Reserve Bank
of New Zealand
Te Pūtea Matua

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The Future of Money – *Stewardship*

Te Moni Anamata – *Kaitiakitanga*

An issues paper inviting public feedback
before 6 December 2021

ISSUES PAPER

www.rbnz.govt.nz/futureofmoney

Navigating this issues paper

Part A (Sections 1-3) provides background material to enable readers to engage fully with the rest of the paper. It includes descriptions of key terms and assumptions, and explanations of why central bank money matters.	• Introduction. • Why New Zealand needs a money and cash steward. • Why central bank money matters.
Part B (Sections 4-8) outlines how we propose to act as steward of money and cash and describes the proposed policy priority areas. Consultation questions are listed at the end of each section.	• Stewardship of money and cash. • Cash system redesign. • Stablecoins. • Central bank digital currency.
The Appendices provide a glossary and additional material, including a comparison of our proposed approach to stewardship with a commonly applied framework.	• Glossary. • What underpins confidence in central bank money. • How the Reserve Bank supports the monetary system. • The Reserve Bank's proposed approach to stewardship, contrasted with the government's published views about what constitutes good stewardship practice.

Contents

Executive Summary

This issues paper from the Reserve Bank of New Zealand – Te Pūtea Matua (Reserve Bank) is about money. The systems that provide cash and other forms of money and that enable the making of payments exist as a complex, interconnected network. This network – 'the monetary system' – underpins everything that happens in the economy. Ensuring that the monetary system is healthy and efficient and meets the needs of stakeholders is a core responsibility of any central bank. Meeting the needs of stakeholders increasingly means providing innovative and efficient options for people. One characteristic of a healthy monetary system is that it can adapt to innovation and improve in a safe and resilient way.

This is the first in a series of papers that seek feedback on a number of issues related to the health, efficiency and choices offered by the monetary system. The purpose of this paper is to:

- introduce the context for the Reserve Bank's work programme on money and cash issues, and the key concepts that underpin this work;
- invite feedback on the Reserve Bank's proposed interpretation of its responsibilities in relation to the monetary system – as steward of money and cash – including outlining its proposed objectives and approach; and
- introduce and receive feedback on the Reserve Bank's proposed priority areas for policy development as steward of money and cash.

An important function of the Reserve Bank in maintaining the health of the monetary system is the issuing of central bank money, in the form of cash, to the public. Central bank money performs two vital tasks:

14. It provides a fair and equal way to pay and save. It contributes to social and financial inclusion by being one option that enables people and businesses to pay and save and undertake other socially meaningful exchanges, like gifting to and rewarding others.

15. It provides a 'value anchor' for the monetary system. Only central bank money performs this role. This means that central bank money ensures that New Zealand retains 'monetary sovereignty', by having access to independent monetary policy as a tool to achieve price stability and sustainable employment and respond to economic shocks.[1]

An important assumption underpinning this paper is that New Zealanders value monetary sovereignty.

The Reserve Bank has monitored and reported on developments affecting New Zealand's monetary system for some time. In 2017 the Reserve Bank launched an investigation into cash use and cash distribution. This led to public consultation on cash-related issues in 2019.[2] And in 2020 the Reserve Bank created a new department – the Money and Cash Department – Tari Moni Whai Take – to better deliver on its responsibilities with respect to the smooth functioning of the monetary system.

1 Central bank money establishes and maintains the New Zealand dollar as: (1) New Zealand's monetary unit of account and (2) official means of payment, and (3) ensures that New Zealand has the use of monetary policy as a tool to respond to economic shocks (by setting interest rates on the New Zealand dollar). When all three of these conditions are met, a country is said to have monetary sovereignty. Refer IMF (2005)

2 Reserve Bank (2019)

Legislative changes (2019, 2021) have been happening alongside the Reserve Bank's ongoing work in this area. Together, the legislative changes and establishing the Money and Cash Department have increased the Reserve Bank's capacity to act to ensure that money and cash in New Zealand, and the monetary system, are meeting the needs of New Zealanders.

The monetary system and the environment that surrounds it are ever-changing. Three key trends in the monetary system are important drivers of the issues that underpin the proposals in this overarching paper (and the series of more detailed papers that will follow it):

- A continuing decline in the use of cash in transactions.
- Digital innovation in money and payments.
- Opportunities to stimulate innovation in the wider payment systems.

In the Reserve Bank's view these trends pose both opportunities to stimulate innovation to enhance the prosperity and wellbeing of New Zealanders, and credible threats to the stability and functioning of the monetary system.

Given the trends outlined above, the Reserve Bank intends to expand and seek to formalise its system stewardship role in respect of money and cash issues. Our objectives as steward are to ensure, now and in the future, that the money we issue as a central bank ('central bank money') is a stable value anchor for the monetary system; is available as a fair and equal way to pay and save; so ensuring that New Zealanders have access to money in forms that suit them and their changing needs.[3]

In delivering this stewardship role, the Reserve Bank intends to take a proactive approach, ensuring that the systems it oversees are modern, agile and forward looking. As some responsibilities for policies that affect the monetary system are held outside the Reserve Bank, we will work in a collaborative and coordinated way with other agencies to take a strategic, system-wide approach. Our preliminary analysis suggests that we may need more powers if we are to fulfil our stewardship responsibilities. This paper explains where we think these regulatory gaps lie.

In our role as steward of money and cash issues, we will prioritise work in the following three areas:

1. Optimising the lifecycle management of physical cash – and therefore New Zealanders' access to it – by redesigning the system that makes cash available around New Zealand (actively or by supporting private sector initiatives).
2. Exploring the opportunities and threats posed to the monetary system by a form of private-sector digital asset – stablecoins.
3. Assessing the potential case for a New Zealand central bank digital currency.

This issues paper is accompanied by others on the topics of central bank digital currency (September 2021) and cash system redesign (November 2021).

[3] 'Central bank money' is a term that is used in this paper to refer to the money the Reserve Bank issues. Cash is an example of central bank money and it is currently the only central bank money available for anyone to use.

Part A: Context and Key Concepts

1 Introduction

This paper is about money. The systems that provide cash and other forms of money, and enable the making of payments, exist as a complex, interconnected network. This network – 'the monetary system' – underpins New Zealand's modern financial system and consequently everything that happens in the economy. It affects prices, employment, productivity, innovation, and investment, along with financial and social inclusion.

Maintaining the health of the monetary system is a core responsibility of any central bank. Indeed, central banking can be defined as providing an environment for the innovative and sustainable development of an effective and resilient monetary system. An effective monetary system is one that is, among other things, efficient, able to adapt to beneficial innovation, and resilient to harmful innovation.

This is the first in a series of papers that will seek feedback on issues related to the health of the monetary system. It provides a high-level overview of the issues and will be accompanied (in September and November 2021) by more detailed consultation papers. The purpose of this paper is to:

- **Part A:** Introduce the context for the Reserve Bank's work programme on money and cash issues, and to explain the key concepts that underpin this work.
- **Part B:**
  - Solicit feedback on our proposed interpretation of our responsibilities in relation to the monetary system – as steward of money and cash. This includes an outline of our proposed objectives and approach as steward.
  - Introduce and receive feedback on our proposed priority areas for policy development as steward of money and cash. These priority areas will be examined further in papers focusing on the possibility of a central bank digital currency ('CBDC') in New Zealand (September 2021) and the redesign of the system that makes cash available around New Zealand (November 2021).

This suite of papers is motivated by three key trends observed in the monetary system:

1. A continuing decline in the use of cash in transactions.
2. Digital innovation in money and payments.
3. Opportunities to stimulate innovation in payments.

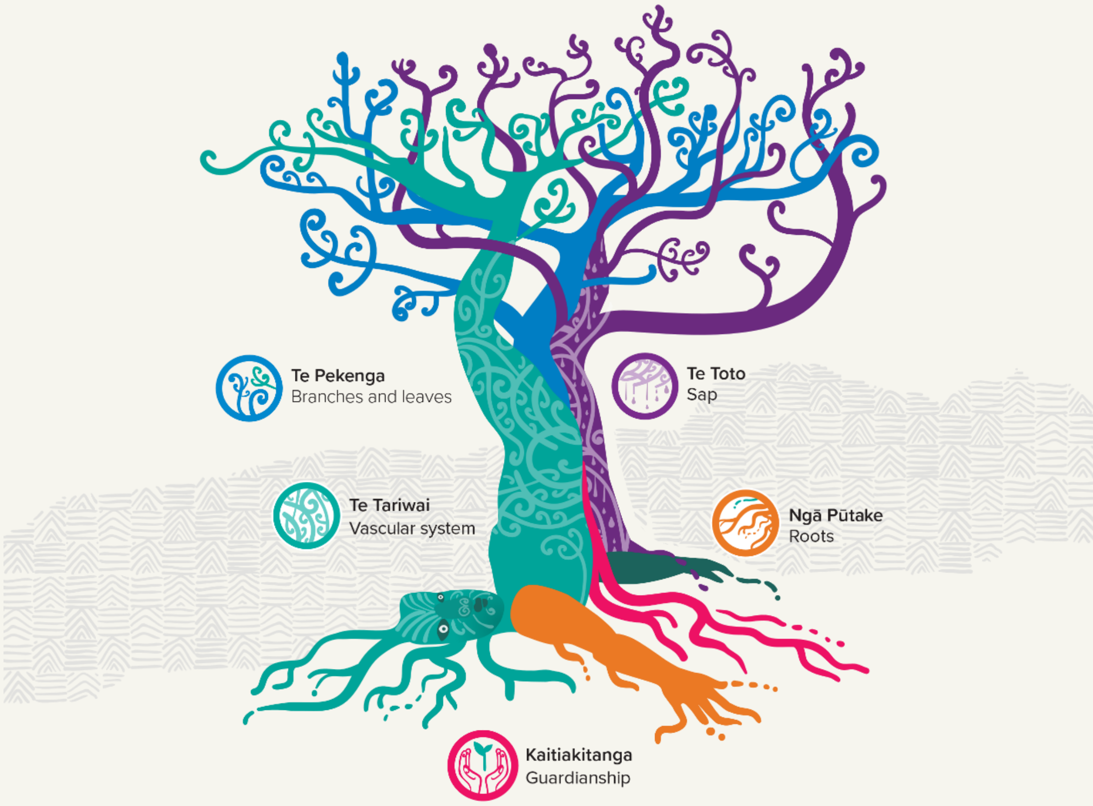
These trends – explored in more detail below – present important opportunities for the monetary system as well as credible threats, and are a key reason for our intention to seek to expand and formalise our stewardship role in relation to money and cash.

At the heart of the issues discussed in this paper (and those that will follow) is the Reserve Bank's concern regarding the importance of maintaining the availability of central bank money to everyone. This concern has led us to prioritise three policy areas: redesigning the cash system; responding to innovation in money; and doing further exploratory work in relation to a CBDC. These policy areas are outlined later in this paper (refer Part B).

Alongside work on money and cash issues, the Reserve Bank is commencing a high-level review of New Zealand's electronic payment system as a first step in taking a more active and deliberate role in promoting a fit-for-purpose payment system. Improvements in New Zealand's electronic payment systems have clear relevance for money and cash, and might be another way to respond to some of the issues and opportunities to which the trends outlined in this paper give rise.

Box 1: Tāne Mahuta and te Toto

In 2018, following a collaborative process with members of the Māori community, the Reserve Bank developed a narrative of our role in the financial system built around the legend of Tāne Mahuta. The Reserve Bank acknowledges its working partnership with Te Roroa iwi who support the Tāne Mahuta narrative and continue as stewards of the kauri in the Waipoua Forest.



The topics addressed in this paper can be understood as relating to the health of Tāne Mahuta and, in particular, the health of te Toto, the sap (money and cash) flowing through Tāne Mahuta.

The Reserve Bank has a responsibility to maintain the health of the financial system. Through the narrative of Tāne Mahuta, the Reserve Bank sees this responsibility as ensuring that all the elements of the financial system support each other and together enable a financial system that is sound, efficient and works for all.

Another way of interpreting the Reserve Bank's responsibilities is to think of the Reserve Bank as practicing the concept of kaitiakitanga or 'stewardship' of the financial system. Different departments in the Reserve Bank have responsibility for ensuring the health of different elements of the financial system, but the Reserve Bank as a whole aims to fulfil its obligations as kaitiaki of the financial system.

Through the Money and Cash Department the Reserve Bank has kaitiakitanga or stewardship responsibilities for money and cash (te Toto). In order to perform this role, the Money and Cash Department works with other areas of the Reserve Bank such as those departments responsible for price stability and thus the purchasing power of te Toto.

The purpose of this paper is to outline the Reserve Bank's thinking in relation to stewardship, te Toto and, the critical role of money and cash in the health of Tāne Mahuta, our sound and efficient financial system.

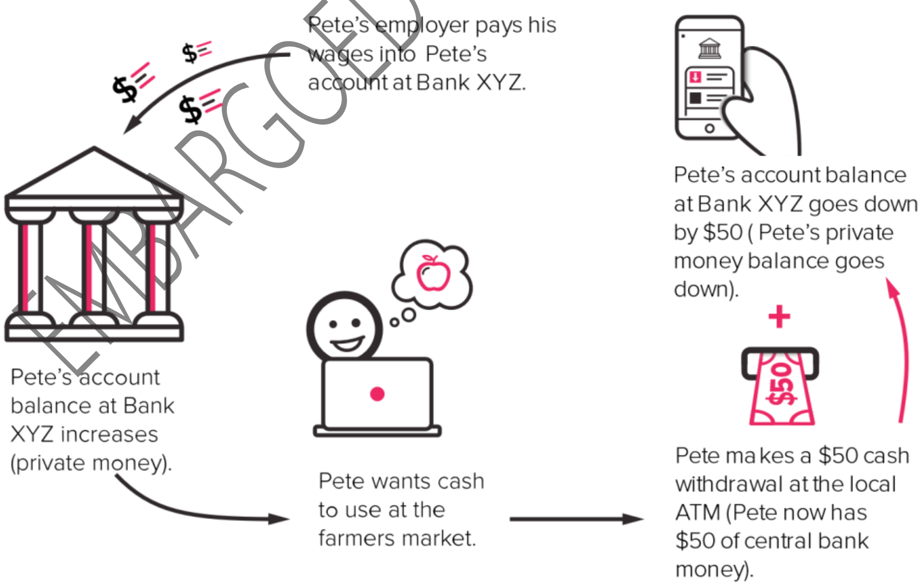
1.1 Key terms and assumptions

There are some fundamental concepts related to money and the monetary system that are helpful to understand, and on which this paper relies.

'**Money'** refers to something that can be used to hold wealth (a 'store of value'), to measure value and set prices (a 'unit of account') and to make payments (a 'medium of exchange'). An important distinction is made between two types of money:

1. **'Central bank money'** is money issued by the Reserve Bank (cash is an example of central bank money).
2. **'Private money**' is money created by private entities and is, in practice, a private 'IOU' (the most common type in New Zealand being commercial bank transaction accounts offered to individuals and businesses) (refer Figure 1).

Figure 1: There are two types of money in New Zealand



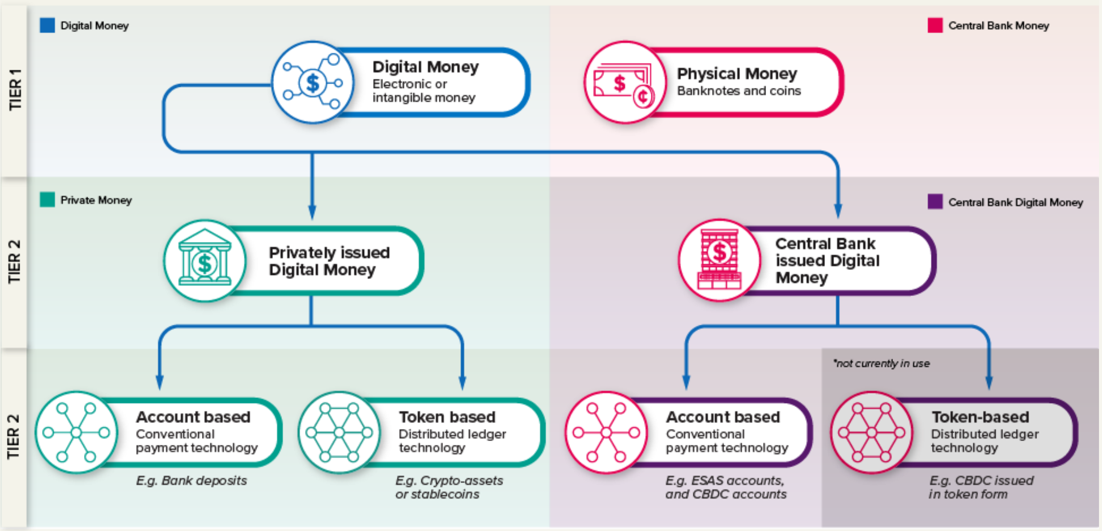
Together, central bank money and private money make up all the money in New Zealand.[4]

4 Cash issued by foreign central banks may also be present in New Zealand but it does not constitute New Zealand money. It can act as a store of value for those who hold it but it does not form the basis of price-setting in New Zealand nor can it be used to make local purchases (before it can be used to buy goods and services locally it must be exchanged for New Zealand cash or converted digitally into a New Zealand dollar denominated private money balance).

Box 2: Money taxonomy

Central bank money is government backed and issued by the central bank. Cash is currently the only type of central bank money available to anyone. Cash is also the only physical money available in New Zealand. All private money exists digitally (as an electronic record). The chart below shows the different types of money that exist – or could exist – in New Zealand.

The Money Tree



Source: Updated from Wadsworth (2018), using Kahn and Roberds' (2009) token – and account-based money distinction.
ESAS is the Reserve Bank of New Zealand's Exchange Settlement Account System (ESAS) which is used by banks and other approved financial institutions to settle their obligations on a Real-Time Gross Settlement (RTGS) basis.

- The first tier of the money tree describes money in terms of whether it is physical or digital. Since the Reserve Bank has the monopoly right to issue banknotes and coins, there is only one form of physical money and that is cash.
- The second tier separates digital money in terms of whether it is issued by the private sector or by the Reserve Bank.
- The final tier of the money tree distinguishes money by its technological forms (account based or 'token based'). This creates a distinction between different types of private money. For example, bank deposits are account based, while 'crypto-assets' like Bitcoin and stablecoins are token based.[5]

5 The Reserve Bank issues digital central bank money to commercial banks via its Exchange Settlement Account System ('ESAS'). ESAS is used to settle transactions between banks, as well as implement monetary policy. Currently, access to ESAS is not widely available and is limited to financial institutions.

'The cash system' refers to the inter-connected system that makes banknotes and coins **('cash')** available around New Zealand, and able to be used in transactions. The system extends from the design of banknotes and coins to cash processing, storage and transport, cash dispensing and acceptance, and destruction when it becomes unfit for use. Digital messaging services that enable the authorisation of a cash withdrawal or the recognition of a cash deposit are an important part of the cash system.

People use their stock of money to buy things. '**Payment'** is a term that refers to this flow of money. Cash can be used as is to make a payment. However, people and businesses typically need to use '**payment instruments**' if they want to spend private money. Bank debit and credit cards, phone-payment apps like Apple Pay and website-based payment portals are all examples of the instruments used when payments are made with private money.

'**The monetary system**' is a large, interconnected network that combines all forms of money and the payment systems that allow them to be accessed and exchanged.[6]

Prices are typically expressed as multiples of a unit of central bank money. This unit has a label – for example, a unit of money issued by the Reserve Bank is called 'the New Zealand dollar' or '**NZD**'.

An important working assumption underpinning the proposals and approach outlined in this paper is that New Zealanders value and seek to retain monetary sovereignty.

'**Monetary sovereignty**' in this paper refers to a nation having autonomy in relation to central bank money and monetary policy.

'**Monetary stability**' refers to situations where there is a high level of trust in the value of money because prices are stable. Monetary stability is supported by the exercise of monetary policy.

'**Monetary policy**' is what the Reserve Bank does when it assesses and uses tools to influence the dynamics of the monetary system in order to achieve its twin objectives of maintaining price stability and supporting the maximum sustainable level of employment. The Reserve Bank's primary monetary policy tool is the Official Cash Rate.[7]

'**Stewardship'** in this paper refers to the responsible management and oversight of a system to create long-term value and sustainable benefits for society.

A more detailed list of key terms is at Appendix 1.

6 Carstens, Agustin (2019)
7 Appendix 3 has further information about monetary policy.

2 Why New Zealand needs a steward of money and cash

2.1 A recent history of the Reserve Bank's focus on money and cash

The Reserve Bank has been concerned about developments affecting the monetary system for some time. In 2017 we began a programme of inquiry called 'Future of Cash – Te Moni Anamata' ('the Future of Cash Programme'). This was motivated by concerns about our future vaulting needs, the wider system responsible for moving and making cash available, and declining cash use.

The Future of Cash Programme established that, in 2019, an overwhelming majority of New Zealanders continued to use and value cash, and a substantial minority of New Zealanders relied on cash for their everyday needs. It concluded that cash plays an important role in promoting financial and social inclusion in New Zealand.

In response to the Future of Cash Programme, we formed the view that, given the realities of declining cash use alongside the need to ensure cash access, we would need to play a larger and more active role in overseeing the cash system than we had in the past.[8] This led to five key developments:

1. In April 2019 a change to the Reserve Bank's governing legislation at the time – the Reserve Bank of New Zealand Act 1989 – made the issuing of cash *to meet the needs of the public* a formal purpose of the Reserve Bank.
2. In January 2020 the Minister of Finance decided that "New Zealand's currency system should continue to deliver the benefits of inclusion, speed and resilience, and freedom and autonomy currently conferred by cash".[9]
3. New foundational legislation the Reserve Bank of New Zealand Act 2021, ('the Reserve Bank Act') was passed by Parliament on 10 August 2021. It recognised the Reserve Bank's role as overseeing the end-to-end functioning of the cash system, ensuring that cash in New Zealand meets the needs of the public, and monitoring and assessing the impacts of technological innovation in money and payments on the public's need for cash.[10] [11]
4. A new department within the Reserve Bank was created - the Money and Cash Department – Tari Moni Whai Take – to support the Reserve Bank's enhanced focus on money and cash issues.
5. A commitment was made in the Reserve Bank's 2020 Statement of Intent to undertake a fundamental redesign of the cash system and to establish a data and information repository to collate, analyse and share cash system information. In our 2021 Statement of Intent we expressed our vision as "cash supporting a monetary and financial system that works for all".[12]

These developments represent key changes in the Reserve Bank's powers, responsibilities and capacity to act in respect of money and cash issues. We consider that now is an appropriate time to seek the public's views on how we should act going forward.

8 Reserve Bank and the New Zealand Treasury (2020) T2020/251
9 Reserve Bank (2019)
10 Reserve Bank and the New Zealand Treasury (2020) T2020/251
11 See Box 3 for changes introduced by the Reserve Bank Act.
12 Reserve Bank (2020) and Reserve Bank (2021)

Box 3: Changes to the Reserve Bank's central bank function

Recent legislative changes have enhanced the Reserve Bank's role, functions and powers in respect of money and cash. These changes clarify how the Reserve Bank will act to meet the needs of the public. The changes include specifications that:

- a *core function* of the Reserve Bank is to monitor the needs of the public for cash; and
- a *central bank function* of the Reserve Bank is to carry out various actions to ensure that cash in New Zealand meets the needs of the public. These actions include issuing cash, monitoring the distribution of cash, distributing cash if the Reserve Bank thinks fit, managing the quality of cash, and monitoring the impacts of technological innovation in money and payments.

The Reserve Bank has the following new statutory powers to support its functions:

- *Information-gathering*: the Reserve Bank may collect information from any provider of cash, payment-processing, or financial services, and any person acting on a provider's behalf. This includes providers of cash transport, storage, and distribution services ('cash-in-transit' companies).
- *Regulatory-standard setting*: The Reserve Bank has authority to set standards for devices that automatically handle cash, such as automatic teller machines (ATMs) and self-service checkouts, to test the quality and authenticity of the money they dispense.
- *Mandatory compliance*: The Reserve Bank may require the operator of a cash-handling device to demonstrate that the machine complies with the quality and authenticity standards above, and may require the operator to cease operating if the device does not comply, or face a fine or loss of the machine.

The Reserve Bank Act provides the legal basis for the Reserve Bank to issue, alongside cash, generally-available digital money (Central Bank Digital Currency, 'CBDC'). It could do this by extending the usability and availability of 'settlement accounts' that are currently only available to approved large financial institutions. However, any decision to issue a CBDC would only be made following consultation with the Government, the public and other stakeholders, to understand how to make the most of the opportunities and address any potential risks. Further legislative change may need to be sought to support the issuance of a CBDC. Key trends motivating a focus on the monetary system

A continuing decline in the use of cash in transactions

The use of cash for everyday transactions by individuals and households has been declining. Data from the Household Economic Survey shows that this trend has been underway for more than a decade and is common in all the household types defined in the survey.[13] On average, cash was

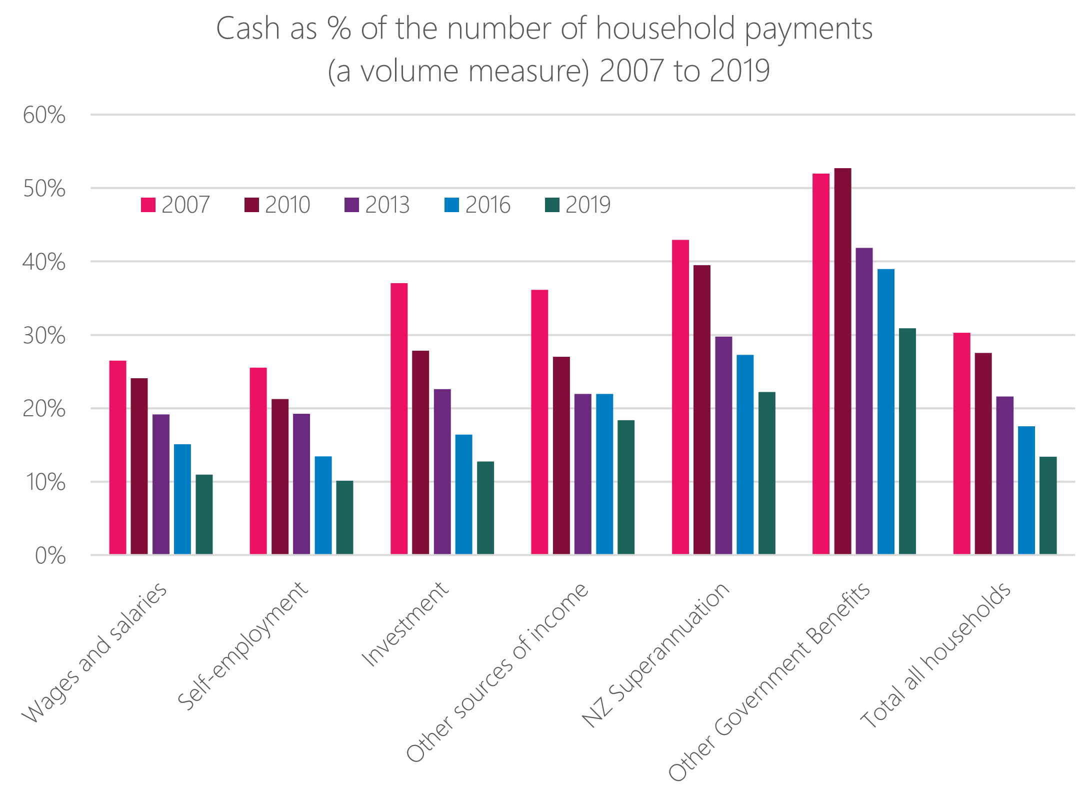
13 Statistics New Zealand (2021)

used for 13 percent of household transactions in 2019, down from 30 percent in 2007 (refer Table 1 and Figure 2).

Table 1: Household payment trends, % of total number of payments

Cash as % of all household payments (volume measure)					
Principal source of income	**2007**	**2010**	**2013**	**2016**	**2019**
Wages and salaries	26%	24%	19%	15%	11%
Self-employment	26%	21%	19%	13%	10%
Investment	37%	28%	23%	16%	13%
Other sources of income	36%	27%	22%	22%	18%
NZ Superannuation	43%	39%	30%	27%	22%
Other Government Benefits	52%	53%	42%	39%	31%
Total all households	30%	28%	22%	18%	13%

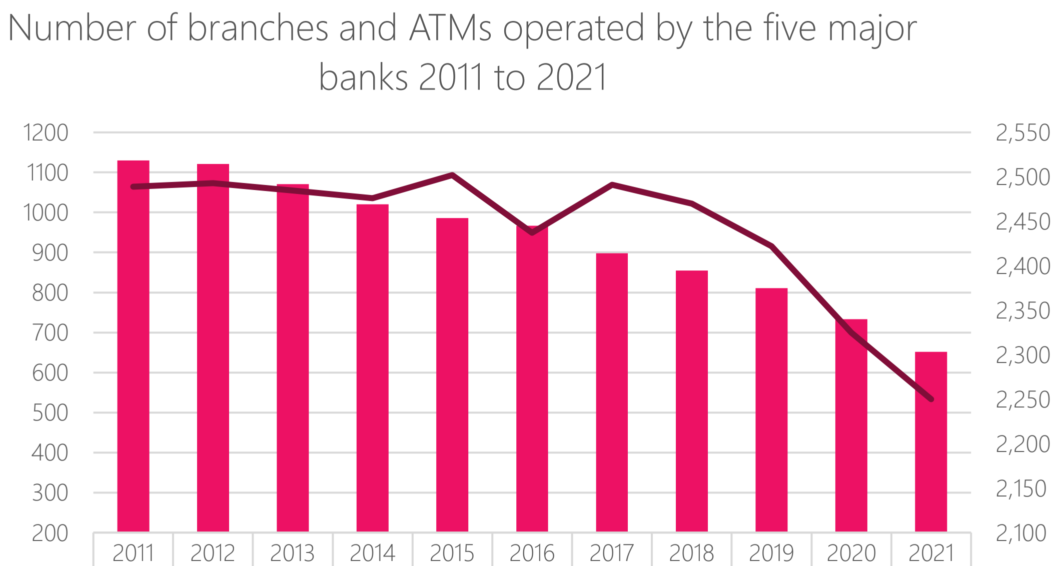
Figure 2: Household payment trends, % of total number of payments



A decline in cash use in transactions is a common trend globally. There are likely to be many contributors to the decline, such as the convenience of digital payments, a growing consumer preference for online shopping, which typically requires non-cash payments, reduced cash availability as bank branches and ATMs are closed (or operate on restricted hours) and, more recently, the COVID-19 pandemic.

As cash use declines, the average cost of providing cash increases. As a result, banks, which are a key part of the cash system, see little incentive to invest in maintaining the availability of cash. They may instead prefer to invest in payment methods that compete with cash (such as Visa- and Mastercard-branded bank-issued credit cards), as these appear to be significantly more profitable for banks. As a result there are fewer bank-owned ATMs than there once were, fewer bank branches and reduced bank opening hours (refer Figure 3).

Figure 3: Trends in large bank branch numbers and bank ATMs



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Branches	1130	1121	1071	1020	986	967	898	855	811	733	652
ATMs (RHS)	2489	2493	2484.5	2476	2502	2437	2491	2470	2422	2325	2250

Branches ATMs (RHS)

Source: KPMG New Zealand Financial Institutions Performance Survey 2011 to 2020, Reserve Bank data.

In New Zealand, as it is in many other countries, there is also a 'cash paradox' where, while the amount of cash used for transactions is falling, the amount of 'cash in circulation' continues to grow.[14] Cash in circulation comprises cash issued by the Reserve Bank that is either circulating in the economy or being used as a store of value. This, in combination with the transaction data in Table 1, suggests that cash may be useful to people as a store of value. In fact, cash in circulation increased by approximately $800 million as New Zealand entered its first COVID-19 lockdown in March 2020.

However, it is the transactional use of cash that effectively determines the overall cost of the cash system. Declining transactional use leads to higher average costs. In the face of declining transactional use, and given the importance of cash remaining available as a means of payment in

[14] Reserve Bank (2021a)

New Zealand, there is a need to explore ways to make the cash system more efficient and resilient. For this reason the Reserve Bank has committed to a fundamental redesign of the system that distributes cash.

Digital innovation in private money and payments

New technologies are emerging to facilitate digital payments, enabling businesses to pursue new strategies. There has already been noticeable innovation in recent years – for example, in phone-based payment apps and digital wallets (an example is Apple Pay).

Now the focus of innovation appears to be on private money itself. Potential 'disruptors' are seeking to offer private money outside the conventional commercial bank account model. This private money offers the prospect of more efficient and innovative means of paying but in some cases may also pose significant risks. So-called 'stablecoins', discussed in detail in Section 6, are one notable example of innovation in private money that raises policy issues.

One relevant policy issue is the risk that private innovation could pose to New Zealand's monetary sovereignty. An important question is 'what new regulations (if any) may be required in order to deliver monetary sovereignty and financial and price stability in a world of new payments technology, new types of private money, new participants and new business models?'

Opportunities to stimulate innovation in payments

The domestic systems that underpin retail payments in New Zealand also provide important context. Inefficiencies and a lack of innovation in retail payments can be expected to motivate new forms of private money, offered outside the conventional commercial bank model.

For example, currently the provision of retail payment services is concentrated in only a few providers, potentially signalling high barriers to entry and few incentives for the incumbents to innovate. This is consistent with the relatively high fees being charged to merchants who accept digital payments (in particular, small and medium-sized merchants incur high fees).[15] There are few incentives for incumbents to adopt innovative solutions that, for example, better serve the needs of consumers or reduce the costs of cross-border payments.

Similarly, except in some cases where customers of the same bank are paying one another, instant, electronic, peer-to-peer settlement is a service currently not provided by the private sector. Instant settlement is both faster and therefore more convenient than deferred settlement (it reduces the need to wait for payments to complete) and it is safer (it reduces the likelihood of payments failing to be settled after a payment instruction has been made).

We intend to explore payment-system-related issues in detail in 2022, focusing on the underlying infrastructure, while the Ministry of Business, Innovation and Employment is examining retail payment issues such as high merchant fees charged for some services, such as 'contactless' payments.[16]

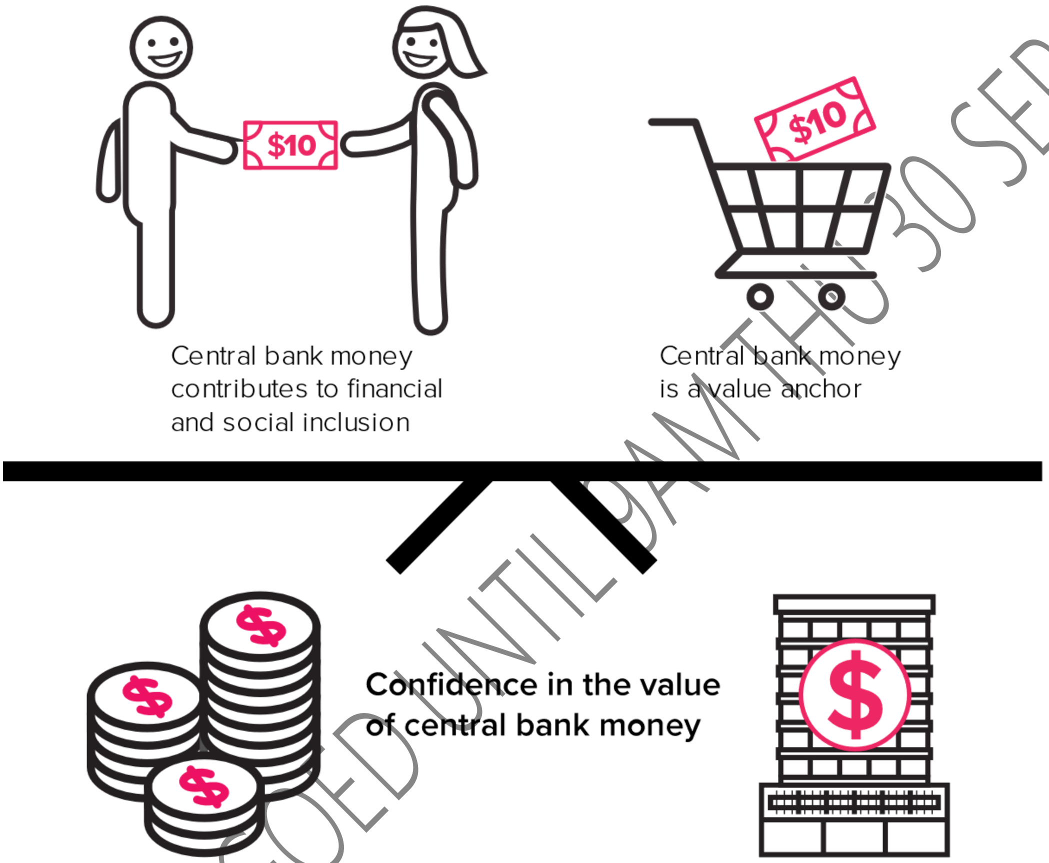
15 Ministry of Business, Innovation and Employment (2020)
16 Ministry of Business, Innovation and Employment (2020)

3 Why central bank money matters

The Reserve Bank has responsibility for the entire monetary system, and central bank money is a particular focus because it performs two essential functions.

The crucial roles performed by central bank money are i) a contributor to financial and social inclusion and ii) a value anchor for the monetary system.

Figure 4: Why central bank money matters



3.1 Financial and social inclusion

Central bank money enables people and businesses to transact with, reward, and recognise one another. Hence, central bank money facilitates financial and social inclusion. This remains true even though cash – the only central bank money currently available to anyone – is being used less and less for transactions.

There are people who banks refuse to accept as customers – even if all they seek is the most basic transaction accounts.[17] These 'unbanked' people have no option but to rely entirely on cash for their everyday needs, either temporarily (say, in the case of a new arrival to New Zealand not having proof of a residential address), or permanently (say, someone who lacks a permanent address).

17 In 2017 the World Bank estimated that 1 percent of the population in New Zealand did not have a bank account. Refer: Demirguc-Kunt A, L Klapper, D Singer, S Ansar and J Hess (2017)

It is not only the unbanked who need cash for transaction purposes. Not everyone is able to use any or some of the digital payment instruments provided with bank accounts. The Reserve Bank's 2019 Cash Use Survey suggests that up to 6 percent of people are entirely or heavily reliant on cash.[18]

Cash provides another economic service beyond being a way to pay. It is available as an asset that has a certain nominal value, is free of credit risk and can be drawn on whenever the need arises. The Reserve Bank's 2019 cash use survey found that around a third of respondents held cash for this store of value purpose.[19]

Cash also plays an important cultural and social role. Cash is central to many cultural and social activities – ranging from how people participate in weddings and funerals to how parents interact with their children. These cultural and social uses of cash help to create a sense of community. The importance of cash in building a sense of community, and the high value placed on cash by non-cash users because it provides benefits to others, emerged as themes in the deliberative workshops held for the Reserve Bank in March 2021.[20] By contributing to financial and social inclusion, cash helps develop and maintain New Zealand's 'social capital', and the development of social capital benefits everyone.[21]

3.2 A trusted value anchor

Central bank money plays another crucial role – it underpins trust and confidence in private money and therefore enables people to transact with confidence. It acts as a value anchor for private money, the financial system and the economy more generally. Central bank money acts as the value anchor for New Zealand because people understand and trust its value and can swap their private money into it at a ratio of 1:1 whenever they want ('convertibility'). Convertibility supports the trust people have in private money and, ultimately, the trust that underpins all financial transactions denominated in New Zealand dollars.

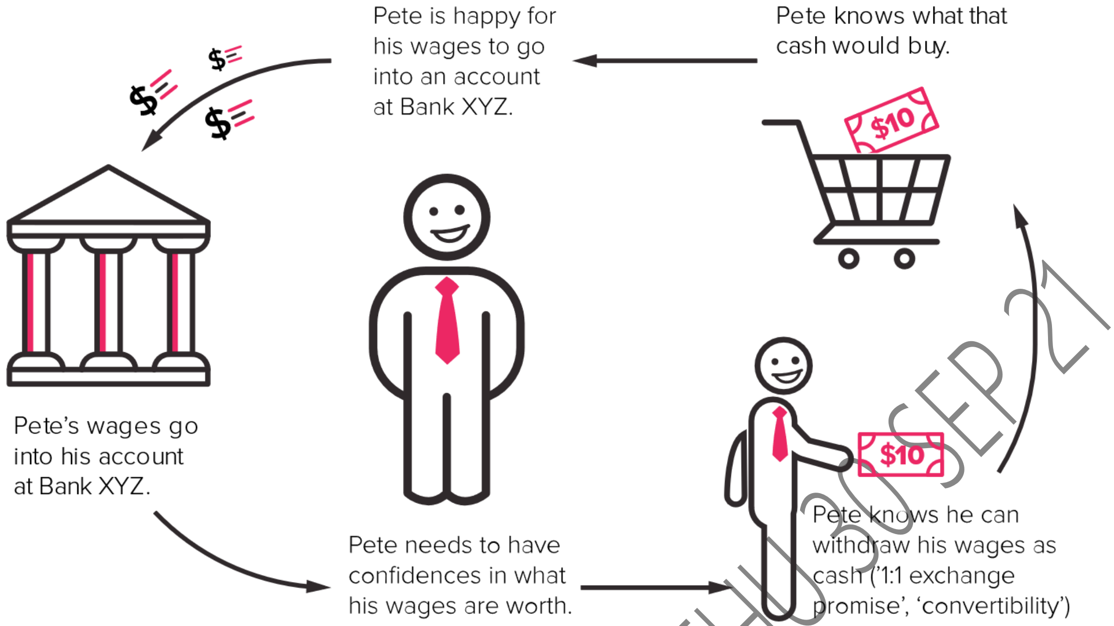
When central bank money acts as a value anchor prices are set in New Zealand dollars (it provides the single unit of account), monetary policy is available as a tool to achieve inflation and employment objectives and New Zealand retains monetary sovereignty.

The concept and acceptance of the New Zealand dollar as the single unit of account is something that people may take for granted. It arises because people have confidence and trust in the value of central bank money, and that trust extends to commercial bank transaction accounts. However, trust in the value of central bank money cannot be taken for granted. It relies on price stability, measures that protect cash from counterfeit and prudent fiscal policy (Appendix 3 outlines the drivers of trust in central bank money in more detail).

Having a single unit of account means that people know the value of the goods, services and assets they are buying with their money (for example, they do not need to apply an exchange rate). They can view the money they hold in a transactions accounts as being worth a constant amount even if they transfer it to another bank or type of private money, or withdraw it and hold cash.

18 Reserve Bank (2019a)
19 Reserve Bank (2019a)
20 Kantar (2021)
21 New Zealand Treasury (2018)

Figure 5: The value anchor provided by central bank money



The ability to convert money in bank transaction accounts into safe and secure central bank money is particularly important to people in times of crisis. This was demonstrated in the significant increases in cash withdrawals at the beginning of the COVID-19 pandemic and by the rush of people to withdraw cash from stressed banks during the Global Financial Crisis that occurred in 2007-2008. The fact that privately issued money can be exchanged for central bank money at face value underpins its acceptance as a form of money.

The convertibility of private money into central bank money is supported by policies aimed at creating a sound and stable banking sector (such as the prudential regulation of banks and liquidity support for banks facing short-term cash difficulties), as well as the network of bank branches, automatic teller machines and retail outlets that provide access to cash.

3.3 Public good characteristics

Central bank money produces benefits that have the characteristics of 'public goods'.[22] These characteristics come from the fact that it is costly or impossible to exclude people from the benefits of central bank money, and the benefits enjoyed by one person do not reduce the benefits available to others. For example, cash enables financial and social participation for those denied access to private money. Greater social and financial inclusion produces benefits such as improved population health and this enhances the well-being of everyone, even those who do not themselves use cash.[23]

Public sector involvement or intervention in some capacity is typically required when benefits that have the characteristics of public goods are involved. That's because private firms are motivated by profit and they cannot charge for benefits from which no one can be excluded. So when private firms weigh up how much to invest or produce, public good benefits carry little weight. If the systems that give rise to public goods are heavily reliant on private entities and interests (as is the system that makes cash available, for example), public interventions in these systems are typically required.

22 'Public good' is a technical term used in economics to refer to goods or services that are considered non-excludable (people cannot be prevented from the good or service) and nondepletable (use by one person does not reduce the amount available to others).
23 For an example of this literature see D'Hombres B et al. (2010).

Part B: Stewardship and our work programme

4 Stewardship of money and cash

An important objective of this paper is to articulate what is new about the Reserve Bank's role with respect to the monetary system, focusing in particular on the Reserve Bank's proposed scope, objectives for and approach to that role.

As noted earlier, maintaining the health of the monetary system is a core responsibility of any central bank. Ensuring that central bank money is available to anyone lies at the heart of the proposals in this paper and our proposal to prioritise three policy areas for immediate work: redesigning the cash system; responding to innovation in private money; and doing further exploratory work in relation to a general-purpose CBDC. These policy areas are outlined in Part B.

Having reviewed public service frameworks operating in New Zealand and elsewhere, the Reserve Bank has concluded that the concept of 'stewardship' or 'kaitiakitanga' best describes the Reserve Bank's responsibilities with respect to the monetary system and in particular money and cash.

4.1 The Reserve Bank's stewardship objectives

The Reserve Bank Act's stated purpose is to promote the prosperity and well-being of New Zealanders and contribute to a sustainable and productive economy. The Reserve Bank works to achieve this purpose by promoting a sound and dynamic monetary and financial system.[24] Central bank money that is available to anyone performs two vital roles, and both are essential to the achievement of these high-level goals. This is true whether the central bank money takes a physical form (as it does at present in the form of cash) or a digital form (as would be the case if the Reserve Bank were to issue a general-purpose CBDC).

The two vital roles performed by central bank money that is available to anyone are:

1. Contributing to financial and social inclusion; and
2. Underpinning confidence in the value of private money (a role described in this paper as providing a value anchor).

Reflecting the benefits produced by central bank money, the Reserve Bank's proposed high-level objectives for stewardship are to ensure that, now and in the future:

1. Central bank money is a stable value anchor for the monetary system; and
2. Central bank money is available as a fair and equal way to pay and save, ensuring that New Zealanders have access to money in a form/s that suits them and their changing needs.

24 Reserve Bank (2021)

4.2 The Reserve Bank's proposed approach to stewardship

In developing our proposed approach to the stewardship of money and cash, we drew on a range of frameworks, including the Government Expectations for Good Regulatory Practice 2017, and the principles of public service set out in the Public Service Act 2020. These frameworks support a number of important judgements about the way we intend to take forward the stewardship role, such as the importance of taking a forward-looking, system-wide approach, and monitoring, reviewing, reporting on, analysing and supporting change to the monetary system.[25] [26]

Appendix 4 illustrates how we view stewardship by contrasting the Reserve Bank proposed approach to the Government Expectations for Good Regulatory Practice 2017.[27]

The scope of the Reserve Bank's stewardship role extends beyond central bank money

Although the Reserve Bank's statutory mandate is focused on the cash system, the reality is that the systems that underpin central bank money, private money and payment instruments are interconnected. This integrated network exists in a dynamic equilibrium, meaning that what happens in one part of the system can have intended or unintended consequences elsewhere, and may even potentially destabilise the whole system.

For example, private payment instruments that people prefer to use (perhaps because they are convenient, deliver cost savings, or offer rewards or other incentives) are likely to be contributing to a decline in the availability or acceptance of cash – a means of making a payment that other people may rely on. Similarly, if a general-purpose CBDC were to become available, this could affect how some people use private money (as this is also digital money) with flow-on effects for others.

The monetary system is more likely to be healthy, efficient and innovative, and meet the needs of diverse users more equitably, if there is strategic oversight of the whole system. This oversight needs to recognise the interconnectedness of the systems underpinning central bank money, private money and payment instruments, and the various incentives in the system.

A coordinated and forward-looking approach will deliver the best outcomes

We propose to take a *strategic and coordinated approach* to money and cash issues. Within the Reserve Bank, various actions that affect the monetary system are the responsibility of different areas (these overlapping functions are outlined in Appendix 3). There are also overlapping responsibilities (and potentially gaps) in the mandates and responsibilities of different agencies and authorities in respect of the monetary system. A strategic and coordinated approach across agencies and authorities is necessary to achieve strong and positive outcomes for the monetary system.

25 Kibblewhite A (2017)
26 New Zealand Treasury (2017)
27 New Zealand Treasury (2017)

One area where coordination and collaboration will be necessary is in the future of payments in New Zealand, a broad work programme capturing initiatives such as:

1. A new regulatory regime for retail payment systems, which is expected to affect the cost and availability of payment card services that compete with cash. Oversight of this system lies primarily with the Ministry for Business, Innovation and Employment (MBIE), and with the Commerce Commission. The latter will be the retail payments system regulator whilst MBIE will administer the new legislation.

2. The development of consumer data rights, which is likely to support innovation in the way that cash is provided to the general public. It could also support innovation in payment technology alongside a CBDC. MBIE is lead agency on consumer data rights.

3. A strategic review of the speed, efficiency, competition, innovation, resilience and interoperability of electronic payment systems that allow New Zealanders to exchange digital money as payment for goods and services. The Reserve Bank is leading this work but it intersects with the payments-related responsibilities and objectives of other agencies such as the Commerce Commission as the future regulator of retail payment systems.

4. Pacific remittances. The Reserve Bank, in conjunction with other South Pacific central banks, is working to better enable money to be exchanged across the Pacific.

Another example of coordination across agencies is the Safer Credit and Financial Inclusion Strategy.[28] This is a partnership between the Ministry of Social Development, MBIE and Te Puni Kōkiri with financial services industry and community support, aimed at providing clear pathways to accessing financial services that meet people's needs, and solutions for people facing financial hardship or who have problem debt.

We also consider that a *forward looking, proactive and enduring approach* is a critical component of effective stewardship. The monetary system needs to be both strong and adaptable over time to respond to a range of future scenarios. This implies actively monitoring and assessing the evolving technology of digital money and payments, building capacity to capture emerging opportunities, being resilient in the face of emerging risks, addressing current challenges and planning for known future issues.

Stewardship needs to be inclusive and respect Te Tiriti o Waitangi

What people and businesses require of cash, private money and payments instruments is evolving. But some of these demands, or the priorities accorded to them, can conflict. There could be, for example, conflict between adopting new technology to meet future generations' needs and preserving the existing systems to avoid disrupting the experience of the current generation. The responsibilities of stewardship include identifying these trade-offs and providing policy and operational advice in relation to them. The Reserve Bank will be transparent about the distributive impacts of its actions in relation to the monetary system.

The Reserve Bank aims to be consistent with the principles of Te Tiriti – the Treaty of Waitangi – when carrying out its stewardship responsibilities. That means reviewing and challenging itself to ensure Te Tiriti is being honoured in this work, including by applying a Te Ao Māori lens and proactively considering the specific interests of Māori in all aspects of the work programme.

28 Ministry of Social Development (2017)

4.3 Proposed outcomes from stewardship

Given the proposed objectives and approach, the Reserve Bank is aiming to advance the following outcomes as steward of money and cash:

1. **Central bank money is trusted money**. People trust central bank money to be valuable. We will achieve this by issuing central bank money that provides a reliable and secure way to pay and save in people's everyday lives and at times of crisis, with a value that remains broadly stable over time due to a low and stable rate of inflation.[29] In addition to making central bank money generally available, we will achieve this by issuing banknotes that are hard to counterfeit, setting standards to regulate the quality and integrity of banknotes in circulation, and monitoring and managing compliance with banknote standards.

2. **The Reserve Bank is a trusted issuer of money**. People trust in the Reserve Bank's integrity and credibility as an issuing authority, and have confidence that the Reserve Bank will use its powers and functions to support the stable value of the New Zealand dollar.[30]

3. **Central bank money is safe and liquid.** Central bank money is a lever that supports a sound and well-functioning monetary and financial system. This is because central bank money gives people, businesses and financial institutions access to an asset that is safe (because it is a claim on the Reserve Bank that is backed by the Crown) and liquid (because it can be freely exchanged for other forms of money or for real goods and services) and they have confidence in it.

4. The institutional, legal, and technical **structures underpinning all money are transparent, well governed and robust**.

5. **Central bank money evolves and adapts through time to reflect the changing needs and preferences of its users.** Where appropriate, the Reserve Bank will use developments in technology to enhance the resilience and capacity of central bank money to continue to perform its vital functions in a range of future environments, including one of lower cash use.

6. **Central bank money promotes financial and social inclusion.** The option of widely available, easy-to-use and cost-effective central bank money will set a baseline for all the money and payment methods available to New Zealanders, and better align private incentives with meeting people's needs. Well-designed central bank money will set expectations for a minimum level of service, constrain, through being a competitor, the costs people face from using other forms of money and payments, and help to mitigate any excessive or disproportionate private-sector costs that might otherwise leave some New Zealanders excluded.

7. **The systems that underpin money and payments are efficient**. The Reserve Bank will support beneficial innovation in central bank money that contributes to a monetary system that is competitive, innovative, dynamic and interoperable.

29 This in turn means people can have confidence in central bank money as an enduring means of payment and unit of account for New Zealand.

30 The money that the Reserve Bank issues is denominated in New Zealand dollars, the currency of New Zealand. It is the Reserve Bank, on behalf of the Crown, that is charged with ensuring the stable value of the currency by achieving and maintaining stability in the general level of prices over the medium term (Reserve Bank Act section 9(1)(a)(i)). This supports stability in the value of all monies denominated in New Zealand dollars.

4.4 The stewardship toolkit

The Reserve Bank's view is that many of our past and current activities can be understood as the actions of a steward, and that what is being proposed is simply the ongoing evolution of an existing role. Such activities include our Future of Cash Programme, co-ordination of the cash system during COVID-19, and work supporting the Minister of Finance in relation to the New Zealand Bankers' Association regional banking hubs pilot (see Box 4).

Box 4: Regional access to banking services

For some time, the number of bank branches in New Zealand has been falling amidst a general decline in face-to-face banking, although this decline has rapidly increased in the past two years. Trends in banking access intersect with money and cash stewardship because of some important roles that banks play in New Zealand's money and cash system, such as allowing people to deposit and withdraw cash, pay bills, and connect with payment systems that connect commercial bank money to the wider economy.

If some people or businesses cannot get reliable access to banking services (at all, or on reasonable terms), or if banking services are not innovative or inclusive in meeting their needs, it is unlikely that the money and cash system will be working well for them or for New Zealand. Data shows that people in regional New Zealand are particularly vulnerable to these problems. Access to banking is also an issue in urban areas, with bank branches and ATMs being withdrawn from many urban communities, creating challenges for people to access face-to-face banking.

Reflecting the intersection between banking access and the functioning of the money and cash system, the Reserve Bank is also the Government's lead agency on regional banking issues, and in this capacity is supporting the Government by:

1. monitoring trends and digital innovation (in our stewardship capacity), and undertaking other monitoring as required;
2. assessing how well banks are meeting customer and community needs, including through shared banking facilities like regional banking hubs; and
3. advising the Government on options for policy, regulatory and legislative responses to ensure that people in New Zealand can access banking services that meet their needs.

Table 2 sets out how the Reserve Bank proposes to deploy the stewardship toolkit. Table 2 includes the financial system – which is broader than the monetary system as it includes, for example, the debt and securities markets – because actions taken by the Reserve Bank acting as steward of money and cash can impact there.

Formal statutory tools – which focus on the cash system – are at the top of the table; softer, indirect tools – which might be used in all systems – are at the bottom. Areas thus far identified where the Reserve Bank does not yet have the power to intervene but may need to do so at some time in the future are in grey and encased in a highlighted border.

The additional legislative powers in the Reserve Bank Act enhance the Reserve Bank's ability to act as steward. However, our view is that further powers are likely to be necessary in order to achieve the proposed objectives and outcomes for the monetary system set out in this section, and the benefits they will deliver for the prosperity and wellbeing of New Zealanders.

Beyond employing the stewardship toolkit in Table 2, achieving the stewardship objectives will draw on our established roles of maintaining the stable value of money, regulating banks that issue private money, and regulating – and in some cases operating – payment systems that allow money to be distributed, accessed and exchanged. A breakdown of these roles is shown in Appendix 3.

In addition to identifying and assessing how best to respond to gaps in the legislative toolkit set out in Table 2, we will continue to develop proposals for the reporting and accountability framework for the stewardship role. This will include developing a framework for measuring and monitoring the needs of the public for cash, reporting on how we are tracking against the stewardship objectives and outcomes, and establishing expectations of how we act as steward in relation to stakeholders and partners.

Table 2 - How the Reserve Bank proposes to deploy the stewardship toolkit

Table 2 legend: Formal, statutory tools – which focus on the cash system – are at the top of the table; softer, indirect tools – which might be used across all systems – are at the bottom. Areas where the Reserve Bank does not yet have the power to intervene but may need to do so at some time in the future are in grey and encased in a highlighting border.

Statutory (hard) Power

Money and Cash Stewardship roles	**The Cash System** (banknotes/coins/CBDC and supporting legal, technical and policy structures)		**The Monetary System** (including private money and payment systems)	**The Financial System** (including other banking and financial services)
Regulate	Regulate banknote quality and processing*.	*Regulate access to cash services or cash acceptance; better align public and private incentives through cost caps.*	*Regulate new forms of money and payments that impact on stewardship goals (e.g., stablecoins).*	Possible future tools
Design, produce and distribute	Design, produce and distribute banknotes and coins.	*Issue general purpose CBDC.*		
Monitor	Gather information from people involved in cash management and distribution, and monitor the impact of innovation in money and payment technologies.			
Advise and lead	Provide policy advice to decision-makers to set the strategic direction of the money and payment system and inform decisions on trade-offs related to money and cash system issues, for example on cash system redesign or Rural Banking Hubs.			
Coordinate and collaborate	Identify relevant stakeholders and coordinate and collaborate across them to support the money and payments ecosystem functions well. This includes working with the cash industry on cash system redesign, to coordinating on payment system issues, and collaborating with other agencies in areas of on common interest e.g. a consumer data right.			
Steer and influence	Promote outcomes that contribute to the Reserve Bank's' stewardship objectives, and influence other agencies/stakeholders to support better outcomes for all in areas where they have a primary role. This includes using suasion to prompt others to act in the public interest, such as on rural access to cash, and encourage a holistic approach so that money and cash-related issues do not fall through the gaps (such as in FinTech).			
Support and enable	Support and enable others to do their jobs well, by providing interested parties with appropriate opportunities to comment and input, addressing barriers or impediments to others' involvement, making a genuine effort to understand others' interests, values, and concerns, and avoiding actions that could crowd out others, for example, in FinTech innovations.			
Communicate and educate	Create greater transparency and incentivise beneficial behaviours through communication and information-sharing, including regularly collecting, analysing and reporting on money and cash data. The steward will also leverage the Reserve Bank's central position to provide expert advice on money and cash matters, and to disseminate useful information to help others make informed decisions on money-related issues e.g., tax treatment of stablecoins.			

Non-statutory (soft) power

The Reserve Bank's accountability framework, including transparent rules and expectations for how it carries out the stewardship role.

* Part 3, Subpart 5 of the Reserve Bank Act gives the Reserve Bank powers to set enforceable standards for machines that handle banknotes, such as ATMs and cash sorting machines. These powers are expected to come into effect on 1 July 2022, but is yet to be confirmed.

4.5 The stewardship policy work programme

The proposed policy work programme in relation to money and cash stewardship prioritises the following areas:

1. A redesign of the cash system that includes investigating incentives in the cash distribution system, cash system costs and potential efficiency gains, and cash system performance. A key focus will be on identifying viable long-term options that are suitable in the context of the decline in transactional cash use.
2. An assessment of the public policy case for and against issuing a CBDC in New Zealand.
3. An assessment of the risks and opportunities arising from private innovation in money, particularly stablecoins, that have the potential to become globally or systemically important or that might undermine the performance of New Zealand's central bank money as an effective value anchor.

The remainder of this paper presents a high-level overview of these policy areas. Detailed consultation papers on two of these policy areas are being released. Future of Money – Central Bank Digital Currency also released in September, and the Future of Money – Cash System will be released in November 2021.

4.6 Have your say

1. Do you agree with the proposed objectives of stewardship?
2. Do you agree that the approach to the stewardship of money and cash should be proactive?
3. Do you agree that the stewardship role is broad, and extends across the whole financial system in New Zealand?
4. Other than clear responsibilities, comprehensive functions, effective tools and strong accountability processes, what do you think a steward ought to have in order to be successful?
5. Where do you see the gaps in the Reserve Bank's legislative powers and responsibilities in fulfilling the role of steward that warrant further investigation?
6. Do you think as a priority the steward should regularly collect, analyse and report on money and cash data?
7. What do you think are the key issues the steward will be grappling with in the next 10 years or so, and which of these should the Reserve Bank prioritise?

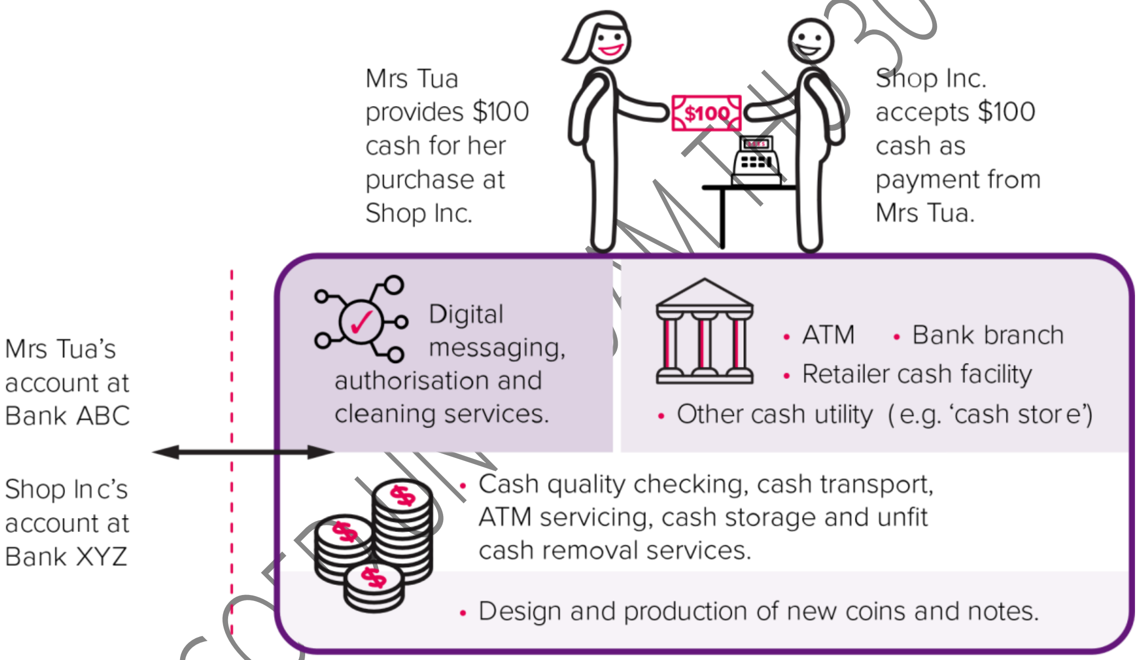
5 Cash system redesign

Like other payment options, cash acts as a bridge, bringing customers and merchants together (and enabling other socially meaningful exchanges).

The stock of private money (typically held in the transaction accounts provided by commercial banks) sits outside the cash system but interacts with it digitally. Whenever someone deposits into or withdraws cash from their bank account there is an exchange between private money and the cash system.

Cash, the cash system, and the exchanges between the cash system and private money are illustrated in Figure 6. In this illustration Mrs Tua withdraws $100 cash from her account at Bank ABC and uses it to pay Shop Inc., and Shop Inc. deposits the $100 into its account at Bank XYZ.

Figure 6: The cash system is everything needed for Mrs Tua and Shop Inc. to transact in cash



In 2020 the Reserve Bank committed to undertake a fundamental redesign of the cash system.[31] Our 2021 Statement of Intent expressed our vision as cash supporting a monetary and financial system that works for all.[32] Our commitment to redesigning the cash system will involve identifying the appropriate scale and other qualities of that system such as its resilience, inclusiveness, internal consistency and efficiency. This will require a careful analysis of the relative potential benefits and costs of the available policy options.

A clear analytical framework is needed in order to design effective policy for the cash system. We propose combining a number of complementary analytical approaches to create a framework for this purpose. One of these is to view the cash system as producing benefits that have the attributes of a public good. Another is to view the system as producing a payments product that faces competition.

31 Reserve Bank (2020)
32 Reserve Bank (2021)

5.1 The cash system produces 'public goods'

As outlined in Section 3, because cash is a type of central bank money, the cash system produces benefits that have the characteristics of public goods. This suggests that, in the absence of strategic public policy interventions, the cash system may not perform as well as it might from a societal net benefit perspective. For example, it may not make cash available in as many locations as needed.

Notably, despite the benefits it produces having the attributes of 'public goods', the cash system is almost entirely reliant on private entities to perform essential system functions – banks, cash-in-transit companies, retailers, and digital messaging service providers. The only exception is the Reserve Bank itself, which designs and supplies banknotes and coins, provides vaulting services for cash, and withdraws cash from circulation when required. This reliance on private entities means issues such as the impacts of private incentives (including but not limited to the financial rewards provided to participants), the underlying financial strength of participants, the need for coordination, and the potential for market concentration and competition all need to be considered when policy options are being explored.

5.2 Cash as a payment product facing competition

As well as simply being a system that produces public good benefits, the cash system generates a product that faces competition. Cash is a means by which participants from different sides of a market transact. On one side there is someone wanting to acquire goods and services, and on the other side there is a merchant wanting to sell those goods and services. There are other payment options available for participants in this transaction, so cash faces competition. When looked at through the lens of competition, success for the cash system means both customer and merchant find the prospect of using cash attractive (or essential) and do so.[33]

There is also a network aspect to cash when it is viewed as a payment product. The more one customer or merchant finds cash attractive, the more others will too. As user numbers grow the relative costs of using cash fall, benefiting all potential users.

Looking at cash as a product facing competition means considering the incentives and disincentives facing transacting parties. These can be complex and interconnected. For example, small merchants may face higher bank fees if customers use scheme-branded, bank-issued payment cards, particular for contactless payments.[34] If these fees exceed a merchant's costs in handling cash, the merchant is likely to prefer to be paid in cash. However the merchant will be unwilling to turn away customers who prefer to use cards and so will accept both. Similarly, while a customer might prefer the anonymity of making a cash payment, some of the revenue raised in merchant fees is recycled by banks and paid to their customers in the form of card 'rewards'. These rewards incentivise customers who have access to bank cards to use those cards at the expense of other payment options including cash.

33 This framework draws on the 'two-sided markets' economic literature. An example of this literature is Rochet, Jean-Charles and Jean Tirole (2003).
34 Ministry for Business, Innovation and Employment (2020)

5.3 Important issues for the cash system

The application of multiple analytical approaches reveals a number of important issues, summarised below, that risk undermining the performance of the cash system. These issues (and others) will be considered in detail in the cash system redesign consultation paper due to be published in November 2021.

First, people and businesses differ in terms of the reliance they place on cash. So some people and businesses will be more adversely affected than others by a further decline in the availability of cash. In particular, the Household Economics Survey[35] indicates there is a strong inverse relationship between household poverty and a reliance on cash. This means any further decline in access to cash for everyday use will impact more on relatively disadvantaged households and thus worsen inequality.

Secondly, there are particularly vulnerable individuals who must rely on cash because they are denied access to private money (for a variety of reasons, banks refuse to allow them bank accounts, or the would-be customers find it too hard to obtain them).

Thirdly, maintaining the cash system requires considerable ongoing fixed capital investment, including in cash storage facilities, transport equipment and cash quality-assurance machinery. This investment in fixed capital means that, overall, the average cost incurred in making each cash transaction becomes more expensive as the total volume of cash transactions falls. There are also limits to the efficiencies achievable in reducing variable costs (for example, when the number of security officers transporting a given volume or value of cash is constrained by security, health and safety, or rostering considerations). The ability of entities to pass on costs to users of the cash system may be constrained. These factors combine to put the financial viability of the entities involved in the cash system at risk when the volume of cash transactions declines. If private entities are to continue playing key roles in the cash system, conditions need to be such that their involvement remains financially sustainable.

Fourthly, bank branches and bank-owned ATMs are a large part of the current cash system infrastructure and these sites and the staffing of branches are costs. Meanwhile, the use by bank customers of scheme-branded, bank-issued payment cards, rather than cash withdrawals over the counter or by bank-issued EFTPOS cards (which are disappearing), generates more revenue per transaction for the banks. So, again, banks face incentives that do not support the cash system despite them being a part of it. From a business-as-usual profit perspective banks are arguably better off if the cash system fails to attract customers and merchants.

5.4 High-level policy options

A range of policy responses can be considered and potentially developed to address any under-provision of the benefits produced by cash. For example, persuasion, measures that address incentives, regulation, co-funding and public provision of cash services are all possible policy options.

A further policy option that emerges from the collective analytical framework is moving towards a CBDC that would be available for public use alongside cash. While cash and a CBDC would compete for any given transaction, they would be complementary across society as a whole (in the same way that, for a given journey, highways and train networks compete but society as a whole values having both transport systems available). In practical terms, also, a CBDC is designed to be

35 Statistics New Zealand (2021)

used for online payments and thus can compete in markets where cash cannot. The concept of a CBDC is introduced in Section 7.

We are not alone in having concerns about cash availability and cash system efficiency. Regulators around the world are currently exploring possible policy responses. These responses are varied and include, for example, options for reducing the costs of the cash system (such as the Bank of England's proposal to reform the wholesale distribution of cash), and industry-led pilots exploring the impacts of different incentives (such as Mastercard and Visa schemes offered in conjunction with partner banks that provide incentives for retailers to offer cash back to encourage the uptake of alternative cash-withdrawal services).[36] [37]

There are also examples of private-sector initiatives that offer innovative ways to improve cash access such as joint-venture, collaborative banking hubs.

Examples of direct regulation exist as well. For example, recent legislative changes in the UK have made it easier for shops and businesses to offer cash back to customers without those customers being required to buy anything.[38] Sweden and Finland are examples of countries requiring banks that offer transaction accounts to give customers 'adequate' access to cash.[39] [40] In France, merchants face the prospect of fines if they do not accept cash.[41]

5.5 Have your say

8. Do you agree that access to cash and the acceptance of cash are issues the steward should be concerned about as a matter of priority?

9. Do you agree with the analytical approach we are considering for developing policy for the cash system?

10. Are there any pressing issues with the ongoing effectiveness of the cash system that we should be particularly mindful of?

11. Do you have insights into or examples of the incentives operating within the cash system that you are willing and able to share?

12. Are there circumstances or impacts related to acceptance, availability, depositing, handling or transporting of cash that you wish to highlight?

36 Bank of England (2020b)
37 HM Treasury (2020)
38 HM Treasury (2021)
39 Bank of Finland (2021)
40 Library of Congress (2021)
41 Banque de France (2021)

6 Stablecoins

Innovation is leading to new technologies and new ways of deploying existing technologies to provide private money and transact digitally. The Reserve Bank is supportive of innovation that is beneficial, as long as system (and provider) risks are managed effectively.

The Reserve Bank is proposing to increase its focus on innovation in money. The Reserve Bank Act includes a new function for the Reserve Bank, namely to monitor "… the impact of technological innovation on the needs of the public for banknotes and coins".

The Reserve Bank is particularly interested in innovation in a type of crypto-asset often referred to as a 'stablecoin'. Like other forms of crypto-asset, stablecoins generally take the form of digital tokens that rely on cryptographic methods and novel payment infrastructure to be transacted and stored securely.[42] 'Stablecoin' is an industry term that refers to its issuer's claim that the value of a crypto-asset is stabilised relative to an asset of certain value such as central bank money. For example, the stablecoin may be backed by asset holdings of relatively stable value (which could include private or central bank money).

Stablecoin schemes can potentially provide a new source of private money outside the conventional commercial bank model and may be explicitly designed to fulfil this role. This is why, as steward of money and cash, the Reserve Bank is proposing to place a priority on stablecoins in the near-term work programme on private innovation.

The purpose of this section is to introduce stablecoins, outline their potential benefits and risks, and explain the next steps in our proposed approach to developing policy related to stablecoins (and potentially crypto-assets more generally).

6.1 Stablecoins are an initial focus

The claim made by stablecoin issuers that a stablecoin's value is stabilised is crucial to the stablecoin's ability to compete with other forms of private money. A common stabilising mechanism for stablecoins involves 'anchoring' the value of the coins to conventional forms of money, which are usually stable and frequently-traded currencies.

Stablecoins pegged to existing national currencies are similar in economic substance and function to commercial bank money in that they are a form of private IOU backed by assets. Therefore these types of stablecoin are more likely than other crypto-assets to be used instead of – and confused with – conventional money. These types of stablecoin have been successful because they can draw on the trust enjoyed by central bank money, just as commercial bank money does through the promise that it can be exchanged 1:1 for central bank money. A critical difference, however, is that the stability of commercial bank money is supported by a range of regulations applying to issuers, and issuers incur costs associated with that compliance.

Stablecoins can be contrasted to other forms of crypto-assets that may have highly volatile exchange rates with central bank money, such as Bitcoin. These crypto-assets do not meet the definition of 'money' due to the volatility of their relative value, making them unattractive for transactional use and a poor store of value. Crypto-assets seem to be largely used as a speculative investment asset or in niche (and sometimes illicit) markets. Indeed, crypto-assets are classified as high risk and speculative by the Financial Markets Authority.[43]

42 An infrastructure based on distributed ledger technology is an example of a novel payments infrastructure.
43 Financial Markets Authority (2021)

6.2 Well-designed stablecoins might have benefits

In theory, providing it does not come to monopolise a market, threaten monetary sovereignty, nor create financial stability or market conduct risk, a stablecoin could add to consumer choice and thus bring benefits from increased competition. Such a platform could compete by providing:

1. peer-to-peer transactions without an intermediary like a bank;
2. faster and easier payments, particularly cross-border, by side-stepping inefficiencies in current arrangements; and
3. a new platform that enables further technological innovation or other initiatives that may not be supported by existing platforms.[44]

Any flow-on benefits – such as prompting further technological innovation – would not be exclusive to stablecoins, nor would stablecoins necessarily be the most cost-effective option to deliver such benefits. For example, a CBDC or other private-sector products or processes could also promote or deliver innovation and efficiency compared to traditional products.

6.3 Stablecoins present a range of risks

Despite the potential benefits, we share the concerns raised by global regulators that stablecoins may pose significant risks to the monetary system and the wider financial system.[45] These risks are outlined below.

Undermining monetary sovereignty: Some stablecoin schemes may be able to upscale rapidly, leveraging their market power over an existing unrelated network (such as a global social media platform). If this rapid and widespread uptake related to a stablecoin backed by foreign currencies, there would be a potential risk of inadvertent 'dollarisation' where the money used in New Zealand (and domestic prices) would be denominated in foreign currency and not the New Zealand dollar.

In the extreme, the majority of transactions taking place in the economy would occur outside the domestic banking system, reducing the efficacy of current monetary policy tools influencing inflation and employment, and making New Zealand subject to other countries' monetary policy settings (or the funding decisions of a private company that is unlikely to have the best interests of New Zealand as first priority and over which the Reserve Bank has no control).[46]

Financial stability risks: A stablecoin scheme upscaling rapidly could have an impact similar to a bank run. It could be an undesirable economic shock. In an extreme scenario, similar to a bank run, commercial banks could face a rapid and unmanageable loss of deposit funding if their customers withdrew deposits to buy stablecoins ('disintermediation').

Stablecoins may also pose financial stability risks similar to those associated with other systemically important financial market infrastructures.[47] Depending on their significance in supporting economic activity, stablecoins could generate negative externalities for the wider financial system. These are the same kinds of risk that the Financial Market Infrastructures Act 2021 (the 'FMI Act') seeks to address.

44 An example would be enabling 'smart contracts' that facilitate new types of automatic payment.
45 Financial Stability Board (2020)
46 In such a scenario, there would be limited demand for central bank money issued by the Reserve Bank. The Reserve Bank would need to source stablecoins from a private provider if it wanted to intervene in a crisis (providing liquidity) and would therefore be subject to the constraints of accessing assets in a market in crisis.
47 'Systemic importance' is a concept defined by the scheme size, the interconnectedness with other parts of the financial system, the availability of substitutes and complexity under the FMI regime.

In addition, investments by financial institutions in crypto-assets could create challenges for the management of failing financial institutions due to the lack of transparency around these assets.

Higher costs for providers of alternative types of private money: Stablecoins could compete with bank deposits. If successful, this could result in a gradual erosion of the deposit bases of commercial banks. Banks could in theory offset this by securing other forms of funding, likely at a higher cost, or offering incentives to depositors, with reduced returns. However, if there is insufficient competition there is a risk that such costs will simply be passed on to bank customers (rather than the innovation reducing the overall costs of payments).

If global stablecoins are able to leverage their market power outside the financial market to compete with incumbents, this may undermine rather than enhance competition.

Tax and other market integrity risks: One of the factors driving confidence in the value of central bank money is the long-term fiscal position. The absence of transparency in stablecoin transactions means that these transactions can elude the tax authorities, ultimately undermining the government's ability to collect tax. Other market integrity risks include money laundering and undermining privacy, for example.

Reputational risks for other money: There could be reputation risks to the New Zealand dollar if stablecoins were easily confused with bank deposits or central bank money. Such confusion could create unnecessary concerns about the soundness of other forms of money should stablecoin schemes fail.

Risks to holders of stablecoins: Stablecoins can pose risks to the holders in that the schemes may not have sufficient currencies and other liquid assets to honour the promise of redemption when needed. The schemes may also become insolvent. There could be legal uncertainties about the promise of redemption, including the cost to redeem, or who the liable party is, including when a scheme fails. Jurisdictional issues such as which country's laws will be applied may arise.

Some of these risks also exist for conventional private money provided by commercial banks. However, there is a clear difference in that commercial banks are regulated and supervised according to prudential legislation, which includes requirements for disclosure and risk management in relation to the underlying assets. Governments and central banks have measures to mitigate the impacts of a commercial bank failure on depositors and the wider financial system (the deposits in commercial banks may also be covered by deposit insurance, for example). A problem may arise if stablecoin users are not fully aware and understand the different risks to which they are exposed compared with holding commercial bank money.

Table 3: Differences between an illustrative stablecoin scheme and a bank transaction account

	Bank-money-like stablecoin[48]	Bank transaction account
Is a claim of liability on	the issuer	the bank
Backed by	US dollars	a range of assets, including bonds, shares and physical assets
Can be redeemed	for foreign currency at a rate and times determined by the issuer, depending on the underlying reserve	1:1 convertibility to central bank money, safeguarded by regulations of credit/liquidity and other banking risks
With a last resort in case of failure	through the legal system based on private contract	through the legal system based on private contract, but also the Government (e.g. via deposit insurance in the future) and the Reserve Bank (as the lender of last resort)
Makes money by	advertising and other revenue generated through bundled services/'fees'	fees and investment returns made on the bank funding represented by the money held in the account
In the form of	digital token	digital account

6.4 Current relevant regulatory frameworks and policies

New Zealand has a suite of financial regulatory regimes that are generally risk, rather than form based. That is, the nature of a risk triggers the regulatory response, rather than whether the risk arises from a certain type of entity, such as a bank. Some of the key risks posed by stablecoins are already subject to a range of existing regulatory regimes.

For example, if a failure of a stablecoin scheme used for payment purposes would threaten the stability of, or confidence in, the whole or a significant part of the financial system, the scheme should be captured by the FMI Act, regardless of whether the issuer is a bank or not, through a designation process.[49] If a stablecoin were designated under the FMI legislation, the scheme would be subject to a range of controls under the FMI Act, such as capital requirements and credit, liquidity and legal risk-management requirements (under section 34 of the FMI Act). Other legislation that may apply includes, for instance, Part 2 of the Financial Markets Conduct Act if the stablecoin were operated as a value-transfer service.[50]

As steward, we will work with other regulators to understand whether there are any gaps in the way the regulatory frameworks as a whole address the risks associated with private forms of money, including stablecoins. This will include, for example, ensuring that applicable frameworks, such as the designated FMI regime, could be implemented effectively and in a seamless manner

48 This is only one example of the scheme and there may be other differences. For example, some schemes may be fully decentralised where there is no single agent to undertake issuance and redemption, or a central point of accountability.
49 Part 3 of the FMI Act. The Reserve Bank is currently consulting on the design and implementation of the designation process.
50 Section 5(f) of the Financial Service Providers (Registration and Dispute Resolution) Act 2008

with other regulatory regimes. Initial findings of this analysis are expected later in 2021. We aim to coordinate our response to stablecoins with those of other financial regulators.

Further work will be carried out to support regulatory proposals if a regulatory gap is identified. This will include a detailed assessment of the benefits and risks of any regulatory proposals. We will also monitor the developments in stablecoin use in New Zealand as part of our stewardship function.

6.5 Global regulatory cooperation

The Reserve Bank is closely following international developments where there has been significant and ongoing regulatory coordination, particularly concerning global stablecoins, since 2019. Given the nature of global stablecoins, any regulatory response will benefit from a coordinated approach across jurisdictions. Recent regulatory responses are outlined in Table 4.

Table 4: International regulatory responses to stablecoins

Country	Response
Australia	A Council of Financial Regulators working group was set up in early 2021 to consider how stablecoins can be regulated and whether gaps exist. The Working Group has recently considered its priorities.[51]
Canada	The Bank of Canada has recently indicated that significant regulatory measures would be required before stablecoins could be widely used in Canada.[52]
EU	The European Central Bank is currently seeking power to veto stablecoin issues that are non-compliant with a proposed regulatory regime for crypto-assets.[53]
UK	HM Treasury concluded in March 2021 a public consultation on a stablecoins and crypto-assets. The Bank of England has recently signalled its view that stablecoins should be regulated as a form of private money.[54]
US	The President's Working Group on Financial Markets, composed of the US Department of the Treasury, the Federal Reserve Board, the Securities and Exchange Commission, the Commodity Futures Trading Commission and other financial sector regulators, has discussed stablecoins and underscored the need to act quickly to ensure that an appropriate US regulatory framework is in place.[55] [56]

6.6 Have your say

13. Do you think the key benefits and risks related to stablecoins have been identified in the paper?

14. Are there aspects of stablecoins that have been overlooked and should be considered as part of the analysis?

15. Do you have insights into or examples of stablecoins or crypto-assets generally that you are willing and able to share?

51 Council of Financial Regulators (2021)
52 Bank of Canada (2020)
53 European Central Bank (2021)
54 Bank of England (2021a)
55 US Department of the Treasury (2021)
56 The President's Working Group is chaired by the Secretary of the Treasury and includes the Chair of the Board of Governors of the Federal Reserve Board, the Chair of the Securities and Exchange Commission, and the Chair of the Commodity Futures Trading Commission. Refer Secretary of the Treasury 2020.

7 Central bank digital currency

The Reserve Bank proposes to take a forward-looking approach to central bank money, being aware of, and responding to, the relevant context. We intend to act in a way that stimulates innovation and efficiency in the monetary system. Consequently, we are considering the opportunities and challenges a CBDC might present New Zealand.

To be clear, we are not considering replacing cash with a CBDC. Our Future of Cash Programme confirmed that cash has unique features and benefits that New Zealanders continue to value. However, we are considering whether a CBDC provides an opportunity to provide these (and other) benefits digitally alongside cash.

Our in-depth CBDC issues paper also released in September 2021 sets out our view of the high-level policy opportunities and challenges that a CBDC may confer, explaining how we see the abstract advantages and disadvantages, costs and benefits, and risks and opportunities that a CBDC might have. This will be the starting point in a dialogue with stakeholders on the potential role of a CBDC for New Zealand.

Developing a CBDC would require long lead times given its inherent complexities and the multiple design choices and policy choices to be made. This means the Reserve Bank will need to take a multi-stage approach to policy development, with the CBDC issues paper being the first of many.

7.1 Have your say

You are invited to read Future of Money – Central Brank Digital Currency published in September 2021 and respond to the questions in that issues paper.

8 Have your say

We want to hear what you think about the issues and proposed approaches outlined in this paper.

We need your feedback by 10am, Monday, 6 December 2021.

If you can, please use the online feedback form available at https://www.surveymonkey.com/r/Future-of-Money-Stewardship. You do not need to answer every question, there is an opportunity to give free-text answers, and you may attach documents if you wish. Doing this online will assist with collation and analysis of all the feedback received.

If you wish to send us a letter instead of answering the questions then you can do so using the online questionnaire. You just need to enter your details and attach the letter without answering the questions. Or. you can email or post your letter to: futureofmoney@rbnz.govt.nz

Future of Money
Money and Cash Department
Reserve Bank of New Zealand
PO Box 2498
Wellington 6140

Or, if none of the above options are suitable then please phone us on 04 474 8693 between 10am-4pm Monday-Friday and we'll arrange a time to call you back to take down your views.

We intend to prepare and publish a summary of responses to the three issues papers we are releasing, and an outline of next steps, by 30 April 2022.

Here are the questions which have been asked already:

1. Do you agree with the proposed objectives of stewardship?
2. Do you agree that the approach to the stewardship of money and cash should be proactive?
3. Do you agree that the stewardship role is broad, and extends across the whole financial system in New Zealand?
4. Other than clear responsibilities, comprehensive functions, effective tools and strong accountability processes, what do you think a steward ought to have in order to be successful?
5. Where do you see the gaps in the Reserve Bank's legislative powers and responsibilities in fulfilling the role of steward that warrant further investigation?
6. Do you think as a priority the steward should regularly collect, analyse and report on money and cash data?
7. What do you think are the key issues the steward will be grappling with in the next 10 years or so, and which of these should the Reserve Bank prioritise?
8. Do you agree that access to cash and the acceptance of cash are issues the steward should be concerned about as a matter of priority?
9. Do you agree with the analytical approach we are considering for developing policy for the cash system?

10. Are there any pressing issues with the ongoing effectiveness of the cash system that we should be particularly mindful of?
11. Do you have insights into or examples of the incentives operating within the cash system that you are willing and able to share?
12. Are there circumstances or impacts related to acceptance, availability, depositing, handling, or transporting of cash that you wish to highlight?
13. Do you think the key benefits and risks related to stablecoins have been identified in the paper?
14. Are there aspects of stablecoins that have been overlooked and should be considered as part of the analysis?
15. Do you have insights into or examples of stablecoins or crypto-assets generally that you are willing and able to share?

In addition to these questions:

16. Is there anything else you wish to comment on relating to the views expressed in this paper, the issues canvassed, or the direction of further work signalled in this issues paper?

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Appendix 1: Terms used in this paper

Term	Meaning
Cash	Banknotes and coins, which in New Zealand are solely issued by the Reserve Bank.
Central bank money (also fiat money, public money or currency)	Money issued by the Reserve Bank (cash is an example of central bank money).
Central bank digital currency (CBDC)	Digital money issued by a central bank that represents a legal claim on that central bank.
Commercial bank transaction account (transaction account)	Digital money issued by a commercial bank that represents a legal claim on the commercial bank.
Cross-border payment	A transfer of money, or a clearing and settling balance across jurisdictions.
Crypto-asset	Digital tokens that rely on cryptographic methods and non-traditional payment infrastructure to be transacted and stored.
Currency	Central bank money in a particular country. The 'New Zealand dollar' is a term used when value is being measured, for example when comparisons are being made about the relative value of different currencies (e.g. 'today the New Zealand dollar buys 0.6 US dollar').
Final settlement (also legal finality)	The irrevocable and unconditional transfer of an asset or financial instrument, or the discharge of an obligation by the FMI or its participants in accordance with the terms of the underlying contract. Final settlement is a legally defined moment.
Fintech	Advances in technology that have the potential to transform the provision of financial services, spurring the development of new business models, applications, processes and products.
Medium of exchange/means of payment	A distinguishing feature of money. An asset, token or other concept that is useful for transferring value or settling obligations. A generally accepted instrument that settles (extinguishes) obligations. Closely linked with the concept of 'store of value' – a viable means of payment must also be a store of value.
Monetary policy	What the Reserve Bank does to achieve its twin objectives of maintaining price stability and supporting the maximum sustainable level of employment. The Reserve Bank's primary monetary policy tool is the Official Cash Rate.

Term	Meaning
Monetary sovereignty	Where a society has autonomy in relation to central bank money and monetary policy.
Monetary stability	A situation where there is a high level of trust in the value of money.
Monetary system	A large, interconnected network that combines all forms of money and the payment systems that allow them to be accessed and exchanged.
Private money	Money created by private entities that is, in practice, a private 'IOU' (the most common type in New Zealand being commercial bank transaction accounts offered to individuals and businesses).
Stablecoin	An industry term that refers to its issuer's claim that the value of a crypto-asset is stabilised relative to an asset of certain value such as central bank money.
Stewardship	The responsible management and oversight of a system to create long-term value and sustainable benefits for society.
Store of value	An asset, token or other concept that is useful for holding wealth. Not a distinguishing feature of money, because any asset, financial or real, is a store of value.
Unit of account	A metric used to measure monetary value for application in, for example, transactions and price-setting.
The Reserve Bank Act	The Reserve Bank of New Zealand Act 2021.

Appendix 2: What drives trust in central bank money?

In order for central bank money to fulfil its value anchor function, people and businesses must have confidence in its value (the real resources to which it equates). Multiple, interacting factors combine to create this confidence.

Most fundamentally, central bank money equates to the pool of resources to which the bank gives holders access. Because central bank money is government backed, the total stock of central bank money at any point in time is equal to whatever resources the government can compulsorily acquire over the long term by exercising its taxation mandate with the support of Parliament. Hence confidence in the value of central bank money ultimately derives from confidence in a society's ability to tax itself.

However, if a government is fiscally imprudent and borrows very heavily (placing a large prior claim on its future tax revenue), then confidence in the value of central bank money may decline. Fiscal policy is therefore a fundamental driver of public confidence in the value of central bank money and, therefore, its ability to act as a value anchor to the wider financial system.

Confidence in the value of central bank money also depends on price stability. If prices are frequently changing then the amount of real resources that can be exchanged for central bank money is continually changing too. This makes it difficult to establish the real resources to which central bank money equates. Hence the ability of central banks to deliver price stability is a factor determining the level of confidence in the value of central bank money.

At an operational level, confidence in the value of central bank money reflects the fact that it is only issued by central banks, and central banks spend resources in actively searching for and destroying counterfeit or unfit genuine notes and coins (in other words, people and businesses can have confidence that what is presented to them as central bank money is genuine).

History shows that when a society loses confidence in the fiscal prudence of governments or state institutions, or experiences hyperinflation, the central bank money that society has issued itself ceases to be used for everyday purposes and no longer acts as an anchor to the financial system. It is replaced in both functions by central bank money issued by other countries. At this point the society is unable to use monetary policy to influence price stability or employment (it 'loses monetary sovereignty'). Instead, achieving inflation and employment goals, and responding to external economic shocks, requires adjustment through the real economy – employment and output – rather than prices, meaning the adjustment will be more disruptive than otherwise.

Sometimes societies willingly and proactively forfeit monetary sovereignty, forming 'currency unions' with one another (an example is the Eurozone formation by 19 member states of the European Union). For the purposes of this paper it is assumed that New Zealanders value and seek to retain monetary sovereignty.

Appendix 3: How the Reserve Bank supports the monetary system

Mandate	Function
Issuance and creation	The Reserve Bank is the only issuer of central bank money in New Zealand. The Reserve Bank supplies banknotes and coins (cash) – via banks – to all New Zealanders, and digital money to financial institutions – like banks – that make large ('wholesale') payments. In future, the Reserve Bank might also issue digital money via a general-purpose CBDC. There are other types of money and ways to pay in New Zealand besides central bank money, but central bank money is especially safe and reliable. Central bank money establishes and underpins the dollar as New Zealand's monetary unit of account. The Reserve Bank issues liabilities in New Zealand dollars, which is New Zealand's official currency and unit of account used to set prices and to pay for goods and services. The money the Reserve Bank issues is a debt on its balance sheet – a 'promise to pay' – that is backed by safe assets like government bonds. If people lost faith in the Reserve Bank's ability to keep that promise, they might lose confidence in New Zealand dollars and stop using them.
Stewardship	The Reserve Bank is responsible for overseeing a fit-for-purpose money and cash system. The Reserve Bank is legally responsible for ensuring that New Zealanders' needs for money and cash are met. The Reserve Bank does this in three ways: monitoring how cash is distributed across the entire country to make sure it is accessible; managing the quality of cash to make sure people can trust that it is valuable and not counterfeit; and assessing how technology and innovation are affecting how New Zealanders use money and cash.
Banking	Commercial banks that issue money hold accounts with the Reserve Bank. In the same way that people and businesses have accounts with banks, banks have accounts with the Reserve Bank. When a bank customer borrows from their bank to make payments, the bank deposits money into the customer's account. Similarly, when a bank borrows from the Reserve Bank to make its day-to-day transactions, its account with the Reserve Bank is credited with digital money called a 'settlement balance'. Settlement balances are debt on the Reserve Bank's balance sheet, backed by safe assets. To have an account with the Reserve Bank, a bank must meet strict requirements. In future the Reserve Bank may allow individuals and businesses to have accounts with it, through a general-purpose CBDC.
System operation	All New-Zealand-dollar-denominated payments in the economy ultimately settle in central bank money.

Mandate	Function
	When people buy goods and services with cash, settlement happens instantly at the merchants' cash registers. When people buy goods and services digitally (for example, online or using a debit card), the transactions are first assigned to their bank and the banks in turn finally settle transactions between themselves using the digital ESAS accounts provided by the Reserve Bank.
Financial stability	The Reserve Bank regulates commercial banks that issue money. The money that New Zealanders use most often in their daily lives is commercial bank money. A commercial bank creates money when it makes a loan to a customer and credits that customers' bank account with a deposit equal to the size of the loan. Commercial bank money does not have value just because banks say so. Banks are overseen by regulators, like the Reserve Bank, to ensure they are soundly managed and have the capacity, integrity and resources to honour their promises. This includes banks' implicit promises to their customers that they can access the money in their bank accounts, on demand, to make digital payments or to convert it to cash. The Reserve Bank regulates payment systems that allow money to be exchanged. Bank accounts are connected to a range of 'retail' payment systems that let people access and use commercial bank money. In a similar way, the accounts that some commercial banks hold at the Reserve Bank are connected to a wholesale payment system that allows them to access, exchange and settle debts between each other in central bank money. Regulators like the Reserve Bank monitor these payment systems to ensure they are stable and resilient, and that payments happen quickly and smoothly.
	Commercial banks that issue money can borrow from the Reserve Bank to meet short-term cashflow difficulties. In times of stress and uncertainty, the Reserve Bank is the 'lender of last resort' to banks. This means that if a bank has short-term cash-flow difficulties, the Reserve Bank can give it an emergency loan to ensure it can continue to make its day-to-day payments and meet its promises to its creditors and customers. A compensation scheme will give New Zealanders confidence their money will be protected should their banks fail. In the future, banks will pay premiums into a new depositor compensation scheme that will protect some of their customers' money in case they fail. The Reserve Bank will be responsible for managing the compensation scheme and overseeing any pay-outs to customers of failed banks. A resolution regime minimises disruption in money and payments should a bank fail. In the unlikely event that a bank fails, the bank resolution regime aims to ensure the bank's customers can continue to access basic banking services such as paying from their transactional accounts or converting their transactional account balances into cash. This supports the smooth functioning of the monetary system, even in crises.

Mandate	Function
	The Reserve Bank stands ready to stabilise the value of the New Zealand dollar in times of stress. The Reserve Bank maintains a stock of 'foreign reserves' – assets denominated in currencies other than the New Zealand dollar – that it can use to help stabilise and support the value of the New Zealand dollar in times of stress and uncertainty.
Monetary stability	An operationally independent central bank aims to maintain the purchasing power of money. The Reserve Bank uses monetary policy to influence prices and so maintain the purchasing power of money. It does this by setting the rate of interest at which banks borrow money from it, which influences the loan rates charged by banks. This in turn affects how much households and businesses want to borrow, and that impacts on the level of economic activity. In this way the Reserve Bank aims to achieve low and stable inflation and maximum sustainable employment, so protecting the economic wellbeing of New Zealanders.

Appendix 4: Reserve Bank stewardship comparison table

A useful way to explain our stewardship proposals is to show how they compare with a widely used framework such as the 2017 Government Expectations for Good Regulatory Practice.[57]

Tables 5 and 6 show these comparisons in relation to the design of regulatory systems and the ongoing stewardship of regulatory systems respectively.

Table 5: How our proposals compare to the 2017 Government Expectations of Good Regulatory Practice

Expectations for the design of regulatory systems	The Reserve Bank's proposal for stewardship of money and cash
The regulatory system has clear objectives.	The Reserve Bank's stewardship approach will be guided by two key roles of central bank money, as a trusted value anchor and a contributor to financial and social inclusion.
The regulatory system seeks to achieve those objectives in a least-cost way and with the lowest adverse impacts on market competition, property rights and individual autonomy and responsibility.	The Reserve Bank will consider costs and benefits across the wider monetary and financial system, as well as take into account non-economic factors, for example access to cash and its impacts on inclusion.
The regulatory system is flexible.	The Reserve Bank's clear articulation of the stewardship objectives and functions will help to provide a consistent and transparent approach to analysis, and clarify the basis for interventions, including non-regulatory options. The key judgements imply a requirement for a robust policy process that is system and future focused as well as one that considers distributional impacts appropriately.
The regulatory system has processes that produce predictable and consistent outcomes.	
The regulatory system is proportionate, fair and equitable.	
The regulatory system is consistent with relevant international standards (except where this would compromise important domestic objectives and values).	The Reserve Bank has extensive relationships with international partners on regulatory and enforcement matters, reflecting the cross-border nature of the financial system. The stewardship role will reinforce the need for international coordination.
The regulatory system is well aligned with existing requirements in related or supported regulatory systems.	The system focus of the steward will highlight the need for alignment across different regulatory regimes to ensure the system as a whole works effectively.
The regulatory system conforms to established legal and constitutional principles and supports compliance with New Zealand's international and Treaty of Waitangi obligations.	The stewardship role explicitly recognises the legislative foundation and will be carried out in a way that fulfils the Reserve Bank's Treaty obligations.

57 New Zealand Treasury (2017)

Expectations for the design of regulatory systems	The Reserve Bank's proposal for stewardship of money and cash
The regulatory system sets out legal obligations and regulator expectations and practices in ways that are easy to find.	The Reserve Bank's stewardship role highlights a wide range of needs for New Zealanders, which would logically include the need for regulatory clarity and certainty.
The regulatory system has scope to evolve.	The future focus of the stewardship role means that we consider the Reserve Bank's capability to respond to a range of future scenarios, which enables the system to evolve in response to unforeseen risks and opportunities.

Table 6: How our proposals compare to the 2017 Government Expectations of Good Regulatory Stewardship

Government expectations for regulatory stewardship	The Reserve Bank's proposal for stewardship of money and cash
Regulatory agencies are expected to adopt a whole-of-system view.	The stewardship approach recognises explicitly that in viewing the monetary system as a whole there are inevitably areas of interest that are relevant for money but are the core responsibility of another agency or stakeholder.
Regulatory agencies are expected to adopt a proactive, collaborative approach to the care of the regulatory system(s) within which they work.	The key judgements underpinning the stewardship approach emphasise the need for proactive responses to a range of future scenarios where risks and opportunities may or may not eventuate, for example in relation to stablecoins. A collaborative and flexible approach is also required, given the interconnections of issues within the financial system, as outlined above.
Regulatory stewardship includes responsibilities for monitoring, reviewing and reporting on existing regulatory systems.	Monitoring and evaluation, and more broadly an evidence-based approach, will be crucial to delivering effective stewardship. The Reserve Bank is already making progress in this direction, for example in setting up a cash data and monitoring framework.
Regulatory stewardship includes responsibilities for robust analyses of and implementation support for changes to regulatory systems. This includes (but is not limited to): • assessing the importance of an issue in relation to the overall performance and condition of the relevant regulatory system(s); • clearly identifying the nature and underlying cause of a policy or operational problem; and • - making a genuine effort to identify, understand and estimate the various categories	The Reserve Bank's stewardship approach reinforces the need for robust analysis in a holistic and future-focused manner. This should improve the quality of its day-to-day policy and operational functions, for example in cost and benefit analyses.

Government expectations for regulatory stewardship	The Reserve Bank's proposal for stewardship of money and cash
of cost and benefit associated with options for change.	
Regulatory stewardship includes responsibilities for good regulatory practice that include (but are not limited to): • developing working relationships with other regulatory agencies within the same or related regulatory systems to share intelligence and coordinate activities; and • alert relevant Ministers to problems with the legislation.	As outlined above, the Reserve Bank will take a flexible and collaborative approach to working with other agencies with mutual or overlapping interests in the health of the financial system.