ESAS Access Review: Risk Assessment Framework for ESAS

Consultation Paper

15 June 2023

Reserve Bank of New Zealand
Te Pūtea Matua

Glossary of key terms

AML/CFT	Anti-Money Laundering and Countering Financing of Terrorism
BCP/DRP	Business Continuity Plan/Disaster Recovery Plan
CMSP	Cash Management Service Provider
CPMI	Committee on Payments and Market Infrastructures
DIA	Department of Internal Affairs
ESAS	Exchange Settlement Account System
FMI	Financial Market Infrastructures
HVCS	High Value Clearing System
IOSCO	International Organization of Securities Commissions
NBDT	Non-Bank Deposit Taker
NBPSP	Non-Bank Payment Services Provider
OIA	Official Information Act 1982
PFMI	Principles for Financial Market Infrastructures
PSD	Payment Services Directorate
RAF	Risk Assessment Framework
SBI	Settlement Before Interchange

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Executive summary

This consultation paper does two things.

First, it provides an overview of the issues that the Reserve Bank needs to consider as we contemplate allowing new participants into our Exchange Settlement Account System (ESAS). In this paper, we are not consulting on whether or not to allow new participants, but rather identifying the sorts of issues we will need to weigh up in considering opening up access; we are also presenting our objectives for ESAS and where these objectives may be further supported by a wider access policy. A proposed access policy will be the subject of a subsequent public consultation.

Second, we are consulting on a risk assessment framework that we think could help us to assess the risks of opening up access to ESAS. The framework is intended to take a comprehensive view of the potential risks and map them in a way that supports the development of transparent criteria.

While this paper consults on the risk assessment framework, we are also using it to present, at a high level, the issues and considerations in opening up ESAS. We understand that stakeholders will want to provide feedback on the overarching question of whether to open up access to ESAS, and we welcome high-level feedback on how we are thinking about these issues, including gaps or omissions. However, the main point of this paper is to seek feedback on the risk assessment framework, as this will form an important component of our assessment of potential participants under a revised access policy, as well as provide insights into how we are thinking about the risks and opportunities.

Following this consultation, we will provide a Summary of Submissions, and consult on the central question of opening up access to ESAS by presenting our proposed access policy and criteria.

1. Introduction

This section covers:

- What ESAS is, including the roles ESAS plays
- Who currently has access, and how this paper supports our assessment of the ESAS access policy
- Our objectives for money and payments, and for ESAS
- How this fits into wider money and payments work.

What is ESAS?

The Exchange Settlement Account System (ESAS or 'the System') is central to the operation of New Zealand's financial markets. It is the system for processing and settling payments between banks and other financial institutions. ESAS is a real-time gross settlement system: 'real time' refers to the immediate settlement of payments, and 'gross settlement' means the payments are settled individually – they are not 'netted off' against counterparties' obligations.[1] The ESAS infrastructure is owned and operated by the Reserve Bank.

The current participants in ESAS (referred to in this document as the account holders) largely comprise financial institutions such as the commercial banks. The Reserve Bank also provides an account for the Crown to facilitate the Government's banking arrangements.[2] And the Reserve Bank itself, through the Financial Markets Directorate, is an account holder, as we use ESAS to implement monetary policy and provide liquidity to the financial system.

Participants are issued with an electronic form of central bank money called reserves in their Exchange Settlement Accounts, and all interbank settlement is conducted in central bank money, which carries a lower credit risk relative to money issued by the commercial banks. The settlement of payments in ESAS is final and irrevocable. Once a payment has been settled, the value is credited or debited to the accounts of the bank or financial institution. Because financial institutions rely on receiving money owed from other institutions to fulfil their other obligations, real-time and final settlement in ESAS helps to mitigate systemic risks.

Figure 1: Entities in the payments system

[1] In practice, payments are settled from every participant's account in order of priority – their having been assigned a priority ranking by either the payer or ESAS. This optimises liquidity, allowing time-critical payments to be made first. RBNZ Notice to Settlement Account Holders, 2020.
[2] 'Reserve Bank payment system operations: an update' Wolyncewicz (2013).

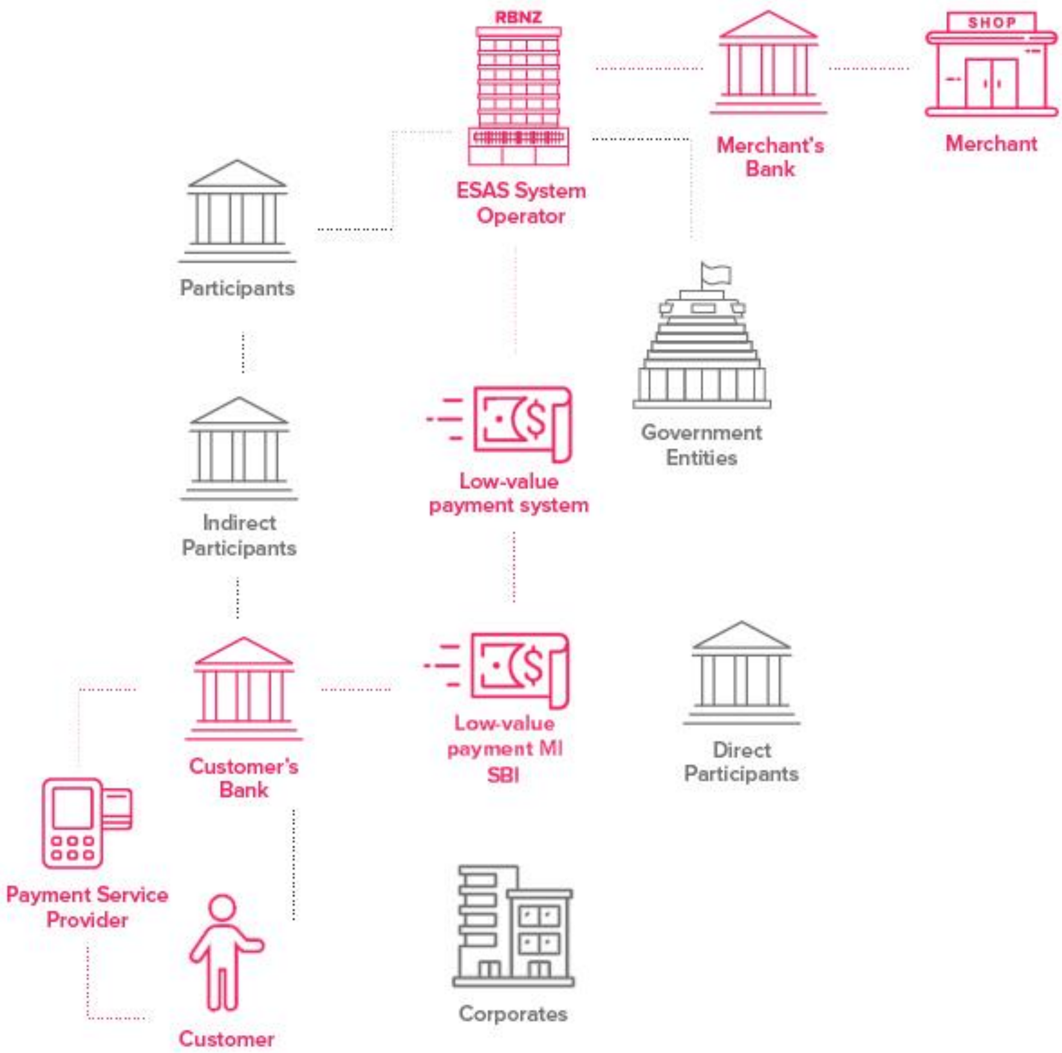
ESAS plays two central roles in the New Zealand financial system; these are reflected in the purpose of ESAS described on page 7.

Role 1: Irrevocable settlement of funds

ESAS acts to ensure the smooth and efficient functioning of the financial system by providing a safe and reliable platform for the transfer of funds between financial institutions. ESAS is responsible for processing large-value payments such as interbank transfers, government payments, and payments between financial institutions.

ESAS provides real-time settlement, enabling funds to be transferred and settled immediately, reducing the risk of default, and increasing the efficiency of the financial system. The System also ensures the security of payments by providing secure and robust infrastructure for the transfer of funds.

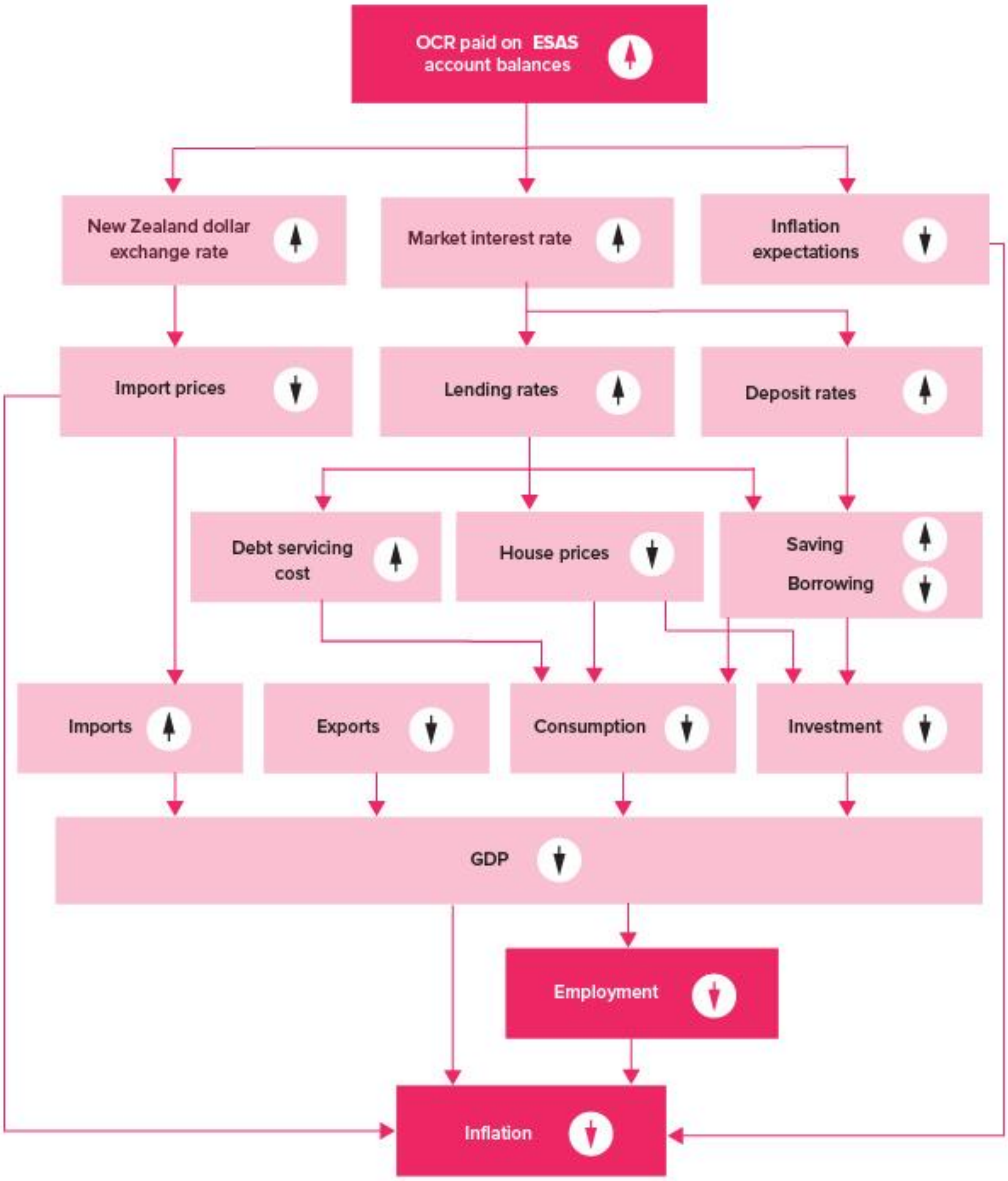
Figure 2: Role of ESAS in New Zealand's financial system: Settlement of funds



Role 2: Monetary policy transmission

One of the Reserve Bank's monetary policy tools is the Official Cash Rate. The Monetary Policy Committee makes decisions on the Official Cash Rate; this is the overnight interest rate paid on account balances in ESAS. It is effectively the daily benchmark interest rate that applies to lending and borrowing between the Reserve Bank and commercial banks. Therefore, ESAS is a key mechanism in the transmission of monetary policy, enabling the Reserve Bank to influence economic activity and inflation. The following figure, adapted from our Monetary Policy Handbook,[3] shows this relationship. More information on the monetary policy transmission mechanism can be found in the Monetary Policy Handbook.

Figure 3: Role of ESAS: Monetary policy transmission mechanism



[3] The Monetary Policy Handbook (2020) can be accessed on our website here.

Our objectives for ESAS

As an initial step in developing the access policy for ESAS, it is important to consider the purpose of ESAS and our objectives for ESAS. We think that a well-performing system achieves the purpose described below in a way that advances the objectives.

We are seeking feedback on our description of the purpose and objectives.

The **purpose** of ESAS is to:

- Support the soundness of the financial system by providing for irrevocable, risk-free settlement in central bank money
- Support the Reserve Bank's implementation of monetary policy
- Otherwise support the Reserve Bank in carrying out its central bank functions.

The Reserve Bank's **objectives** for ESAS are that:

- ESAS has a high level of integrity and reliability, and contributes to payments systems being efficient by being open to innovation and supporting competition, without creating undue risks to the payments system
- ESAS provides effective support for the implementation of monetary policy.

Our purpose

The term 'soundness' as part of the purpose reflects the necessity to ensure the stability and safety of the financial institutions, markets, and systems. ESAS supports this soundness by ensuring dependable, risk-free settlement in central bank money. To remain dependable, ESAS cannot fail. This leads to a zero risk appetite for system outages and a low tolerance for the failure of payments.

The purpose statement refers to supporting the Reserve Bank's central bank functions. This is in addition to the two functions specifically named (providing irrevocable risk-free settlement in central bank money and the implementation of monetary policy). In relation to ESAS, relevant functions can include (but are not limited to):

- Currency services
- Deposit accounts for overseas financial institutions.

Our objectives

The term 'reliable' captures both 'resilience' (i.e., the ability to avoid or recover from shocks, or equally 'financial stability') and everyday performance reliability. Resilience differs from reliability in that reliability is the outcome that we strive for, and resiliency is a requirement to achieve reliability. This part of our objective reflects our active role in risk management in order to fulfil our purpose.

The reference to innovation is included as part of the objective to reflect that innovation is a potential outcome of having a reliable, efficient and accessible money and payments system. This reflects the view that access to ESAS should not be an unnecessary barrier to participation in New Zealand's payments system. The role of innovation in the current context is that of providing the environment for innovation to flourish: in this sense, the innovation leg of our objective statement can be seen as passive rather than active.

These objectives for ESAS broadly align with the Reserve Bank's high-level objective statement for money and payments (more detail on this below). The focus on integrity and qualification around risks to the payments system is necessary to provide a reliable payments system. We also consider that supporting competition in turn enables efficiency, subject again to a consideration of the risks that may compromise the integrity and reliability of the System. Thus, our objective for ESAS specifies that we are open to innovation – access to ESAS should not be a barrier that inhibits innovation, and innovation is an outcome of having a reliable and efficient money and payments system. Innovation and inclusion can be seen as somewhat interlinked, as creating a supportive environment for innovation can help expand the choices available to New Zealanders, thereby supporting financial and social inclusion.

Having a well-calibrated ESAS access policy will support the purpose, consistent with the objectives. We consider that ESAS is currently delivering on the first of these objectives, but that there may be scope for increasing efficiency and supporting innovation and inclusion. In section 2 of this consultation paper we discuss potential opportunities for greater contributions to these outcomes.

Once we have concluded this consultation on the risk assessment framework (RAF), the question for us to address in the next consultation is whether we have the calibration – or balance of risk and innovation – correct.

Intersection with other money and payments work

The Reserve Bank is currently undertaking a significant work programme on the Future of Money and Payments.[4] The underlying objective for our work is that:

> "New Zealand has reliable and efficient money and payments systems that support innovation and inclusion".

The statement encapsulates four key concepts – reliability, efficiency, supporting innovation, and inclusion.

Reliability, which as discussed earlier encompasses resilience, is the foundation of trust and confidence in money and payments. The money and payments systems should also be efficient, provided that this does not lead to intolerable levels of risk or poor inclusion outcomes. A policy that leads to better inclusion outcomes is of interest even if it worsens efficiency outcomes.

ESAS can contribute to this objective by providing a reliable and efficient payments system that supports innovation and inclusion. We consider that ESAS is currently delivering on the first of these objectives but there may be scope for increasing

[4] Information, including consultation papers on the future of money (our stewardship approach, cash system redesign, a central bank digital currency and private innovation) is available on our Future of Money webpage.

efficiency and supporting innovation and inclusion. In section 2 of this consultation paper we discuss potential opportunities for greater contributions to these outcomes.

This wider work on the Future of Money and Payments includes how the future forms of central bank money may look and potential amendments or additions to the current cash system to ensure that it remains fit for purpose. It also explores exploration of a central bank digital currency (CBDC) in recognition of its potential utility in the digital economy, and includes work on innovations in private money and the associated risks and opportunities. This paper does not go into these work streams in detail; however, it is useful to reinforce the crucial role of ESAS in the settlement of central bank money in underpinning the future of money and payments.

What do we mean by opening up access to ESAS?

Due to its systemic importance,[5] participation in ESAS is currently only granted to financial institutions that meet stringent requirements regarding the soundness and efficiency of the financial system and that have legitimate business interests, and to minimise any potential reputational impacts for the Reserve Bank.[6]

This paper sets out the Reserve Bank's initial assessment of the main issues and considerations in opening up access to ESAS. We firstly discuss the role that ESAS plays in the Reserve Bank's money and payments objectives and functions, what opening up ESAS could mean, and the main considerations in expanding ESAS. We also explain where this consultation fits in the ESAS Access Review and what specifically we are seeking from your feedback.

This consultation paper presents a RAF that could be used to assess entities seeking access to ESAS. We also outline our objectives for ESAS and motivations for further considering our ESAS access policy and criteria. Following feedback on the RAF we will formulate an access policy and supporting criteria that will be released for further consultation. The access policy and criteria will provide specific details on how we will assess the potential participants ('the applicants'); these considerations will be designed to ensure our criteria support the conclusion of the RAF.

The dimensions of this draft RAF reflect risks that applicants may pose to the System if they are granted access and become ESAS account holders. We start our consultation on ESAS access with the RAF as this reflects the systemic importance of ESAS and illustrates how understanding risks and acting within our risk tolerance is – and will be – at the heart of our decisions around ESAS access.

By understanding these risks we will be in a better position to consider the extent to which ESAS access criteria could be broadened, while safeguarding the operation of the System. This paper obviously focuses on risk, but it also discusses why we think there could be benefits to broadening our ESAS access criteria.

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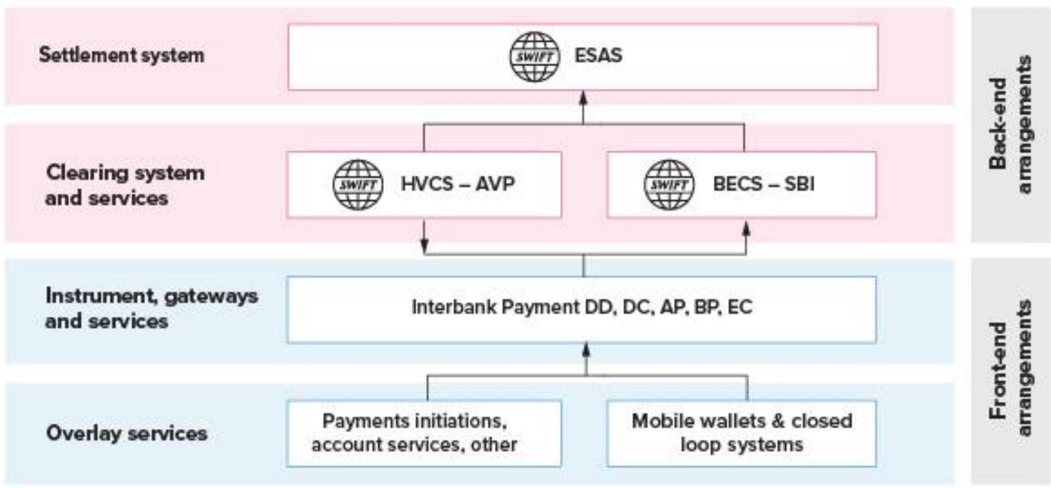
[5] The International Monetary Fund Financial Sector Assessment Program: Technical Note – Regulation and Oversight of Financial Market Infrastructures notes that ESAS is one of the New Zealand FMIs of systemic relevance.
[6] More information on ESAS access can be found on our website. The access policy and requirements are currently in review.

There are a number of components in the New Zealand payments system.[7] Figure 4 illustrates where ESAS sits in the payments landscape; payments across financial institutions are ultimately settled in ESAS.

Figure 4: The New Zealand domestic payment landscape



Notes: DD = Direct debit, DC = Direct credit, AP = Automatic payment, BP = Bill payment, EC = All other electronic payments. HVCS – AVP relates to the High Value Clearing System and BECS – SBI relates to the Bulk Electronic Clearing System. More information can be found in "New Zealand's Payment Landscape: a primer".[8]

All inter-bank payments are settled in ESAS using central bank money, although not all financial institutions involved in payments have ESAS accounts. Financial institutions and payment providers without direct access, such as smaller banks, non-bank deposit takers (NBDTs), credit unions and building societies, have agency arrangements with ESAS account holders that facilitate the settlement of transactions on their behalf. This indirect access requires agreement between the ESAS account holder and the financial institution. ESAS account holders are not obliged to offer agency arrangements to financial institutions that request them, and ESAS account holders may cease to offer agency arrangements, potentially limiting access to system participation.

A financial institution may apply to the Reserve Bank for an ESAS account. The current access policy sets out the factors used to assess applications to join ESAS.[9] It notes that applications for access must meet requirements regarding the soundness and efficiency of the financial system, have legitimate business interest, and demonstrate a lack of risks to the Reserve Bank.

However, the current access policy does not provide further details on these requirements or how the Reserve Bank assesses the level of risk an applicant may bring to ESAS. The advantages of a more transparent process could include making it easier for potential applicants to understand what would be required and judge whether joining ESAS would be beneficial for their businesses, thereby supporting competition

[7] New Zealand's payment landscape: a primer provides a detailed overview of the New Zealand payments landscape.
[8] Figure 4, page 4, of "New Zealand's payment landscape: a primer" describes the system in more detail.
[9] A moratorium on assessing applicants has been in place since May 2022 while the ESAS Access Review takes place. Information on this and our current access policy is available on our website.

and innovation in the payments sector. In addition, the current policy may not adequately consider the benefits of widening access given appropriate risk mitigations. This paper focuses on the former, but we discuss some high-level considerations of the benefits of accommodating more applicants in section 2.

Payments NZ also plays an important role in managing the clearing systems that flow across ESAS, and ESAS participants may also, but are not obliged to, join the clearing systems governed by Payments NZ. Payments NZ administers both the Settlement Before Interchange (SBI) system and the High Value Clearing System (HVCS). Payments NZ has set its current access rules to include a requirement for applicants to have ESAS accounts before access to systems such as SBI is granted. Participants in SBI and HVCS are currently registered banks, and Financial Market Infrastructures (FMIs).

Question

1

Do you have any feedback on how we have described our objectives for ESAS?

2. Considerations in opening up access to ESAS

It is important that any ESAS access policy be developed following a thorough assessment of the benefits against the risks of broadening access. This paper does not provide a conclusive assessment of this trade-off, but articulates our view of the potential risks as well as the potential benefits we have identified. These shape how we have approached the RAF.

Opening ESAS to a wider pool of participants could be consistent with the purpose and objectives we have stated for ESAS in section 1 to "*support the efficiency of the payments system by being open to innovation and supporting competition without adding undue risk to the payments system*". The second half of this statement refers to risk, again highlighting the importance of understanding the potential risks and possible mitigation as part of the access considerations.

The following section discusses:

- Potential reasons for entities wishing to join ESAS, and the potential benefits wider access may offer for the New Zealand money and payments system
- Risks to opening access, and wider considerations
- The link with the Principles for Financial Market Infrastructures (PFMI) standards.

Potential benefits of wider participation

There could be several potential benefits for prospective participants having direct access to ESAS. (These entities may already have indirect access through agency arrangements.)

Table 1: Potential benefits to a prospective participant

Benefit	Explanation
Removes reliance on agency banks (incumbents)	Firms have the ability to run their own business with direct access to clearing and settlement systems, without reliance on other industry players.
Ability to offer wide range of services	New firms may be able to enter the payments landscape and offer new types of services or improved services. However, access to clearing systems administered by Payments New Zealand, such as SBI, may also be required, and access to these systems is outside the Reserve Bank's scope as operator of ESAS.
Ability to buy (and repatriate) currency (physical cash) directly	An ESAS account is a requirement to buy cash directly from the Reserve Bank. This means firms such as ATM providers need to source their cash through agreements with ESAS account holders e.g., a registered bank. The ability to purchase directly can convey economic benefits.

Given that agency arrangements come at a cost to those relying on ESAS account holders, there may be some cost benefits in gaining direct access. However, the extent of any potential overall cost reductions is unclear as direct access also comes with increased costs; firms need adequate capital, operational, and technological capacity to service these payment functions and access liquidity. The cost/benefit calculation for each financial institution will vary based on scale and other considerations. In addition, a distinction may be drawn between those financial institutions that currently have access to ESAS through agency arrangements and the potential new entrants, as there are likely to be additional transitional costs for the former.[10]

There can also be benefits for certain types of financial institution, such as NBDTs, as the provision of ESAS accounts can provide them with another option for holding liquid assets and meeting their prudential requirements. However, we note that gaining access to liquidity support facilities is a separate process and is not automatically granted with an ESAS account.

Widening ESAS participation could also contribute in the following ways:

- Supporting a more effective implementation of monetary policy by being able to transmit Official Cash Rate (OCR) changes via the settlement accounts of a larger number of market participants.
- Supporting greater efficiency in New Zealand's financial system by promoting competition and supporting innovation, with more participants having direct access to the payments system.
- Supporting resilience, as ESAS as a whole may benefit from having more access points to the ledger, reducing concentration risk.

As more participants join ESAS, these wider benefits will become greater as, ultimately, ESAS access facilitates more competition in the market and supports innovation in payment services through, for example, making a business/service more profitable by reducing its costs of or barriers to entry, and more broadly may lead to economic benefits for New Zealand.

[10] For example, there is likely to be an impact on interchange numbers moving from agency arrangement to being a direct participant.

Risks to opening up access

While we have discussed the objectives of ESAS and why broadening the access criteria may be desirable, this consultation paper is substantially concerned with understanding and presenting the relevant risks. This is achieved by presenting our RAF in section 3.

The Reserve Bank has used an internal risk appetite statement to inform our RAF. In addition to this, as ESAS operator, the Payment Services Directorate (PSD) self-assesses against the Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions' (IOSCO) PFMI.[11] These principles are part of a set of international standards that the international community considers essential to strengthening and preserving financial stability.

To summarise the risks identified in the RAF, in this section we set out the main risks that an additional applicant may bring to the operation of ESAS. It is helpful to note that this analysis does not consider all risks in relation to ESAS, given that the question is around the access policy and is therefore concerned with risks from a new entrant to ESAS.

Table 2: Risk categories

Risk categories	Reserve Bank interpretation
Financial	The risk that an account holder is significantly incapacitated due to financial settings precluding it from conducting its business. This may involve credit risk (the risk the entity will be unable to meet its obligations when due or at any time in the future) and liquidity risk (the entity may have insufficient funds to meet obligations in a timely manner).
Legal	The risk that ESAS rules, contracts, or procedures cannot be enforced against the account holder. This risk could arise due to a conflict of laws issue, for example, in relation to overseas-incorporated applicants. There are also reputational risk issues that arise if an account holder is involved in breaches of legal requirements such as AML/CFT requirements or tax law requirements.
Operational	The risk that an adverse operational event arises for an account holder, affecting their ability to continue business operations in a sound and controlled manner. Including their business risk management processes, cybersecurity, and business continuity plan/disaster recovery plan (BCP/DRP) arrangements.

[11] The Principles for financial market infrastructures can be accessed at Principles for financial market infrastructures (bis.org).

Our analysis, as set out in the RAF, is that admitting a new participant to ESAS poses risks that would crystallise in reputational impacts.

Figure 5: Risks crystallise in reputational impacts (Source: RBNZ)

Figure 5 above illustrates the potential direct impact for the Reserve Bank; from a Reserve Bank perspective, we consider that the risks a participant may bring to ESAS ultimately materialise in reputational impacts. From a wider perspective, we note that there are potentially material flow-on consequences to other participants in ESAS, should these risks materialise. Our analysis, as set out in the RAF, is that admitting a new participant to ESAS poses risks that would crystallise in reputational impacts for the Reserve Bank as operator, and consequences for other ESAS account holders.

Relevance of Principles for Financial Market Infrastructures and Principle 18

The PFMI are international standards developed by CPMI and IOSCO. The PFMI aim to ensure the safety, efficiency, and reliability of FMIs, namely payment systems, central securities depositories, securities settlement systems, central counterparties, and trade repositories.

The PFMI are designed to be comprehensive and cover all aspects of an infrastructure's operations, from governance and risk management to business continuity and transparency. They provide guidance on the design, operation, and oversight of FMIs to reduce systemic risk and promote financial stability.

The PFMI are intended to apply to all systemically important FMIs, that is, the FMIs that are critical to the functioning of the financial system and could pose risks to the stability of the system if they were to fail. They include both domestic and international infrastructures, whether they are privately or publicly owned.

Although compliance with the PFMI is not mandatory, the ESAS operator adheres to and self-assesses against the PFMI principles. New Zealand is bringing in domestic FMI standards that are largely based on these PFMI standards.[12] Additionally, in some cases compliance with the principles is a prerequisite for participating in cross-border payment and settlement systems. In New Zealand, ESAS is currently designated as a settlement system under Part 5C of the Banking (Prudential Supervision) Act 1989,[13] and

[12] More information on this is available on our website: Financial market infrastructures (FMIs) Standards consultation - Reserve Bank of New Zealand

[13] The Banking (Prudential Supervision) Act 1989 replaced the relevant parts of the Reserve Bank Act 1989 and will itself be replaced once the Deposit Takers Bill (currently before Parliament) is passed.

is expected to be designated a payment system under the Financial Market Infrastructures Act 2021 in due course.

The RAF explains our view on the relevant PFMIs and how they relate to the generic risk categories we use – financial, operational, and legal.

One of these principles is worth elaborating on separately here. Principle 18 states that "*An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.*" This principle speaks directly to the access policy for ESAS. It underscores the importance of taking a risk-based approach to the access policy, and also of having transparent and clear access requirements.

Question

2

Do you have any feedback on our considerations for opening up ESAS?

3. Risk assessment framework

To ensure the stability and robust operation of ESAS, risks to the System stemming from its participants must be mitigated as much as possible. This section explains the framework used to assess the level of risk a prospective participant may introduce to the System. Later in the section, as a way to illustrate, the RAF is applied to stylised versions of entity types (e.g., registered bank, NBDT, Non-Bank Payment Service Provider) to capture all relevant activities undertaken by applicants. We derive the potential reputational impact an applicant may bring to the System by first assessing each of the financial, legal, and operational risks, then factoring in the mitigating controls to arrive at the residual risk for the applicant.

The RAF results in an assessment of the reputational impact on the Reserve Bank as the operator of ESAS. As noted in section 2, where any of the identified risks (financial, legal, or operational) materialise they can have material impacts on the other participants of the System.

The changing regulatory landscape

We note that the regulatory landscape for both ESAS as a system operator and for financial institutions that are current members or may be prospective applicants is undergoing change.

ESAS, as a systemically important infrastructure, currently self-assesses against the PFMIs. We expect ESAS will be designated under the Financial Market Infrastructures Act 2021, and will be required to comply with domestic FMI standards. The proposed FMI standards have not yet been implemented, but as previously stated the ESAS operator adheres to and self-assesses against the PFMI principles.

In addition, the Deposit Takers Bill is currently before parliament. This legislation will replace the existing legislation for banks and NBDTs, bringing them together under the proposed Deposit Takers legislation. The legislation, once passed, is expected to modify some of the regulatory requirements for these entities. The draft RAF illustrates how it would apply with current requirements to stylised versions of these entities. We note that amendments will likely be required to reflect any legislative or regulatory changes.

Risks associated with ESAS operation

From the ESAS operator's perspective, any event that triggers an adverse effect on the performance of the System arising from a deterioration in any ESAS account holder's current or projected financial condition[14] and resilience[15] constitutes a risk. To mitigate this risk, the ESAS operator focuses on the three categories of risk most relevant to the System: financial risks, legal risks and operational risks.

These risk categories are not mutually exclusive. Any product or service may expose an account holder to multiple risks. Risks may also be interdependent and may be positively or negatively correlated, so any risk assessments will need to take interdependence into consideration. Concentrations of a particular category of risk also

[14] 'Financial condition' includes the impacts of diminished capital and liquidity. Capital in this context includes potential impacts from losses, reduced earnings, and the market value of equity.

[15] Resilience recognises the bank's ability to withstand periods of stress.

need to be monitored, as they can elevate the overall risk to the System. Risk concentrations can accumulate within and across products, business lines, geographic areas, countries, and legal entities.

Payment system risk includes potential loss or harm for those account holders that send or receive payments, or information about the payments such as account holders' customers or related third parties. Enhanced technology capabilities have enabled account holders to meet the demands of the modern economy by delivering faster payments. More current and prospective account holders are seeking to offer payment services to consumers and businesses with the option of same-day settlement.

As the payments ecosystem continues to evolve with new products, services, participants, and partnerships, so do the risks. Accordingly, it is important that account holders' risk-management practices and internal controls continue evolving and keep pace with changes in the central bank's payments systems, products, and services. Effective communication between the stakeholders, both internal and external, is key to the System's overall risk-management goal.

Systemic risk can result from an inability to clear and settle payments due to a disruption in a particular segment of the overall system. For example, an incident at one large account holder could cause a chain reaction throughout the payments system. Such events can be sudden or result from an accumulation of risks over time. Operational and liquidity risks are the primary risks that can lead to such failures. The interconnectivity of financial institutions and markets can contribute to financial shocks that could have systemic impacts. Losses in value or confidence in the financial system can have significant adverse effects on economic markets.

Applying the CPMI-IOSCO Principles for Financial Market Infrastructures framework

(a) General approach

Given the central role that FMIs play in the safe and sound functioning of the financial system and in the transmission of systemic risk, the Bank for International Settlements' CPMI, and IOSCO have jointly created PFMI, the international standard for FMIs, to support the stability of the overall financial system. The standard comprises 24 principles that the international community considers essential to strengthening and preserving financial stability.

In New Zealand, ESAS is systemically important, and expected to be designated as a systemically important payments system under the Financial Market Infrastructures Act 2021. Currently the ESAS operator periodically assesses ESAS against the relevant principles. Of the 24 PFMI, 18 are applicable to payment systems such as ESAS.

Although the ESAS operator is not tasked with a regulatory role, it can mitigate undue risks through the initial vetting of prospective participants seeking access to ESAS, and the subsequent ongoing monitoring of the participants accessing the System. Furthermore, it may rely on the risk-mitigation practices implemented by the upstream FMIs, such as HVCS and SBI, which clear payments for subsequent settlement in ESAS.

The RAF takes the PFMIs that are relevant to considering a prospective participant's access to ESAS, and maps these onto the main risk categories (financial, legal, and operational) as used currently by the Reserve Bank in its risk-appetite statement. For each of these risks, the framework assesses the prospective participant's likelihood of crystallising a particular category of risk and its impacts, and takes into account the existing regulatory regimes and other key control factors to derive the residual risk. This result is then plotted onto the residual risk assessment matrix to inform the ESAS operator's decision.

This framework is risk focused. It has been designed in this way so as to balance the need to maintain system stability and the resilient performance of ESAS given its centrality in New Zealand's financial system. It considers the evolving needs of market participants seeking Exchange Settlement Accounts at the Reserve Bank.

(b) Mapping the relevant PFMI onto the Reserve Bank's risk categories

Of the 18 principles relevant to payment systems, only a subset is relevant for considering the participant access policy. Aside from Principle 18, which sets out access and participation requirements, there are 9 relevant principles to observe when mapping these to the aforementioned three risk categories. These are listed in Table 3.

Table 3: Principles relevant for considering ESAS access

Financial	Legal	Operational
Principle 7	Principle 1	Principle 15
Principle 8	Principle 2	Principle 17
Principle 13	Principle 3	Principle 18
		(Principle 19)

See Appendix 1 for a more detailed description of these principles.

For a number of the Principles in Table 3, the cooperation and compliance of the FMI's participants is needed. Where an ESAS operator's ability to enforce participant compliance is called into question, such as when there are limited legal options available for the ESAS operator to enforce compliance by an entity residing in another jurisdiction due to legal conflicts, this weighs against allowing such a prospective participant into the System.

Ultimately for the ESAS operator, it is the reputational impacts resulting from the crystallisation of these risks that need to be mitigated. In the reputational impact assessment, the residual risk ratings for these key risk categories are assessed holistically to derive the reputational impacts ESAS may incur from the assessed entity.

In Table 3, Principle 19 (tiered participation arrangements) is included, as although at present no tiered participations are permitted for ESAS, it may apply should ESAS access be widened.

The next section discusses in more detail some of the main risks the PSD identified that may be introduced by the prospective participants of ESAS. Section 3 explains the RAF that considers these risks in terms of the probability and the impacts on crystallisation of these risks. Section 4 describes how the RAF is applied to the various participant groups currently seeking access to the System, namely non-bank payment service providers (NBPSPs), NBDTs, and cash management service providers (CMSPs).

All these groups currently have access to ESAS indirectly through the existing ESAS participants. However, a small number of firms from each of these groups have engaged with the Reserve Bank to understand the requirements for direct access to ESAS, largely with the aim of reducing their access costs and dependency on their participant institutions. For each of the three risk categories, assessments are made of the residual risks that each of these entity groups will retain, after taking into account the risk control measures that address some of the inherent risks such entities may pose. These residual risks are then plotted onto the assessment matrix that depicts the range of outcomes deemed acceptable or otherwise to the ESAS operator. The result is used by the ESAS operator to infer the likely risks the applicants may pose to the System.

Risks relevant for assessing ESAS access permission

In order to ensure the stability and robust operation of ESAS, risks that may be introduced by those accessing ESAS must be mitigated as much as possible. Of the various risks ESAS faces, three have been identified as the primary risks to focus on: financial risk; legal risk; and operational risk. Reputational impacts for the Reserve Bank may occur when one, or more, of these risk categories materialises.

Financial risk

In the context of the PFMI, financial risk is an umbrella term encompassing credit risk and liquidity risk, with each addressed in separate principles.

(a) Credit risk

Credit risk is the risk to a current or projected financial condition and resilience of an account holder arising from an obligor's failure to meet the terms of any contract with the account holder or otherwise fail to perform as agreed. The Reserve Bank, in its role as the operator of ESAS, is not exposed to any material current or future credit risk. However, for account holders credit risk is present when settlement or repayment depends on counterparty, issuer, or borrower performance. Credit risk exists when the provision of funds and settlement do not occur simultaneously.

In wholesale payment and securities settlement systems, credit risk can have multiple sources and take several forms, including daylight overdrafts, settlement lags, principal risks, and loss-sharing provisions. Wholesale payment and securities settlement systems include financial intermediaries, financial services firms, and non-bank businesses that create, distribute, and process large-value payments. Wholesale payments are irrevocable at final settlement. The payment system's rules and applicable laws determine what constitutes final settlements.

Settlement risk is the possibility that the completion or settlement of transactions will not take place as expected. Credit risk in the settlement process is present during the lag time between the origination of a payment and the final funding of the origination instructions. In addition to credit risk, settlement risk often includes elements of liquidity risk.

(b) Liquidity risk

Liquidity risk is the risk to a current or projected financial condition and resilience arising from an account holder's inability to fully meet its obligations when they come due.

The primary liquidity risk with payment systems is related to account holders' intraday liquidity positions under normal and stressed market conditions. Account holders engaged in significant payment, settlement, and clearing activities that do not manage intraday liquidity effectively may be unable to meet payment and settlement obligations in a timely manner.

Since the ESAS account cannot be in a negative position at any point during the business day, any transactions that fail to settle are placed in a queue until such time as sufficient funds become available. But the interdependencies of payments and other parts of the financial system should also be considered. For example, ESAS is linked to the NZClear system through the delivery versus payment mechanism. If a participant in the NZClear system experiences a security settlement failure or interruption within the security settlement system, the settlement of the payments leg may be affected. This happens in ESAS and may, *in extremis*, affect the ESAS account holder and hence have the potential to cause systemic disruptions, prevent the efficient functioning of the financial system, and amplify the liquidity risks posed by payment systems. ESAS account holders are exposed to liquidity risk through the risk that a counterparty may be unable to meet fully its financial obligations when due. Certain large participants failing to meet their obligations in a timely manner could create a liquidity crisis in the payment system if other members are dependent on those payments to meet their obligations.

Legal risk

There is reputational risk if account holders breach other applicable laws, such as AML/CFT or tax law. Current account holders are required to have a sufficient understanding of the ESAS requirements and procedures, understand the legal and operational requirements of holding and operating an ESAS account, monitor activities within their business undertakings for AML/CFT compliance, report any breaches to the ESAS operator as well as the AML/CFT regulator, and remedy breaches promptly.

An account holder might engage in business practices that are regarded as unfair, deceptive, or both, and could infringe consumer protection laws.

Compliance risk

Principle 1 of the PFMI covers the legal basis for the FMI's operation. Of particular relevance in this context is the risk of ESAS account holders failing to comply with the existing regulations and contractual obligations. Principle 1 requires the FMI to have rules, procedures, and contracts that are enforceable in all relevant jurisdictions.

Compliance risks may be higher for account holders that also have memberships in FMIs outside the domestic market, where compliance requirements and expectations differ from those of New Zealand. Some FMI operators may require indemnification from their members while also placing open-ended liabilities on the members, or have contracts that do not adequately clarify the responsibilities of the members, their customers, or other third parties. Other FMIs may be conflicted in meeting New Zealand's AML/CFT requirements and those of their home jurisdictions, for instance in the area of reporting obligations that conflict with the respective jurisdictions' bank secrecy laws.[16] These circumstances need to be flagged for ESAS operators' attention, as circumstances may arise where a participant chooses to prioritise the requirements of other FMIs over ESAS, with detrimental impacts on the latter.

Operational risk

Operational risk is the risk to current or projected financial conditions and resilience arising from inadequate or failed internal processes or systems, human errors or misconduct, or adverse external events. Operational losses may result from: internal fraud; external fraud; inadequate or inappropriate employment and workplace safety practices; failures to meet professional obligations involving clients, products, and business practices; damage to physical assets; business disruption and system failures; and failures in execution, delivery, and process management.

The quantity of operational risks and the quality of operational risk management are heavily influenced by the quality and effectiveness of account holders' internal control systems. The quality of the audit function, although independent of operational risk management, is a key assessment factor. Auditing can affect the operating performance of an account holder by helping to identify and validate the correction of weaknesses in risk management and internal controls. The effectiveness of due diligence, the risk management of third-party relationships, business continuity planning, and controls protecting the confidentiality, integrity, and availability of bank information are other key assessment factors for mitigating operational risks.

System disruptions or failures by account holders and their third parties can delay processing, introduce errors, and introduce other risks such as liquidity and credit risks. Even a short disruption in payment systems can have widespread impacts due to the large volume and value of transactions.

Risk assessment framework

The PSD currently employs a RAF to minimise the chances of unacceptable risks being introduced to ESAS by its participant account holders, and to ensure that residual risks remain manageable by the ESAS operator. This framework can be applied to any entities seeking access, as long as sufficient evidence can be provided by the assessed entities to establish their operating history and capability in managing their own risks.

The framework follows a standard risk-assessment process where activity is assessed from two perspectives – likelihood (probability) and impact. The process, which considers the risks associated with the activities of prospective and current participants in relation to the payment system, uses a combination of qualitative and quantitative methods to assess likelihood and impact, as set out in Appendices 2 and 3.

Where appropriate, estimates of risk likelihood and impacts are made using data from past observable events, which may provide a more objective basis than an entirely subjective estimate. However, where this is not feasible, such as when the credible data required for quantitative analysis are not practicably available or obtaining and analysing data is not cost effective, a qualitative assessment is made instead. The outcome will be expressed in qualitative terms, ranging from 'improbable' to 'highly

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[16] In some jurisdictions, the local banking laws protect the confidentiality of bank/client relationships, and banks are prohibited from disclosing information about their clients to third parties without their consent. This creates a conflict with the reporting obligations required under AML/CFT regulations.

likely' for its likelihood, and 'insignificant' to 'extreme' for the resultant impacts of risk crystallisation.

Given that the risk appetite for the ESAS operator is very low, risk assessments naturally tend to be made on a conservative basis and focus on the risks with short- to mid-term time horizons. However, risks that may have longer-term time horizons are also taken into account where feasible, and care is exercised in using past events to make predictions about the future, as factors influencing events may change over time.

Each of the principles sets out the expectations to be taken into account when assessing the FMI against the PFMI framework. This RAF has been designed, among other things, to serve as a tool in the decision-making process, as an assessment tool to identify matters that require structural improvement, and as a tool to prioritise resources to address identified areas of improvement. These principles encourage the assessor to focus on the risks and activities of the FMI and its participants. The relevant principles for determining access eligibility to ESAS are listed in Appendix 1.

Assessing the likelihood of a risk event

For any of the three risk categories (financial, legal, and operational), the likelihood of a risk crystallising is evaluated using the assessment methodology shown in Appendix 2 and a single metric consisting of a five-point scale ranging from 'Rare' to 'Almost certain'. This metric is shown as a table in Appendix 3, Part 1.

The lowest scale is comparable to the risk materialising only under exceptional circumstances, approximately once in every 5 – 10 years, or equivalent to an occurrence approximately once during the lifecycle of a particular ESAS. At this scale, the assessed entity is expected to have an effective internal control in place. At the other end of the scale, where the risk is expected to crystallise with near certainty, the lack of an effective internal control is presumed to be a contributing factor.

The likelihood of a risk event is assessed at an entity level, taking into consideration any organisational and functional relationships the entity may have in undertaking the payment settlement activity, and capturing them within the assessment accordingly.

Assessing the impacts of a risk event

When a risk crystallises, it can affect both ESAS and the Reserve Bank in various ways, depending on the nature of the risk. To address this, we use the methodology described in Appendix 2 to assess the impacts of the risk. This methodology includes the use of the impact assessment table in Appendix 3, Part 2, which includes a set of risk-specific impact metrics. Each metric is rated on a five-point scale that mirrors the impact metrics used by the Reserve Bank in its bank-wide risk-appetite statements.

At the most benign end of the scale, an impact may be deemed insignificant in terms of the effects it would have on the continued ESAS operation. Note this table sets out indicative and non-exhaustive examples of how an operational impact would be deemed insignificant.

At the other end of the scale, an impact may be considered extreme where it would be implausible for a business to be sustained at the expected service level for ESAS.

The calibration of the five-point scale is made based on prior experience in encountering impact events and instances of risks crystallising within ESAS and elsewhere. Some of the descriptions included in the impact assessment table are extrapolated from such experience and are therefore indicative and non-exhaustive.

Taking account of the various control measures

The RAF as described above is first applied to assessing the inherent risks or the risks materialising in the absence of any additional actions taken to alter their likelihood or impacts. Where there are regulations or other controls in place to mitigate some of the risks, the outcome of the assessment is modified, taking into account the resultant effects of such regulatory and other control measures. The likelihood of and the potential impacts of the residual risks – the risks remaining after applying these control measures – are then assessed to derive the residual risk ratings for each of the risk categories.

Mapping the residual risk onto the risk acceptance matrix

A risk likelihood and impact assessment results in one of four possible risk ratings: 'Low', 'Medium', 'High', or 'Critical'. For each of the risk categories, the risk rating is plotted against the risk acceptance matrix, as shown in Appendix 5. This matrix establishes the boundaries of acceptable risk tolerance. Our low tolerance of the likelihood of risk crystallising is reflected in the skewed boundaries of the 'High' and 'Critical' risk ratings. Given the priority to ensure the stable and resilient operation of the payments system, an entity that receives a 'High' or 'Critical' risk rating is considered unsuitable for participation in ESAS unless the prospective participant adopts further risk-mitigation measures that reduce its risk rating.

In the next section, examples are set out of how the application of this RAF is used to assign risk ratings to entities seeking access to ESAS.

Some illustrative examples of the Risk Assessment Framework

The current ESAS account holders comprise mostly financial institutions such as registered banks. However, as the financial market continues to evolve, more firms are seeking accounts at the Reserve Bank to enable non-intermediated, risk-free settlements.

Appendix 4 sets out the inherent risk ratings, the applicable key regulatory controls, and the residual risk ratings that were assigned to various entity types following risk assessments made using the above RAF.

The following pages provide some examples of how the RAF might be applied. Note, these examples do not predetermine the outcome for any prospective applicant, but rather are intended to provide clarity on the different starting risk levels and factors that we consider are important for some of the most common entity types that might seek access. Each entity type encompasses a range of businesses with some variability in their risk profiles. These examples are intended to provide further clarity on the RAF to assist in the consultation.

For each of these entity types, which are further explained in the subsections below, we assessed the likelihood of a particular category of risk crystallising, and the magnitude of the impacts of such a risk being introduced to the System. An inherent risk rating was assigned to each of the three risk categories, and taking into account any control measures that currently existed, a residual risk rating was assigned and recorded in Appendix 4.

The resultant risk ratings for the risk categories were then plotted on the residual risk assessment matrix, as shown in Appendix 5. The matrix provided a residual risk summary of the three risk categories for each entity type. These were then taken together to derive the likely reputational impacts that are not readily quantifiable through objective means. The PSD has separately established its boundaries for acceptable levels of residual risk. These are considered to be risks that are judged 'Low' or 'Medium'.

Non-bank payment service providers

NBPSPs are corporate entities that enable businesses and individuals to accept electronic payments for goods and services. NBPSPs act as intermediaries for merchants and payment networks such as credit card companies and banks, but do not hold banking licences themselves. They may provide services such as settlement services, switching services, online payment gateways, and fraud protection to help merchants process payments securely and efficiently.

Currently, no NBPSPs have accounts with the Reserve Bank; instead they are accessing ESAS to settle transactions via registered banks that are ESAS participants. Some NBPSPs are seeking direct access to the central bank settlement account to reduce their access costs and dependence on the bank intermediaries for facilitating access to ESAS.

(a) Financial risk

In assigning a risk rating, we assessed the risk of an NBPSP becoming financially incapacitated due to a financial setting that precluded it conducting its business on a going-concern basis. Such risks may be caused through insufficient capital or available liquidity, unsustainable credit losses, non-adherence to accepted accounting standards and practices, or a lack of independent auditor scrutiny. They impair the NBPSP's financial capacity to continue participating in ESAS, and this may give rise to operational issues for other participants in ESAS. The risks were deemed to be 'Possible', and if crystallised their impacts assessed as 'Moderate', resulting in an inherent risk rating of 'Medium'. As no substantive oversight or monitoring arrangements currently exist, the residual risk rating remains 'Medium'. Given that the PSD's target risk rating for financial risk is 'Low', NBPSPs fall outside the acceptable rating.

(b) Legal risk

This risk relates primarily to the compliance capabilities of an entity and its capability in mitigating the risk of allowing its clients to undertake activities that are illegal or otherwise in breach of the ESAS Terms and Conditions. These activities include direct or indirect involvement in fraudulent or scam types of activity, and being incorporated in a foreign jurisdiction where the ESAS Terms and Conditions cannot be enforced due to a conflict of law. The resultant impacts of such risks would have reputational impacts on ESAS.

As it is an entity type, an NBPSP's likelihood of legal risk crystallising was assessed by the PSD as 'Possible' and the resultant impact to be 'Major', resulting in an inherent rating of 'High'. Given the current lack of sufficient key controls, the residual risk rating remains

'High'. Given that the PSD's target risk rating for this risk category is 'Low', NBPSPs remain outside the acceptable rating.

(c) Operational risk

The most relevant risk category with regard to the payment system is operational risk, which can materialise through a cyber-attack, ineffective BCP/DRP arrangements and capabilities, and a risk framework that is unable to manage account holders' operational risks, to name but a few. The impacts of such a risk materialising will affect the account holders' ongoing participation in ESAS, thereby affecting the System and other ESAS participants.

The PSD assessed the likelihood for NBPSPs of adverse operational events occurring as 'Likely' and their impacts as 'Major'; this was in part due to the increasing prevalence of cyber-related risks and the related threats presented by NBPSPs for threat actors to exploit, and the increasing complexity of the business environment, which requires highly sophisticated BCP/DRP capabilities. The resultant risk rating assigned by the PSD was 'High', and as there are currently minimal key controls in place to reduce the risks, the residual risk rating for NBPSP remained 'High', which exceeded the PSD's acceptable residual risk rating of 'Low'.

(d) Reputational impact

When the above three residual risk ratings are plotted onto the residual risk assessment matrix per Appendix 5, it is evident that the overall reputational impact for an ESAS operator is in the 'High' risk zone. Without additional measures to reduce the component risks, NBPSPs as entity types are not considered suitable for gaining direct access to the System at the present time.

Registered banks

Registered banks[17] are financial institutions that provide a range of banking services to businesses and individuals, and a number of them have accounts at the Reserve Bank to participate in the Financial Market Department's monetary policy and liquidity provision activities, and to settle their transactions. The risk assessment takes into account the latter only, but as registered banks are regulated and are required to follow strict rules and regulations to ensure the safety and stability of the banking system, the inherent risk ratings are adjusted downwards when these measures are taken into account.

(a) Financial risk

As the registered bank business is materially exposed to credit and liquidity risks, absent any key controls, the banks have an inherent risk rating of 'Critical'. However, thanks to a suite of regulatory requirements, the residual risk rating is reduced to 'Low', thereby meeting the PSD's acceptable residual risk rating.

(b) Legal risk

As with NBPSPs, the likelihood of legal risks materialising was assessed as 'Possible', but because of the reputational impacts on the Reserve Bank, and the additional legal risk exposure that typically ensues in such a scenario, the impact was assessed as 'Extreme', leading to an inherent risk rating of 'High'. Unlike the situation for NBPSPs however, the

[17] They are registered under the Banking (Prudential Supervision) Act 1989; legislation is currently before Parliament to replace this Act (through the Deposit Takers Bill).

heavily regulated nature of the registered banks means much of the impact can be offset, resulting in a residual risk rating of 'Low'.

(c) Operational risk

Similar to NBPSPs, the registered banks are increasingly targeted for cyber-attacks, with the consequential impacts assessed to be 'Extreme' with an inherent risk rating of 'Critical'. However, because of the capability required to mitigate this risk and a wide range of regulatory requirements, the residual risks were assessed as 'Low'.

(d) Reputational impact

Although the inherent risks for all three risk categories were considered 'High' to 'Critical', owing to the key controls already in place, the residual risks were all judged to be 'Low'. For the matrix in Appendix 5, the reputational impact for ESAS operators therefore was considered 'Low'.

Non-bank deposit takers

NBDTs are financial institutions that engage in activities that are the same as or similar to those of registered banks – that is, the business of borrowing (in the form of 'deposits') and lending. The NBDT sector comprises credit unions, building societies, and retail-funded finance companies. NBDTs are currently regulated under a separate framework from that for registered banks – the Non-bank Deposit Takers Act 2013.

Registered banks and licensed NBDTs will be brought together within a single regulatory framework under the Deposit Takers Act (when passed). The new Act will provide a consistent approach to the regulation and supervision of licensed deposit takers, subject to the Reserve Bank tailoring prudential requirements to reflect the diversity of the sector (in size, business models etc.), and taking a risk-based approach to supervision. All licensed deposit takers will be members of a newly introduced scheme to protect deposits (the Depositor Compensation Scheme).

(a) Financial risk

Although the inherent risks were rated in line with NBPSPs as 'Possible', the credit-creation role assumed by NBDTs meant the impact was estimated to be greater than the impact of financial risks arising from NBPSPs, thereby resulting in the inherent risk rating of 'High'. Although currently subject to a different regulatory regime from the banks, the implementation of key controls, such as requiring NBDTs to provide credit ratings from approved agencies and to submit to capital adequacy requirements, means such risks may be reduced to 'Medium'. Although this residual risk rating remains above the acceptable level, with additional measures such as the submission to the PSD of the NBDT's audited financial accounts and credit-rating updates, the PSD considers this rating could be further reduced to 'Low'.

(b) Legal risk

As with the NBPSPs, the inherent risk rating for NBDTs was assessed by the PSD to be 'High'. However, with the regulatory regimes adding ongoing obligations for the NBDTs, such risks are considered mitigable to 'Medium'. Although this rating is insufficient for the PSD to accept NBDTs' entry to the System, with further measures such as requiring NBDTs to furnish their credit rating updates and audited financial accounts on an ongoing basis, this could be lowered further to 'Low', thereby meeting the PSD's risk acceptance level.

(c) Operational risk

Although the inherent risk rating for NBDTs is the same as that for NBPSPs, the introduction of fit and proper assessments at the time of licensing and requirements to have robust BCP/DRP capabilities, including in respect of outsourced functions, should enable the residual risk rating to be reduced to 'Medium'. If the NBDTs were to accept additional transparent operational requirements developed by the PSD that were legally enforceable and monitored for compliance, it would be feasible for the residual risk rating to be lowered further, thereby clearing the PSD's risk acceptance level.

(d) Reputational impact

Taking the putative control measures into account, NBDTs scored 'Medium' across the three risk categories, with the resultant reputational impacts expected to remain within the 'Medium' band. ESAS operators' concerns may be allayed further through the adoption of additional control measures to enable acceptance of their participation in ESAS.

Cash management service providers

CMSPs are entities that supply cash to banks, ATMs, and retailers. They are responsible for transporting cash to cash handlers to ensure that the end customers have access to cash when they need it. CMSPs may also be responsible for maintaining and servicing ATMs, as well as ensuring that cash in the machines is secure and properly accounted for.

Currently CMSPs are required to pay the Reserve Bank upfront when acquiring a supply of physical cash from the Reserve Bank, and as they do not have a direct means to do so they have to pay through the ESAS participant banks. Substantial handling fees are charged by these intermediaries, and they are eroding their margins such that the businesses will not be sustainable in the long term. CMSPs are therefore seeking direct access to the Reserve Bank account to enable cash exchanges without incurring unnecessary intermediation fees.

(a) Financial risk

As with the NBPSPs, the inherent risk rating was assessed to be 'Medium', although CMSPs only transact with the Reserve Bank as counterparties in ESAS. Given the current lack of key controls, the residual risk rating remains 'Medium'. However, with additional measures such as the provision of all credit-rating updates and audited financial statements, it would be feasible for the residual risk rating to become 'Low'.

(b) Legal risk

Given the low legal impacts of the operation of CMSPs, an inherent risk rating of 'Medium' was assigned for CMSPs. Key controls include AML/CFT supervision by the Department of Internal Affairs (DIA), which mitigates the residual risk rating further to 'Low'.

(c) Operational risk

As the operational risks affecting ESAS are nominal, the inherent risk rating assigned for CMSPs was 'Medium'. With a key control that included AML/CFT supervision by DIA, the residual risk rating for CMSPs was assessed as 'Low'.

(d) Reputational impact

The three risks coalesced around the boundary between the 'Low' and 'Medium' residual risk ratings. Given the limited interlinkages with other ESAS participants in the payment settlement space, CMSPs are expected to have 'Low' reputational impacts for the ESAS operator.

Questions

3

A) Do you consider that there are any substantive risks that are not included in the RAF that should be included in order to safeguard the continued operation of ESAS?

B) Do you consider that any of the risks set out in the draft RAF have been misrepresented?

C) Is there any further feedback you would like to provide with regards to the draft RAF?

...

4. Seeking feedback on the Risk Assessment Framework

The Reserve Bank invites submissions on the draft Risk Assessment Framework (RAF) by 5pm, 27 July 2023. Please note the disclosure on the publication of submissions below.

Please address submissions and enquiries to:

(Email)
ESASAccessReview@rbnz.govt.nz

(Hard Copy)
ESAS Access Review
Reserve Bank of New Zealand
PO Box 2498
Wellington 6140

Consultation questions

1) Do you have any feedback on how we have described our objectives for ESAS?

2) Do you have any feedback on our considerations for opening up ESAS?

3) Please review the RAF and provide your views on the following:
   A. Do you consider that there are any substantive risks that are not included in the RAF that should be included in order to safeguard the continued operation of ESAS?
   B. Do you consider that any of the risks set out in the draft RAF have been misrepresented?
   C. Is there any further feedback you would like to provide with regards to the draft RAF?

Publication of submissions

All information in submissions will be made public unless you indicate that you would like all or part of your submission to remain confidential. Respondents who would like part of their submissions to remain confidential should provide both confidential and public versions of their submissions. Apart from redactions of the information to be withheld (i.e., blacking out of text), the two versions should be identical. Respondents should ensure that redacted information is not able to be recovered electronically from their documents (the redacted versions may be published as received).

Respondents who request that all or part of their submissions be treated as confidential should provide reasons why this information should be withheld if requests are made for it under the Official Information Act 1982 (OIA). These reasons should refer to the grounds for withholding information under the OIA. If an OIA request for redacted information is made, the Reserve Bank will make its own assessment of what must be released, taking into account the respondent's views.

The Reserve Bank may also publish an anonymised summary of the submissions received in respect of this consultation.

Next steps

Your feedback on this issues paper will help us build the foundation for a revised ESAS access policy that would enable us to broaden the ESAS participation base in a safe and transparent manner. Following the close of the feedback period we will analyse the responses and determine whether the draft RAF can be finalised as is or needs to be amended to address the issues raised in the responses. We may publish the revised RAF if material changes are made.

The subsequent main phase of this work will be to create a revised ESAS access policy. All aspects of the existing access criteria, including various legal, technical, and operational requirements for entities seeking access to ESAS, will be reviewed. The RAF will help set these requirements to ensure that those seeking to join ESAS will be assessed appropriately. These proposed requirements will be set out in the ESAS policy exposure document for public consultation, likely about September/October 2023.

We need to ensure that the revised ESAS application policy and criteria strike the right balance of being open to innovation and supporting competition while not adding undue risks to the System. To do so in a rapidly evolving payments landscape, we have decided to extend the overall ESAS Access Review timeline to ensure all relevant points are considered.

We plan to publish the revised ESAS Policy and Criteria during late 2024, and to reopen the ESAS access application by early 2024. However, as this is a comprehensive review of the ESAS access policy and criteria, the timeline for the review completion will depend on what key decisions are to be made, and whether a need for additional consultation arises.

Table 4: Updated indicative timeline for the ESAS Access Review

Timing	Event
June 2023	Consultation 1: ESAS risk assessment framework
July 2023	Feedback on Consultation 1 closes
August 2023	Key decisions on risk acceptance confirmed by Reserve Bank
September 2023	Consultation 2: Draft ESAS access policy and criteria
November 2023	Feedback on Consultation 2 closes
December 2023	ESAS access policy and criteria finalised
December 2023	ESAS access policy and criteria implemented
January 2024	ESAS open for applications under new access policy and criteria

Appendix 1: Principles for Financial Market Infrastructures as categorised according to the ESAS risk categories

The PFMI requires that an FMI provide relevant information to participants, relevant authorities, and the broader public. To aid this, CPMI-IOSCO developed a supplemental report in 2012 that contained the disclosure framework for FMIs and the assessment methodology for the principles for FMIs and the responsibilities for authorities, which aimed to promote the observance of the principles and responsibilities set forth in the PFMI.

The table in this appendix links the relevant principles for the assessment of ESAS by mapping these to the Reserve Bank's key risk categories. We consider the principles listed below are directly or indirectly relevant for assessing the suitability of prospective ESAS participants. These principles are relevant for the risk probability and impact assessments as shown in Appendices 2 and 3.

ESAS risk categories	PFMI	Description
Legal risk	1. Legal basis	An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.
	2. Governance	An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.
	3. Framework for the comprehensive management of risks	An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

ESAS risk categories	PFMI	Description
Financial risk	7. Liquidity risk	An FMI should effectively measure, monitor, and manage its liquidity risks. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlements of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.
	8. Settlement finality	An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.
	13. Participant default rules and procedures	An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.
Operational risk	15. General business risk	An FMI should identify, monitor, and manage its general business risks and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.
	17. Operational risk	An FMI should identify the plausible sources of operational risks, both internal and external, and mitigate their impacts through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for a timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.
	18. Access and participation requirements	An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

ESAS risk categories	PFMI	Description
	19. Tiered participation arrangements	An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Appendix 2: Risk probability and impact assessment methodology

Objective: To determine the likelihood and impacts of the risks being introduced to the System by the prospective and current ESAS participant.

Methodology:

1. Analyse the likelihood/impacts of risks that may arise from the applicant's current payment products and services. Consider:

    - The nature and volume of the products and services offered
    - Whether the firm has introduced new or discontinued payment products, services, or activities
    - Payment growth or attrition rates (identify cause of large increase or decrease)
    - Target markets or geographies
    - Technologies used
    - Levels and trends for transaction volumes, aggregate exposures, and concentrations, and quality of associated reporting and metrics
    - The volume and significance of customer complaints, including complaints received by or regarding relied-upon third parties
    - The effects of external factors, including economic, industry, competitive, and market conditions
    - The effects of potential legislative, regulatory, payment system rule, accounting, and technological changes.

2. Assess the likelihood/impacts of financial risk (credit and liquidity risks). Consider:

    (a) Credit risk:

    - The volume and value of payment transactions that have the potential to introduce credit risk
    - The extent to which the firm pays on uncollected funds
    - The extension of credit practices through the offering of daylight overdrafts
    - Credit exposure from originations, disputes, chargebacks, and returns
    - Credit exposure for enterprise-wide payment systems (e.g., third-party payment processors and merchant services).

(b) Liquidity risk:

- The firm's history of meeting and settling obligations and the extent to which the firm uses credit lines to meet its obligations
- Whether the firm has access to a central bank liquidity line. If so, review the usage activity in recent years and consider whether this usage affects the firm's quantity of liquidity risk
- The aggregate exposure of the overdraft lines that the firm offers to the business customers. Identify the customers with the largest approved exposure and assess the potential impacts on the firm's liquidity profile.

3. Assess the likelihood/impacts of legal risk. Consider:

- The volume, trend, and nature of past violations, audit findings, errors, consumer complaints, and litigation
- The extent to which the firm is a member of payment systems or associations and its history of conforming to their rules or prescribed practices
- The extent to which the firm relies on third parties to offer products or services (e.g., transaction processing, the handling of customer data or information, or the development or delivery of applicable required consumer disclosures)
- The volume and nature of transactions being conducted by originators or counterparties located in higher-risk geographic locations.

4. Assess the likelihood/impacts of operational risk. Consider:

- Incidents or operational failures related to payment systems. Consider the duration, customer impacts, and losses. Consider the history of disruptions and downtime
- Payment-related operational losses and near misses, client accommodations over the past 10 years (including errors, fraud, and misconduct), and comparisons with the firm's loss appetite threshold. Consider the volume, trends, and nature of the losses and near misses
- The extent to which management relies on manual processes or controls
- The extent to which the firm is a member of payment systems or associations and the extent to which these activities affect risk exposure. Consider, for example, the firm's exposure to operational risk liability for members of the payments system(s)

- The nature and extent of the firm's FMI memberships. Consider exposures related to FMI memberships such as securities and cash pledged
- The types and criticality of payment services provided based on the firm's risk profile and complexity and the number of payment-related third-party relationships
- The turnover rate of personnel responsible for executing or overseeing the firm's payment-related policies, standards, and processes.

5. Rate the risks: the likelihood of the risks from the assessed entity is judged as one of the following: 'Rare', 'Unlikely', 'Possible', 'Likely', or 'Almost certain'. The impact of the risks' crystallisation on ESAS is judged as one of the following: 'Insignificant', 'Minor', 'Moderate', 'Major', or 'Extreme'. The rating involves a degree of judgement, as guided by the calibration of these ratings as detailed in Appendix 3.

Appendix 3: Likelihood of and impact measures for the assessment of financial, legal, and operational risks

1. Likelihood ratings

For assessing the financial, legal, and operational risks of activities undertaken by an entity, the likelihood of a risk materialising is placed into one of the five buckets below.

Probability	Description
Almost certain	• The event is almost certain to occur and could be at any time • No effective internal controls (design issue)
Likely	• The event can be expected to occur once or more per year • Weak internal controls (design ok but not operating effectively) • For projects: within 1 – 6 months
Possible	• The event can be expected to occur every 1 – 2 years • Control design ok: a level of operating effectiveness established with some ongoing control treatment in progress • For projects: within 6 – 12 months
Unlikely	• The event is improbable, but can be expected to occur every 2 – 5 years • Effective internal control established • For projects: once every 1 – 2 years
Rare	• The event only occurs in exceptional circumstances, once in 5 – 10 years • Effective internal control established • For projects: once every 2 – 5 years

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2. Impact ratings

A table of impacts specific to each of the risk categories – financial, legal, and operational – is provided below. It provides a representative depiction of a typical impact scenario envisaged for a particular rating to aid the rating-assignment process. The typical impact scenarios are consistent with the Reserve Bank's risk-appetite statement.

Impact	Insignificant	Minor	Moderate	Major	Extreme
Financial	Market or credit exposure of [X%] of our target capital level in any [X]-month period	Market or credit exposure of [X%] of our target capital level in any [X]-month period	Market or credit exposure of [X%] of our target capital level in any [X]-month period	Market or credit exposure of [X%] of our target capital level in any [X]-month period	Market or credit exposure of [X%] of our target capital level in any [X]-month period
	Within market or credit risk exposure limit	Within market or credit risk exposure limit	Expected market or credit risk exposure limit breaches	Unexpected market or credit risk exposure limit breaches	Inability to measure market or credit risk exposures accurately
	Liquidity risk – Liquid assets sufficient to meet immediate liabilities, with action needed within next [X] months	Liquidity risk – Liquid assets sufficient to meet immediate liabilities, with action needed within next [X] months	Liquidity risk – Liquid assets sufficient to meet immediate liabilities, with action needed within next [X] months	Liquidity risk – Liquid assets insufficient to meet immediate liabilities (next [X] days)	Inability to measure liquidity risk exposures accurately or to meet liabilities as they fall due
The possible or actual financial impact, including all resulting costs for the Reserve Bank	One-off operational loss (< $[X])	One-off operational loss (< $[X])	One-off operational loss ($[X] – $[Y])	One-off operational loss ($[X] – $[Y])	One-off operational loss (> $[X])
	Increase in yearly operating cost can be absorbed within budget/managed by re-prioritising	Increase of (< [X]%) in yearly operating costs. Can be managed within [X]-year funding agreement	Increase of ([X]% – [Y]%) in yearly operating costs. Can be managed within [X]-year funding agreement	Increase of ([X]% – [Y]%) in yearly operating costs and/or serious risk of over spend versus [X]-year funding agreement	Increase by more than [X]% and/or cannot be managed within [X]-year funding agreement
	Sensitive expenditure – Insignificant value with no Official Information Act (OIA)/+media attention	Sensitive expenditure – Insignificant value with no OIA/media attention	Sensitive expenditure (< $[X]) with some OIA/media attention possible	Sensitive expenditure ($[X] – $[Y]) and/or with OIA/media attention expected	Sensitive expenditure (> $[X]) and/or with significant OIA/media attention expected
	Projects – Impact can be managed within current resources, with no re-planning	Project cost overruns (< [X]%)	Project cost overruns ([X]% – [Y]%)	Significant project scope error and/or cost overruns ([X]% – [Y]%). Delays other critical projects	Material project scope error and/or cost overruns (> [X]) and/or resulting in unacceptable delays/cancellations of other critical projects
		Unbudgeted technology or system costs (< $[X])	Unbudgeted technology or system costs ($[X] – $[Y])	Unbudgeted technology or system costs ($[X] – $[Y])	Unbudgeted technology or system costs (> $[X])
	No fraud losses	Fraud losses (< $[X])	Fraud losses between $[X] and $[Y]	Fraud losses between $[X] and $[Y]	Fraud losses (> $[X])
Legal	All communications and recovery can be managed internally	Legal issue can be resolved at departmental level/by business unit management	Senior management involvement required to resolve legal issue	Reserve Bank faces litigation (actual or potential)	Reserve Bank breaches laws and becomes exposed to significant liability (including requirement to provide compensation)
The risk that the Reserve Bank acts unlawfully and we are subject to legal challenge		Regulatory issue in one institution managed within business unit	Legal dispute with employee or third party	Reserve Bank is subject to judicial review	Reserve Bank is subject to an external investigation or public inquiry
				Intergovernmental cooperation required to resolve legal issue	Reserve Bank is subject to significant prosecution and fines

Impact	Insignificant	Minor	Moderate	Major	Extreme
Operational People, systems, processes, and compliance disruptions to the Reserve Bank's Core and Support Functions, which could affect the delivery of planned objectives	No effect on the outcomes and/or objectives of a business unit Payment systems – delayed by (< [X]) minutes before recommencing operations	Non-critical business functions (systems and processes) are delayed Payment systems – delayed by (< [X]) minutes before recommencing operations No or minimal impact on achievement of regulatory and policy objectives No injuries but the Reserve Bank's practices are questioned Staff capacity loss of (< [X]%) Impact can be managed with current resources Impact can be managed within the Department Audit/Investigation is commissioned by the Department	Core-business functions/critical systems (systems and processes) are delayed by (< [X]) hours Payment system operation interrupted by (< [X]) minutes Limited impact on achievement of regulatory and policy objectives Involved parties suffer minor injuries Staff capacity loss of ([X]% – [Y]%) Impact can be managed with some re-planning Impact can be managed within the business unit Audit/Investigation is commissioned by the Executive Leadership Team	Core-business functions/critical systems are delayed by ([X] - [Y]) hours Payment system operation interrupted by (< [X]) minutes Regulatory and policy objectives delayed or compromised Involved parties suffer significant but not permanent and life-threatening injuries Staff capacity loss of ([X]% – [Y]%) Impact cannot be managed without re-prioritisation of work programmes/project deliverables Impact management requires extra financial and human resources Audit/Investigation is commissioned by the Audit Committee/Board	Core-business functions/critical systems (systems and processes) are delayed by (> [X]) hours Payment system operation interrupted by (> [X]) minutes Regulatory and policy objectives cannot be achieved Involved parties suffer permanent injuries or loss of life Staff capacity loss (> [X]%) Impact cannot be managed without re-prioritisation of business plans/business-as-usual activities Impact management requires significant financial and human resources Audit/Investigation is commissioned by the Minister

Appendix 4: Reputational impact assessment

The table below shows the latest results of the overall risk assessment for ESAS as made by potential and current account holders. This stylised assessment is based on current regulatory rules.

Reserve Bank risk profile			Inherent risk			Controls	Residual risk		
Risk category	Risk ID	Risk statement	Likelihood	Impact scale	Inherent risk rating	Key controls	Likelihood	Impact scale	Residual risk rating
Financial Risk	NBPSPs	**Risk** The risk that an account holder is significantly incapacitated due to financial settings precluding it from conducting its business **Causes (examples)** • Insufficient capital • Insufficient liquidity • Unsustainable credit losses • Non-adherence to accepted accounting standards and practices and independent external audit scrutiny **Impact** Account holder's financial capacity affects their participation in ESAS, giving rise to operational issues in ESAS	Possible	Moderate	Medium	Review of financial standing at time of the account holder's application, but no oversight or monitoring beyond this	Possible	Moderate	Medium
	Registered Banks		Likely	Extreme	Critical	Banks prepare, as a prudential regulations requirement, disclosure statements that formally set out their risk, compliance, and assurance mechanisms to manage risks, including financial risks Banks are subject to prudential regulation, including capital, credit risk and liquidity, and market risk requirements Banks are subject to external audit scrutiny and independent published audit opinion Banks are subject to Open Bank Resolution regime	Rare	Moderate	Low
	NBDTs		Possible	Major	High	NBDTs are required to have credit ratings from approved rating agencies NBDTs are required to maintain minimum ratios of capital against credit risk and market risk, but the capital adequacy requirements imposed on registered banks are much more stringent and detailed than the requirements imposed on NBDTs	Unlikely	Moderate	Medium
	CMSPs		Possible	Moderate	Medium	Review of financial standing at time of the account holder's application, but no oversight or monitoring beyond this	Possible	Moderate	Medium

Reserve Bank risk profile			Inherent risk			Controls	Residual risk		
Risk Category	Risk ID	Risk statement	Likelihood	Impact scale	Inherent risk rating	Key controls	Likelihood	Impact scale	Residual risk rating
Legal Risk	NBPSPs	**Risk** The risk that an account holder is operating illegally, conducting business illegally, or undertaking activities that are illegal, or there are risks that the Terms and Conditions of ESAS cannot be enforced on the account holder **Causes (examples)** • The underlying business activities are illegal (AML/CFT activities) • Money-laundering activities are being facilitated by the account holder • The account holder is involved in fraudulent or scam-type activities • The account holder is involved in tax evasion • The account holder is acting against consumer protection legislation • The account holder is incorporated in a foreign jurisdiction and the terms and conditions cannot be enforced due to conflict of law considerations **Impact** The system operator of ESAS is facilitating an account holder operating illegally, or there are risks that key ESAS Terms and Conditions cannot be enforced, such as requirements to notify immediately a Notifiable Event	Possible	Major	High	NBPSPs are subject to registration with the FMA Some, but not all, NBPSPs are subject to AML/CFT supervision by DIA. However, no onsite supervision is conducted or it is limited to a desk-based review only NBPSPs are not required to publish any formal disclosure documents that may illustrate the frameworks they have in place to address legal risks	Possible	Major	High
	Registered Banks		Possible	Extreme	High	Banks are subject to registration and licensing in New Zealand, which in itself is a binding legal framework and ongoing obligation. Registration and licensing are supported by Prudential Supervision Banks are subject to AML/CFT supervision by the Reserve Bank and are subject to regular onsite inspections. This is supported by a Reserve Bank enforcement function when there is a breach or a non-compliance matter arises Banks prepare, as a prudential regulations requirement, disclosure statements that formally set out their risk, compliance, and assurance mechanisms to manage risks, including legal risks	Possible	Minor	Low
	NBDTs		Possible	Major	High	NBDTs are subject to registration and licensing in New Zealand, which in itself is a binding legal framework and ongoing obligation. Registration and licensing are supported by Prudential Supervision Because the prudential obligations faced by NBDTs are embedded in the regulations, the requirements faced by NBDTs are more general than those faced by registered banks. Although the requirements may be adapted via licence conditions, ultimately the Reserve Bank is constrained in the nature of the conditions it can impose by the NBDT Act and the regulations NBDTs are subject to AML/CFT supervision by the Reserve Bank and they are subject to regular onsite inspections. This is also supported by a Reserve Bank enforcement function when there is a breach or a non-compliance matter arises	Possible	Moderate	Medium
	CMSPs		Possible	Minor	Medium	CMSPs are subject to AML/CFT supervision by DIA CMSPs are not required to publish any formal disclosure documents that may illustrate the frameworks they have in place to address legal risks	Possible	Minor	Low

Reserve Bank risk profile			Inherent risk			Controls	Residual risk		
Risk category	Risk ID	Risk statement	Likelihood	Impact scale	Inherent risk rating	Key controls	Likelihood	Impact scale	Residual risk rating
Operational Risk	NBPSPs	**Risk** The risk that an adverse operational event arises for an account holder, affecting their ability to continue business operations in a sound and controlled manner **Causes (examples)** • The account holder is the victim of a cyber-attack or threat • Executives appointed are deemed not 'fit and proper' to manage and/or to govern the account holder's business • A BCP/DRP-related event arises and the account holder is unable to manage it effectively to a resolution • Operational risk-management frameworks are inadequate in preventing, detecting, and managing operational risks **Impact** Insufficient risk management by the account holder affects their participation in ESAS, giving rise to operational issues in ESAS	Likely	Major	High	Some, but not all, NBPSPs are subject to AML/CFT supervision by DIA. However, no onsite supervision is conducted or it is limited to desk-based reviews only	Likely	Major	High
	Registered Banks		Likely	Extreme	Critical	Banks are subject to registration and licensing in New Zealand, which in itself is a binding legal framework and ongoing obligation. Registration and licensing are supported by Prudential Supervision. This includes disclosure requirements in the context of Prudential Supervision by the Reserve Bank, some of these are listed below: · Fit and proper assessment by the regulator · Corporate Governance Requirements · Outsourcing Policy Requirements Banks are subject to AML/CFT supervision by the Reserve Bank and are subject to regular onsite inspections. This is also supported by a Reserve Bank enforcement function when there is a breach or a non-compliance matter arises Banks prepare, as a prudential regulations requirement, disclosure statements that formally set out their risk, compliance, and assurance mechanisms for managing risks, including operational risks	Rare	Moderate	Low
	NBDTs		Possible	Major	High	A fit and proper assessment at the time of licensing only. Once an NBDT is licensed, significant changes of shareholding can occur without vetting by the Reserve Bank (compared to changes of shareholding in a registered bank) NBDTs' obligations with respect to risk management are limited to preparing and maintaining risk-management programmes NBDTs' licencing conditions are likely to include a requirement to have robust business continuity plans, including in respect of outsourced functions	Possible	Moderate	Medium
	CMSPs		Possible	Moderate	Medium	CMSPs are subject to AML/CFT supervision by DIA; however, no onsite supervision is conducted or it is limited to a desk-based review only	Possible	Minor	Low

Appendix 5: ESAS account holder residual risk assessment matrix

Each of the three risks is plotted onto the residual risk assessment matrix per below. From the distribution of the three risk ratings, an entity-level assessment is made to derive the level of reputational impact for the Reserve Bank if the assessed entity were permitted access to ESAS.