The Monetary Union of Australia, New Zealand and the United Kingdom – Its Operation, Fragmentation and Break-up

Abstract: This article examines the monetary arrangements between Australia, New Zealand and the United Kingdom from the 1820s to the 1930s. It is argued that the three countries formed a monetary union for most of this period. A new analysis of inland and London exchange rates demonstrates that the union achieved a high degree of uniformity and stability, and that an international branch network of competing, private banks could successfully integrate vastly different geographic and economic areas. It is shown that the union’s break-up in the 1930s was the result of a political decision to create separate and devalued Australian and New Zealand currencies in order to mitigate some of the impacts of the Great Depression. International lending of last resort only played a limited role and helped to fix exchanges between the newly separated currencies after 1932.

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1 Introduction

Australia and New Zealand share a long economic, political and legal history as they are geographically proximate and were once closely integrated colonies of the British Empire. This integration was once particularly strong in monetary matters. For most parts of the 19th century and well into the 20th century, the seven colonies of Australasia¹ and later Australia and New Zealand, had a common monetary and banking system that was closely linked to that of the United Kingdom. Chalmers, in his influential 1893 survey of the currencies of the British Colonies, classified Australasia, together with other colonies, under the “Sterling Standard”, which belonged to the “rapidly widening ‘currency area’ of Great Britain”.² The currency area comprising Australia, New Zealand and the United Kingdom gradually fragmented from the beginning of World War I, as restrictions were imposed on gold exports and note redeemability. The systems briefly realigned with the introduction of the gold bullion standard in the United Kingdom in 1925, but broke up into separate currency areas in 1929-1936 due to the impacts of a severe exchange rate crisis triggered by the Great Depression. The understanding that Australia, New Zealand and the United Kingdom had identical currencies was firmly held until the Great Depression.³

The contemporary view that currencies were identical began to be challenged on theoretical grounds in the 1920s and 1930s, at a time when the currency area had started to fragment.⁴ A narrative then developed that Australia and New Zealand had always been on a “sterling exchange standard”,⁵ even

¹ New South Wales, New Zealand, Queensland, South Australia, Tasmania, Victoria and Western Australia. Six colonies achieved responsible government in the 1850s and obtained the power to regulate currency by colonial acts. Western Australia followed in 1890. In 1901, the federation of six colonies formed the Commonwealth of Australia, which obtained the power to make laws with respect to currency, coinage and legal tender. New Zealand’s status was changed to that of a Dominion in 1907.
² R. Chalmers, History of Currency in the British Colonies, London 1893, pp. 27, 30.
³ Commonwealth of Australia, Report of the Royal Commission on Monetary and Banking Systems, Canberra 1937, p. 40 and G. Hawke, 1872-1947 the early Years, in: F. Holmes (Ed.), The Thoroughbred among Banks in New Zealand. Volume 1, Wellington 1997, p. 35.
⁴ A.H. Tocker, The Monetary Standards of New Zealand and Australia, in: The Economic Journal 34, 1924, pp. 556-575; D.B. Copland, Australian Banking and Exchange, in: Economic Record, November 1925, pp. 17-28; B.C. Ashwin, Banking and Currency in New Zealand, in: Economic Record, November 1930, pp. 188-204.
⁵ Ashwin, Banking and Currency, p. 194 and the statement submitted by the New Zealand Treasury to the 1934 Monetary Committee on Banking and Currency in New Zealand authored
prior to 1914. Not gold reserves but funds held in London were the real regulator of the Australian and New Zealand banking systems. The “exchange standard” concept typically described countries with silver or paper currencies that held a reserve of foreign gold standard currencies (e. g. India, Russia, The Philippines). Hence, in the Australian and New Zealand context, the characterisation of monetary arrangements as exchange standard implied that pounds in Australia, New Zealand and the United Kingdom were in reality not identical. Banks controlled the volume of credit in Australia and New Zealand to keep exchanges with London at par. The par exchange rate was only a convention. By 1934 the sterling exchange standard and the role of London funds “had acquired the status of orthodoxy”. Consequently, Butlin, in his standard work on the Australian monetary system, classified Sydney exchanges on London even before 1851 as foreign exchanges and expressed pounds in Sydney and other Australian locations as “£s Australian”.

There are doubts, however, as to whether the sterling exchange standard is the most appropriate concept to describe the monetary arrangements that linked Australia, New Zealand and the United Kingdom in the 19th and early 20th centuries. While the state of London funds was certainly a critical variable as bank reserves were predominately held in London, the three systems appear to have been much more closely integrated than a sterling exchange standard would suggest. For instance, the high degree of integration is clearly recognisable in the underlying legal structure. Fox, based on a comprehensive legal analysis, consequently characterises the system as a “Sterling Monetary Union” that in his view existed from the 1850s to the 1930s. Independently, Decker and McCracken argue that the monetary arrangements between Australia, New Zealand and the United Kingdom, at least before 1914, are more appropriately described as a monetary union and that the sterling exchange standard narrative can be misleading.

The objective of this article is to build on Decker and McCracken and show at a more detailed level that a monetary union existed between Australia, New Zealand and the United Kingdom from the 1820s to the 1930s. The main argu-
ment is that the currency area, during most of the period under review, used the same monetary unit, had a common coinage and was interconnected by a highly integrated international branch banking and clearing system. I argue that the currency area comprising Australia, New Zealand and the United Kingdom (ANZUK) therefore meets the conventional criteria of a currency or monetary union (ANZUK monetary union), in particular before 1914. Moreover, I find that the ANZUK monetary union was part of an imperial hub and spoke network with London at the centre, where Australasia, Ireland and Scotland represented distinct satellites that were interconnected through a carefully managed system of London, intercolonial\(^{10}\) and inland exchanges. A review of inland and London exchange rates shows that the union achieved a high degree of uniformity. I then consider the period after 1914 and show how gold export and note redeemability restrictions together with changes to inter-bank clearing arrangements impacted on the union and led to its fragmentation in 1920-1924. The 1929-1931 exchange crisis caused the break-up of the union. I assess at what point in time the currencies should be regarded as separate. The international dimension of the crisis also raises the important question as to whether international lending of last resort played any role. I show that the Bank of England assisted from 1932 in the stabilisation of London exchange rates after the separation of the systems.

The article is organised as follows. Section 2 covers the period to World War I, while Section 3 analyses the institutional changes in 1914-1936. Section 4 outlines the fragmentation and break-up of the union as evidenced in the exchange rate development. Section 5 reviews whether there was still a monetary union after 1914. The role of international lending of last resort is explored in Section 6. Section 7 adds some concluding remarks.

### 2 The ANZUK Monetary Union to World War I

Conventionally, a multinational monetary or currency union can be defined as “groups of countries that share a single money”\(^{11}\) with “the recognition of a common unit of account and a more or less satisfactory standardisation of the coinage”.\(^{12}\) In the following, the case for classifying the currency area of Australia,

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\(^{10}\) Interstate after federation.

\(^{11}\) A.K. Rose, Currency Unions, in: S.N. Durlauf/L. Blume (Eds.), The New Palgrave Dictionary of Economics, New York 2008, pp. 2554-2559, here: p. 2555.

\(^{12}\) T. Congdon, Comments on Chapter 3 – The future of EMU, in: F.H. Capie/G.E. Wood, Monetary Unions, London 2003, pp. 70-72, here: pp. 71-72; see also A. Ögren, Currency Unions, in: S.
New Zealand and the United Kingdom prior to 1914 as a monetary union is based on three institutional factors. The seven colonies shared a common monetary unit, used a common coinage and had a highly developed branch banking system that linked monetary obligations in all relevant Australasian towns and cities, and London through the accounts of the banks. The historical development of inland, intercolonial and London exchange rates suggests that this institutional set-up created a high degree of uniformity and monetary integration.

From the beginning of the colony of New South Wales, the monetary unit or money of account for expressing debts, prices and keeping accounts was the pound sterling. After a short transition to a system based on the Spanish dollar introduced in 1822, the pound sterling was restored as the official monetary unit in various enactments from 1825. This was part of a broader Imperial scheme for introducing British silver coinage into general circulation in the British colonies. Subsequently, through various Acts and Proclamations, gold coins issued by the Royal Mint in London and its colonial branches (Sydney, Melbourne and Perth) were made legal tender in Australasia, the United Kingdom and parts of the British Empire. New South Wales passed currency acts in 1854 and 1855 that made gold coin legal tender.

For most of the time period prior to World War I, Australasia operated under a free banking system with competing, private note-issuing banks. State notes only began to replace private bank notes from the end of the 19th century, with Queensland introducing Treasury notes in 1893 and the Commonwealth of Australia passing legislation in 1910 to introduce Australian notes. Australian notes were legal tender but payable in gold coin at the Melbourne Treasury on demand. New Zealand retained privately issued bank notes until the Reserve Bank of New Zealand (RBNZ) began operations in 1934.

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Battilossi (Ed.), Handbook of the History of Money and Currency, Singapore 2020, pp. 747-770, here: p. 748, who defines currency union as “two or more sovereign nations adopt a common currency” and also share “a common unit of account”.

13 Here defined “as the units in which debts are reckoned”, R.G. Hawtrey, The Gold Standard in Theory and Practice, London 1947, p.7. Hence, the pound is not a coin and the sovereign is valued as one pound.

14 In the early years of the colony, sterling accounting was complemented by a second monetary unit, the “pound currency”, see F. Decker, Bills, Notes and Money in early New South Wales, 1788-1822, in: Financial History Review 18/1, 2011, pp. 71-90.

15 Chalmers, History, pp. 23, 248-250.

16 Ibid., pp. 28-29, 254.

17 Ibid., p. 254.

18 Treasury Notes Act 1893 (Qld).

19 Australian Notes Act 1910.
The integration through the use of a common monetary unit and coinage was underpinned by a tightly integrated branch banking system that interconnected all significant towns and cities in Australasia with their respective capital cities and London. In his eighth annual statistical survey of Australasia for 1899-1900 the New South Wales government statistician Coghlan\textsuperscript{20} reported that at the beginning of 1900 Australasia had 22 trading banks. The top ten trading banks accounted for 77 percent of total assets and all had a head office or a branch location in London. Two of the top ten banks were headquartered in London accounting for 24 percent of total trading bank assets. At the time, five trading banks operated in New Zealand, of which three were headquartered in London, one in Wellington and one in Sydney. The banks were also highly interconnected in multiple locations. Out of the 22 banks, 15 had a presence in London, 13 in Sydney, 11 in Melbourne, 11 in Brisbane, seven in Adelaide, six in Perth, five in Wellington, four in Launceston/Hobart and one in Fiji. This multilateral structure reflected the relatively high importance of intercolonial trade, which in 1899 was of about the same size as the trade of all seven Australasian colonies with the United Kingdom.\textsuperscript{21} The larger Australasian banks developed extensive branch networks. There were 1,280 open trading bank branches in Australia in 1900.\textsuperscript{22} None of the banks operated outside Australasia\textsuperscript{23} and London.

Clearing arrangements in capital and regional cities linked note and deposit liabilities of the different banks at par in the various locations.\textsuperscript{24} The London branches or head offices of the banks operating in Australasia were in turn directly linked to the English monetary system through accounts kept with the Bank of England and local English banks. London was also the chosen location for the majority of bank reserves.\textsuperscript{25}

\textsuperscript{20} T.A. Coghlan, A Statistical Account of the Seven Colonies of Australasia 1899-1900, Sydney 1900, p. 744.
\textsuperscript{21} Ibid., pp. 335-337, with trade to the United Kingdom at 64 percent of total external trade. British possessions and foreign countries received 10 percent and 26 percent, respectively.
\textsuperscript{22} S.J. Butlin, The Australian Monetary System 1851-1914, Sydney 1986, p. 298.
\textsuperscript{23} Including branch locations in Fiji and in later years Samoa, Papua and New Guinea. The original scheme put forward by the promoters of the Bank of Australasia in 1833 was for a “Bank of Australasia and South Africa”, but a charter was only granted for Australia, see S.J. Butlin, Australia and New Zealand Bank. The Bank of Australasia and the Union Bank of Australia Limited 1828-1951, Melbourne 1961, pp. 22-25.
\textsuperscript{24} Notable clearing houses included the Melbourne Clearing House, the Sydney “Banker’s Pool” and “The Pool” in Wellington.
\textsuperscript{25} Based on archival data of the Bank of New South Wales, at the time Australasia’s largest bank headquartered in Sydney, I was able to reconstruct an unpublished 1906 balance sheet with a breakdown by colony as an example. The bank’s capital was £3.7m or 11 percent of
The actual level of monetary integration can be assessed by looking at the exchange rates between locations within the union. Location is an important concept in banking law, as legally the banker’s obligation to pay a cheque is limited to the place and branch where the customer’s account is kept. While par clearing applied to individual towns and cities, exchange was charged to transfer funds between different towns and cities including domestic and international locations. Exchange applied to cheques, bills, orders, and transfers between savings accounts in different locations. Exchange rates were determined by the private banks, which typically co-ordinated rate quotations through their associations. Domestic exchange has been well recognised as part of the evolution of the monetary union of the United States but has been neglected in the Australian context, where the focus has almost entirely been on exchange rates between different Australasian capital cities and London.

Conceptually, there are four main reasons why exchanges incur charges. First, there is the interest cost associated with the collection time, including the time taken to transport the bill or cheque to its destination and the time of payment specified on the bill once it is at its destination. With the introduction of the telegraph, this charge could be eliminated by the telegraphic transfer of funds. Second, there are costs associated with maintaining a branch office and providing services (e.g. premises and staff) in a specific location. Third, there are costs associated with maintaining adequate reserves (e.g. cost for shipping assets. Remarkably, almost the entire capital was located in London, where assets exceeded liabilities by £3.5m. London based investments included £2.5m of money at short call, £1.5m of British and Colonial securities and debentures, and £1.1m of interstate remittances and bills receivable in London. The balance sheets are held in the Westpac Banking Corporation Archives, Sydney (Westpac Archives). Westpac was formed by the merger of the Bank of New South Wales, the Commercial Bank of Australia and other organisations in 1982. It is one of Australia’s “big four” banks.

26 Clare & Co v Dresdner Bank [1915] 2 KB 576.
27 For instance, as outlined in Reserve Bank of Australia Archives, Sydney (RBA Archives), CS-I-4, Commonwealth Savings Bank Administration - Instruction Books, Sydney 1914, p. 12.
28 For instance, K.D. Garbade/W.L. Silber, The Payment System and Domestic Exchange Rates: Technological Versus Institutional Change, in: Journal or Monetary Economics 5, 1979, pp. 1-22.
29 For instance, the standard references Butlin, Foundations; Idem, Australian Monetary System; Idem/A.R. Hall/R.C. White, Australian Banking and Monetary Statistics 1817-1945, in: Reserve Bank of Australia, Occasional Paper No. 4A, Sydney 1971 do not include domestic exchange statistics.
30 On the cost issue for remote locations see, for instance, RBA Archives, S-a-107, Secretary’s Department, Exchange Inland – Interstate Rate, 05.03.1924, Letter of the Queensland National Bank to the chair of the Commonwealth Note Issue Department, which refers to the “cost of maintaining Branches in out-of-the-way places”.
and insurance of gold or Australian notes across locations). Supply/demand factors require some further commentary as their impacts within a branch banking system are not well understood. In the following, the critical accounting relationships are illustrated using a simplified model where all transactions are conducted through a single bank with two branches in location 1 (1) and location 2 (2). As total bank assets must equal liabilities, the following relationship between changes in individual branch assets (A1 and A2) and liabilities (L1 and L2) must hold (Eq. (1)):  

\[ \delta L_1 - \delta A_1 = \delta A_2 - \delta L_2 \]  

Eq. (1)

From a bank’s perspective, the purchase of a bill drawn on 2 by its branch in 1, creates a deposit (\(\delta L_1 > 0\)) or reduces an advance (\(\delta A_1 < 0\)), as the customer in 1 obtains a credit for the bill in a deposit or overdraft account. In turn, the bill is posted to the branch in 2, which obtains an additional asset (\(\delta A_2 > 0\)) without a corresponding deposit liability (\(\delta L_2 = 0\)). While there is no change in the net asset position (defined as assets minus liabilities) for the bank as a whole, net assets in 2 increase at the expense of 1. This relationship holds for a typical export transaction, for instance, where an exporter in 1 sells a bill drawn on 2 to a bank branch in 1.

In the opposite import transaction, an importer in 1 buys a bank draft drawn on 2 from a bank branch in 1. Consequently, branch 1 advances increase (\(\delta A_1 > 0\)) or deposits decrease (\(\delta L_1 < 0\)), as the customer would typically take out a loan to fund the draft purchase or use an existing deposit. When the draft reaches the branch in location 2, its deposits are increased (\(\delta L_2 > 0\)) or its advances reduced (\(\delta A_2 < 0\)), assuming that proceeds are credited to a customer’s deposit or overdraft account. As a result, the net asset position of branch 1 has improved relative to branch 2.

Exports surpluses can therefore create liquidity exposures in location 1 as deposits are increased at the expense of assets, whereas import surpluses can result in liquidity exposures in location 2 due to an increase in liabilities with an associated potential outflow of funds. Banks would mitigate these imbalances.

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31 For instance, an article in the South Australian Register, 05.07.1893 suggests that South Australian banks justified their increase in domestic exchanges by reference to expenses in forwarding additional gold to the country branches during the 1893 financial crisis.

32 S. Patterson, Domestic and Foreign Exchange, New York 1917, pp. 13-17.
in three ways. First, banks kept a buffer of reserves and managed the level of advances through interest rates or quantitative controls, and in that way influenced the volume of imports into the location of the branch. According to statements of bankers, this was the most important mechanism. Second, banks could adjust their selling and buying rates. Third, banks could restore the relative financial positions of branches through off-setting gold or Australian note shipments.

The latter mechanism is effective because for inter-branch transfers an asset outflow in one branch must create an equal inflow in another branch. Consequently, there is theoretically no exposure (ignoring shipping costs and insurance) from exchanges within a branch network of the same bank as long as settlement assets (e.g. gold) can be moved quickly enough to the required location. This assumes that overall reserves are adequate. Hence, demand and supply related exchange rate charges can be greatly reduced by faster and more efficient transportation and communications. This is precisely what can be observed in the historical development of exchange rates.

The accounting relationships for the export leg reveal an important relationship between the excess of domestic deposits over advances and London funds in an Australasian context. If it is assumed that changes in liabilities are mainly due to changes in deposits in 1 and changes in assets are mainly due to changes in advances in 1, it follows that any increase in the excess of deposits over advances in 1 must be matched by a corresponding increase in net assets in 2. Hence, in the typical situation where banks kept their reserves in London and created the majority of deposits and advances in Australasia rather than London, the excess of deposits over advances in Australasia must have a linear relationship with London funds. This accounting relationship is precisely what Tocker and others identified as a “correlation” and used as evidence to argue for the existence of a “sterling exchange standard”. In this view, Australia and

33 See New Zealand, Monetary Committee, Minutes of Evidence, p. 47, witness statements from the Associated Banks of New Zealand, Mr. Shaw: “[exchange rate] [f]luctuations, if it is only a matter of a couple of pounds, is not enough to regulate anything [...] the banks would of necessity (and have in the past to my knowledge) restrict, say, credits with the view of preventing too many imports”. R. Wilson, The Australian Trading Banks, in: R.S. Sayers (Ed.), Banking in the British Commonwealth, Oxford 1952, pp. 1-38, here: p. 22, stressed the delayed impact of credit decisions and that banks could not forecast their impact on imports with certainty. He therefore argued that there was “no exact relation between an increase (or decrease) in London funds and an expansion (or contraction) of credit in Australia”.

34 Tocker, Monetary Standards, p. 562; Copland, Australian Exchange, pp. 19-20; for South Africa see, S.H. Frankel, The Situation in South Africa, in: The Economic Journal 169, 1933, pp. 93-107, here: p. 105-106.
New Zealand’s monetary systems had always been regulated by the banks. The classical price-specie flow theory did not hold, with the corollary that currencies had never been identical.

It is clear, however, that the observed “correlation” should not be overinterpreted. It simply reflects the accounting relationships between branch balance sheets in an international branch system and the assumptions made about the location of credit creation and reserves.\(^{35}\) Par clearing in individual locations and exchanges between clearing hubs united the different bank notes and deposit liabilities into a “single money”. Reserves across all domestic and international branch locations were subject to careful management. London had a special role as the reserve location but from this does not follow that New Zealand and Australian currencies were always separate. This argument is further supported by the fact that London funds were not only important for Australasian banks. The English country banking system used London assets as a critical part of its reserves and for inter-bank settlement.\(^ {36}\) Moreover, the Scottish banks appear to have devised the exchange rate stabilisation practice that was later followed by Australasian and other banks. This included a mutual rate agreement between the banks and the use of a buffer stock of accumulated London funds. In this way, the Scottish banks successfully stabilised the Edinburgh-London exchange in 1809.\(^ {37}\) The practice was subsequently applied from 1822 by the Bank of Ireland to fix the Dublin-London exchange rate.\(^ {38}\)

The narrative of the “sterling exchange standard” remained an attractive concept despite its theoretical shortcomings and the contradictory historical evidence demonstrating that London funds played an equally important role within the English, Irish and Scottish banking systems, i.e. within a single currency area. However, it suited the New Zealand Treasury, which wanted to man-

\(^{35}\) Already R. Wilson, Australian Monetary Policy Reviewed, in: Economic Record, November 1931, pp. 195-215, here: p. 205 had noted that the “correlation, indeed, is so perfect that it is at once suspect” and highlighted the trivial, arithmetical nature of the relationship.

\(^{36}\) L.S. Pressnell, Country Banking in the Industrial Revolution, Oxford 1956, p. 197.

\(^{37}\) The rate agreement was decided by a meeting of the Edinburgh banks in 1809 to counter the activities of John Maberly, who had challenged the duopoly of the Bank of Scotland and Royal Bank, see C. Munn, The Scottish Provincial Banking Companies 1747-1864, Edinburgh 1981, pp. 121-127. An example of evidence that Scottish banks collected funds in London for exchange rate stabilisation purposes can be found in the evidence of James Mansfield, Banker in Edinburgh, in: F.W. Fetter, The Irish Pound 1797-1826. A Reprint of the Report of the Committee of 1804 of the British House of Commons on the Condition of the Irish Currency, London 2006, p. 91.

\(^{38}\) G.L. Barrow, The Emergence of the Irish Banking System 1820-1845, Dublin 1975, pp. 44-47.
age the New Zealand currency independently of Australian influences.\textsuperscript{39} Across
the Tasman Sea, Davidson, the General Manager of the Bank of New South Wales,
used the same narrative to justify his actions to effectively create a separate Aus-
tralian currency in the exchange crisis of 1929-1931 (see Section 4).\textsuperscript{40} Both parties
had a stake in the separation from the pound sterling and made out that it was a
less significant change than it actually was. Later economic historians built on
the narrative as it aligned well with their efforts to create the first truly national
and separated monetary histories of Australia and New Zealand.\textsuperscript{41}

A schematic and simplified topology of the major exchange relationships
found within the ANZUK monetary union is shown in figure 1.\textsuperscript{42}

Major clearing hubs in the United Kingdom (Dublin, Edinburgh and London)
and Australasia (Adelaide, Brisbane, Fiji, Hobart, Launceston, Melbourne, Perth,
Sydney and Wellington) were connected with the banks’ London branches or
agents through London exchanges. In addition to their direct London exchang-
es, clearing hubs in the seven colonies and Fiji were also interconnected with
each other through intercolonial exchanges and overlapping branch networks
and in this way created a distinct Australasian sub-system. In turn, local
branches were connected to the nearest major clearing hub on a par clearing
basis or through inland exchanges. The ANZUK topology therefore suggests that
Ireland, Scotland and Australasia represented three distinct satellites within an
imperial hub and spoke network of exchanges with London at the centre. It is
clear that there were other satellites connecting into London that operated
along similar principles, for instance, South Africa. One could thus conjecture
that the ANZUK monetary union was only a subset of an imperial monetary
union that extended over an even larger geographic area.\textsuperscript{43}

\textsuperscript{39} Ashwin, Banking and Currency, p. 202.
\textsuperscript{40} Bank of New South Wales, Royal Commission on Monetary and Banking Systems 1936, Replies
by A.C. Davidson, General Manager, to Questionnaire to Trading banks, Sydney 1937, p. 53.
Davidson argued that Australia had been on a \textit{de facto} sterling exchange standard from the
time the Spanish dollar was abandoned in the 1820s. He noted “we have followed sterling
whether on gold or off, believing the story that an Australian pound was exactly the same as an
English pound as firmly as the very young believe in fairies”.
\textsuperscript{41} For instance, Butlin/White/Hall, Statistics p. 84 went through great efforts to separate the
New Zealand component of Australasian bank balance sheets in order to create an Australian
banking and monetary statistics. It should be noted that this separation of Australian and New
Zealand monetary data can only be approximated as banks did not separate London funds with
respect to their Australian and New Zealand operations.
\textsuperscript{42} Only Melbourne, Sydney and Wellington are shown for simplicity.
\textsuperscript{43} More detailed research is required to assess (i) whether the level of monetary integration of
other satellite systems with the United Kingdom was comparable to that of Australasia, (ii) the
Fig. 1: ANZUK Monetary Union – Topology of Major Exchange Relationships. Source: created by the author.

The exchange operations emanating from a colonial clearing hub can be illustrated based on a typical exchange rate quotation from the Sydney newspaper Empire, which is reproduced in table 1. Exchange rates are shown between Sydney and London, and various other inland and intercolonial locations.

As was standard practice for identical currency systems, exchange rates were quoted on a percentage basis. For instance, in table 1, the buying rate of ½ percent discount Sydney on Melbourne signified that a £100 bill of exchange payable in Melbourne would be exchanged for £99/10/0 in the seller’s bank account in Sydney. Conversely, a buyer would have to pay a 1 ½ percent premium or £101/10/0 in Sydney to obtain a £100 draft on Melbourne.

As demonstrated in table 1, exchange rates were typically small and correlated with distance. Supply and demand factors are evidenced by the fact that buying and selling rates were not always symmetrical. As the Australasian specific geographical area and timing; and (iii) whether the institutional structures met the criteria of monetary union (see Section 5 above for suggested criteria). A starting point for possible candidates is provided by Chalmers, History, p. 30, who listed Australasia, The Cape, Natal, Fiji, St Helena, Malta, West Indian Islands, British Guinea, West African Colonies and Falkland Island under the Sterling standard.

4 As is explained in Patterson, Exchange, p. 225. Patterson, writing in 1917, considered London and Australia as identical systems.
The economy grew and transportation improved over the course of the 19th century, intercolonial and later interstate rate quotations no longer distinguished between buying and selling rates, with the same value applied as a discount for the buying rate and as a premium for the selling rate. Exchange rates also decreased. For instance, the buying rate Sydney on Melbourne was ½ percent (10s) in 1862 and had halved to ¼ percent (5s) in 1906. In 1925 rate quotations show a further reduction to 1/8 percent (2/6).\(^\text{45}\) The corresponding buying rate Sydney on New Zealand was 2 percent in 1862 and had reduced to 3/4 percent by 1906.

**Tab. 1:** Exchange Rates in Sydney, Empire (newspaper) 21.05.1862.

| Sydney on | Usance | Purchase bills | Issue drafts |
|-----------|--------|----------------|--------------|
| London    | 30 days | -              | 2 percent premium |
|           | 60 days | par            | 1 ½ percent discount |
| Melbourne and Geelong [Victoria] | at sight | 1/2 percent discount | 1 ½ percent premium |
| Ballarat, Portland, Sandhurst, Belfast, Castlemaine, Avoca and Beechworth [Victoria] | at sight | 1 percent discount | ½ percent premium |
| Adelaide [South Australia] | 15 days' sight | 1 percent discount | ½ percent premium |
| Launceston and Hobart Town [Tasmania] | 15 days sight | 1 percent discount | 1 percent premium |
| Brisbane [Queensland] | ½ percent discount | ½ percent premium |
| Goulburn and Bathurst [New South Wales] | ¼ percent discount | ¼ percent premium |
| Maitland and Newcastle [New South Wales] | 1/8 percent discount | 1/8 percent premium |
| New Zealand | 15 days' sight | 2 percent discount | 1 percent premium |

Domestic exchange was also applied within New Zealand. For instance, in 1862 the selling rate Auckland on New Zealand for drafts at 3 days sight was 1 percent premium, while buying rates (15 days) were at ½ – 1 percent discount. Buying

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\(^{45}\) RBA Archives, S-a-1070, Exchange, Inland-Interstate Rates. The files include a proposal from the Associated Banks to reduce rates from 5/- to 2/6 percent in response to an inquiry from the Notes Board on 27.02.1924.
and selling rates Auckland on London (60 days) were at 1 percent premium and 1 percent discount, respectively.\textsuperscript{46}

Exchanges between Australasia and London were more strongly exposed to supply and demand factors than intercolonial exchanges as these were less easy to equalise due to distance.\textsuperscript{47} The history of London exchange rates over the 1835-1914 period is shown in figure 2.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{exchange_rates.png}
\caption{Exchange Rates Sydney/Melbourne on London, 1835‒1914. A new database of 30 and 60 day buying and selling rates was created for this article. It holds about 700 individual exchange rates. About 490 data points are based on \textit{Butlin}, Foundations; \textit{Idem}, Australian Monetary System; and \textit{Idem/White/Hall}, Statistics. I have corrected some anomalies and added some 210 additional data points from primary newspaper sources.}
\end{figure}

\textsuperscript{46} New Zealander, 08.02.1862.
\textsuperscript{47} The mail service between Sydney and London by steam ship took about 33 days in 1899, see \textit{Coghlan}, Statistical Account, p. 709.
The graphs show the 30-day buying and selling rates Sydney on London for 1835-1857, and 60-day rates for 1857-1873, as the standard usance was changed around 1857. Melbourne on London 60-day rates are displayed for 1873-1914, as there are more consistent newspaper quotations, with rate differentials between Sydney and Melbourne negligible in this period.

Overall, rates show a clear trend of declining volatility over time and rates stayed broadly within the gold points, which were at around 3 percent from par in the mid-1850s and at 1 percent below or above par after the 1860s.\textsuperscript{48} It should be noted that gold points increased in line with war risk driving up insurance costs. Large variations in buying and selling from par are related to extreme events. High buying rate discounts correlate with periods where banks sought to protect their liquidity position in Australasia through reduced bill purchases and the associated net asset outflows. This can be seen during the 1840s depression, the 1852 liquidity squeeze during the Victorian gold rush and the 1890-93 banking crisis. With rates at 10 percent discount, the Victorian gold rush produced the highest buying rate discounts ever recorded.\textsuperscript{49} The rapid growth of bank balance sheets due to the increased business\textsuperscript{50} and record gold remittances to London created a liquidity squeeze. Banks themselves organised the large-scale importation of gold coins, with a considerable part of the gold production returned to Australia as coinage in the closing months of 1852.\textsuperscript{51}

By contrast, high selling rates helped banks reduce potential outflows in their London branches. Excessive importations and political events in Europe appear to have caused this action. For instance, the 1854 spike in selling rates relates to an import glut caused by excessive orders placed during the gold rush. The remaining outliers in selling rates reflect the European history of war with peaks in 1859 due to the Austro-Italian war, in 1862 due to war fears with the United States, in 1870 due to the Franco-Prussian war and in 1877 due to the

\textsuperscript{48} Butlin/White/Hall, Statistics, p. 96. The Argus, 21.11.1874 states a bank’s cost for transporting gold to London including insurance as 22s 6d percent. During the Austro-Italian war, when the selling rate was at 4 percent for a short period, a Sydney Morning Herald article on 16.07.1859 states that some gold was shipped to London when premiums on bank drafts were at 4 percent with a reported profit of 1 ½ percent.

\textsuperscript{49} Buying rates for produce bills with hypothecated tallow and wool. An even higher rate of 12 percent was charged for gold advances. \textit{T.A. Coghlan}, Labour and Industry in Australia. \textit{Volume II}, Oxford 1918, p. 849 even stated a figure of 12 percent discount for produce bills.

\textsuperscript{50} Butlin, Australia and New Zealand Bank, p. 123, states that the liabilities of the Melbourne branch of the Union Bank of Australia increased from £280,888 in October 1851 to £1,538,741 in October 1852, a fivefold increase in 12 months.

\textsuperscript{51} Coghlan, Labour and Industry, p. 851.
Russo-Turkish war. Wars could lead to an increase in marine insurance costs and put shipping to and from Europe at risk.

While I have highlighted the extremes, rates from 1871 onwards show a remarkable stability. The 1871-1914 average premium on 60-day drafts is 0.43 percent, while the corresponding average of buying rate discounts is 0.59 percent. The resulting mean between buying and selling rates is 0.08 percent, which gives a rough indication that long-term effective exchange rates on London were not only stable but also very close to par.\textsuperscript{52} By 1914 the union had therefore achieved a high degree of integration and uniformity as interstate, New Zealand and London exchange rates were low, stable and effectively reduced to interest charges and commissions.\textsuperscript{53}

3 Institutional Changes 1914–1936

The start of World War I marked the beginning of the fragmentation of the union, which then broke up in 1929-36 under the pressures of the Great Depression. Different national responses were implemented to the challenges imposed by the war. In New Zealand, bank notes of the six private banks operating in New Zealand were proclaimed legal tender and the exportation of gold without the written consent of the Minister of Finance prohibited. A clause in the Banking Amendment Act 1914 provided that banks had the obligation to pay their own notes in gold on presentation after the expiration of the period limiting the proclamation. In addition, the New Zealand Treasury guaranteed payment in gold in the case of non-payment by a bank after expiry.\textsuperscript{54} However, this clause was never exercised.

\textsuperscript{52} It can be observed that the 60-day selling rate is often at a discount from about 1906 to 1914. This does not necessarily imply that banks were encouraging outflows from London at the time as telegraphic transfer selling rates remained at a premium over the entire period (see figure 3 below).

\textsuperscript{53} Hence, a definition of monetary union as a currency area with uniform par exchange rate is not a useful concept for Australia. A similar argument was made for the United States by R. Sylla, The Transition to Monetary Union in the United States 1787-1795, in: Financial History Review 13/1, 2006, pp. 73-95, here: p. 74, Footnote 3, who argues that the existence of exchange rates between locations within the United States is consistent with monetary union.

\textsuperscript{54} Banking Amendment Act 1914 No. 4 and 5 and proclamation in the New Zealand Government Gazette 05.08.1914, p. 3043. The gold export prohibition was no longer applied to the export of gold bullion after the commencement of the Finance Act 1919.
as the legal tender status of private bank notes was repeatedly renewed and private notes were subsequently redeemed in legal tender RBNZ notes.\textsuperscript{55}

In Australia, a proclamation under the Customs Act 1901-1914 was made in July 1915 that prohibited the exportation of gold specie and bullion except with the consent of the Treasurer.\textsuperscript{56} The legal status of Australian notes remained unchanged. However, the Commonwealth Treasury did not exchange notes for gold and for practical purposes Australian notes became irredeemable.\textsuperscript{57} In the United Kingdom, the Currency and Bank Notes Act 1914 was introduced in August 1914, empowering the Treasury to issue £1 and 10s currency notes. Both the newly issued currency notes and Bank of England notes remained redeemable in gold. However, due to the English pound depreciating against the United States dollar, the export of gold was subsequently prohibited in April 1919.\textsuperscript{58} Hence, within each country the link between nominal sterling obligations and gold was retained at all times and the gold standard not formally abandoned.

Gold export restrictions remained in place until the new gold bullion standard was established in the United Kingdom in April 1925. This required the Bank of England to sell gold bullion at £3/17/10 \frac{1}{2} per once in the form of bars containing 400 ounces troy of fine gold for legal tender notes. Notes, however, were individually no longer redeemable in gold coins. In a synchronised fashion, the Australian gold export restrictions were revoked by proclamation\textsuperscript{59} and gold was paid out again by the Commonwealth Bank of Australia\textsuperscript{60} head office on the presentation of Australian notes. Although, the public was cautioned by the Commonwealth government that legislation similar to that in Britain would be introduced if gold withdrawals became too large.\textsuperscript{61} There were no formal changes in New Zealand. The government made a public statement that it would re-

\textsuperscript{55} Trading bank notes ceased to have legal tender status on 10.01.1935. RBNZ notes began to be issued during 1934. Hawke, Governments and Banks, p. 51 described how RBNZ notes were introduced.

\textsuperscript{56} Commonwealth of Australia Gazette, 14.07.1915.

\textsuperscript{57} Commonwealth of Australia, Royal Commission, p. 43. Newspapers reports refer to an agreement between the Commonwealth government and the banks. The latter had agreed not present notes at the Treasury for gold until the close of the war, for instance, Argus, 15.04.1915. Butlin, Australia and New Zealand Bank, p. 357 suggested that there was in fact no formal agreement with the banks.

\textsuperscript{58} This included gold coins and bullion.

\textsuperscript{59} Commonwealth of Australia Gazette, 28.04.1925.

\textsuperscript{60} An Australian Government trading and savings bank.

\textsuperscript{61} For example, Daily Standard, 30.04.1925.
tain the power to prohibit but would freely licence the export of gold.\textsuperscript{62} Private bank notes retained their legal tender status in New Zealand.

The later abandonment of the gold standard took different pathways in each country. In Australia, the Commonwealth Bank Act 1929 empowered the government-owned Commonwealth Bank to require the exchange of gold coin and bullion holdings from any person in exchange of Australian notes. The Commonwealth Bank Act 1932 then widened the categories of assets suitable as note issue reserve to gold and “English sterling” (London funds) and Australian notes were formally rendered inconvertible. Australian mints ceased to mint coins from September 1931. In New Zealand, bank notes were already legal tender. RBNZ legal tender notes were issued in replacement from 1934. These could be exchanged for sterling at a rate fixed by the new Central Bank.\textsuperscript{63} By contrast, the Gold Standard Amendment Act of September 21\textsuperscript{st} 1931, relieved the Bank of England from its obligation to sell gold bullion in exchange of legal tender notes.

In order to understand the development of the exchange rates in the 1914-1936 period, it is essential to also briefly review the evolution of inter-bank clearing arrangements in New Zealand and Australia. With private bank notes declared legal tender, inter-bank settlement in New Zealand transitioned in 1916 from the use of gold to settlement notes.\textsuperscript{64} The latter were large denomination bank notes payable on demand in gold or overseas exchange. Little has been written about settlement notes,\textsuperscript{65} despite the fact that the consequences of their introduction were profound. It was a unique arrangement that allowed New Zealand domestic inter-bank balances to be settled with funds payable in London and Australia, thereby greatly reducing the need for gold shipments to New Zealand. In effect, banks operating in New Zealand granted each other an unse-

\begin{footnotes}
\item[62] New Zealand Herald, 30.04.1925, see also the discussion in G.R. Hawke, New Zealand and the Return to Gold in 1925, in: Australian Economic History Review IX, 1971, pp. 48-58.
\item[63] Reserve Bank of New Zealand Act 1933 Section 16; for amounts not less than £5,000.
\item[64] N.M. Chappell, New Zealand Banker’s Hundred. Wellington 1961, p. 280. The Bank of New Zealand (BNZ) Archives hold a “Register of Notes issued by Wellington Branch for Exchange Settlement only”. The first settlement note issue is recorded on 15.05.1916. The BNZ Archives, Unsigned Notes Register 1927-1934, contains evidence that BNZ settlement notes were destroyed on 26.09.1934, the year in which the RBNZ commenced operations.
\item[65] Chappell, Banker’s Hundred, p. 280 provides a picture of a £1,000 note as a curiosum; C.G.F. Simkin, Banking in New Zealand, in: R.S. Sayers (Ed.), Banking in the British Commonwealth, Oxford 1954, pp. 320-352, here: p. 328, only provides a cursory comment. R.H. Griffin, Bank of New Zealand Banknotes 1861-1934, Wellington 1987, pp. 52-55 provides some information on BNZ settlement note issues.
\end{footnotes}
cured line of credit.\textsuperscript{66} Settlement notes appear to have been initially carried as note issue liabilities. This attracted some public attention as reported notes in circulation at times showed marked increases due to fluctuating inter-bank settlements.\textsuperscript{67} From about 1921, presumably to avoid public attention, settlement note liabilities began to be accounted for in settlement note deposit accounts under balances due to/from other banks.\textsuperscript{68} Settlement note liabilities were clearly identified in internal bank balance sheets, presumably to distinguish them from ordinary deposit liabilities that could be discharged in legal tender notes. Outstanding settlement note account balances were typically cleared in Wellington by the sale of excess London funds to the creditor banks.\textsuperscript{69} Although, banks carried at times significant inter-bank settlement obligations in their balance sheets.\textsuperscript{70} Interestingly, the special role that settlement notes played for the New Zealand clearing system was not recognised by Tocker, who instead argued that the lack of effective note issue limits had removed “the

\textsuperscript{66} An agreement in 1918 provided that balances in excess of £300,000 were to be cleared by London funds or, alternatively, via creation of an interest-bearing deposit (at 1 \% p. a.) at the issuing bank; see 2634:1:10 Adjustment of exchange settlement notes, letters regarding special arrangements with BNZ, 1918-20, 25.02.1918, The National Bank of New Zealand Ltd, ANZ New Zealand Archive.

\textsuperscript{67} An example is provided in the Bank of New Zealand 1920 annual report. Outstanding Bank of New Zealand settlement notes had increased the reported notes in circulation by about 50 percent compared to the previous financial year; see Otago Daily Times, 19.06.1920.

\textsuperscript{68} For instance, internal Bank of New South Wales New Zealand balance sheets list under liabilities “settlement notes due to [Bank x] on deposit with us” and under assets “[Bank x] settlement notes on deposit with them”; see Westpac Archives, S01-0002, Inspector’s Half Yearly & Yearly Reports. New Zealand Inspector’s reports 1920-1933. The deposit of settlement notes at the issuing debtor bank would have had the effect of converting a settlement note liability into a settlement deposit liability in favour of the creditor bank. The note deposit accounts carried interest. Costs for interest and income tax related to note deposit accounts to the Wellington branch of the Bank of New South Wales in September 1933 were £4/18/9 percent p. a. compared with proceeds of £5 percent p. a. from Treasury bills, see New Zealand Inspector’s report September 1933.

\textsuperscript{69} It appears that settlement in gold coin was still used as a last resort. The New Zealand Inspector’s report of September 1930 mentions a shipment of £250,000 in gold coin from the head office in Sydney to Wellington to address a temporary situation where the Bank of New Zealand had an accumulated claim against the Wellington branch of the Bank of New South Wales of £1,399,000 in settlement notes or 15 percent of the bank’s September 1930 New Zealand assets. The cause was the 1930s exchange crisis, which led to an acute shortage of London funds (see Section 4 below) and thus prevented the usual clearing operations.

\textsuperscript{70} For instance, the September 1933 New Zealand Inspector’s report shows settlement notes due to the Bank of New Zealand, National Bank of New Zealand and Union Bank of Australasia amounting to 12 percent of the Bank of New South Wales’ New Zealand assets.
usual check upon credit expansion” and thereby enabled a “sufficient liberty of credit expansion” according to the needs of trade. The perhaps more important factor that unsecured inter-bank lending and clearing with London funds provided a much-needed alternative to gold imports and enhanced levels of liquidity at the Wellington clearing hub remained unrecognised.

Inter-bank settlements in Australia had transitioned from gold to Australian notes by 1914. Notes were initially issued to the banks by the Commonwealth Treasury against gold or as loans and used as a vehicle to finance the war. This meant that the volume of notes greatly expanded. There appears to have been arrangements where notes could be borrowed against the lodgement of London funds at the Bank of England to avoid the physical export of gold from London. For instance, a 1917/18 financing agreement for the Queensland sugar crop included this option. Hence, at the time Australian notes could be obtained based on assets located in Australia and London. In October 1920, the Bank of England was approached as to whether it would make advances “against sovereigns to be earmarked with the Commonwealth Bank in Sydney”. This would have overcome the gold export restrictions in place at the time in Australia and would have provided funds in London on the basis of assets located in Australia. However, the Bank of England declined the request as it was “more disposed to make advances against gold lodged for shipment”.

In December 1920, the Australian note issue was transferred from the Treasury to the newly created Note Issue Department of the Commonwealth Bank of Australia. The Notes Board imposed significant liquidity constraints on the trading banks in Australia, which made it harder for the banks to finance

71 Tocker, Monetary Standards, pp. 560, 567.
72 R.F. Holder, The Bank of New South Wales. A History. Volume II: 1894-1970, Sydney 1970, p. 553.
73 Ibid., p. 585.
74 J. Osborne, The Bank of England 1914-1921. Unpublished War History. Volume 3. Chapter 8, p. 256, https://www.bankofengland.co.uk/archive/bank-of-england-1914-21-ww1?msclkid=b2bb2bf6bb7b11ec9d432b43aa9012b1, 05.04.2022, and RBA Archives, S-L-102, The London Letters, From London, cable from the Governor No. 287, 13.10.1920. In a previous war time arrangement, the Bank of England had undertaken to purchase gold bullion to be deposited at Melbourne, Wellington and other Dominion locations. The Bank of England’s Australian gold holdings were sold in 1915 shortly before the Australian government prohibited the export of gold, see Osborne, Bank of England, Volume 2, Chapter 5, p. 365. Hence, the Australian gold export restrictions must have been one of the key considerations when declining the Australian request in 1920. The refusal to make advances against gold coins located in Australia did not impact on the Bank of England’s role as a banker to state governments in London as this involved London funds and the issue of government securities in the London market.
the seasonal exports and contributed to an exchange crisis (see Section 4 below). Guided by crude quantity theoretical principles, the Board viewed the existing level of Australian notes in circulation as sufficient and any increase as potentially inflationary.\textsuperscript{75} Moreover, according to Giblin, the long-held objective to keep parity with sterling was “not accepted by the Note[s] Board in 1922 to 1924”.\textsuperscript{76} The Board had the powers to issue Australian notes on the basis of London funds, but chose not to exercise them.\textsuperscript{77} It could have therefore assisted the banks in containing Melbourne/Sydney on London buying and selling rate discounts near par. In December 1923, the Board resolved not to act on a proposal by the Prime Minister of Australia, S. M. Bruce, at the time in London,\textsuperscript{78} urging the Board to issue against the proceeds from government borrowings in London.\textsuperscript{79} In July and August 1924, the Notes Board eventually offered limited advances of first £3m and then £5m secured by London funds after an urgent request by the Associated Banks. However, the proposed facility’s high interest costs and rigid loan limit were not acceptable to the banks.\textsuperscript{80}

The Australian Notes Board was abolished on October 10\textsuperscript{th} 1924\textsuperscript{81} as part of the Commonwealth Bank Act 1924, as it had antagonised banks and primary producers. The Australian note issue transitioned to the Commonwealth Bank. Section 18 of the Act explicitly empowered the bank to issue notes against London funds.\textsuperscript{82} As one of its first actions, the Commonwealth Bank board agreed a £15m advance facility and an exchange pool with the Associated Banks to secure the financing of the upcoming wool and wheat export season.\textsuperscript{83} Key details

\textsuperscript{75} W. Coleman, A Brief History of the Australian Notes Issue Board, in: Cato Journal 19, 1999, pp. 161-170, here: p. 165 and L.F. Giblin, The Growth of a Central Bank, Melbourne 1951, pp. 10, 12.

\textsuperscript{76} Ibid., p. 11.

\textsuperscript{77} See the insightful analysis by the British Treasury in New Zealand, Imperial Economic Conference, Record of Proceedings and Documents, January 1924, p. 228.

\textsuperscript{78} Bruce had attended the Imperial Economic Conference and had contributed to the October 1923 session on Empire Currency and Exchange.

\textsuperscript{79} RBA Archives, N-N-4, Minutes of meeting 13.-14.12.1923.

\textsuperscript{80} RBA Archives, N-N-4, Letters from Associated Banks 30.05., 30.07. and 2.09.1924; letters to Associated Banks 10.07., 19.08.1924.

\textsuperscript{81} Coleman, Notes Issue Board, p. 168.

\textsuperscript{82} “The Board may issue Australian notes to the Bank or to other banks in Australia in exchange for money or securities lodged with the London branch of the Bank.”

\textsuperscript{83} RBA Archives, BM-P-1, board meeting minutes 11.10.1924, 13.10.1924 and 14.10.1924. A maximum amount of £2.8m was actually drawn down and advances were repaid by June 1925, see Commonwealth of Australia, Royal Commission, p. 47. The Commonwealth Bank made the advance with surplus funds and without increasing the note issue. The amount of outstanding Australian notes remained static between June 1924 and May 1925 at £56.89m and dropped to
of the arrangement became public on October 15th and 19th 1924 and addressed widespread market concerns, especially among exporters. Nevertheless, the banks viewed the current system and its reliance on temporary facilities as inadequate. Thomas Buckland, the chairman of the Bank of New South Wales, summarised the situation at a shareholder meeting in November 1924. He argued that additional temporary facilities were not a sufficient “remedy for the inelasticity of the currency”. Instead, the banks’ old-time right of issue should be restored: “Had the Banks the right of issue there would have been more elasticity in credit for production and commerce and no currency worries”.

New Zealand was seen as evidence that private banks could manage the note issue responsibly even though the currency was no longer on a gold basis. Hence, in public discussions, a contrast was being drawn “between the flexibility of the currency in New Zealand where banks issue their own notes and the rigid State control of legal tender in Australia”. In 1925, inter-bank settlement transitioned to a system, whereby banks used accounts at the Commonwealth Bank. As a result, Australian Notes became less significant for the monetary system.

4 The Fragmentation and Break-up of the Union

The development of Melbourne on London and New Zealand on London exchange rates over the 1900-1936 period is shown in figure 3. I have chosen selling rates for telegraphic transfers to exclude the impact of interest costs. Pre-war rates did show only little variation, with the exception of a temporary drop in the New Zealand selling rate around July 1914, just before the start of World War I, reportedly due to an excess of London funds. Despite gold export restrictions imposed at the beginning of the war, exchange rates remained remarkably stable and low until August 1920. Premia then increased to 2.5 percent in Melbourne and a record 3 percent in Wellington by January 1921. The cause was excess importations including orders placed before the end of the war combined with the £53.89m in June 1925, see Australian note statistics in the Commonwealth of Australia Gazette, 26.06.1924 – 30.07.1925.

84 For instance, as reported in the Daily Telegraph 15.10.1924 and Sun 19.10.1924.
85 Westpac Archives, Bank of New South Wales, Half-Yearly Annual Meetings, Report of the Directors, 28.11.1924.
86 Acting chairman of the Bank of New Zealand quoted in Argus, 08.10.1924.
87 Commonwealth of Australia, Royal Commission, p. 48.
88 See, for instance, New Zealand Herald, 24.07.1914 and Nelson Evening Mail, 27.07.1914.
export restrictions on gold from Australia and New Zealand, which could no longer be used to offset import related outflows in London. The Australian wheat crop was not ready for export and wool shipments had just started.\textsuperscript{89} This created a drain on the banks’ resources in London. The banks raised rates and refused to negotiate drafts on Australia in London to limit further importations.\textsuperscript{90}

The impacts were significant. Due to the lack of credit, steamers bound for Australia were reportedly leaving England short of cargo.\textsuperscript{91} At the request of New Zealand, empire currency and exchange became an agenda item at the Imperial Economic Conference in October and November 1923.\textsuperscript{92}

\begin{figure}
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\includegraphics[width=\textwidth]{fig3}
\caption{Telegraphic Transfer (TT) Selling Rates Melbourne on London and New Zealand on London, 1900–1936. A new database of TT selling rates was created for this article as the exchange rate data in the literature is insufficient. It contains about 190 data points from original newspapers sources.}
\end{figure}

\textsuperscript{89} Commonwealth of Australia, Royal Commission, p. 46, Argus, 09.11.1920
\textsuperscript{90} The Bank of New South Wales New Zealand Inspector’s report of September 1921 notes: “The over-importation [...] is now reacting. [...] The Banks have assisted in this by limiting Letter of Credit facilities”, Westpac Archives, S01-0002, Inspector’s Half Yearly & Yearly Reports.
\textsuperscript{91} Argus, 25.11.1920.
\textsuperscript{92} New Zealand Imperial Economic Conference, Record of Proceedings and Documents, January 1924, pp. 214-233. However, the associated Committee on Inter-Imperial Exchange concluded that (i) difficulties [divergence of rates from parity; excessive bank charges in Australia and
The opposite problem was experienced during 1924 and early 1925, when selling rates went to record lows, with the rate at a discount of 2.5 percent in Melbourne in October 1924. The underlying cause was a strain on the reserve position of the Australian bank branches. While the note issue remained nearly static, due to the Notes Board’s restrictive policies, bank reserves in Australia, made up of gold and notes, were falling. The ratio of Australian reserves to deposits had dropped from 23.6 percent in the June quarter of 1920 to 17.9 percent in the June quarter of 1924. With gold shipments from London to Australia prohibited and the Notes Board’s initial refusal to issue additional notes on the basis of London funds, the adjustment of surplus balances in London became difficult and branches in Australia saw their liquidity curtailed. This made export exchange transactions more difficult as these further reduced net assets in Australian branches. As a result, buying discounts for bills reached record highs, which represented a direct loss to Australian primary producers. The additional Commonwealth Bank advance facility for Australian notes, agreed in October 1924 (see Section 3 above), did not lead to a reduction of buying and selling discounts, which stayed at elevated levels until April 1925. By contrast, the New Zealand system performed much better at the time as the banks were free of government interference and could settle inter-bank obligations in Wellington with London funds. Selling rate discounts were much lower than in Australia, with the Wellington on London rate at 1 percent in November 1924.

From the perspective of the private banks, the system of an Australian government-controlled note issue had failed. While in the past exchange rate variations were largely governed by seasonal variations in exports and imports, political influences had now become material.

After the removal of gold export restrictions in April 1925, exchange rates normalised in May 1925. But problems started to re-emerge four years later with the onset of the Great Depression. Long-term overseas government borrowing effectively ceased in January 1929 and during 1928-1929 Australian export prices

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New Zealand] would disappear with the expected reintroduction of gold convertibility; and (ii) schemes such as Empire currency bills (Darling’s scheme) would involve difficult constitutional and financial questions. A key consideration to reject any scheme to implement the equivalent of an “Empire currency” was the desire to avoid any implied mutual financial guarantees between the United Kingdom and the Dominions.

93 Giblin, Central Bank, p. 9.

94 The advantages of the New Zealand system were widely acknowledged, see Argus, 08.10.1924, which argued that “credit control should not be in the hands of State officials.”

95 See the speech of Thomas Buckland at the half-yearly annual meeting of the Bank of New South Wales, 30.11.1923, Westpac Archives, Half-Yearly Annual Meetings, Report of the Directors.
rapidly declined, both factors contributing to an excess of the value of imports over exports.\textsuperscript{96} It became extremely difficult to meet Commonwealth and State government interest bills and maturing overseas debt. Capital flows unrelated to trade were thus a major factor contributing to the exchange crisis. In December 1929, selling rates went beyond the gold point and in January 1930, the Treasurer gave authority to the Commonwealth Bank to take control of the banks’ gold reserves. Significant gold holdings were shipped by the Commonwealth Bank to London, largely to meet Commonwealth and State government loan repayments and interest. As a result of the ongoing shipments, gold holdings of the Australian banking system in Australia declined from £45.1 million at the end of the September quarter 1929 to £15.3 million in the March quarter 1931.\textsuperscript{97} In August 1930, the Commonwealth Bank and the trading banks entered into a voluntary agreement for the “Mobilization of London Exchange”\textsuperscript{98} to meet government interest and limited debt service commitments, at the time estimated at £36m per annum, with banks initially contributing £3m per month. The Bank of New South Wales, leading the other banks, then raised the selling rate premium in various steps to a record £30/10/0 in January 1931 in a successful attempt to beat the outside market, where importers acquired bills directly from exporters. The New Zealand system was under less pressure and the banks could stabilise the rate at £10/0/0 in January 1931. The New Zealand government debt service in London was subsequently safeguarded by an exchange mobilisation scheme based on the Export Licences Order December 1931, which required all export proceeds to be remitted through the New Zealand based banks. The scheme also effectively eliminated the outside exchange market and prevented further rate increases, which would have imposed higher charges for London debt services on the New Zealand government.\textsuperscript{99}

\begin{footnotesize}
\textsuperscript{96} Commonwealth of Australia, Royal Commission, p. 49.
\textsuperscript{97} Ibid., Table 19, pp. 324-325; the entire gold reserve in Australia was exported by the September quarter 1933.
\textsuperscript{98} RBA Archives, S-La-41 and C.3.15.10.7, Letter Commonwealth Bank Governor to Bank of England, 28.07.1930.
\textsuperscript{99} According to the Bank of New South Wales New Zealand inspector’s report March 1932, the scheme was instigated by the Bank of England, which was administering the New Zealand government loans in London. The objective of the scheme was, to ensure that the New Zealand based banks were in a position to meet the government’s demand for London funds, estimated at £1m per month. It appears that the Bank of New South Wales had protested against the compulsory pool and the implied pegging of the exchange rate. The exchange pool operated from January 1932 and was abolished on 01.07.1932 earlier than expected as the government raised a London loan of £5m in April 1932. On termination of the pool the outside rate approxi-
\end{footnotesize}
National governments or their institutions then took over the responsibility from the private banks to set exchange rates on London. The Commonwealth Bank of Australia reduced the Australian selling rate to £25/10/0 in December 1931 and the New Zealand government instructed the trading banks to raise the New Zealand selling rate to £25/0/0 in January 1933 under the Banks Indemnity (Exchange) Act 1932-33.\textsuperscript{100} Both actions were met with protests from the private banks. However, exchange rates had become an economic management tool tied to political decision making that weighed up different stakeholder interests. High selling premia favoured primary producers and their bankers.

From October 1930 the banks changed exchange rate quotations from quoting premia and discounts to a nominal basis\textsuperscript{101} (per £100 London) similar to those used for foreign currencies. This emphasised that the three currencies were no longer identical. A circular to managers of all Bank of New South Wales branches in January 1932 stressed that “English pounds, Australian pounds, New Zealand pounds and Fiji pounds [...] are paper pounds and entirely separate currencies”. The 10-page memo also explained the new way of calculating exchange charges. The separation was then formalised by distinguishing between the different pounds in balance sheets and by the increasing use of separate currency names and symbols (£A, £F, £NZ, and £E or £stg.).\textsuperscript{102} The Commonwealth Bank of Australia announced in March 1936 that it had received advice from the Commonwealth Solicitor General and its financial reports would from now on be in Australian pounds, with London branch balances converted from sterling at the prevailing rate.\textsuperscript{103} Archival records show that the bank had already encountered issues with its currency accounting in October 1931, when British tax authorities (Inland Revenue) became concerned about the bank’s par treatment of Australian pounds and sterling in its profit & loss accounting.\textsuperscript{104}

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\item mated the rate of £10/0/0 rate quoted by the banks. See New Zealand Inspector’s reports, March and September 1932 and Evening Post, 24.12.1931 and 01.07.1932.
\item The Act constituted the Bank of New Zealand as the agent of the New Zealand government for buying and selling exchange on London. The bank was authorised to purchase any surplus amounts held in London by the other New Zealand based banks at the £25/0/0 rate. Payment could be made either in cash or Treasury bills.
\item Argus, 10.10.1930.
\item Westpac Archives, B123/1, Circulars (initiated by the Economic Department) to Branch Manager 1923-1953 and to staff serving in the forces, Circular Letter, 06.01.1932.
\item Sydney Morning Herald, 26.03.1936. Before March 1936, Australian pounds were treated as equivalent to sterling; see RBA Archives, C2.68.217-219, unpublished half yearly balances sheets for December 1921, December 1928, June 1930 and December 1935.
\item RBA Archives, S-L-140, The London Letters, From London. Letter from H.M. Inspector of taxes, Inland Revenue, 26.10.1931.
\end{itemize}
\end{footnotesize}
Bank of New South Wales unpublished accounts in 1936 also show currency conversions and asset and liability breakdowns by country and currency.\textsuperscript{105} The London-based Bank of Australasia stated its balance sheet still in sterling in 1938, with Australian and New Zealand assets and liabilities recognised at par.\textsuperscript{106} However, the bank included a currency reserve to account for the exchange rate differentials. The separation of English, Australian and New Zealand pounds had become a reality.

5 Was There a Monetary Union After 1914?

While the status of monetary arrangements before 1914 is reasonably clear, the status of the union after 1914 presents particular complexities. In fact, the question as to whether the Australian pound was identical to the English pound at various times over the 1920-1933 period occupied the highest English courts with conflicting opinions expressed in leading judgements.\textsuperscript{107} It is therefore an important question to determine the status of the union after 1914.

The situation is complicated by the fact that there was no longer a common gold coinage in actual circulation. Nevertheless, as most monetary transactions were conducted through the books of the banks, one can still define a meaningful concept of monetary union that is independent of a common coinage or common legal tender notes. In the following, I use three criteria that must be fulfilled for monetary union: (i) a common money of account to express prices and debt obligations; (ii) a universal settlement asset that can be used to settle inter-bank claims in any location; (iii) an objective or agreement to stabilise exchanges at par.\textsuperscript{108}

\textsuperscript{105} Westpac Archives, 2006/023/16, Aggregated Balance Sheet of the Bank of New South Wales, 30.09.1936 and Aggregated Balance Sheet of the Bank of New South Wales Arranged According To Currency, 06.04.1936.
\textsuperscript{106} Sydney Morning Herald, 25.04.1938.
\textsuperscript{107} Broken Hill Proprietary Company Ltd v. Latham [1933] 1 Ch 373 consistent with separate currency areas, overruled in Adelaide Electric Supply Company Ltd v. Prudential Assurance Co. Ltd [1934] AC 122 consistent with a common currency area; for more details on the cases see F.A. Mann, The Legal Aspect of Money, Oxford 1992, pp. 55-60 and Fox, Monetary Obligations.
\textsuperscript{108} Based on the constituting elements of monetary union identified in F. Decker, The Credit Mechanics of Monetary Unions: a review of the Eurosystem, in: J. E. Castaneda/A. Roselli/ G.E. Wood (Eds.), The Economics of Monetary Unions, Past Experiences and the Eurozone, London 2020.
The application of these criteria to the institutional arrangements during 1914-1924 suggests that the union between New Zealand and the United Kingdom remained intact. By contrast, the Australian system became temporarily decoupled. New Zealand settlement notes were redeemable in overseas exchange, which means that banks could use their London funds to settle interbank balances arising at their branches in New Zealand and any accumulation of London funds did not present a problem to the New Zealand system. Similar to gold, London funds were a universal settlement asset that could provide bank liquidity in New Zealand as well as London. By contrast, the Australian system relied on settlement in Australian notes. These could not be used to settle interbank balances in London or Wellington and the Notes Board during 1920-24 pursued a policy of quantitative controls that was inconsistent with a par exchange rate. The Australian system therefore became temporarily decoupled from the monetary systems of New Zealand and the United Kingdom. Once gold could be freely shipped again from 1925, Australia was reintegrated.

After January 1930, when the Commonwealth Bank of Australia obtained the power over the Australian gold reserves, the same assets, gold and London funds, were still used to settle obligations in all three countries. The money of account remained unchanged. As is shown in Section 2, even significant exchange rate fluctuations, as occurred in the 1850s, are not necessarily inconsistent with the existence of a monetary union. I therefore argue that, after 1929, the monetary union was technically still intact until a political decision was taken to stabilise the exchanges on London at non par rates, which ended the union. Arguably, this occurred in Australia around June 1931 with the adoption of the Report of the Premiers’ conference,\(^{109}\) and independently in New Zealand in January 1933, when the banks were advised by the government to lift the selling rate to 25/0/0 premium in conjunction with the Banks Indemnity (Exchange) Act 1932-33. In both jurisdictions, this marked the beginning of a true sterling exchange standard, where Australian and New Zealand pounds had become separate currencies and were pegged to the English pound at fixed non-par rates. The union’s fragmentation and break-up therefore occurred as a gradual and complex process, which was reflected in conflicting legal opinions about the identity of the English and the Australian pound.

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\(^{109}\) E.O.G. Shann/D.B. Copland, The Battle of the Plans, Sydney 1931, p. 131. Non-par, free exchanges together with wage, interest rate and government expenditure cuts as well as increased taxation became part of the measures to restore budgetary equilibrium.
6 International Lending of Last Resort

The international nature of the monetary union between Australia, New Zealand and the United Kingdom raises the question as to whether international lending of last resort played a role before, during or after the break-up of the union. Before 1929 there is little evidence for international lending of last resort to stabilise exchanges or to assist struggling banks. While most banks operating in Australasia had offices in London and kept accounts with the Bank of England, there are only very few reported instances in the secondary literature where the Bank of England provided advances to struggling banks. Moreover, Australia and New Zealand did not see the development of a lender of last resort from a clearing house association or dominant bank.

The experiences during the Australian financial crises of 1840-45 and 1890-93 are instructive in this regard. The 1840-45 depression was one of Australia’s most severe crises and clearly recognised by policy makers as a monetary event. Spectacular bank failures, a drastic fall in the money supply and widespread panic and fear had led to a severe asset and commodity price deflation and unprecedented levels of insolvencies. With direct references to last resort lending efforts via Exchequer bills during the English crises of 1793 and 1826, the New South Wales Legislative Council passed the Monetary Confidence Bill 1843 (NSW). The Bill provided for the establishment of land-board commissioners, which were to become lenders of last resort to the Colony. Land-board commissioners would issue pledge certificates (covered bonds) and land-board notes on the security of land. Pledge certificates were to be guaranteed by the government and land-board notes legal tender. However, nothing was to come of the bill as New South Wales had not yet obtained responsible government and the Colonial Governor withheld his assent. Instead, another monetary recovery measure passed in the same year proved to be highly effective. The Lien on Wool and Stock Mortgage Act 1843 (NSW) broadened the range of collateral that lenders could utilise to include the wool clip of the upcoming season and made stock mortgages more effective. This provided a “substitute last resort lending mechanism” and greatly assisted in the recovery from the depression.

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110 For instance, G. Blainey, Gold and Paper, Melbourne 1958, pp. 78, 210 noted that the Bank of England provided an advance of £89,000 for one month to the London branch of the National Bank of Australasia during the Overend Gurney crisis in 1866 and an advance of £200,000 for two months to the London office of the Queensland National Bank in 1891.
111 F. Decker, The Legal and Economic History of the Lien on Wool and Stock Mortgage Act 1843 (NSW), in: Legal History 12, 2008, pp. 151-175.
Alternative support mechanisms to last resort lending also dominated in the financial crisis of 1890-93. At the height of the crisis in 1893, more than half of the Australian trading banks suspended operations.112 Private bank notes were declared legal tender in New South Wales to stop a bank run in May 1893. In the same year, Queensland introduced legal tender state notes.113 In addition, special voluntary insolvency legislation was enacted in New South Wales and Victoria to deal with struggling institutions. The legislation114 allowed banks under pressure to suspend operations and reopen after a few months as new companies. Under the reconstruction schemes, part of the depositor claims could be converted into shares and the repayment of the remaining deposit claims deferred. In New South Wales, the Current Account Depositors’ Act 1893 allowed the issue of Treasury notes to depositors with locked up deposits. Similar provisions were enacted in Queensland. Hence, reconstruction schemes, legal tender legislation and Treasury note issues avoided the wholesale liquidation of banks. Private support initiatives were limited.115 Given the severity of the 1893 crisis, the stability of the monetary union was remarkable. The buying rate discount only temporarily increased to 3 percent and was back to pre-crisis levels only 6 months later. The banking crisis did not spread to New Zealand.

International last resort lending commenced on a limited scale with the 1929 exchange crisis, when the Bank of England provided advances to the Commonwealth Bank of Australia against shipped gold. However, the Bank of England was not prepared to meet loan requests on more general terms made by the Commonwealth Bank in March 1930, June 1930 and refused in March 1931 to lend directly to Australian governments.116 The Bank of England was not prepared to help the Commonwealth out of its funding difficulties and to stabilise the exchange rate at par by granting sufficiently large loans. Giblin, a director of the

112 Butlin, Australia and New Zealand Bank, p. 301.
113 See Decker/McCracken, Central Banking, p. 249.
114 Joint Stock Companies Arrangement Act 1891 (NSW) and Companies Act Amendment Act 1892 (VIC).
115 For more details see B. Fitz-Gibbon/M. Gisycki, A History of Last-Resort Lending and Other Support for Troubled Financial Institutions in Australia (Research Discussion Paper 2001-07, Reserve Bank of Australia) and D.T. Merrett, The Australian Bank Crashes of the 1890s Revisited, in: Business History Review 87, 2013, pp. 407-429.
116 RBA Archives, S-L-134 and S-L-137, The London Letters, From London, Cable to the Governor No. 323, 29.03.1930, No. 403, 13.06.1930, No. 709, 31.03.1931. The Bank of England secretly lent to the New Zealand government in 1931, see R.S. Sayers, The Bank of England 1891-1944, Volume 2, Cambridge 1976, p. 449.
Commonwealth Bank in 1935-42, reflected on the situation in early 1931 in his official history of the Commonwealth Bank of Australia with some frustration:

“There was then only £5 million between solvency and default. It might have been expected that the Bank of England would have been willing to come to the help of a Dominion central bank. [...] The sum was comparatively trifling. [...] The Bank of England, however, was very cold. Strong unofficial representations were made but its attitude was rigid. It would advance money on gold on water, but nothing more. Australia must solve its own trouble for itself”.  

Interestingly, while the Commonwealth Bank’s loan requests were refused, the Bank provided a temporary loan to the Bank of England in March 1931 to assist it with its market operations.  

The Bank of England became more accommodative from 1932. As discussed in Section 4, in December 1931, the Commonwealth Bank made the unilateral decision to lower the exchange on London from £30/10/0 previously agreed with the trading banks to a rate of £25/10/0. This was not a market rate. There is evidence that requests for advances were made by the Commonwealth Bank to the Bank of England in July 1932, March 1935 and again in July 1936 amid concerns that the rate could be pushed beyond £25/10/0 due to a fall in export prices and an anticipated lack of London funds. In each case, the Bank of England approved advances for limited durations to support the Australia on London exchange rate. Correspondence between the banks shows that £4m were actually drawn down in October 1935. Approved advances in 1932 and 1936 did not have to be utilised. Hence, international last resort lending was

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117 Giblin, Central Bank, pp. 97-98. The Bank of England sent Otto Niemeyer, who arrived in Australia in July 1930, to assess the Australian financial situation.

118 RBA Archives, S-L-137, The London Letters, From London, London Funds & Finances, 05.03.1931.

119 After the abandonment of the gold standard in September 1931.

120 RBA Archives, S-c-16, cable Gibson to Norman 19.07.1932; cable Norman to Gibson 22.07.1932 approval of £3m to end September; letter Reading to Norman 08.03.1935 request for advance up to £4m; cable from London 29.03.1935 approval of advance over £3-4m whenever necessary; Bank of England to Reading 16.07.1936, approval of advance up to £5m. See also Giblin, Central Bank, pp. 143, 239 on the 1932 and 1936 advances.

121 RBA Archives, S-L-159, The London Letters, From London, Advance Account, 20.12.1935.

122 RBA Archives, S-c-16, cable Gibson to Norman to 20.09.1932, asked for the accommodation to be terminated. This loan was originally intended for “window dressing” the Commonwealth Bank’s London funds position only. On the 1936 loan, refer to Giblin, Central Bank, p. 239. Similarly, the Bank of England approved an advance up to £3m on 07.07.1937, see RBA Archives, S-c-16. According to Giblin the 1937 loan was not used either, Giblin, Central Bank, p. 240.
only exercised at a limited scale, but assisted in maintaining a fixed exchange rate after 1932.

7 Conclusion

The following conclusions can perhaps be drawn from this case study. The monetary arrangements between Australia, New Zealand and the United Kingdom before 1914 qualify as a monetary union. The commonly accepted narrative of a “sterling exchange standard” with separate Australian and New Zealand currencies is misleading. The three regions formed part of an imperial hub and spoke network with London at the centre and were integrated through an extensive branch system and carefully managed London, intercolonial and inland exchanges. After 1914, a monetary union was retained between New Zealand and the United Kingdom until 1933, while Australia became decoupled from the Union in 1920-24, and re-integrated in 1925-31. New Zealand’s system after 1914 performed better than Australia’s as it suffered from less state intervention, legal tender private bank notes provided stability and the use of overseas exchange to settle inter-bank balances reduced exchange rate deviations from par. The design of the union as an international branch system of competing private banks seamlessly integrated large and vastly different geographic and economic areas. Each geography developed some unique institutional structures including different approaches to bank note regulation, inter-bank settlement, government banking and gold export regulations. There were only few interventions to align monetary institutional structures with the centre in London, the introduction of the pound sterling as the official monetary unit in 1825 and the co-ordination around the introduction of the gold bullion standard in 1925 being perhaps the prime examples. The 1929-31 exchange rate crisis highlights the importance of capital flows, as government debt obligations in London and greatly reduced proceeds from London capital markets significantly contributed to the destabilisation of exchanges. International last resort lending played only a limited role, but helped to maintain a fixed Australia on London exchange rate between the newly separated currencies after 1932.

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**Bionote**

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