the system in response to increased load:
 - **Horizontal scaling (scale-out):** adding components such as servers or computing nodes to distribute load.
 - **Vertical scaling (scale-up):** upgrading existing components, e.g., increasing processing power, memory, or storage capacity of a single server.

Each approach has advantages and disadvantages in terms of cost, flexibility, and management.

- **Connectivity with other systems:** All proposed solutions demonstrated standard connectivity through ISO 20022-based APIs.

Most of the proposed solutions were based on DLT, which relies on cryptographic mechanisms allowing each network participant to maintain an updated copy of the distributed ledger. Any change to the ledger is subject to a consensus mechanism and must be approved by other participants. Respondents cited several reasons for choosing DLT for the backend layer, including: high resilience, transaction

finality and atomic settlement, enhanced security, business continuity, efficient settlement processes, interoperability potential (including with other CBDCs), 24/7 operation between financial institutions without direct dependence on the central bank, and transparency enabling simultaneous updates across all participants.

It should be emphasized, however, that while DLT-based systems can achieve these advantages, centralized systems may also provide similar capabilities. The Bank of Israel remains open to all types of technological solutions—centralized or decentralized—provided they meet the requirements set out in the preliminary design and comply with standards for information security, resilience, and reliability. It should also be noted that decentralized systems introduce privacy challenges due to their inherent transparency—both vis-à-vis the system manager (the Bank of Israel, in the case of the digital shekel), who may be able to analyze transaction flows even without directly identifying end users, and vis-à-vis other participants, who may view transactions not necessarily related to them. This contrasts with the principle established in the preliminary design, which stipulates that the central database will not store identifiable or individual transaction data, but only aggregated information. A potential solution to these privacy challenges lies in the use of advanced encryption mechanisms. Although such mechanisms currently have limitations—such as longer latency and higher computational cost—they are expected to evolve significantly in the coming years.

Messaging System - The messaging system proposed by most respondents is based on REST API architecture, with the specific design depending on requirements to be defined by the Bank of Israel, including information security considerations.

Secure Component - Most companies proposed leveraging smartphones for end users, given the secure element embedded within them, which enables payments even without an internet connection. Smart cards were also presented as an alternative, though they have limitations such as smaller memory capacity, lower computational power, and lack of an interface for PIN entry. Consequently, they require reliance on an additional device such as payment terminals (POS) or a smartphone used by the other party to the transaction. For corporations and merchants, the secure component could be embedded in POS devices or in dedicated secure hardware modules, such as Hardware Security Modules (HSMs).

Offline Payments - It remains unclear whether the technologies presented can fully meet all requirements of the preliminary design—for example, preventing double spending, ensuring immediacy

and finality of payment at the moment of execution (and not only upon reconnection to the online system). There are also questions regarding which end-user devices will be used, depending on the chosen secure component. This area is expected to evolve further, particularly as the European Central Bank advances its work on implementing offline payment capabilities for the Digital Euro.

Alias Systems - Existing market technologies can meet the requirements outlined in the preliminary design. These are typically standalone systems that operate through mapping and search functionalities.

Real-Time Fraud Monitoring Systems - AI-based systems exist that can enable fraud detection and anomaly identification within the digital shekel system. Real-time monitoring—especially in the context of anti-money laundering (AML) regulations—may slightly delay transaction execution (increased latency).

4.4. Summary and Conclusions

The main conclusion of the technological feasibility assessment is that it is technologically possible to establish a Digital Shekel system in accordance with the preliminary design. However, should a decision be made to issue a DS, the Bank of Israel will need to resolve several technological implementation questions, such as:

- Whether to build the retail and wholesale systems on a shared infrastructure or as two separate systems that interface seamlessly to provide a unified user experience.
- Where to host the system infrastructure—within the Bank, through an external provider, in the cloud, or via a hybrid model.
- Which communication standard to use between participants and between participants and the backend—an existing standard or a dedicated one for the Digital Shekel.
- Whether a secure component based solely on smartphones or dedicated hardware (e.g., HSM) will suffice, or whether physical smart cards will also be required—an option that increases implementation costs and raises the question of who will bear those costs.

Regarding **costs**, the responses to the technological consultation indicated a wide range of estimates, depending on the nature of the solution, implementation model (e.g., cloud/on-premises, open-

source/closed-source), scope of functionality, and other characteristics. These cost estimates were incorporated into the cost-benefit analysis presented in Section 1.

To verify the technological feasibility as presented by suppliers during the consultation, the digital shekel team approached several respondents with a proposal to conduct a Proof of Concept (PoC) for evaluating the backend system. Within the PoC, the Bank of Israel will simulate system participants, while the suppliers will simulate the backend system. The PoC will examine various wallet management features under different payment scenarios, such as split transactions, multiple transactions, fund locking and release, waterfall and reverse waterfall mechanisms, and more.

The Bank of Israel will continue to monitor technological developments in both traditional payment systems and emerging payment instruments (e.g., stablecoins, other CBDCs worldwide, and tokenized deposits) to ensure it maintains up-to-date information necessary for any future decision regarding the issuance of a Digital Shekel.

5. Business Preferences Survey Regarding Use of the Digital Shekel

To examine the Israeli public's willingness to use the Digital Shekel, a study was conducted in 2024 among individuals.²² Following that study, a second survey was carried out in 2025, this time focusing on the business sector, with the aim of assessing how businesses could be expected to accept the DS and identifying its perceived advantages and disadvantages compared to existing means of payment. The survey was conducted among both large corporations (through qualitative research) and small businesses and self-employed individuals (through quantitative research). The survey was carried out by the Rushinek Institute.

5.1. Small Businesses and Self-Employed – Quantitative Survey

5.1.1. Background

The survey among small business owners and self-employed individuals was conducted online in two stages. Participants represented a national random sample of self-employed individuals and small businesses in Israel employing 0–20 workers (excluding the business owner). In the first stage, respondents were asked to indicate which means of payment they currently use for expenses and income, and to rate how convenient or inconvenient these means are, including perceived advantages and disadvantages. After a short interval, respondents to the first survey were invited to complete a second survey, in which they were presented with a general description of the DS. In this stage, they were asked to indicate their level of interest in using it in the future for various purposes. A total of 910 respondents completed both surveys.

5.1.2. Key Findings

The survey results indicate that most self-employed individuals and small business owners already make extensive use of digital payment.

- **Expenses:** Credit cards are the primary and most common means of payment for most nonpayroll expenses, while bank transfers are the main method for paying salaries.
- **Income:** Payment applications such as Bit and PayBox are the main method for receiving payments up to NIS 1,000, while bank transfers are the primary method for receiving payments above that amount.

²² Bank of Israel (2025). [Summary Report – The Israeli Public's Willingness to Adopt a Digital Shekel](#).

Most small business owners expressed high levels of satisfaction with existing payment methods.

- For expenses, between 85% and 91% of respondents said they find credit cards convenient to use, and between 76% and 86% said they find bank transfers convenient. The main advantages cited were speed, simplicity, and ease of tracking payments, with perceived advantages outweighing disadvantages.
- For income, between 77% and 87% of respondents said they find payment apps convenient, and between 90% and 92% said they find bank transfers convenient. Again, the main advantages cited were speed and simplicity, payment finality, and ease of tracking, all perceived as stronger than the disadvantages.

With this high level of satisfaction with the existing means of payment, many small business owners did not see a need for an additional means of payment such as a Digital Shekel. The main reason for the lack of interest was the perception that a DS is not yet reliable, likely due to its novelty and unfamiliarity.

However, even with limited information and relatively low engagement with the potential benefits, about 20% of businesses expressed interest in using a Digital Shekel—both for making payments and for receiving income. Interest was concentrated in small-value transactions (up to NIS 1,000). Among those expressing willingness to use a digital shekel, the main reason cited was its perceived convenience.

While aspects such as security, payment finality, and ease of use are already well-addressed by existing means of payment, transaction fees emerged as a potential entry point for the Digital Shekel. Survey findings show that fees are a major sore spot for small business owners—both for expense payments (via credit cards and bank transfers) and for income receipts (via credit cards, payment apps, and services such as PayPal). Low usage cost was identified as an important feature for future adoption of a digital shekel—both for receiving income and as a factor strengthening overall willingness to adopt it.

Another factor that could increase interest in the Digital Shekel is the absence of limits on payment and receipt amounts. Such limits were identified as a disadvantage of existing payment applications—both for making payments and for receiving income—and their removal could enhance the attractiveness of the digital shekel among self-employed individuals and small businesses.

5.2. Large Corporations – Qualitative Survey

5.2.1. Background

The qualitative survey was conducted through in-depth interviews with approximately 20 Chief Financial Officers (CFOs) from large companies operating across a wide range of industries, including retail, manufacturing, infrastructure, food, energy, pharmaceuticals, real estate, high-tech, communications, insurance, and professional services. The interviews began with a detailed discussion of existing means of payment. After being presented with a comprehensive description of the Digital Shekel's features, interviewees were asked to share their perceptions of its value. Due to the qualitative nature of the research, the findings are not statistically valid, but they provide in-depth insights into the considerations, concerns, and perceived potential of the digital shekel among large corporations.

5.2.2. Key Findings

The interviews revealed that large companies have high levels of satisfaction with existing payment methods.

- On the expense side, bank transfers—including through the MASAV system—are the main means of payment for a wide range of transactions, such as salary payments, payments to authorities, and large supplier payments. Most interviewees noted that the shift to extensive use of MASAV occurred over the past 10–15 years, mainly replacing checks and individual transfers, and that this transition represented a significant operational improvement. The improvement was reflected in the ability to process large volumes of payments quickly, enhanced monitoring and control, and payment finality—a major advantage also appreciated by suppliers.
- On the income side, satisfaction was also high. In most segments—particularly B2B transactions—payments are received mainly via bank transfers. In retail industries such as food chains, fashion, furniture, electronics, and pharmaceuticals, most income is received via credit card payments. Retail companies reported high levels of satisfaction with credit card acquiring, citing significant improvements in acquiring processes in recent years and reductions in fees charged by credit card companies. Cash payments were described as cumbersome, and their share of total income has been steadily declining over time.

When presented with a detailed description of the Digital Shekel, interviewees expressed moderate to low interest in its future use, varying by industry and operational characteristics. Most noted that key features of the digital shekel—such as ease of use, safety (as a liability of the Bank

of Israel), offline functionality, sub-wallet capabilities, and fraud monitoring systems—were not perceived as significant advantages compared to the current situation, since existing means of payment (bank transfers and credit cards) are already viewed as efficient, secure, and well-suited to their needs. Nevertheless, several potential advantages of a digital Shekel were identified that may be relevant to specific industries and needs:

- The potential to reduce fees—both credit card acquiring fees and fees for RTGS transfers and foreign exchange conversions—was consistently cited as the main advantage. For retail companies processing hundreds of millions of Shekels annually, even a fractional reduction in fees could have a significant impact on profitability.
- Instant settlement was another advantage, considered important in industries where immediate receipt of funds is critical (e.g., tourism) or where operations depend on immediate access to raw materials or goods. Instant payments were seen as improving cash flow, strengthening trust between suppliers and customers, and enabling additional transactions.
- Many interviewees also noted that a digital shekel could increase competition with banks, MASAV, and credit card companies, creating incentives to improve services and reduce costs across the financial system.

Finally, several recommendations were raised regarding the implementation and integration of the Digital Shekel in large companies, including:

- The need for pilot programs in high-volume and complex transaction environments.
- Concerns about being early adopters of a new means of payment.
- The importance of a simple and user-friendly interface.

Additional concerns included the need to manage separate balances, potential impacts on liquidity vis-à-vis banks, and the lack of installment payment options.

6. Summary of Public Responses to the Digital Shekel Design Document

6.1. Background

The preliminary design document for the Digital Shekel was published on March 3, 2025, with the aim of enabling broad public and professional discussion and designing the system in collaboration with stakeholders. The public was invited to submit responses via an online questionnaire until April 30, but to allow for deeper review and broader participation, the deadline was extended to May 15, providing approximately two-and-a-half months for submission of responses.

6.2. Status of Responses

By the questionnaire’s closing date, approximately 200 responses were received, around 170 from the general public and around 30 from organizations. However, only 42 responses were considered substantive—17 from individuals and 25 from organizations, 7 of which operate abroad. Following an analysis of the responses, the digital shekel team held a series of meetings with 14 respondents to further explore key issues and leverage the ecosystem’s broad expertise for continued development of the digital shekel. The distribution of respondents who provided substantive feedback was as follows:

Government entities	6	Academia	1
Financial institutions	6	Civil society organizations	3
Technological / Fintech industry	9	Private individuals	17

The following are the key Insights from the public’s feedback on the preliminary design.

6.3. Broad Support for the Proposed Digital Shekel Ecosystem Model

- Many respondents expressed support for the proposed model, in which the Bank of Israel serves as the issuer and system manager of the Digital Shekel, while private entities (PSPs, FIs, ASPs) are responsible for interactions with end users. Respondents agreed that this is an appropriate structure but should be designed with flexibility to allow future evolution.
- It was proposed to add a new participant type to the Digital Shekel system—a Technical Service Provider (TSP)—which would provide PSPs with the technological infrastructure to connect to the system but would not directly serve end users.
- Alongside the backend layer, respondents stressed the importance of central services managed either by the Bank of Israel or other entities. In the area of identification, tension was noted

between convenience and privacy, with support for hybrid approaches combining centralized management and decentralized implementation. Fraud monitoring was viewed as essential, with support for a hybrid model combining responsibility between private providers and a central regulatory body.

- The model was seen as balancing monetary responsibility and stability with innovation and competition, though some expressed concern that the Bank of Israel’s role—as issuer, operator, supervisor, and manager—may be too centralized.
- Concerns were raised about risk management costs being disproportionately borne by financial institutions (FIs), perceived as having “deep pockets.”
- Regarding privacy and public trust, there was broad agreement that clear boundaries must be set for PSPs, including a prohibition on default user consent for data sharing. Respondents proposed that privacy mechanisms be implemented at the system level, subject to dedicated regulation.
- As an alternative to the Alias management system, some proposed using a Decentralized Identifier (DID)—a unique identifier created and controlled by the user and stored in a decentralized manner (e.g., on a blockchain).
- Respondents emphasized the importance of supporting a diverse range of users, with a focus on simple interfaces, robust KYC processes, and advanced cybersecurity. There was consensus on allowing minors access under appropriate conditions and supporting positive access for foreign users, accompanied by tailored control mechanisms.

6.4. Feedback on the Basic User Journey in the Digital Shekel

- Respondents supported adding basic functionalities such as access recovery, privacy features, and smart contracts, while avoiding unnecessary functional overload at launch. Most supported multiple wallets and multi-PSP access, with strict cybersecurity and privacy standards. Concerns were raised about regulatory transparency and consumer protection.
- There was broad support for allowing PSPs to specialize in specific user groups or segments, though concerns were expressed about potential discrimination or exclusion. Several entities proposed flexible regulation requiring minimum accessibility or operating under the principle of “basic service for all, advanced services by specialization.”
- Opinions were divided regarding a default PSP. Some viewed it as a tool for financial inclusion, while others feared it could harm competition. Options discussed included a public provider or a public-private partnership.

- There was consensus on enabling access through existing hardware (e.g., users' smartphones, existing merchant payment terminals), though technological and regulatory challenges must be addressed. Uniform standards and minimum service levels should be defined.
- Respondents emphasized ensuring end-user control over payment initiation, balancing security and convenience. Support for diverse use cases is important, though some suggested gradual implementation.
- While finality and immediacy were seen as advantages providing transaction certainty, respondents noted the need for refund mechanisms in exceptional cases.
- The requirement for continuous funding and defunding and real-time balance updates in payment accounts connected to wallets 24/7 year-round presents technological and regulatory challenges, particularly for smaller entities.

6.5. Feedback on the Advanced User Journey

- Concerns were raised that excessive expansion of functionality and complex operations could burden the system.
- Respondents emphasized the importance of interoperability with other payment systems, regulated digital assets, and national information systems, as well as support for cross-border payments and open banking, while maintaining privacy and information security.
- There was recognition of the need to develop advanced payment scenarios, reducing dependence on any single participant and preventing the creation of “closed environments.”
- Broad support was expressed for developing offline payments, considered essential for trust and system availability.
- Respondents stressed the need to balance convenience, security, privacy, and cost, and to consider support mechanisms from service providers.

6.6. Feedback on Architecture and Technical Matters

- The main database and the settlement engine form the core of the digital shekel system, while preserving user privacy. Most respondents felt that no additional components are needed in the backend layer but suggested implementing “Chinese walls” between databases to prevent reverse engineering.

- Online payment operations require payment messages between PSPs and the settlement engine while maintaining privacy. Respondents emphasized the importance of interoperability and compliance with international standards, such as ISO 20022.
- The system should be available 24/7/365, with high performance requirements—including transaction processing time, latency, throughput, reporting, and data analytics. Technological complexities were noted that could affect execution times, particularly due to differences in transaction volumes and needs between business and private customers.

6.7. Feedback on Policy, Rules, and Regulation

- Concerns were raised about regulatory arbitrage among different participant types. Respondents emphasized the need for clear delineation of responsibilities among participants and uniform standards defining who is responsible in each case.
- System design must protect user privacy and include mechanisms to prevent tracking and centralized data collection.
- There was support for enabling anonymous transactions, though respondents agreed that privacy must be balanced with oversight of illicit activity, meaning not all user types should be permitted to transact anonymously.
- Respondents stressed that the Digital Shekel should offer low-cost basic operations. Accordingly, several business models for PSPs were proposed, including subscriptions, advertising, additional services, minimal fees, and revenue sharing. Some suggested that the Bank of Israel could bear the operational and management costs.
- Users should enjoy strong consumer protection without being “bounced around” between entities. It was noted that issues identified following the open banking reform should be addressed before launching the DS.
- Regarding holding limits, opinions were divided between support for uniform limits and complete opposition to limits. Respondents proposed measuring the impact of the Digital Shekel’s introduction on liquidity and the credit market (from a funding perspective) before setting limits. Some argued that user-type-based limits could themselves burden the system.
- There was also disagreement regarding interest payments on the DS. While respondents acknowledged that paying interest could enhance monetary transmission, concerns were raised

that it might reduce liquidity and bank funding sources. It was suggested that if interest is paid, the calculation mechanism should operate at the end of each business day.

Glossary

“The Beginning of Wisdom is the Definition of Terms” ~ Socrates

Entities in the Digital Shekel System

1. **End Users** - Anyone who can hold a balance and perform payment transactions with the digital shekel: individuals and organizations (businesses, non-profits, government offices, etc.). Participants in the system may also hold a wallet(s) and act as end users. An end user is the owner of the digital shekels in their wallet.
2. **Participant** - An organization that plays a role in the digital shekel system and is bound by the system's scheme rules. So far, the following types of participants have been defined for the digital shekel system:
 - Digital Shekel Payment Service Provider (DS-PSP)
 - Funding Institution (FI)
 - Additional Services Provider (ASP)
 - In this document, a new participant type is defined for the first time: Technology Services Provider (TSP).
3. **System Manager** - The entity that defines the scheme rules and is responsible for the proper management of the system, including supervising the various participants in their activities concerning the scheme rules, resolving disputes between participants, etc. The Bank of Israel is expected to fulfil this role.
4. **System Operator** - The entity that operates the technological infrastructure according to the scheme rules and the terms of engagement with the system manager. The system operator will be the central technological entity with which most technological engagements of the various entities will be conducted. The Bank of Israel, or an entity appointed by it, is expected to fulfil this role.
5. **Funding Institution (FI)** – Financial entities licensed by a financial regulator that manage payment accounts for the public outside the digital shekel system and will allow their customers to convert money from their account balance to DS (funding) and vice versa (defunding). Examples include commercial banks, the Postal Bank, credit unions, financial asset service providers, etc. Some of these entities will also support the conversion of cash to DS and vice versa.

versa for all end users of the digital shekel. Different models for FI activity may exist, depending on whether the FI has access to the RTGS and whether it relies on its own digital shekel balance or that of another FI to perform the funding and defunding processes for its end users.

6. **Digital Shekel Payment service provider (DS-PSP)** – The entity responsible for providing the necessary technological and business framework to connect end users to the digital shekel system (conducting KYC procedures, providing and recovering access technology to the system, customer service, etc.) and enabling end users to perform transactions. Without engagement with a payment service provider, an end user cannot operate in the digital shekel system.
7. **Additional Services Provider (ASP)** – An entity of this type can provide optional additional services to end users, such as budget management, analytics services for businesses, payment insurance, advanced payment applications (e.g., conditional payments), etc.

Business Terms

1. **Retail Central Bank Digital Currency (rCBDC)** – A digital currency issued by the central bank, representing a direct liability of the central bank, intended for use by the general public.
2. **Two-Tier Model** – An operational model for the rCBDC system where end users' access to the system is based on engagement with payment service providers who supply the necessary technological, service, and business framework for this access.
3. **Smart Money** – Digital money that, beyond being a simple database entry like "classic" money, is managed in a system that allows for advanced use cases, such as smart contracts, DeFi, conditional payments, and more.
4. **Wholesale Central Bank Digital Currency (wCBDC)** – An upgrade of the RTGS system to smart money that can operate 24/7/365. It has built-in programmability and connectivity to other systems (DLT and others). According to the BIS, wCBDCs are intended for use in transactions between central banks, commercial banks, and other financial institutions, meaning they will play a role similar to that of reserves or clearing accounts currently held at central banks. However, they can enable financial institutions to access new functions powered by tokenisation, such as composability and programmability.²³

²³ Composability is the ability to bundle multiple actions so that they are executed following a single transaction command.

5. **Funding/Defunding** – The conversion of other forms of New Israeli Shekels (e.g., deposits in an FI, as well as cash) into DS. The result of a funding process is that the balance in the end user's digital shekel wallet increases, and their balance with the FI (or their cash balance) decreases. Defunding is the reverse of funding.
6. **Issuance/Redemption** – The creation/deletion of new/existing digital shekels by the Bank of Israel, resulting in a change in the amount of DS in circulation.
7. **Offline Payment** – A payment in a situation where both parties, the payer and the payee, are not connected to the backend of the DS system, and the payment is transferred via an electronic message between their access technologies.

Technological Terms

1. **Access Technology** – The hardware and/or software that allows end users to perform payments and manage their digital shekel balances. An access technology includes a secure container and usually also a user interface.
2. **Unique Identifier** – A one-to-one identifier issued for each end user registered in the digital shekel system, to which the wallets of that end user are linked. The unique identifier lacks identifying features of the end user and cannot be used to identify the user.
3. **Alias** – An easy-to-remember or retrieve nickname, such as a name, phone number, or email address of the end user linked to their wallet. The Alias allows payments between end users without needing to specify the identifier, which may be a complex sequence of letters and numbers.
4. **Digital Shekel Wallet** – A compartment in the digital shekel database where balances of digital shekels (and only digital shekels) are recorded. The wallet is used to perform funding, defunding, and payment transactions in the digital shekel system. There cannot be a negative balance in the wallet. The wallet is linked to the user's unique identifier, and the user's access to the wallet will be through a payment service provider. A user can hold multiple digital shekel wallets linked to their unique identifier. They can link a wallet or multiple wallets to multiple payment service providers or link multiple wallets to a single payment service provider.

5. **Offline Digital Shekel Wallet** – A hardware component where balances of digital shekels are recorded, used to perform funding, defunding, and payment transactions in the digital shekel system offline. There cannot be a negative balance in the wallet. Unlike an online digital shekel wallet, each offline wallet can only be linked to one PSP.
6. **Backend Layer** – The system components required by the system operator to perform its functions in the digital shekel system, including the necessary and/or derived databases from these actions (including the main database containing the balances in all end-user wallets). In particular, the backend will include the "settlement engine" - the component that enables the transfer of digital shekels as a result of a payment between two wallets - and the main database.

Abbreviations and Acronyms

DS - Digital Shekel

AML - Anti-Money Laundering

ATM - Automated Teller Machine

CBDC - Central Bank Digital Currency

CFT - Combating the Financing of Terrorism

DvP - Delivery Vs Payment

KYC - Know Your Customer

NFC - Near-Field Communication

PET - Privacy-Enhancing Technologies

PFMI - Principles for Financial Market Infrastructure

PvP - Payment Vs Payment

RTGS - Real-Time Gross Settlement

wCBM - Wholesale Central Bank Money

- **User Abbreviations** – Private (P), Business (B), Government/Public (G), Financial Institution (F).

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