

RBAFOI-262709

An application was received by the Reserve Bank seeking access to documents as detailed below.

Summary of Request	<i>Existing non-operational documents held in relation to the following publications:</i> <i>'Money in the Australian Economy', Bulletin, September 2018</i> <i>'What is Money?', Explainer</i> <i>'Money – Born of Credit', speech by Dr Christopher Kent, 2018</i> <i>'Developments in Bank's Funding Costs and Lending Rates', Bulletin, March 2021 — but only insofar as these documents relate to the process by which lending creates deposits or how that process is distinct from the process by which an individual bank funds itself and obtains liquidity to settle payments</i> <i>'Structural Features of Australian RMBS' — Bulletin, June 2015</i> <i>'Managing the Risks of Holding Self-Securitisations as Collateral', Bulletin, September 2020</i> <i>Also internal analytical documents on the subject of how deposits are created (reduced) when banks extend loans (borrowers repay loans), as well as any limits to that process.</i>
Notes/context to any specific documents released:	The publications cited in the request are all at least 5 years old and are publicly available,



What is Money?

Throughout history and around the world, money has taken diverse forms - from cowrie shells, copper ingots, rum and gold coins in the past, through to colourful pieces of paper or polymer and digital bank records today (see images 1, 2, 3 and 4). Throughout Australia's own history, a variety of different tokens of exchange have been used as money (See Box: Early Forms of Money in Australia). What links these different forms of money is not their physical qualities but the function they perform: each in their era were trusted as a reliable way to pay or be paid, as a way to quote prices and as a way to store value over time. In other words, they were a:

- widely accepted means of payment
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These three attributes are in fact the standard definition of what makes something 'money'.

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have had this feature (e.g. gold coins, copper ingots), while others have not (e.g. paper banknotes). Rather, money derives its value from the trust people place in it. History shows, however, that this trust can be lost if mismanaged. For example, if too much paper money is printed and issued, the value of the money will fall; that is, high inflation will result. In fact, hyperinflation can result. This has happened many times through history, including in Zimbabwe in the late 2000s, resulting in the population abandoning the Zimbabwe dollar (see image 5) and switching to other, more stable currencies such as the US dollar.

Maintaining a stable currency and avoiding high inflation is in fact one of the core functions of central banks. Indeed, the *Reserve Bank Act 1959*, which established the Reserve Bank, explicitly singled out 'the stability of the currency' as one of the Reserve Bank Board's three aims (the others being full employment, and the economic prosperity and welfare of the people of Australia).



1. Rum bottle

In the colonial period when coins were in short supply, bottles of rum were used as a form of currency.

Image: Hyde Park Barracks Museum collection, Sydney Living Museums, HPB/UG269.



2. Roman coin

An ancient Roman coin made from gold, depicting the Emperor Augustus, dating from between 4 BC and 2 AD.

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3. Cowrie shell

Cowrie shells, such as this one from Zanzibar in east Africa, have traditionally been used as a form of currency in numerous parts of Asia, Africa and Oceania. Image: British Museum, 2014, 2011.38.

4. \$20 Banknote Issued by the Reserve Bank of Australia



Image: Reserve Bank of Australia

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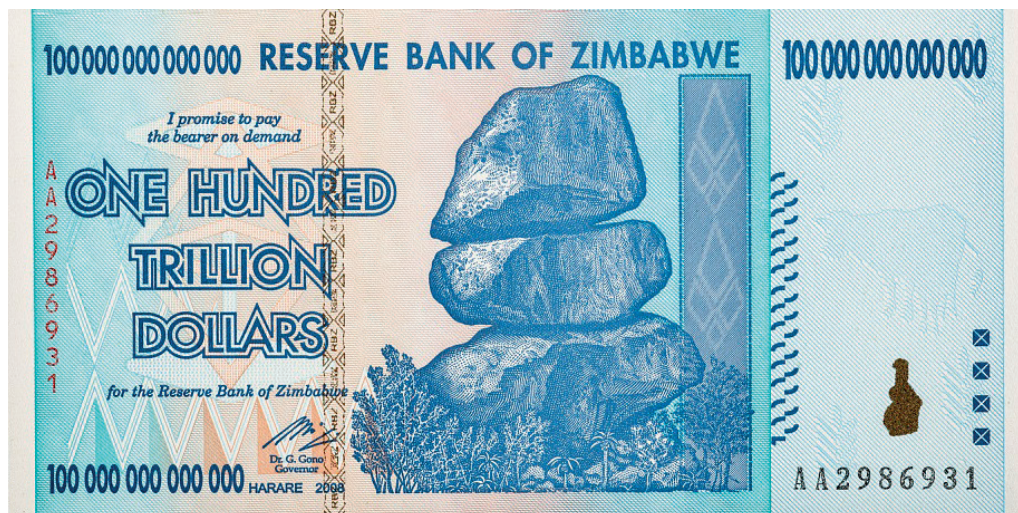


Image: National Museum of American History, Smithsonian Institution. 2015.0071.1.

Box: Early Forms of Money in Australia

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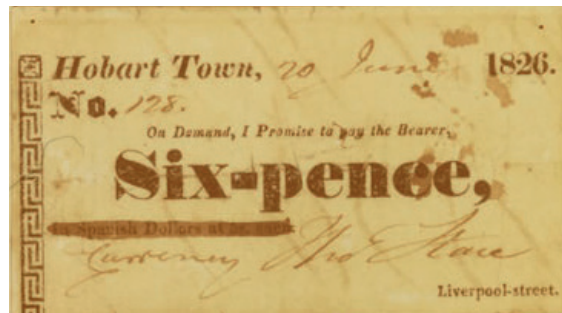
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Learn more about how banknotes are produced in the *Bulletin* article on Money in the Australian Economy.
<https://www.rba.gov.au/publications/bulletin/2018/sep/money-in-the-australian-economy.html>

Why do we need money?

Money has value because people trust that it has value today and will continue having value in the future. But history shows that this trust is sometimes broken, so why do people keep on using money? The answer is that it is incredibly useful for facilitating trade, which in turn has led to higher living standards.

Trade allows people to specialise in producing those things in which they have a comparative advantage. Even the most capable person would struggle if they had to find food, build shelter and make clothes entirely on their own. If that individual lived within a community, however, and could trade with others, then each community member could specialise in one area – maybe fishing, building houses or making clothes – and become very skilled in that task. By trading with each other, each member of the community would benefit from the specialist skills developed by the other community members.

So what is the role of money? It enables production and trade on a large scale. If you live in a small village where you know and trust everyone, you may be willing to give up some of your fish catch today to others in the knowledge that when you need (for example) clothes, the tailor will give you something to wear. If you live in a larger town, where you may not know or trust people so well, you probably won't give away your fish to anyone who asks, as you might not trust, for example, that a tailor will give you new clothes if you ask later on. While you could try to solve this problem of lack of trust with barter, barter usually doesn't work very well. For example, the tailor might not want your fish when you need new clothes – indeed, the tailor might not ever want fish, nor have the specific clothes you need. With money, however, you can sell your fish to whoever wants fish, save some of the money they pay you and take it to the tailor when you need clothes (or to whomever you want to purchase something from and whenever you need to).

In brief, money makes trade with people we might not know or trust possible, and trade makes a society prosperous. Trust is now placed in the value of money, rather than in every person we might want to buy from or sell to.

What forms of money are used in a modern economy?

There are two main forms of money that exist in modern economies:

- coins and banknotes (i.e. currency)
- deposits held in accounts at banks or other authorised deposit-taking institutions.

Currency is a *physical* form of money, while deposits held in accounts with a financial institution are a *digital* form of money and comprise the greatest share of money in a modern economy. (Learn more in the [Bulletin](#) article on [Money in the Australian Economy](#).) There is also a subtle difference between currency and deposit account balances. Currency is backed by the central bank, which eliminates any risk of default. Deposit account balances, on the other hand, are liabilities of privately owned financial institutions (because the depositor can ask for them back) and these institutions are at possible risk from default. Nonetheless, while this risk has materialised in some countries, in Australia it is extremely low. (Australia's banks are well capitalised and regulated, depositors are paid out first if a bank gets into trouble, and there is a Financial Claims Scheme in which the government provides a limited guarantee for household deposits of individuals below \$250,000.)

What is legal tender?

Legal tender is a form of payment recognised by the legal system such that, when it is offered ('tendered') in payment of a debt, the debt is legally discharged (i.e. the creditor cannot refuse a legal tender and then later pursue the debtor



in court for the debt). Banknotes are legal tender under the *Reserve Bank Act 1959* and coins are legal tender under the *Currency Act 1965*. The system of money, where the currency of a country is not backed by a physical commodity (e.g. gold) but by a directive from a government that makes it legal, is called a 'Fiat' system.

How is money created?

Australia's banknotes are produced by the Reserve Bank of Australia, while coins are produced by the Royal Australian Mint. Banknotes account for most of the value of physical money and we focus on them in this Explainer. Under established agreements, commercial banks purchase banknotes from the Reserve Bank as required to meet demand from their customers. Hence, growth in the value of banknotes in circulation represents growth in the demand for cash from the general public.

From the perspective of money 'creation', deposits can also be created when financial intermediaries make loans. While the process of extending loans is central to the process of money creation, this does not mean that financial intermediaries are able to make loans and create money without limits. Deposit-taking institutions need to meet certain regulatory requirements and must be satisfied that borrowers can pay back their debts.

Is Bitcoin money?

Bitcoin, and other 'cryptocurrencies', fulfil some of the attributes of money, but not all of them. Most notably, they can be used as a medium of exchange – some businesses and individuals will accept bitcoin as payment, though the number of businesses willing to accept bitcoin is low (i.e. it is not a widely accepted means of payment). On the other two attributes of money – being a unit of account and a store of value – bitcoin fails. Shops do not quote prices in bitcoins; rather, shops that accept bitcoin typically quote prices in the local currency and then do a conversion to bitcoin at

the current exchange rate if someone wants to pay that way. They do this in part because the price of bitcoin is very volatile, with this volatility being one reason why bitcoin is a poor store of value. (For more information see [Explainer: Cryptocurrencies](#).)

Why don't all countries use the same money?

While a single, stable form of money used by every country in the world would help people spend and save with confidence and plan for the future, it would make it harder for individual economies to respond to economic shocks. By having their own unit of account (i.e. their own currency), countries have more flexibility in economic management. They can choose to allow the value of their currency to fluctuate freely in response to economic events and to conduct their own economic policies (in particular monetary policy) independently of those in other countries. Consequently, individual countries (or groups of countries with similar economic features, e.g. the member countries of the euro area) usually have their own currency.

What is the future of money?

Money has changed form many times over the years, but for as long as complex societies have existed, there has been money. The only confident prediction that can be made about money is that as long as people want to trade with each other, money will continue to exist in some form because the functions it performs are central to sustaining economic activity.



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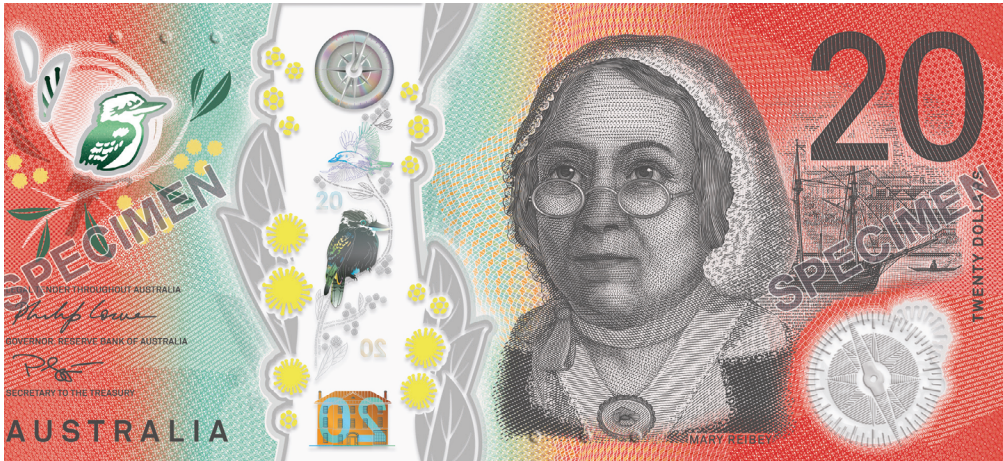


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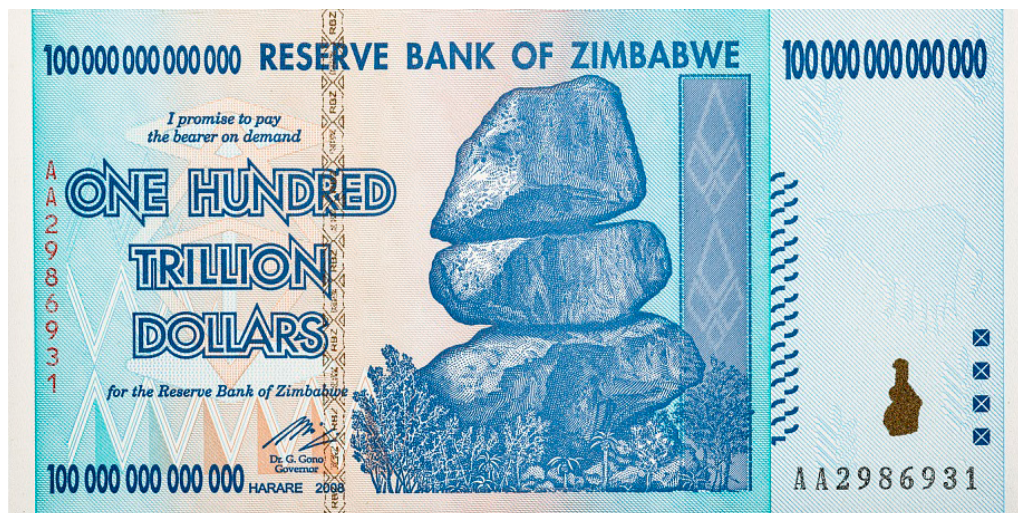


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Deposits can also be created by the Reserve Bank, such as when the Reserve Bank purchases government bonds (for more information, see [How the Reserve Bank Implements Monetary Policy](#)). When the Reserve Bank purchases government bonds from the non-bank private sector, households and businesses ultimately deposit the proceeds of the sale into the banking system, adding to total deposits.

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¹ While payments by governments increase the deposits in accounts of households or businesses at banks or other deposit-taking institutions, they do not create money because they must be funded by an offsetting transaction that reduces deposits. A government transfer that increases the deposits held by households must be funded by issuing bonds or taxation, both of which reduce deposits.



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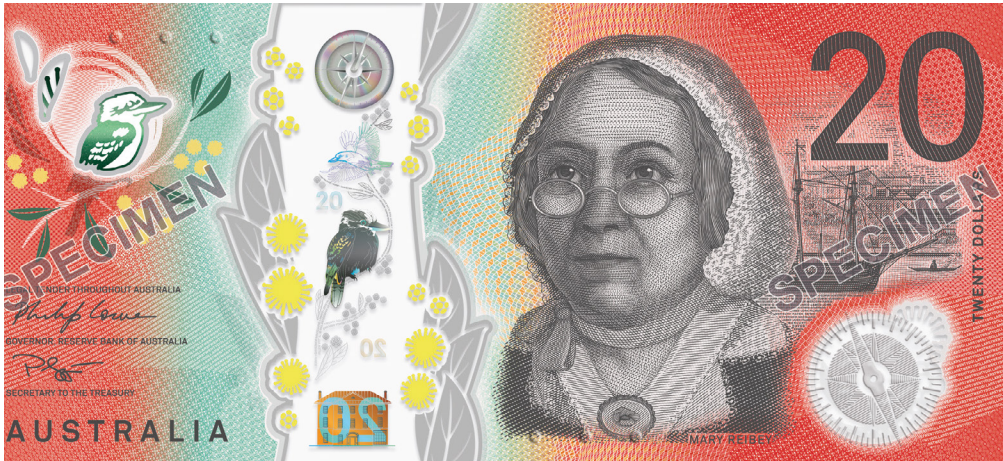


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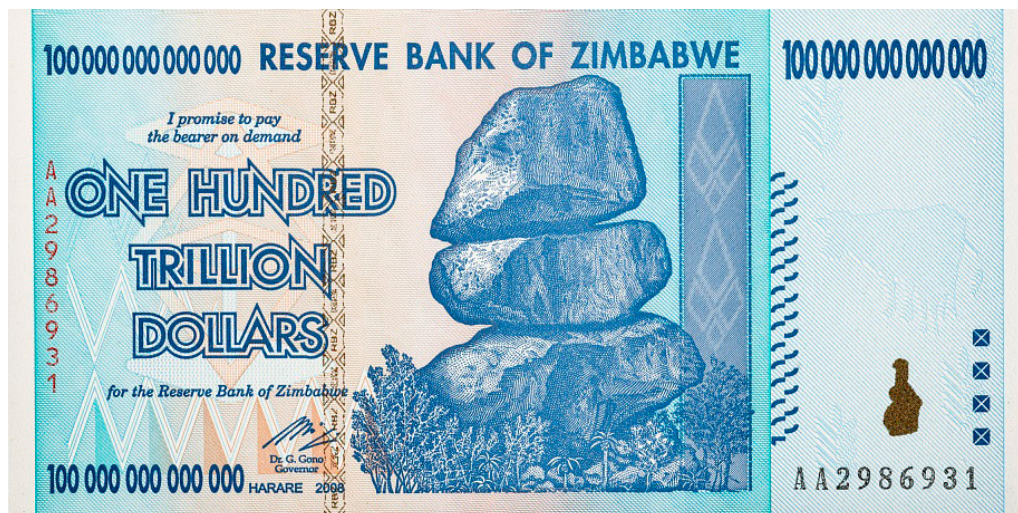


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Trade allows people to specialise in producing those things in which they have a comparative advantage. Even the most capable person would struggle if they had to find food, build shelter and make clothes entirely on their own. If that individual lived within a community, however, and could trade with others, then each community member could specialise in one area – maybe fishing, building houses or making clothes – and become very skilled in that task. By trading with each other, each member of the community would benefit from the specialist skills developed by the other community members.

So what is the role of money? It enables production and trade on a large scale. If you live in a small village where you know and trust everyone, you may be willing to give up some of your fish catch today to others in the knowledge that when you need (for example) clothes, the tailor will give you something to wear. If you live in a larger town, where you may not know or trust people so well, you probably won't give away your fish to anyone who asks, as you might not trust, for example, that a tailor will give you new clothes if you ask later on. While you could try to solve this problem of lack of trust with barter, barter usually doesn't work very well. For example, the tailor might not want your fish when you need new clothes – indeed, the tailor might not ever want fish, nor have the specific clothes you need. With money, however, you can sell your fish to whoever wants fish, save some of the money they pay you and take it to the tailor when you need clothes (or to whomever you want to purchase something from and whenever you need to).

In brief, money makes trade with people we might not know or trust possible, and trade makes a society prosperous. Trust is now placed in the value of money, rather than in every person we might want to buy from or sell to.

What forms of money are used in a modern economy?

There are two main forms of money that exist in modern economies:

- coins and banknotes (i.e. currency)
- deposits held in accounts at banks or other authorised deposit-taking institutions.

Currency is a *physical* form of money, while deposits held in accounts with a financial institution are a *digital* form of money and comprise the greatest share of money in a modern economy. (Learn more in the *Bulletin* article on [Money in the Australian Economy](#).)

There is also a subtle difference between currency and deposit account balances. Currency is backed by the central bank, which eliminates any risk of default. Deposit account balances, on the other hand, are liabilities of privately owned financial institutions (because the depositor can ask for them back) and these institutions are at possible risk from default. Nonetheless, while this risk has materialised in some countries, in Australia it is extremely low. (Australia's banks are well capitalised and regulated, depositors are paid out first if a bank gets into trouble, and there is a Financial Claims Scheme in which the government provides a limited guarantee for household deposits of individuals below \$250,000.)

What is legal tender?

Legal tender is a form of payment recognised by the legal system such that, when it is offered ('tendered') in payment of a debt, the debt is legally discharged (i.e. the creditor cannot refuse a legal tender and then later pursue the debtor in court for the debt). Banknotes are legal tender under the *Reserve Bank Act 1959* and coins are legal tender under the *Currency Act 1965*. The system of money, where the currency of a country is not backed by a physical commodity (e.g. gold) but by a directive from a government that makes it legal, is called a 'Fiat' system.

How is money created?

Australia's banknotes are produced by the Reserve Bank of Australia, while coins are produced by the Royal Australian Mint. Banknotes account for most of the value of physical money and we focus on them in this Explainer. Under established agreements, commercial banks purchase banknotes from the Reserve Bank as required to meet demand from their customers. Hence, growth in the value of banknotes in circulation represents growth in the demand for cash from the general public.

From the perspective of money 'creation', deposits can also be created when financial intermediaries make loans.¹ While the process of extending loans is central to the process of money creation, this does not mean that financial intermediaries are able to make loans and create money without limits. Deposit-taking institutions need to meet certain regulatory requirements and must be satisfied that borrowers can pay back their debts.

Deposits can also be created by the Reserve Bank, such as when the Reserve Bank purchases government bonds (for more information, see [Explainer: How the Reserve Bank Implements Monetary Policy](#)). When the Reserve Bank purchases government bonds from the non-bank private sector, households and businesses ultimately deposit the proceeds of the sale into the banking system, adding to total deposits.

Is Bitcoin money?

Bitcoin, and other 'cryptocurrencies', fulfil some of the attributes of money, but not all of them. Most notably, they can be used as a medium of exchange – some businesses and individuals will accept bitcoin as payment, though the number of businesses willing to accept bitcoin is low (i.e. it is not a widely accepted means of payment). On the other two attributes of money – being a unit of account and a store of value – bitcoin fails. Shops do not quote prices in bitcoins;

rather, shops that accept bitcoin typically quote prices in the local currency and then do a conversion to bitcoin at the current exchange rate if someone wants to pay that way. They do this in part because the price of bitcoin is very volatile, with this volatility being one reason why bitcoin is a poor store of value. (For more information, see [Explainer: Digital Currencies](#).)

Why don't all countries use the same money?

While a single, stable form of money used by every country in the world would help people spend and save with confidence and plan for the future, it would make it harder for individual economies to respond to economic shocks. By having their own unit of account (i.e. their own currency), countries have more flexibility in economic management. They can choose to allow the value of their currency to fluctuate freely in response to economic events and to conduct their own economic policies (in particular monetary policy) independently of those in other countries. Consequently, individual countries (or groups of countries with similar economic features, e.g. the member countries of the euro area) usually have their own currency.

What is the future of money?

Money has changed form many times over the years, but for as long as complex societies have existed, there has been money. The only confident prediction that can be made about money is that as long as people want to trade with each other, money will continue to exist in some form because the functions it performs are central to sustaining economic activity.

¹ While payments by governments increase the deposits in accounts of households or businesses at banks or other deposit-taking institutions, they do not create money because they must be funded by an offsetting transaction that reduces deposits. A government transfer that increases the deposits held by households must be funded by issuing bonds or taxation, both of which reduce deposits.

BOE Intro article

- 3 main types of money – currency, bank deposits and central bank reserves
- Most money in form of bank deposits – Created by commercial banks when giving loans
 - o “When a bank makes a loan to one of its customers it simply credits the customers account with a higher deposit balance. At that instant, new money is created. “
 - o Note: look at percentage of money held in its various forms
- Look at background of money in Australia- MBL piece, Ellis note in draft doc, commodity money

Role of money – store of value, unit of account, medium for exchange

Effect of hyperinflation- role of RBA in controlling inflation

Money important in movement from substance economy to exchange economy- Adam Smith

Assets = liabilities

Money as a social institution – trust in money, King 2006

Types of money

- Broad money – currency and deposits
- Base money – central bank reserves + currency
- In reality amount of broad money is > base money

Fiat money – bank notes and coins, money that is not convertible into any other asset.

- Used to fill demand in contact to gold which is in limited supply and therefore not appropriate for the smooth functioning of the economy.

Currency represents legal tender

BOE. 2

Savings by themselves does not increase amount of deposits

- Saving in consumers bank account represents less money in businesses bank accounts – less consumption.

Lending creates deposits

Bank deposits = record of how much bank owes its customers

Repayment of bank loan destroys money

When banks issue longer-term debt and equity instruments to non-bank financial companies, those companies pay for them with bank deposits. Reduces amount of deposit liabilities on banking sectors balance sheet and increases their non-deposit liabilities.

Limits on money creation

- Banks limited by how much they can lend
- Constrained by the behavior of money holders
 - The “hot potato effect “ passing on of money through the economy through spending – inflationary effect, velocity of money
 - Destroyed- repaying loan
- Monetary policy – influence of CB on level of interest rates
 - Cash rate
 - QE – asset purchasing

Types of money – in bulletin

What constitutes money has evolved over time. Various early forms of money (known as commodity money) were intrinsically valuable because their value was underpinned by a physical good, such as gold. The high demand and limited supply of these commodities ensured that they maintained their value over time, albeit often with sizeable volatility, and were readily accepted as a means of payment. In contrast, modern currency – Australian banknotes and coins – does not itself hold intrinsic value. Referred to as fiat money, its value arises from the strong credibility of the currency issuers that leads to social acceptance of the currency as money.

When the colony of New South Wales was established in 1778, colonists relied on barter and used rum (spirits) as a makeshift currency. In 1792, international currencies, including the Spanish dollar, were shipped to Australia for use as currency. To address persistent corn shortages, new forms of money were developed in the following decades. These included the creation of the holey dollar and dump by Governor Macquarie, the use of promissory notes or IOUs, and copper tokens issued by businesses. IOUs and copper tokens proved an unreliable source of currency, partly because they had no backing or official guarantee.

In 1825, the British Government legislated a sterling currency for the colony, which remained the basis of Australian currency until the introduction of the decimal system in 1966. Australia's first gold coins were minted in 1855. The gold rushes spurred the development of banking and commercial banks issued bank notes backed by gold, though these notes did not constitute a national currency. Like many other countries at the time, Australia adhered to the gold standard and the total amount of notes that banks could issue was limited by their gold reserves. At the turn of the century, Australia's currency remained a mixture of British coins, Australian coins and the notes of private banks and the Queensland Government.

In 1910, legislation for a national currency was enacted. Superscribed banknotes issued by the Australian government, where the government overprinted words on notes purchased from the private banks, were the first currency notes accepted across the nation. The first Australian banknote was produced in May 1913, with additional denominations produced during 1913 to 1915.

Types of money – short form summary

What constitutes money has evolved over time. Various early forms of money were intrinsically valuable, such as gold or other commodities, whereas modern currency – Australian banknotes and coins – does not itself hold intrinsic value.

When the colony of New South Wales was established in [1778?], colonists relied on barter and used rum (spirits) as a makeshift currency. In 1792, international currencies, including the Spanish dollar, were shipped to Australia for use as currency. To address persistent corn shortages, new forms of money were developed in the following decades. These included the creation of the holey dollar and dump by Governor Macquarie, the use of promissory notes or IOUs, and copper tokens issued by businesses. IOUs and copper tokens proved an unreliable source of currency, partly because they had no backing or official guarantee.

In 1825, the British Government legislated a sterling currency for the colony, which remained the basis of Australian currency until the introduction of the decimal system in 1966. Australia's first gold coins were minted in 1855. The gold rushes spurred the development of banking and commercial banks issued bank notes backed by gold, though these notes did not constitute a national currency.

Like many other countries at the time, Australia adhered to the gold standard and the total amount of notes that banks could issue was limited by their gold reserves. At the turn of the century, Australia's currency remained a mixture of British coins, Australian coins and the notes of private banks and the Queensland Government.

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Modern australia....

Types of money – long form summary

What constitutes money has evolved over time. Money does not have to be intrinsically valuable in itself. Although various early forms of money were intrinsically valuable, such as gold or other commodities, modern currency – Australian banknotes and coins – does not itself hold intrinsic value.

When the colony of New South Wales was established in [1778?], colonists relied on barter and used rum (spirits) as a makeshift currency. In 1792, international currencies were shipped to Australia for use as currency. This included the Spanish dollars, a major international currency at the time, as well as coins from a range of other countries. To address the ongoing corn shortage, Governor Macquarie created the holey dollar by punching out the centres of Spanish dollars, leaving a ring (the holey dollar) and a dump (or core).

However, a coin shortage remained and promissory notes or IOUs soon came into use. These notes proved an unreliable source of currency as they were not accepted for foreign ships, were easily forged and did not have an agreed upon value. From the late 1840s, copper tokens were issued by businesses as small change to relieve the coin shortage but, like paper IOUs, had no backing or official guarantee.

With no adequate solution to the currency problem, the British Government had legislated a sterling currency for the colony in 1825. 'Pounds, shillings and pence' remained in place as the basis of Australian currency until the introduction of the decimal system in 1966. Australia's first gold coins, sovereigns and half sovereigns, were minted in 1855. The gold rushes spurred the development of banking and commercial banks issued bank notes backed by gold, though these notes did not constitute a national currency. The total amount of notes that banks could issue was limited by their gold reserves. Like many other countries around the turn of the century, Australia adhered to the gold standard.

Australia's currency remained a mixture of British coins, Australian coins and the notes of private banks and the Queensland Government well into the period following Federation.

In 1910, legislation for a national currency was enacted. As an interim measure the Australian Government issued superscribed banknotes, where the Government overprinted words on notes purchased from the private banks. These superscribed notes were Australia's first currency notes that were acceptable across the nation. The first Australian banknote was produced in May 1913, with additional denominations produced during 1913 to 1915.

Info from RBA museum website: <https://museum.rba.gov.au/displays/>

Before Federation

When the colony of New South Wales was established, no provision was made for an internal currency. There were no banks for some time and of course no central bank. In the early years, the colonists had to rely on **barter** – the exchange of produce, goods and services – and other makeshift currencies such as **rum** (as all spirits were then called).

Coin was very scarce in the early years with England also suffering from a coin shortage. The Spanish dollar was a major international currency of the time. A shipment of **Spanish dollars** was sent from England in 1792. **Coins from a range of other countries** were also used such as Dutch guilders and ducats, Indian mohurs and rupees and Portuguese johannas. But much of this coin left the colony as a result of trade with visiting merchant ships.

Governor Macquarie also tried to remedy the coin shortage by the creation of the **holey dollar**. He had the centres of Spanish dollars punched out, leaving a ring (the holey dollar) valued at 5 shillings and a dump or core valued at one shilling and threepence. Despite stiff penalties for exporting this coin, it remained scarce.

Because of the persistent shortage of coin and the limitations of other currencies, **promissory notes or IOUs** also soon came into general use. Squatters' cheques were a form of IOU in specific districts. These IOUs, however, were vulnerable to forgery and had no collateral backing.

Promissory notes became known as shinplasters, a term describing a paper currency thought to be only worth soaking in vinegar as a poultice for bruises. These notes mostly fell apart quickly in the pockets or boots of customers, thereby saving the issuer from having to redeem them in coin.

From the late 1840s, **copper tokens** were issued by businesses as small change to relieve the coin shortage but, like paper IOUs, had no backing or official guarantee.

With no adequate solution to the currency problem, the **British Government had legislated a sterling currency for the colony in 1825**. 'Pounds, shillings and pence' remained in place as the basis of Australian currency until the introduction of the decimal system in 1966.

The mining of gold from the 1850s set off a long period of prosperity. Immigration increased rapidly. In 1853, Queen Victoria consented to the establishment of a branch of the Royal Mint in Sydney. Branches of the Royal Mint were also established in Melbourne in 1872 and in Perth in 1899. **Australia's first gold sovereigns and half sovereigns** were turned out in 1855. By the late 1870s, Sydney and Melbourne gold coins were accepted as legal tender in Britain and most other colonies using British coin.

The gold rushes spurred the development of banking and **the issue by commercial banks of bank notes backed by gold**. The public, however, was often wary of these notes, and they did not circulate widely. These bank notes did not constitute a national paper currency.

The [economic] crisis in the early 1890s, produced calls for a national or central bank, uniform banking laws and a national currency. **Australia's currency remained a mixture of British copper, silver and gold coins, such as this 1901 sovereign (£1), Australian gold coins and the notes of private banks and the Queensland Government well into the period following Federation.**

A New Currency: 1900–1920

Legislation for an Australian currency was eventually enacted in 1910 and, in 1911, a government-owned bank – the Commonwealth Bank and forerunner to the Reserve Bank

– **was founded**. The first currency banknotes reflected Australia's heavy dependence on the land and rural activities.

The Governor-General, Lord Hopetoun, proclaimed the Commonwealth of Australia under the Federation Pavilion in Centennial Park, Sydney on 1 January 1901. The Constitution empowered the Parliament to make laws in relation to 'Currency, coinage and legal tender' and 'Banking... and the issue of paper money'. But it was not until 1910 that legislation – The Australian Notes Act – passed through Parliament. Under this Act, control over the issue of Australian currency notes was given to the **Commonwealth Treasury**. The Bank Notes Tax Act, also in 1910, imposed a 10 per cent tax on all private bank notes, effectively discouraging, though not prohibiting, their issue.

Up to 1910, notes issued by the private banks and the Queensland Government continued to circulate as Australia's paper currency. The total amount of notes that banks could issue was limited by their gold reserves. Like many other countries around the turn of the century, Australia adhered to the **gold standard**.

Though the 1910 legislation for a national currency was in place, the new nation was ill-prepared to move quickly to issue its own currency notes.

As an interim measure the Australian Government issued **superscribed banknotes**. [Government overprinted words on notes purchased from the private banks]. **These superscribed notes were Australia's first currency notes that were acceptable across the nation.**

By late 1911 the Government had approved revised banknote designs. The **first Australian banknote** – a ten shilling denomination – **was produced in May 1913**. Other denominations from £1 to £1, 000 followed during **1913–15**.

The **superscribed notes** were to be withdrawn once the new Australian notes were issued but, because of a shortage of notes following the outbreak of World War I in 1914, were kept in circulation and special notes were produced.

An 'emergency issue' of the **one pound note**, which came to be known as the Rainbow Note, was circulated in 1914. A more basic note, it could be printed relatively quickly and had no security features. Consequently, counterfeits soon appeared and the note was withdrawn from April 1915.

In the early 1900s, nearly 90 per cent of currency in circulation was in the form of coins compared with a mere 6 per cent in recent times. The new paper notes were not popular at first.

Despite earlier proposals, when established in 1912 the Commonwealth Bank was not given a central banking role, not even responsibility for issuing banknotes. World War I provided significant opportunities for the development of the Commonwealth Bank. It boosted the Bank's role in the distribution of banknotes and in organising finance for Australia's war effort.

The Commonwealth Bank and the Note Issue: 1920–1960

The Commonwealth Bank was made responsible for Australia's banknotes and eventually was given wider central banking powers. Three **new series of the lower-denomination banknotes** were issued during the interwar years and another in the **early 1950s**.

The **early 1920s saw control of the note issue move** from Treasury to the Commonwealth Bank.

Ww2: Not all notes intended for issue in Australia were produced here. During World War II the Japanese Government printed notes, some denominated in the Australian pound, for use in Pacific countries intended for occupation.

The Reserve Bank and Reform of the Currency: 1960–1988

A separate central bank with responsibilities for the note issue was established – The Reserve Bank of Australia. The decimal system was introduced and a distinctively Australian set of banknotes was issued, though not without some controversy. Legislation in 1945, based on wartime regulations, defined for the first time a broad central banking role for the Commonwealth Bank.

The Reserve Bank of Australia became a reality on 14 January 1960.

A major project during the first half of the 1960s was the **introduction of decimal currency** and the issue of a new series of currency notes. A big decision concerned the **name of the new currency unit**. In June 1963, with no clear consensus having emerged on a name, the Government decided to name the new currency the '**Royal**'. Just three months after announcing the 'Royal' decision the Government conceded on 19 September 1963 that the name of the currency unit would be the '**Dollar**'

(Info about demand for different denomination banknotes e.g. decline of \$1 and \$2 notes, intro of \$50)

When the **new decimal currency banknotes were introduced in 1966**

From: s 22
To: s 22
Subject: RE: Follow up - Final edits for Explainer: What is Money? [SEC=UNCLASSIFIED]
Date: Monday, 6 April 2020 2:39:36 PM

Jacqui – yes, looks good to me and I have nothing to add.

James

From: DWYER, Jacqui
Sent: Monday, 6 April 2020 2:10 PM
To: HOLLOWAY, James < s 22 @rba.gov.au>
Subject: Follow up - Final edits for Explainer: What is Money? [SEC=UNCLASSIFIED]

James

We are keen to get this out. Just wanted you to check that you were happy with the final edits and you had another suggestion.

Regards

Jacqui

From: DWYER, Jacqui
Sent: Friday, 27 March 2020 5:06 PM
To: HOLLOWAY, James < s 22 @rba.gov.au>
Cc: FINLAY, Richard < s 22 @rba.gov.au>
Subject: Final edits for Explainer: What is Money? [SEC=UNCLASSIFIED]

James

Ellis requested some changes to the Explainer 'What is Money?' before he approves it. You can view these as track changes in the Word document in the section on 'What forms of money are used in a modern economy?'. See: [D19/518217](#).

The original typeset PDF you last viewed ([D20/81688](#)) will be updated with this edit if you agree. I recall that you had a few other small changes that you wanted to make. I would be grateful for a timely response so that we can get some resources out to the students.

Regards

Jacqui

Jacqui Dwyer | Head of Information Department
 RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
 p: s 22 | f: s 22 | w: www.rba.gov.au

s 22

From: s 22
To: s 22
Subject: RE: Endorsement of an Explainer [SEC=UNCLASSIFIED]
Date: Friday, 27 March 2020 3:23:36 PM

Thanks Jacqui – that looks good to me.
 Ellis

From: DWYER, Jacqui
Sent: Friday, 27 March 2020 3:09 PM
To: CONNOLLY, Ellis < s 22 @rba.gov.au>
Subject: RE: Endorsement of an Explainer [SEC=UNCLASSIFIED]

Ellis

Is this adequate emphasis? See highlighted text that bolsters the relevant section of the Explainer on 'What is Money?' Going above this would require introduction of concepts and terminology that is beyond the target audience (of Year 10). I would like to keep currency listed first as it is conceptually easier to relate to as money and has been presented visually already in the Explainer.

What forms of money are used in a modern economy?

There are two main forms of money that exist in modern economies:

- coins and banknotes (i.e. currency)
- deposits held in accounts at banks or other authorised deposit-taking institutions.

Currency is a *physical* form of money, while deposits held in accounts with a financial institution are a *digital* form of money and comprise the greatest share of money in a modern economy. (Learn more in the *Bulletin* article on [Money in the Australian Economy](#).) There is also a subtle difference between *currency and deposit account balances*. Currency is backed by the central bank, which eliminates any risk of default. Deposit account balances, on the other hand, are liabilities of privately owned financial institutions (*because the depositor can ask for them back*) and *these institutions are* at possible risk from default. Nonetheless, while this risk has materialised in some countries, in Australia it is extremely low. (Australia's banks are well capitalised and regulated, depositors are paid out first if a bank gets into trouble, and *there is a Financial Claims Scheme in which* the government provides a limited guarantee *for household deposits of individuals below \$250,000.*)

Please advise. Keen to get something out to these students.

Thanks

Jacqui

From: CONNOLLY, Ellis
Sent: Wednesday, 25 March 2020 4:14 PM
To: DWYER, Jacqui < s 22 @rba.gov.au>
Subject: RE: Endorsement of an Explainer [SEC=UNCLASSIFIED]

Hi Jacqui,

I don't think it would need to involve much additional material – it is more a question of emphasis. I would suggest somewhere up front highlighting that most money is in the form of deposits. In the section on how money is created, I would suggest putting deposits first, since loans creating deposits is much more important than currency (we effectively just convert deposits into currency at the request of banks on behalf of their customers). I also thought that it might be worth specifically referring to the Financial Claims Scheme, since it provides a government guarantee over virtually all the deposits that readers of this Explainer would be concerned about (household deposits below \$250,000); you mention some other pieces of legislation in the Explainer, so I don't think it would be too technical.

Best regards,
Ellis

From: DWYER, Jacqui
Sent: Wednesday, 25 March 2020 3:59 PM
To: CONNOLLY, Ellis < [s 22 @rba.gov.au](mailto:s22@rba.gov.au) >
Subject: RE: Endorsement of an Explainer [SEC=UNCLASSIFIED]

Many thanks Ellis

I appreciate you giving it attention. We will need to keep it as 'What is Money?' and consistent with Year 10 learning goals – but suit wider readership. Could you clarify how much extra on deposits and electronic means of payment you think would be appropriate for your approval? Expanding on this requires introduction of (potentially many) new concepts and terms.

On the future of money, perhaps we can just say less and remove the last section about a role for physical cash. (This was drafted with a view to the \$100 banknote issuance – not coronavirus!)

Regards

Jacqui

From: CONNOLLY, Ellis
Sent: Wednesday, 25 March 2020 2:44 PM
To: DWYER, Jacqui < [s 22 @rba.gov.au](mailto:s22@rba.gov.au) >
Subject: RE: Endorsement of an Explainer [SEC=UNCLASSIFIED]

Hi Jacqui,

Thanks very much for sending this Explainer through for review. It is an excellent piece of work.

My main comment is that the Explainer places too much emphasis on notes and coins, and not enough emphasis on deposits and electronic means of payment. In the monetary aggregates, currency is \$80 billion, while deposits are \$2.1 trillion. So deposits are much more important than currency as a source of money. According to the latest survey of consumer payments, cash

is only used in around a quarter of transactions, with the remainder being electronic means of payment. To address this, options would include changing the title of the Explainer to “What is Currency?”, or redrafting the Explainer to place more emphasis on the role of deposits and electronic transactions. I think the Bulletin article from 2018 on [Money in the Australian Economy](#) did a good job on explaining the role of deposits in money – perhaps some more material from that Bulletin article could be used?

I also think the conclusion in the section on “What is the future of money?” appears a little outdated given recent concerns about physical notes as a means of transmitting COVID-19.

Best regards,
Ellis

From: DWYER, Jacqui
Sent: Tuesday, 17 March 2020 12:34 PM
To: CONNOLLY, Ellis < [s 22 @rba.gov.au](#)>; HOLLOWAY, James < [s 22 @rba.gov.au](#)>
Subject: Endorsement of an Explainer [SEC=UNCLASSIFIED]

Dear Ellis and James

Find enclosed an Explainer on [What is Money?](#). It is a new resource for the Commerce Syllabus. It has been prepared jointly by [s 22](#) and PAE. It is uncontroversial and closely aligned with Bulletin articles.

As the corona virus impedes our usual forms of engagement with students, we will be focusing on a new wave of content creation and digital resources. I would appreciate your timely endorsement. A TRIM action will follow.

Many thanks

Jacqui

Jacqui Dwyer | Head of Information Department
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
p: [s 22](#) | f: [s 22](#) | w: [www.rba.gov.au](#)

From: s 22
To: s 22
Cc: s 22
Subject: Follow-up questions on money [SEC=UNCLASSIFIED]
Date: Tuesday, 25 September 2018 12:56:33 PM

Hi Chris,

Following up on your questions yesterday:

s 22

Influence of purchases of bank debt by non-residents on broad money

Starting with the principle that the extension of credit creates deposits we've stepped through a couple of examples of how other transactions of banks (for example, debt or equity issuance) can also create or extinguish deposits and/or broad money in a way that would support credit growing more quickly over time than broad money.

In these examples, long-term debt or equity issuance can leave the stock of broad money either smaller or unchanged depending on who buys the debt/equity and/or who supplies AUD.

- The different outcomes depend on which sector's deposit holdings have declined.
- While the bulk of deposits are included in broad money and the bulk of broad money consists of deposits, for the purpose of the examples below it's important to note that deposits held by banks (properly, all money issuers or 'AFIs'), the government and non-residents are excluded from broad money.
- (These examples focus on long-term debt or equity issuance, so they abstract from the point that broad money also includes short-term debt securities issued by AFIs (which are not deposits).)

Example 1: AUD-denominated long-term debt/equity issuance is purchased by a resident

- If purchased by an Australian household/business we would expect the stock of broad money to **decline** as the deposits of Australian households/businesses decline
- If purchased by an AFI or government sector entity we would expect **no change** in the stock of broad money as the deposits of Australian households/businesses are unchanged

Example 2: AUD-denominated long-term debt/equity issuance purchased by a non-resident. We assume the non-resident needs to acquire AUD to undertake the transaction.

- If the AUD are acquired from an Australian household/business (for example, superannuation funds looking to make overseas investments or importers needing to acquire FX to buy foreign goods) we would expect the stock of broad money to **decline**
- If the AUD are acquired from an AFI or another non-resident we would expect **no change** in the stock of broad money

Example 3: FX-denominated long-term debt purchased by a non-resident. We assume the bank will want to exchange the foreign currency for AUD.

- The effect on the stock of broad money is the same as in Example 2, and depends on which sector the AUD are sourced from

Note that these examples abstract from any rebalancing behaviour – for example, if the non-resident provider of AUD to the bank looked to replenish their AUD holdings by buying AUD from another counterparty, this could still flow through to a decline in broad money.

Please let me know if there's anything you'd like us to follow up further.

Regards,

s 22

s 22 | Manager | Securities Markets
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
p: **s 22** | w: www.rba.gov.au

From: s 22
To: s 22
Cc: s 22
Subject: RE: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]
Date: Friday, 15 July 2022 11:38:58 AM

Sounds good. Thanks to you all for doing all of this. Much appreciated. Chris

From: s 22
Sent: Friday, 15 July 2022 11:35 AM
To: KENT, Christopher <s 22 @rba.gov.au>
Cc: s 22
Subject: RE: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]

Hi Chris

See below for Explainer and letter drafts for your comment. Thanks to s 22 who helped with the Explainer sentences.

Thanks
s 22

Explainer draft (*worth nothing this dynamic was referenced already in [Box D: Aug 2020 SMP](#), so this is not our first public comment on this*):

Deposits can also be created by Reserve Bank of Australia, such as when the Bank purchases bonds (see [How the Reserve Bank Implements Monetary Policy](#)). When the Bank purchases bonds from the non-bank private sector, households and businesses ultimately deposit the proceeds of the sale in the banking system, adding to total deposits.

Letter draft:

Dear s 22

Thank you for your valuable feedback on the Explainer, Bulletin article, and speech.

In our public material, our primary goal is to explain the factors driving deposit and money creation over the long term, which is credit and deposit creation by the private banking sector.

Payments by the government to the non-bank private sector must be funded, either through taxation or bond sales, both of which will reduce the deposit balance of the non-bank private sector tax payer or purchaser of bonds in an offsetting manner. Similarly, payments by the external sector to the non-bank private sector must also be funded, and this will reduce the deposit balance of the non-bank private sector in an offsetting manner.

We have added some clarifying material to the 'What is Money' Explainer to highlight this detail.

Kind regards

Etc.

From: KENT, Christopher

Sent: Wednesday, 13 July 2022 8:14 PM

To: s 22

Cc: s 22

Subject: Re: The RBA's misleading and incomplete description of how money is created
[SEC=OFFICIAL]

Hi s 22.

I'm open to adding this point about QE if we can keep it short and simple.

Thanks

Chris

Sent from my iPad

On 13 Jul 2022, at 5:32 pm, s 22 wrote:

Thanks s 22, I agree looks in great shape.

Chris:

- Tomorrow I will draft a new response and run past you. I will note we will update our explainer to add a clarification.
- A last issue: in the explainer, there is a case to include a line on RBA bond purchases creating deposits. These increase deposits if the purchases are ultimately sourced from the non-bank sector. The BOE included QE in their explainer.
 - o If you recall, s 22 in IMS produced work ([D22/22523](#)) suggesting roughly two-thirds of RBA bond purchases ultimately created deposits.
 - o If you'd rather keep it simple, we could justify leaving it out this by noting that this is still about the behaviour of the banking sector as intermediaries between us and the non-bank private sector.

Thanks
s 22

From: s 22

Sent: Wednesday, 13 July 2022 5:10 PM

To: KENT, Christopher <s 22 [@rba.gov.au](mailto:s 22@rba.gov.au)>; s 22

Cc: s 22

Subject: RE: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]

Thanks very much Chris. We will update the footnote to reflect your changes below.

From: KENT, Christopher

Sent: Wednesday, 13 July 2022 4:56 PM

To: s 22

Cc: s 22

Subject: RE: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]

How about tweaking the footnote to be something like, a bit shorter and the first line was a bit provocative by itself, whereas we would now be saying they don't create money because they need to be funded. Otherwise, this is great so thanks so much for coming up with this. Chris

While payments by governments increase the deposits in accounts of households or businesses at banks or other deposit-taking institutions, they do not create money because they must be funded by an offsetting transaction that reduces deposits. For example, a government transfer that increases the deposits held by households must be funded by issuing bonds or taxation, both of which reduce deposits.

From: s 22

Sent: Wednesday, 13 July 2022 4:50 PM

To: KENT, Christopher <s 22 @rba.gov.au>; s 22

Cc: s 22

Subject: RE: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]

Hi Chris and s 22,

Following on from the discussion below, we have sought to add a point of clarification in the [What is Money?](#) Explainer. The proposed addition can be seen on page 5 of the attached file (yellow highlighted).

We would appreciate any thoughts you may have on this.

Thanks,
s 22

From: s 22

Sent: Wednesday, 13 July 2022 9:38 AM

To: KENT, Christopher s 22 [@rba.gov.au](mailto:s22@rba.gov.au); s 22

Subject: RE: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]

Thanks Chris and s 22,

s 22 and I will try and find a spot to add this point of clarification in the Explainer today and we will run it past you before the media office responds to s 22 .

Many thanks for your help on this.

s 22

From: KENT, Christopher

Sent: Tuesday, 12 July 2022 8:41 PM

To: s 22

Cc: s 22

Subject: Re: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]

Hi s 22

I'd still be tempted to say that deposits are created in the way we say, and not by government payments (when you account for the fact that the funds for this come from taxes or bonds issued, which reduce private deposits) and similarly for the external sector. Instead we could thank him for raising the issue and then say we'll consider ways to clarify in a suitable manner.

As to what we actually do, maybe it wouldn't be bad to add this point of clarification in the explainer if you can find a spot. Only needs a line or two. And would help explain it well by covering why these aren't ways to create deposits.

What do you think?

Thanks

Chris

Sent from my iPad

On 12 Jul 2022, at 6:28 pm,
wrote:

s 22

Hi Chris

Neither the speech, Bulletin, nor Explainer mention government or external sector payments to the non-bank private sector influencing the level of deposits. I think this is for the same reason outlined below – in the long run it's really only aggregate bank balance sheets that matter. As a result we don't have a place to point to. (For what it's worth, there also isn't any direct treatment of this in the famous [Bank of England piece from 2014](#) that we cited - some detail below if interested.)

We could soften the relevant sentence in our response to something like:

“Nonetheless, the detail you have highlighted is helpful for clarifying the accounting flows associated with deposits in the short term, and we will consider if this level of detail is appropriate for future public material on the topic.”

If you're happy I'll pass to the media office as you suggest.

Thanks

s 22

[Bank of England](#)'s discussion of government is focused on the interaction between government and banking sector (not payments to the non-bank private sector):

Banks buying and selling government bonds is one particularly important way in which the purchase or sale of existing assets by banks creates and destroys money.

...a purchase of government bonds from consumers by banks would be represented by a change in the composition of consumers' assets from government bonds to deposits and an increase in both deposits and government bonds on the commercial banks' balance sheet.

The one mention of the external sector is circumspect about the impact on deposits:

Additionally, in an open economy such

as the United Kingdom, deposits can pass from domestic residents to overseas residents, or sterling deposits could be converted into foreign currency deposits. These transactions do not destroy money per se, but overseas residents' deposits and foreign currency deposits are not always counted as part of a country's money supply.

From: KENT, Christopher

Sent: Tuesday, 12 July 2022 12:30 PM

To: s 22

Cc: s 22

Subject: Re: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]

Hi s 22. This is great. Only one question, is this detail not mentioned one way or another in either the bulletin or my speech, even if only in a footnote? If so rather than promising to tweak things in the future we could reference the relevant spot in the bulletin or speech instead? Happy to for the media office to make suggestions as to tone and who should send this off. Thanks. Chris

Sent from my iPad

On 12 Jul 2022, at 10:20 am, s 22
wrote:

Hi Chris

I think you've identified the key issue. An individual's deposits can be increased by govt/external sector payments, but total deposits cannot be on average over the long term. (On short timeframes it can – for example the AOFM could run down its balances at the RBA to facilitate payments to increase total deposits, but this just implies that they ran it up previously by accumulating cash through taxation, reducing total deposits).

I've drafted a response below. It makes the point we are communicating about the long term. It includes a bit of detail and is quite polite, which I feel might be appropriate for the recipient.

Thanks
s 22

Dear s 22

Thank you for your valuable feedback on the Explainer, Bulletin article, and speech.

When payments are made by the government sector to a non-bank private sector payee, this will result in an increase in the deposit balance of the payee. However, the government must fund this payment, either through taxation or bond sales, both of which will reduce the deposit balance of the non-bank private sector tax payer or purchaser of bonds. Although funding of government payments will not always be contemporaneous, the net effect of government payments on total non-bank private deposits is small, particularly over the long term.

Similarly, when payments are made by the external sector to a non-bank private sector payee, this will result in an increase in the deposit balance of the payee. However, the external sector must fund this payment by purchasing Australian dollars, which will reduce the deposit balance of the non-bank private sector entity selling the Australian dollars. Again, while the funding of the external sector's payment will not always be contemporaneous, the net effect of external sector payments on total non-bank private deposits is small, particularly over the long term.

In our public material, our primary goal is to explain the main factors driving deposit and money creation over the long term, which is credit and deposit creation by the private banking sector.

Nonetheless, the detail you have identified is important for clarifying the accounting flows associated with deposits, and we will carefully consider how to include this detail in future material on the topic.

Thank you for your time.

Kind regards
Etc

From: KENT, Christopher
Sent: Monday, 11 July 2022 4:38 PM
To: s 22
Cc: s 22
Subject: Re: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]

Very high level thoughts for now but as s 22 said, we'll get back to you with a suggested response.

The Government sector paying to people's accounts does create money in a way, but they have to get that by raising taxes or issuing bonds, which does the opposite. So that's not really a way to create money in net terms.

And the external sector must get AUD by buying them from AUD banks in exchange for say USD (or borrowing them I guess). Easiest to just bundle them into the non-bank private sector. Doesn't matter if they are domestic residents or foreign ones.

Sent from my iPad

On 11 Jul 2022, at 4:33 pm, s 22 wrote:

Hi s 22

RBAInfo passed this on – Chris and I will be discussing tomorrow and will coordinate a response.

Thanks
s 22

From: s 22
Sent: Monday, 11 July 2022 4:33 PM
To: KENT, Christopher
<s 22 @rba.gov.au>; s 22

Subject: FW: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]
Importance: High

Hi Chris and s 22,

We've received the below query on our [What is Money Explainer](#) (and your [2018 Speech](#), Chris and [Bulletin](#), s 22).

I'm not an expert on the monetary aggregates so would love to get your views on Roger's assertion that our explanation for money creation is only partially correct because "bank deposits are created ... when payments are made by the government and external sectors to the non-bank private sector".

Many thanks,

s 22

From: LOWE, Phil
Sent: Monday, 11 July 2022 9:47 AM
To: DWYER, Jacqui <s 22 @rba.gov.au>
Subject: FW: The RBA's misleading and incomplete description of how money is created [SEC=OFFICIAL]

FYI

From: RBAInfo
Sent: Monday, 11 July 2022 9:12 AM
To: s 22 @rba.gov.au>;
KENT, Christopher <s 22 @rba.gov.au>
Cc: s 22

; SMITH, Penny
s 22 @rba.gov.au>; DICKMAN, Anthony
< s 22 @rba.gov.au>; s 22

Subject: FW: The RBA's misleading and incomplete description of how money is created

Dear s 22 & Chris,

Please see the below email addressed to you. Let us know if we should provide a response on your behalf.

Kind Regards,

s 22

Communications Division

RESERVE BANK OF AUSTRALIA | 65 Martin
Place, Sydney NSW 2000

p: s 22 | e: rbainfo@rba.gov.au
| w: www.rba.gov.au

From: s 22

s 22

Sent: Saturday, 9 July 2022 12:30 PM

To: RBAInfo <RBAInfo@rba.gov.au>

Subject: The RBA's misleading and
incomplete description of how money is
created

 **EXTERNAL EMAIL:** Do not click any
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trust the sender and know the content is
safe.

Attention:

Philip Lowe, RBA Governor

Christopher Kent, RBA Assistant

Governor (Financial Markets)

Emma Doherty, Ben Jackman and Emily
Perry

Reserve Bank of Australia

GPO Box 3947

SYDNEY NSW 2001

AUSTRALIA

The RBA's description on its website of
how money is created is misleading or
only partially correct.

Money (M1) consists of bank deposits
plus currency, where currency is defined
as notes and coin in circulation in the
non-bank private sector. Coin is minted
at the Royal Australian Mint. Notes are
printed by the RBA. Banks buy coin from
the Mint and notes from the RBA. The
non-bank private sector buys notes and
coin from banks.

The RBA website states that bank deposits “can” be created when banks lend to the non-bank private sector. This statement is only partially correct. It omits any explanation of how else bank deposits can be created.

Bank deposits are created when banks lend to the non-bank private sector and when payments are made by the government and external sectors to the non-bank private sector.

Bank deposits contract when bank loans are repaid by the non-bank private sector, and when payments are made by the non-bank private sector to the government and external sectors.

The RBA should rectify this omission on its website, particularly in its Education Explainer.

References:

Christopher Kent, RBA Assistant Governor (Financial Markets)
Money – Born of Credit?, Remarks at the Reserve Bank's Topical Talks Event for Educators
Sydney – 19 September 2018

Emma Doherty, Ben Jackman and Emily Perry
Money in the Australian Economy
RBA Bulletin, 20 September 2018

[What is Money?](#), RBA Explainer (Education), 9 April 2020

Former Lecturer in Econometrics,
Macquarie University (Retired)

s 22

Sent from [Mail](#) for Windows

From: s 22
To: s 22
Cc: s 22
Subject: RE: TRIM: Request for comment: RBA Bulletin Article June 2015 - Structural Features of Australian RMBS [SEC=UNCLASSIFIED]
Date: Friday, 29 May 2015 6:49:56 PM
Attachments: [image002.png](#)

Hi s22

Thank you very much again for your comments.

We have reviewed and revised the text in the article on the introduction of the 20% holding limit following your comments. I would like to check if possible whether the revised text is in line with your understanding.

After re-reading APRA's letter to ADIs from 26 August 2010 that discussed amongst other issues the 20 % holding limit, our understanding is that there seems to have been some confusion in the market around the applicability of the 20% holding limit and that according to this letter (page 2 of the letter, from the second paragraph of the 'Acquisition of securities' section) APRA revised APS 120 "The 20 per cent limit is determined relative to outstanding securities. ... To clarify this requirement, APS 120 will be revised to reflect that the limit applies to 'holdings', as opposed to 'purchases', of securities by originating ADIs". The letter makes it quite clear that the limit existed before this date.

Based on your feedback and the re-reading of APRA's letter mentioned above we have revised the reference to the introduction of the 20 % holding limit to:

Another factor contributing to the increased use of serial paydown, particularly in RMBS issued by ADIs, was the revision of the Australian Prudential Regulation Authority's (APRA) *Prudential Standard APS 120 Securitisation* (APS 120) in 2010 that clarified the applicability of the 20 per cent limit on an ADI's holdings of the notes in an RMBS sponsored by the ADI (for details, see APRA 2010).

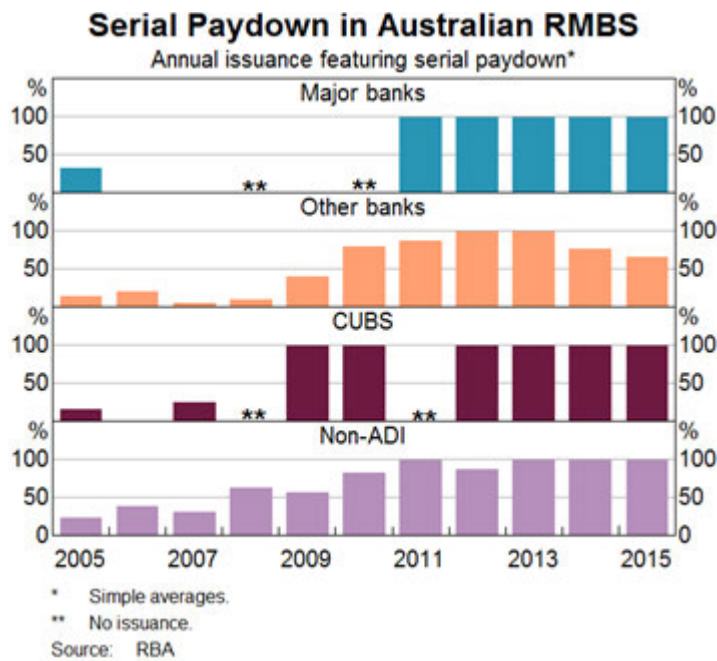
Where the reference to APRA reads:

Australian Prudential Regulation Authority (2010), 'Letter to ADIs: Regulatory Capital Treatment for Securitisation', 26 August. Available at <http://www.apra.gov.au/adi/Documents/cfdocs/Securitisation-Letter-to-ADIs-FINAL-26-August-2010.pdf>.

For your reference the previous text was:

Another factor contributing to the increased use of serial paydown, particularly in RMBS issued by ADIs, was the introduction by the Australian Prudential Regulation Authority (APRA) in the *Prudential Standard APS 120 Securitisation* (APS 120) in 2010 of a 20 per cent limit on an ADI's holdings of the notes in an RMBS sponsored by the ADI.

We have also removed the lines from graph 11 below the text that referred to the 20% holding limit being introduced, and the new graph is:



Pleas let me know if the revised text and changes to the graph address adequately your feedback.

Regards,
Ivailo

Ivailo Arsov | Head of Overseas Economies | Economic Group
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
p: **s 22** | f: **s 22** | w: www.rba.gov.au

From: ARSOV, Ivailo
Sent: Wednesday, 27 May 2015 5:18 PM
To: **s22**
Cc: AYLMEER, Chris; **s22**
Subject: TRIM: RE: TRIM: Request for comment: RBA Bulletin Article June 2015 - Structural Features of Australian RMBS [SEC=UNCLASSIFIED]

Hi **s22**

Thank you very much for taking the time to look through the article and provide these comments. We will certainly look into addressing them in the text.

Regards,
Ivailo

From: **s22** [[mailto: s 22 @apra.gov.au](mailto:s22@apra.gov.au)]
Sent: Wednesday, 27 May 2015 4:07 PM
To: ARSOV, Ivailo
Cc: AYLMEER, Chris; **s22**
Subject: RE: TRIM: Request for comment: RBA Bulletin Article June 2015 - Structural Features of Australian RMBS [SEC=UNCLASSIFIED]

Ivailo,

No issues or concerns. Just one clarification required and a simple observation.

The clarification relates to the bottom paragraph of page 13 and the 20% limit on ADI's holdings of notes in their own RMBS structures. The paper notes this was introduced in 2010. As you probably know this limit was in place going back to perhaps 1995/96 and, as I understand it, was widely followed by ADIs. This was originally in the form of the RBA's Prudential Statement C2 and then subsequently in APRA's Guidance Note AGN 120.3, before being covered by APRA's prudential standard APS 120.

This second point is a relatively minor observation. Looking at the second line of the introduction would it be preferable to say "Historically, RMBS have provided an alternative to bank deposits and unsecured wholesale funding"?

Thanks for giving us the opportunity to comment.

s22

s22

GM Policy Development — Policy Development
Australian Prudential Regulation Authority

T s 22 | F s 22
E s 22 @apra.gov.au | W www.apra.gov.au
400 George St (Level 26), Sydney, NSW 2000



From: ARSOV, Ivailo [<mailto:s22@rba.gov.au>]
Sent: Wednesday, 20 May 2015 4:54 PM
To: s22
Cc: AYLMEr, Chris
Subject: FW: TRIM: Request for comment: RBA Bulletin Article June 2015 - Structural Features of Australian RMBS [SEC=UNCLASSIFIED]

Hi s22

I believe that Chris Aylmer has already flagged with you that we are planning to publish an RBA Bulletin article on the Structural Features of Australian RMBS in mid-June and that we would very much value any comments that you may want to offer on the article's draft. The draft of the article is attached. It examines the key structural features of Australian RMBS and how they have evolved over the past decade.

If at all possible, we would appreciate receiving comments by close of business on Wednesday, 27 May in order to make the necessary changes in the text in accordance with our publication schedule. We would be happy to receive comments in whatever form is most convenient for

you.

Just as a short aside, I have recently left the Domestic Markets Department headed by Chris Aylmer where the article was written and hence the RMBS-unrelated signature at the bottom of the email.

Regards,
Ivailo

Ivailo Arsov | Head of Overseas Economies | Economic Group
RESERVE BANK OF AUSTRALIA | 65 Martin Place, Sydney NSW 2000
p: **s 22** | f: **s 22** | w: www.rba.gov.au

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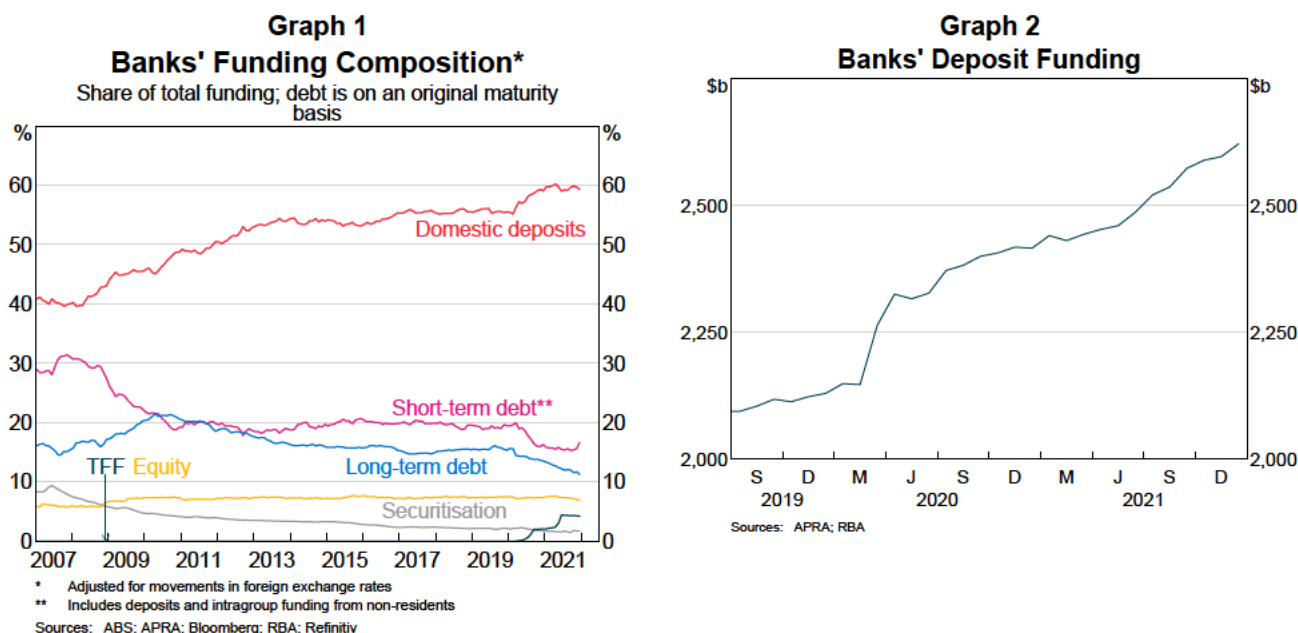
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DEPOSIT GROWTH DURING THE COVID-19 PANDEMIC¹

The stock of deposits in the Australian banking system has grown significantly since the start of the COVID-19 pandemic, increasing by nearly \$475 billion (or around 20 per cent). This growth primarily reflects the Reserve Bank of Australia's (RBA) bond purchases, credit growth and net maturities of bank debt (partly related to the TFF). The increase in deposit funding has contributed to downward pressure on banks' non-equity funding costs, including through the associated reductions in deposit rates over the pandemic period.

Deposits have grown strongly since the onset of the pandemic

The stock of deposits in the banking system has increased significantly since the onset of the COVID-19 pandemic, growing by nearly \$475 billion over the period from end February 2020 to end December 2021.² These inflows have seen the deposit share of banks' total funding (including equity) increase by roughly 5 percentage points over this period to around 60 per cent (Graph 1; Graph 2).



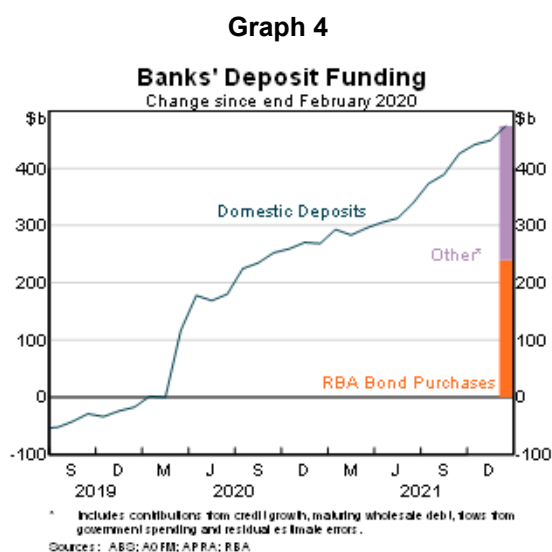
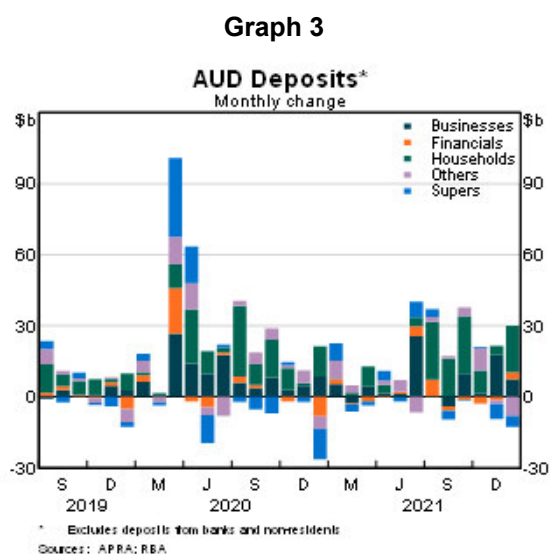
Deposit growth over this period reflected a number of factors. Substantial pandemic-related inflows were important at the onset of the pandemic, making up around 40 per cent of the increase in deposits over March and April 2020 (Graph 3).³ This initial growth can be partly attributed to an increased desire for liquidity from superannuation funds and other financial corporations, as well as non-financial businesses. Superannuation funds increased their holdings of cash by selling down assets, including debt securities and foreign equities.⁴ To the extent that banks were a counterparty to some of these transactions, these transactions would have added to deposit growth, since banks could pay for these securities with newly created deposits.⁵ In addition, non-financial businesses temporarily drew down on lines of credit with banks for precautionary purposes at the onset of the pandemic; these funds were likely held as deposits until they were repaid later in the year.⁶ While these factors were important drivers of deposit growth at the onset of the pandemic, deposit growth since then has mainly reflected contributions from:

- credit growth

1 We would like to thank David Norman, s 22 for their help with this work.
2 Non-resident deposits, Exchange Settlement (ES) balances held at the RBA and physical currency are excluded from our measure of deposits. We refer to the commercial banking system as the 'banking system' throughout this note.
3 RBA (2020), 'Box D: Recent Growth in the Money Supply and Deposits', RBA Statement on Monetary Policy, August.
4 RBA (2021), 'Box C: What Did 2020 Reveal About Liquidity Challenges Facing Superannuation Funds?', RBA Financial Stability Review, April.
5 For instance, bank liaison over the period noted that some funds had requested banks to buy-back short term debt securities prior to maturity.
6 Domestic Markets (2020), ' s 22 ', July.

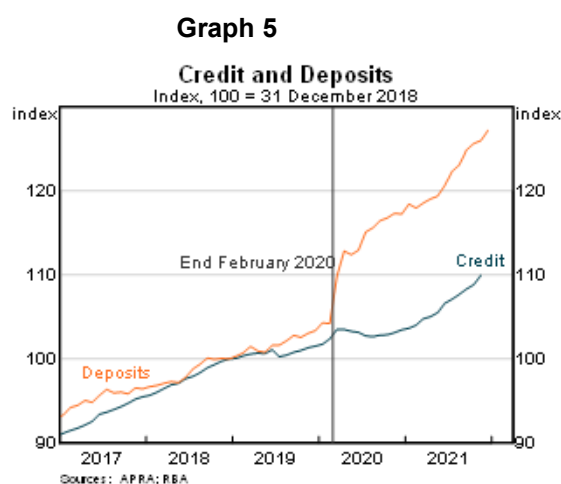
- the Reserve Bank of Australia's (RBA's) purchases of government bonds
- a decline in the stock of banks' outstanding wholesale debt, partly related to the Term Funding Facility (TFF)
- flows related to government spending.

Our rough estimates of the contributions from each of these factors (see each section below for details) suggests that the RBA's bond purchases were a significant driver of the increase in deposits since the start of the pandemic. Other sources of deposit growth – such as new lending and net maturities of wholesale debt – made up the remainder of the increase in deposits seen over this period (Graph 4). We caution that these estimates are rough and should be viewed as being indicative of the relative importance of different factors, rather than as a precise decomposition of the growth in deposits. This reflects the substantial difficulties in accurately attributing growth in aggregate deposits to specific drivers.



Part of the growth in deposits was due to credit growth

Deposit growth has historically been driven by new lending by the banking sector.⁷ Lending creates deposits as the funds made available to a borrower find their way into a deposit somewhere in the banking system, either as a deposit in the borrower's account, or in another account when the borrower uses those funds to make a purchase. While the provision of new credit was an important driver of deposit growth over the period since end February 2020, other factors played a role too (Graph 5).



⁷ Kent, C (2018), '[Money – Born of Credit?](#)', Remarks at the Reserve Bank's Topical Talks Event for Educators, Sydney, 19 September; Doherty, Jackman and Perry (2018), '[Money in the Australian Economy](#)', RBA Bulletin, September.

s 22

s 22

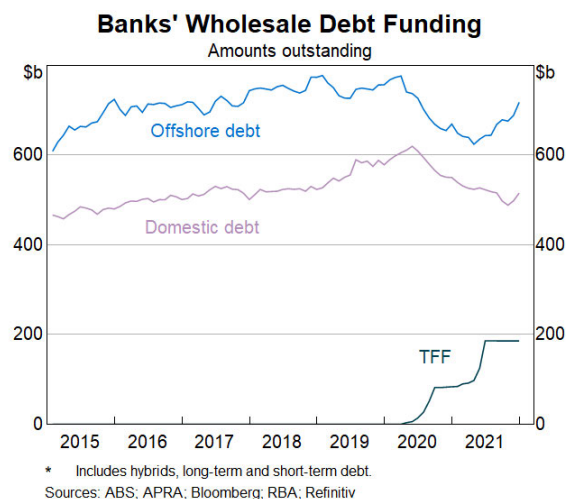
s 22

Net maturities of bank debt have also added to deposits

Maturities of banks' wholesale debt liabilities can create deposits, since banks can repay lenders by crediting their deposit accounts with new funds.²⁰ Conversely, issuance of bank debt can drain deposits as lenders (i.e. the counterparties that purchase the bonds) can pay the bank by reducing their deposit balances.

This channel of deposit creation has likely been important over the period since end February 2020. Over this period, more bank debt matured than was newly issued, such that the stock of banks' short- and long-term debt outstanding decreased by around \$140 billion between end February 2020 and end December 2021 (Graph 9). This decline is partly explained by banks' TFF drawdowns, since as banks have drawn on TFF funding they have largely refrained from issuing new bonds. In addition, deposits created from other sources, such as the RBA's bond purchases, have reduced the need for banks to seek funding via wholesale markets.

Graph 9

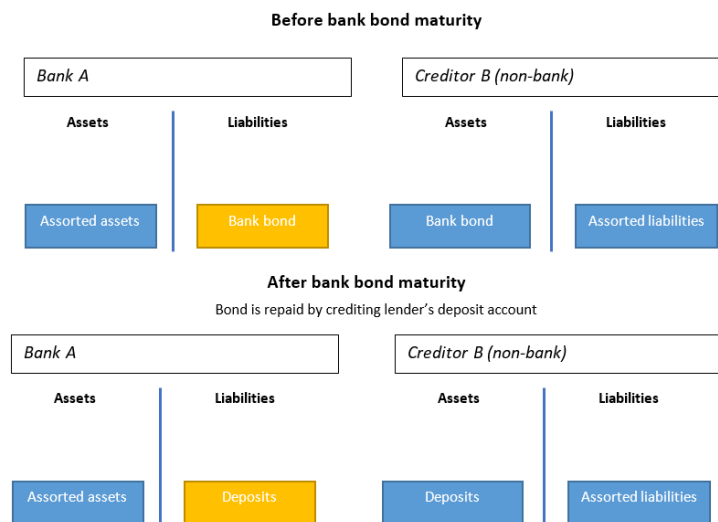


s 22

²⁰ More broadly, banks can create (or drain) deposits through any change in the composition of their liabilities that changes deposits to non-deposit liabilities or vice-versa. We consider maturities of wholesale debt here, since they were likely the most important example of this over the pandemic period.

However, these debt maturities would not have resulted in a one-to-one increase in the stock of deposits. For Australian dollar denominated issuance, the link between debt maturities and deposit growth is direct. Debt held by non-bank entities can be repaid (by the bank) by crediting the lender's deposit account with Australian dollar deposits (Figure 2). Roughly 75 per cent of banks' domestically issued wholesale debt liabilities were held by domestic non-bank entities (excluding the RBA and Australian government) at end September 2021. A rough estimate using this share suggests that the contribution of net maturities of Australian dollar denominated debt to deposit growth would have been around \$60 billion over the period between end February 2020 and end December 2021.

Figure 2: Bank bonds held by a non-bank
Stylized balance sheet



The link between repayment of bank debt and deposit growth is more complicated for issuance denominated in foreign currencies. This is because the original obligation is settled using payments in foreign currencies, rather than Australian dollars. This distinction is important, since roughly 40 per cent of the outstanding debt that has matured since end February 2020 was issued offshore.

There are two key factors that determine whether these maturities would add to Australian-dollar deposits. Firstly, Australian banks tend to use cross-currency swaps to effectively transform their foreign currency issuance into an Australian dollar liability, such that coupons and principal payments are made in Australian dollars.²¹ Previous work indicates that Australian banks hedge the majority of their foreign-currency denominated issuance.²²

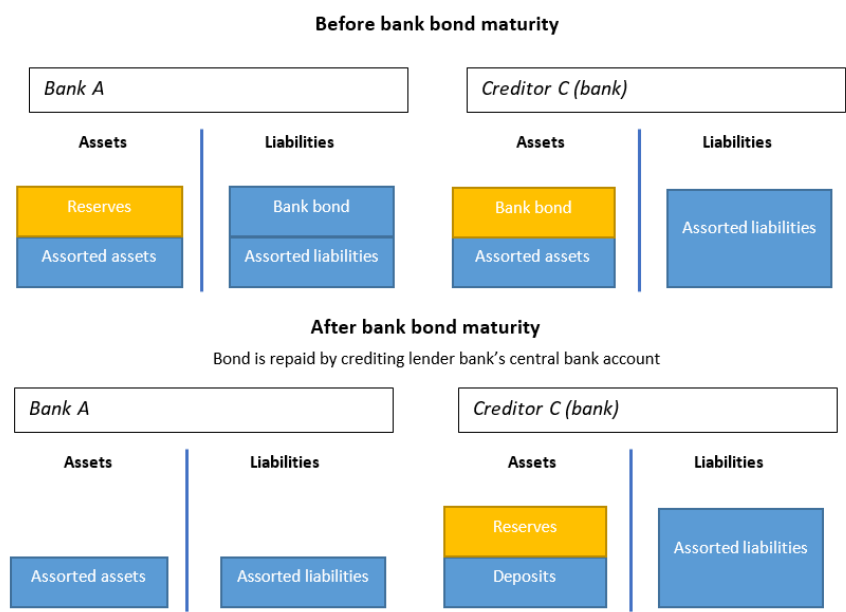
Secondly, whether these Australian dollar payments add to deposits or not is determined by who the recipient of these payments is. Payments to another bank would not add to deposits (e.g. these can be settled via interbank transfers of ES balances; Figure 3), whereas payments to a non-bank would be expected to create new deposits. While previous work indicates that the largest direct counterparty for Australian banks' hedges are foreign banks, these institutions are also noted to commonly transfer the risk associated with these hedges to other entities – such as non-bank financial institutions – by entering into offsetting contracts.²³ This means that the non-bank institution, rather than the foreign bank, could be considered the 'ultimate' counterparty for a given hedge. Unfortunately, data on the ultimate exposure of Australian banks to different counterparties is limited, making it difficult to calculate an estimate of the contribution of offshore debt maturities to deposit growth.

21 See Figure 1 of Arsov, Moran, Shanahan and Stacey (2013), '[OTC Derivatives Reforms and the Australian Cross-currency Swap Market](#)', RBA Bulletin, June.

22 **S 22** '[Banks' Foreign Currency Hedging: Behavioural Insights from PLATO](#)', Internal RBA Note, July; Berger-Thomson L and B Chapman (2017), '[Foreign currency exposure and hedging in Australia](#)', RBA Bulletin, December.

23 Cole and Ji (2018), '[The Australian OTC Derivatives Market: Insights from New Trade Repository Data](#)', RBA Bulletin, June.

Figure 3: Bank bonds held by another bank
 Stylized balance sheet



Looking forward, we expect that banks will increase their issuance of wholesale debt funding substantially over the next few years, with the need to fund TFF maturities likely to be a driver of this issuance.²⁴ This means that while net maturities of bank debt have made a positive contribution to deposit growth since the onset of the pandemic, net issuance will likely weigh on deposit growth going forward.

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24 S 22 (2021), ‘[The Term Funding Facility Refinancing Task](#)’, Internal RBA Note, July.

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Institutional Markets Section
31 January 2022

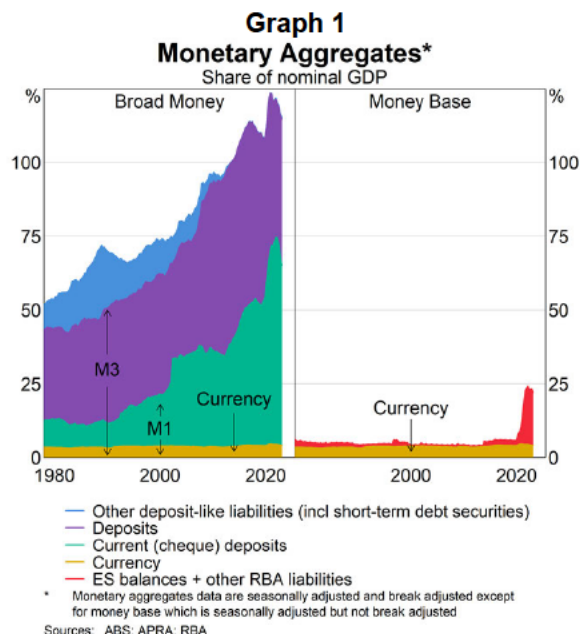
25 S 22 (2021), [‘Major Banks’ Exposure to Low-rate Deposit Funding – September Quarter 2021](#), Internal RBA Note, October.

DM NOTE: DEVELOPMENTS IN THE MONETARY AGGREGATES¹

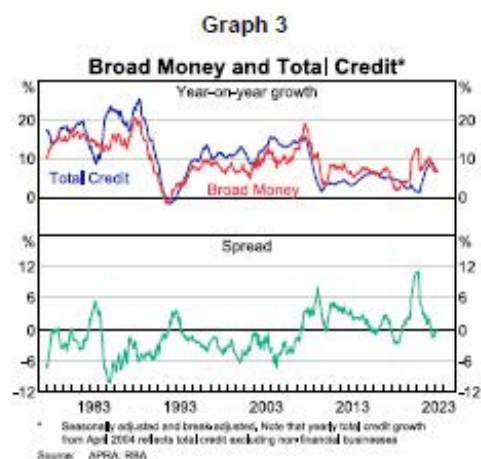
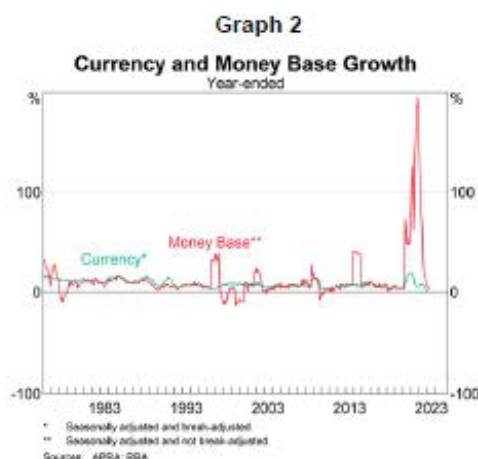
The monetary aggregates grew quickly in 2020 and 2021, partly reflecting the Bank's policy response to the COVID-19 pandemic. The money base grew due to Open Market Operations (OMOs), the Bond Purchase Program (BPP) and the Term Funding Facility (TFF). In contrast, broad money growth reflected only a portion of the BPP and the indirect effects of the TFF; credit growth also contributed to broad money growth over the period. The money base will decline as the TFF and BPP unwind. Movements in broad money will be influenced by future credit growth, banks' TFF refinancing needs and the funding needs of the government.

Growth in Monetary Aggregates Since COVID-19

Since the start of the pandemic, there has been large growth in the monetary aggregates relative to the previous decade. This monetary expansion partly reflects the Bank's policy responses; [s 22](#)



- **M3 (Currency + Deposits) and Broad Money (M3 + Other Deposit-Like Borrowings)** primarily reflect growth in deposits arising from BPP², credit growth, maturing wholesale debt and flows related to government spending ([s 22](#) [2022](#)). These factors explain the divergence in broad money and total credit growth, which peaked in late 2020 (Graph 3). The BPP only created bank deposits for bonds ultimately purchased from non-bank investors (purchases from banks just swap banks' bond holdings with ES balances and do not add to any entities' deposit account at a commercial bank). The TFF only indirectly increased broad money to the extent that it lowered the cost of funding, stimulating the economy and encouraging credit growth.



- 1 The monetary aggregates measure the money and 'money-like' instruments (such as deposits) that the banking system owes to households and businesses. In recent years there has been a reduced focus on the money aggregates as they have limited use as an indicator of future activity ([s 22](#) [2018](#)).
- 2 The transmission mechanism of QE relies on the effects of newly created broad money. Refer to BOE (2014) '[Money creation in the modern economy](#)'.

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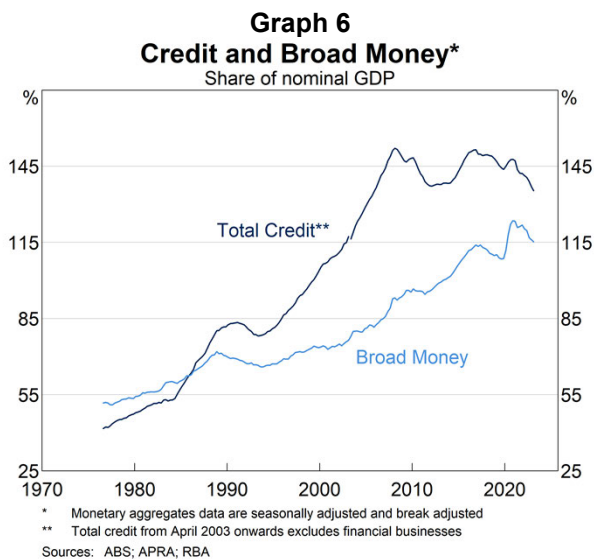
The impact on broad money of TFF repayments will be driven by banks' asset growth, the need to maintain their liquidity ratios and their choice of funding source. For example, banks may choose to refinance the TFF by issuing bonds which will decrease broad money for a given amount of credit outstanding. Banks may also seek to attract depositors, but where banks compete for deposits between each other broad money does not increase because the deposits are just transferred between institutions.

Since 2019, the share of the major banks' funding obtained from deposits increased roughly 5 percentage points while the share of funding from long-term wholesale debt declined, partly reflecting the use of TFF funding (s 22 2022). Bond issuance began to pick up in 2022 and overall net issuance in 2023 remains above the decade average (s 22 2023). The share of deposit funding may decline a little – reversing some or all of the increase since 2019 – as the TFF matures and banks continue to issue bonds.

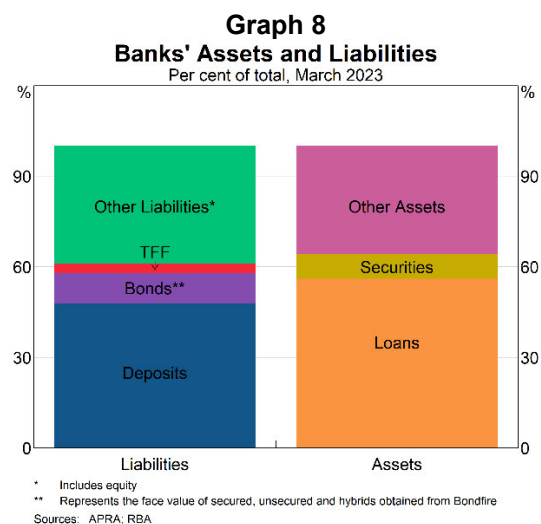
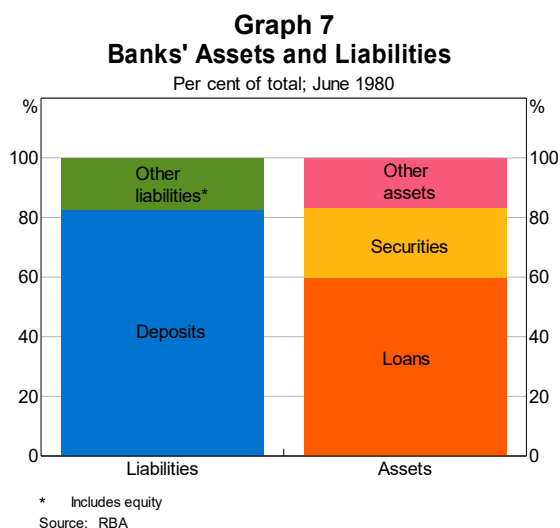
Forthcoming work will look at potential future paths of deposits as unconventional monetary policy unwinds as well as under plausible scenarios for credit growth.

Historical Trends in Total Credit and Broad Money

As a proportion of GDP, total credit and broad money have diverged since the 1980s (Graph 6). This occurred as banks funded more of their lending by issuing bonds rather than deposits (Graph 7 and Graph 8), reflecting choices by both banks and the private sector after the deregulation of the financial system.

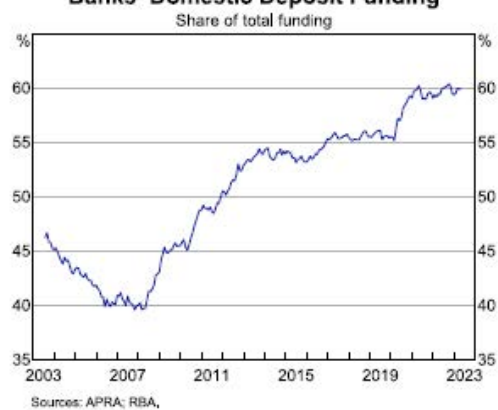


In 1980, Australian banks held more than 80 per cent of their liabilities as deposits which was sufficient to fund loans of about 60 per cent of assets (s 22 2018). The share of deposits has declined over the past 45 years, as banks began to source funding from issuing bonds, reaching a low of 40 per cent in the mid-2000s. After the financial crisis, banks moved back somewhat from the use of wholesale debt securities towards domestic deposits (s 22 2012). The gap between credit and broad money has narrowed as banks increased their share of funding from deposits to just below 60 per cent (Graph 9).



Graph 9

Banks' Domestic Deposit Funding



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Analyst

Institutional Markets

Domestic Markets Department

8 June 2023

Appendix

Measure	Description ^(a)
Currency	Holdings of notes and coins by the private non-bank sector
M1	Currency + current (cheque) deposits of the private non-bank sector at banks
M3	M1 + all other deposits of the private non-ADI sector at banks (including certificates of deposit) + all deposits of the private non-ADI sector at CUBS
Broad money	M3 + other deposit-like borrowings of AFIs from the non-AFI private sector (such as short-term debt securities)
Money base	Currency + banks' holdings of notes and coins + deposits of banks with the Reserve Bank + other Reserve Bank liabilities to the private non-bank sector

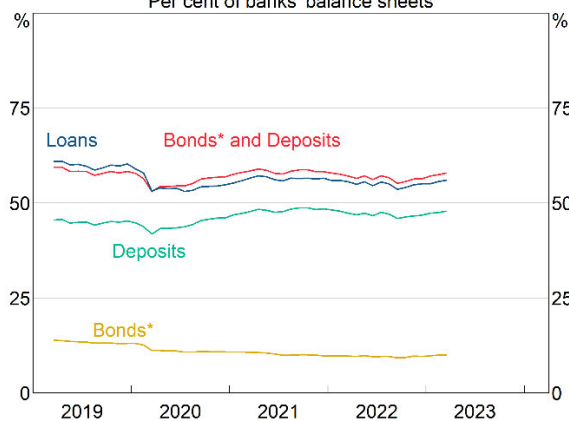
(a) These descriptions abstract from some detail. See the Financial Aggregates release for more information.

Other Graphs

Graph 10

Bonds and Deposits vs Loans

Per cent of banks' balance sheets



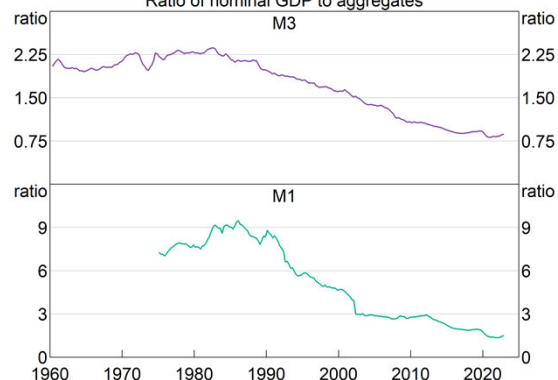
* Includes unsecured, secured and hybrid bonds

Sources: APRA; Bondfire; RBA

Graph 11

Monetary Aggregates Velocity*

Ratio of nominal GDP to aggregates



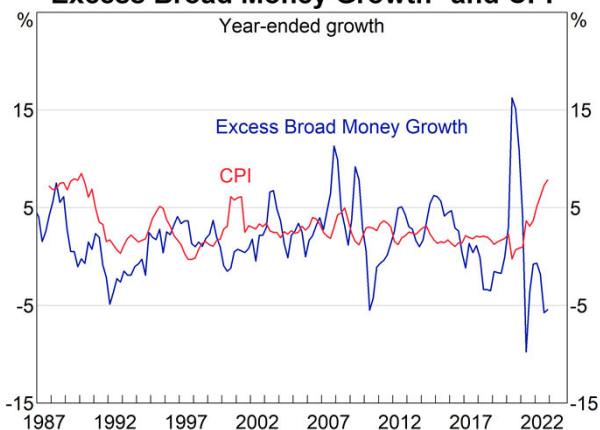
* Monetary aggregates data are seasonally adjusted and break adjusted

Sources: ABS; APRA; RBA

Graph 12

Excess Broad Money Growth* and CPI

Year-ended growth



* Represents the difference between the growth in broad money and the growth in real GDP

Source: ABS; RBA.

A PLAUSIBLE PATH FOR SYSTEM DEPOSITS AS UNCONVENTIONAL MONETARY POLICY UNWINDS¹

Growth in deposits over the next two years will primarily be determined by credit growth, the RBA's bond portfolio maturing, and banks' decisions about their funding mix. A plausible scenario is that deposits in the banking system increase by \$325b over 2024 and 2025 (5 per cent each year) as deposits created by credit growth would be partly offset by deposits destroyed as unconventional monetary policy unwinds. However, the error bands around this scenario are wide.

Deposits grew quickly during the pandemic...

The stock of deposits in the banking system increased significantly over the pandemic, expanding \$475b from February 2020 to December 2021 (Graph 1).

s 22 (2022) estimate roughly half of the increase in deposits was due to Bond Purchase Program (BPP) (see Box A for the different ways deposits can be created). The rest of the increase in deposits was due to:

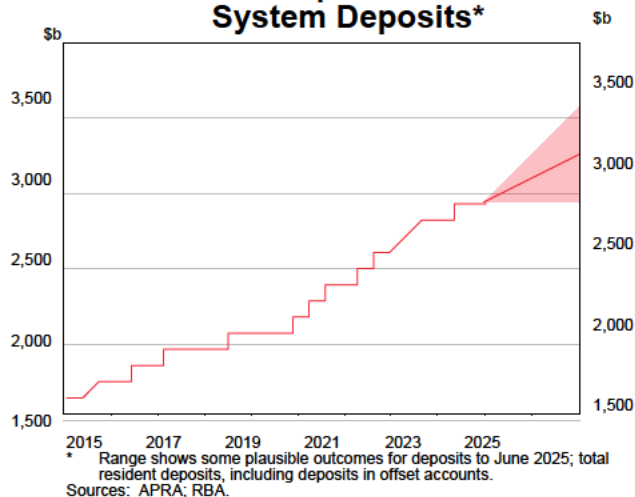
- Credit growth, because [money is born of credit](#).
- Net spending by the Australian Government.
- Net maturities of wholesale bank debt.

Over 2023, deposits increased by \$130b, or 4½ per cent – roughly the same pace as credit, even as bonds purchased by the RBA start to mature and banks have purchased more government securities to support their liquidity ratios.²

...and will likely keep growing as deposits created by new credit outweigh deposits being destroyed as unconventional monetary policy unwinds

We estimate deposits could grow by \$325b over 2024 and 2025, driven by growth in credit (Graph 2, Table 1).

**Graph 1
System Deposits***



**Graph 2
Plausible Change in System Deposits**
By contribution, 2024 and 2025

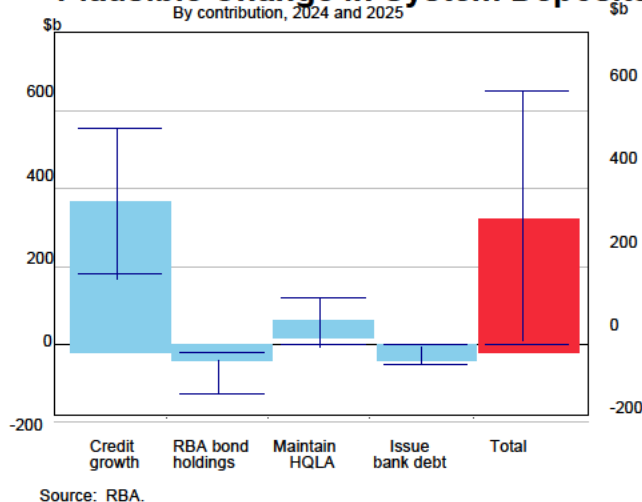


Table 1: Plausible Contributions to System Deposits
Over 2024 and 2025, rounded to \$5b throughout

	(\$b)
6%pa credit growth	365
RBA bond holdings mature	-50
Banks maintain HQLA	60
Banks issue more debt	-50
Total	325

The unwinding of unconventional monetary policy has a large effect on the RBA's balance sheet (**s 22** 2023) but a smaller effect on deposit growth. Unless credit growth is very weak and the RBA undertakes active quantitative tightening (front-loading deposits being destroyed), system deposits will likely continue to grow over the next two years.

¹ We would like to thank **s 22** for assistance with data on this note and earlier rough estimates.

² Deposits and credit data to end-November, annualised.

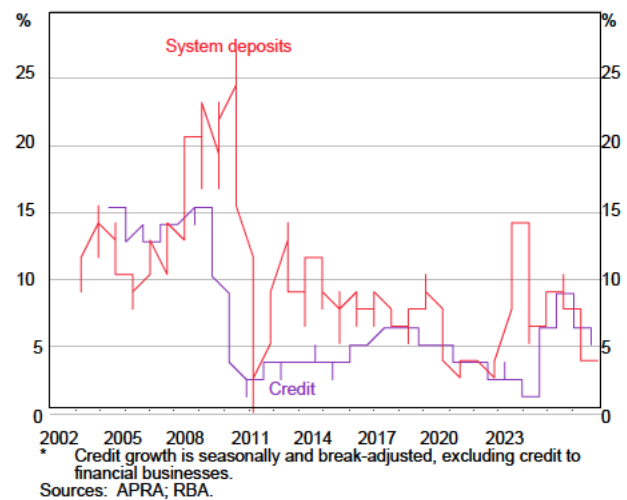
The central scenario is plausible but highly uncertain; for each factor we consider upper- and lower-bound scenarios to attempt to quantify the uncertainty. In addition to volatility in the rate of credit growth, the level of deposits will depend on the extent to which banks manage their liquidity ratios by purchasing government securities and whether banks change their funding mix. How the Australian Government funds maturities of AGS will have a smaller – but still noticeable – effect on the path of deposits in the next two years.³

Credit growth could add \$365b in deposits

All else equal, credit and deposits would grow at roughly the same rate. Nominal trend growth in credit was around 6 per cent since 2008 ([s 22 2023](#)); projecting credit growth forward would imply an additional \$365b in deposits. Given the volatility in credit, we set upper and lower bounds at ± 3 percentage points.

Credit and deposit growth most commonly diverge when banks change their funding mix (Graph 3; we consider this effect below). For example, deposits grew faster than credit after the GFC when banks shifted away from wholesale debt funding – particularly short-term debt – creating deposits through the net maturity of debt ([s 22 2023](#)). Unconventional monetary policy and a large increase in net government spending also created a substantial gap during the COVID pandemic.

Graph 3
Credit and Deposit Growth*
Year-ended



s 22

s 22

s 22

If banks maintain record net issuance of debt, \$50b in deposits could be destroyed

The deposits assumed to be created by credit growth are based on banks holding the deposit share of their funding mix constant (Graph 7). If instead banks issue more bank debt, deposits will be destroyed.

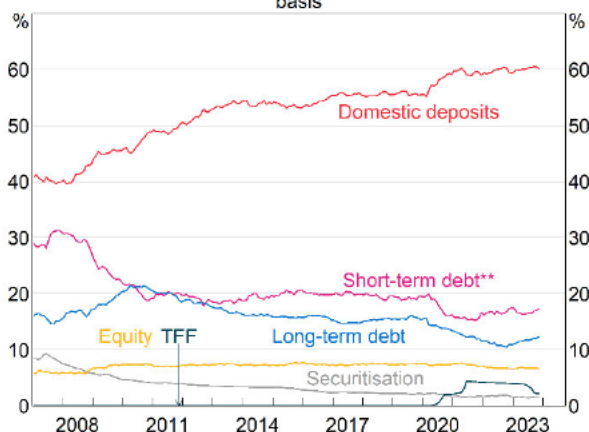
For our **central scenario**, we assume banks maintain the strong pace of net bond issuance in 2023 (a nominal record) of ~\$70b per year for the next two years, plus issue around \$50b of net short-term debt per year (Graph 8). Of the \$240b net issuance, \$160b is required just to *maintain* the funding mix at 2023 shares. The remaining \$80b would destroy around \$50b in deposits (assuming equal split between domestic and offshore issuance, and stable non-bank ownership shares; see Box A). Our **lower-bound scenario** assumes just enough net issuance to maintain the funding mix, so no deposits are destroyed.

A risk to the deposit profile is a large shift in banks' funding mix. Even maintaining record issuance for the next two years under our central scenario would only decrease the deposit share of funding by perhaps 50 basis points. Deposits are cheap relative to bank debt, and typically efficient to hold for banks' regulatory ratios. Therefore, large-scale shifts in funding mix have historically occurred only in response to regulatory change, financial crises (the GFC) or large economic shocks (COVID). For this reason, our **upper-bound scenario** is the same as the central scenario. There is not enough evidence to support an assumption of net issuance above record 2023 levels, but if it were to occur it would weigh on growth in system deposits.

Graph 7

Banks' Funding Composition*

Share of total funding; debt is on an original maturity basis

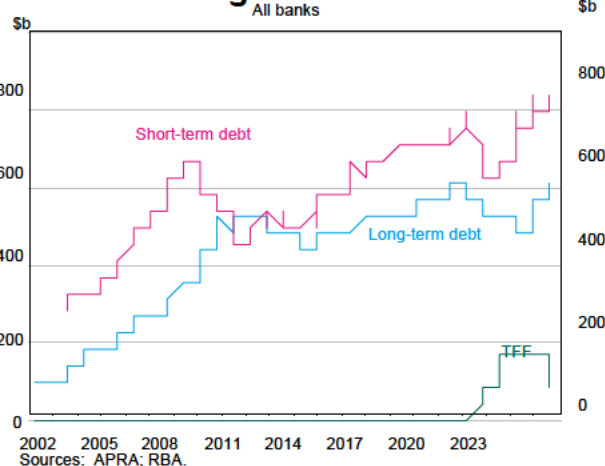


* Adjusted for movements in foreign exchange rates.
 ** Includes deposits and intragroup funding from non-residents.
 Sources: ABS; APRA; Bloomberg; RBA; Refinitiv

Graph 8

Outstanding Bank Debt and the TFI

All banks



Sources: APRA; RBA.

Box A: How deposits can be created

- **Credit growth.** New lending creates deposits when the funds are made available to the borrower. Businesses drawing down on their lines of credit similarly creates deposits.
- **Bond Purchase Program.** When the RBA purchases government bonds, a deposit is created only if that bond is ultimately sourced from a non-bank investor. When the RBA purchases the bond from a commercial bank, it credits their ES account, but ES balances are not deposits. Only if the commercial bank purchased the bond from a non-bank investor (therefore crediting the investor's account with deposits) are new deposits created. For example, during COVID we estimate around two-thirds of bonds purchased were ultimately sourced from non-bank investors.
- **Net spending by the Australian Government (budget deficits).** When the Australian government spends, funds are transferred from the Official Public Account (which is not a deposit) to commercial banks' ES accounts (also not a deposit) and ultimately credited as a deposit in the beneficiaries' bank accounts. Collecting taxes is the opposite process, and destroys deposits.
- **Net maturities of AGS.** Deposits are created in the same mechanism as the BPP, if the maturing bonds are ultimately sourced by non-bank investors. Net *issuance* of AGS to non-bank investors destroys deposits, offsetting roughly two-thirds of deposits created by net government spending (the one-third of government debt purchased by banks does not destroy deposits). Similarly, changes in ownership of government debt between banks and non-bank investors alters the level of deposits; deposits are created when banks purchase AGS from non-bank investors.
- **Net maturities of bank debt.** Deposits are created because banks repay their debt by crediting bondholders' deposit accounts with new funds. Deposits are only created if the bondholder is not a bank. Non-banks hold roughly three-quarters of domestically issued bank debt and 40 per cent of offshore bank debt.

The inverse in each scenario destroys deposits: households repaying debts; the RBA selling bonds back to non-bank investors (note the effect of QT on deposits where bonds mature depends on the actions of the AOFM); net taxation by the Australian Government; net issuance of AGS; and net issuance of bank debt.

Figure 1: How to identify whether deposits might be created or destroyed

FMG Seminar Presentation, February 2024

Deposits are created or destroyed when funds move between one of RBA/Federal Government/ADIs and another actor

