SAE./No.53/March 2016

Studies in Applied Economics

THE MALAYAN CURRENCY BOARD (1938-1967)

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Johns Hopkins Institute for Applied Economics,
Global Health, and Study of Business Enterprise

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By Josephine George

About the Series

The *Studies in Applied Economics* series is under the general direction of Professor Steve H. Hanke, Co-Director of the Institute for Applied Economics, Global Health and Study of Business Enterprise (hanke@jhu.edu).

This working paper is one in a series on currency boards for the Currency Board Project. The currency board working papers will fill gaps in the history, statistics, and scholarship of the subject. The authors are mainly students at the Johns Hopkins University in Baltimore who have conducted their work at the Institute as undergraduate researchers.

About the Author

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Summary

This essay examines the Malayan Currency Board from its formation in 1938 to its dissolution in 1967. It analyzes the orthodoxy of the board using high-frequency data, such as monthly statistics of currency notes in circulation. Accompanying the essay is a spreadsheet workbook which presents high-frequency data of the board in digital format for the first time, as well as balance sheets and other financial statements.

Acknowledgements

I thank Dr. Kurt Schuler for advice and guidance on sources, as well as comments on drafts.

Keywords: Brunei, Malaya, Malaysia, North Borneo, Sarawak, Straits Settlements, Singapore, currency board.

JEL codes: E59, N25

Introduction

British colonization of the Malay Peninsula dates from 1786, when the British East India Company established a settlement at Penang. The British established a settlement at Singapore in 1819. By the treaty of London in 1824, the British and Dutch established spheres of influence corresponding largely to present-day Malaysia and Indonesia. The opening of the Suez Canal in 1869 fueled the tin trade and boosted the Malayan economy. In the late 19th century the British established protectorates over the native states of the peninsula to supplement their direct control of the Straits Settlements colony, whose key component was Singapore. The Straits Settlements had its own currency, the Straits dollar, which was also used in the Malay states, because they had no distinct local currency or currency unit.

After Japanese occupation during the Second World War, Britain joined all of the Malayan states into a single unified state called the Malayan Union on 1 April 1946, which under a revised constitution became the Federation of Malaya on 1 February 1948. Under the Malayan Union and Federation and even for some years before, the local governments operated a currency board system, linking all of the Federated States with a single currency, the Malayan dollar. In the 1960s, tensions bubbled between Malays and non-Malays within the Federation, eventually leading to the emergence of Malaysia and Singapore as separate, independent nations and the end of the currency board system. The Malayan Currency Board has been the subject of a number of studies (e.g., King 1957; Drake 1966, 1969; Lee 1974). The novelty of this essay is its emphasis on the data of the board's operation, especially its high-frequency data, which are digitized and analyzed systematically for the first time here.

Background/History

The *Straits Settlements* were British territories on the Malayan Peninsula consisting of four individual settlements: Malacca, Dinding, Penang, and Singapore. The neighboring *Federated Malay States* and *Unfederated Malay States* were also under British rule. During the Second World War, Japanese forces invaded and occupied the Malayan peninsula. They also occupied the British protectorates on Borneo: Brunei, British North Borneo, and Sarawak. The occupation lasted from 1942 to 1945. After the war ended and British rule resumed, the Straits Settlements was dissolved in 1946. The Malayan Union and the Federation of Malaya, which replaced the Malayan Union in 1948, gathered all British territories on the Malayan Peninsula under a single government. Within the Federation, the Malayan states were protectorates of the British Crown, until achieving independence within the Commonwealth of Nations in 1957. Britain granted Singapore full internal self-government in 1959. In 1963 Singapore, the Federation of Malaya, North Borneo, and Sarawak united to form the independent country of Malaysia.

Political disagreements led Singapore to separate from Malaysia and gain independence in 1965. Brunei was a separate British protectorate all during these events and remained so until gaining independence in 1984.

Early in their history, the Straits Settlements in practice used as their currency Spanish silver pesos, also known as silver dollars or pieces of eight. They began coining their own equivalent currency, known as the Straits Settlements dollar, in 1871 (Chalmers 1893: 382-7). The Straits Settlements established a currency board in 1899. By 1906 the Straits Settlements dollar had switched from a silver basis, like China, to a gold basis, like the Netherlands Indies (Indonesia), India, and the United Kingdom. The Malay States used Straits Settlements currency but shared none of the profit from the issuance. Beginning in 1938, the Malay States joined together with the Straits Settlements to form the "All Malaya" currency board, eventually bringing in the Borneo territories in 1952. The Currency Ordinance of 1938 officially gave the Board authority as the sole currency issuer on the Malayan Peninsula, and gave all member governments shares in the profits. Above all else, the colony required stable exchange rates with London and therefore the currency board system fixed the Malayan dollar to the pound sterling at 2 shillings 4 pence (or Malayan $50 = £7, the same as the old Straits Settlements dollar) and backed it with reserves of at least 100 percent. The official name of the board was initially the Board of Commissioners of Currency, Malaya, but it was popularly known as the Malayan Currency Board or Malayan Currency Commission.

Currency ordinances of 1950 and 1960 updated the laws of the Currency Ordinance as the political economy of the region changed. From 1953 to 1967, the Malaya and British Borneo dollar was issued by the Board of Commissioners of Currency, Malaya and British Borneo. The Currency Ordinance of 1960 was the last currency ordinance and included a provision for the potential break-up of the Board. After trying to maintain a common currency and market, Singapore, Malaysia, and Brunei each issued their own currencies beginning on 12 June 1967 (BCCMBB Annual Report 1967: 3).

In 1959 Malaya established the Central Bank of Malaysia (in Malay, Bank Negara Tanah Melayu; from 1963, Bank Negara Malaysia). Until the currency board split of 1967, however, it did not take an active role in monetary policy, so as to preserve the monetary union with Singapore, and did not issue currency. Hence it seems accurate to continue to focus on the currency board in this discussion.

After 1967, Malaysia let Bank Negara Malaysia become a full-fledged central bank, and it took over currency issuance. Singapore continued to operate a currency board system for a time, before replacing the system with central banking in 1971 when it established the Monetary

Authority of Singapore. Brunei also founded its own currency board in 1967 by the Currency Enactment of 1967 (Skully 1984: 7). Brunei continues to have a quasi currency board system, in which external assets need not be equal to 100 percent of the monetary base. The Brunei dollar is equal to the Singapore dollar, and Brunei and Singapore have a currency interchange agreement under which their monetary authorities accept each other's currencies at par (Currency Interchangeability Agreement, Brunei: 2ai)[1].

Definition of an Orthodox Currency Board

In the analysis of the orthodoxy of the Malayan Currency Board, it is useful to first define what characterizes an orthodox currency board. For the purpose of this paper, we will use Hanke and Schuler's (1994: 3) definition of an orthodox currency board: "A currency board is a monetary institution that issues notes and coins (and, in some cases, deposits) fully backed by a foreign 'reserve' currency and fully convertible into the reserve currency at a fixed rate and on demand." In some cases, the reserve currency might be a commodity such as gold or silver.

An orthodox currency board holds low-risk, interest-earning securities and other assets payable in the reserve currency as reserves. These reserves equal or slightly exceed 100 percent of the notes or coins in circulation. An orthodox currency board earns profit from the difference between the return on the securities in the reserve currency, and any expenditures needed to maintain the notes and coins in circulation. Any surpluses are appropriated to the governments in the currency board (termed in the Malayan case the "Participating Governments") to maintain reserves at the level laid out by the Currency Ordinance.

Behind all the legislation is a basic idea that the purpose of a currency is to serve as a medium of exchange and store of value, nothing more (King 1957: 28). To meet the requirements of trade, the currency must have at least 100 percent backing and a high proportion of liquid assets in the reserves to maintain unquestioned credibility. An orthodox currency board has no discretionary power over the quantity of notes, coins, and deposits that it offers. Supply and demand in the market determine the quantity of notes and coins issued by the currency board, therefore also determining the overall money supply in the system (Hanke and Schuler 1994: 3). Within the currency board system, commercial banks and other financial institutions may exist. The currency ordinances and laws lay out particular rules of behavior for those institutions concerning exchange rates, convertibility, and finance. One notable distinction between a

[1] The Currency Interchangeability Agreement originally included Malaysia as well, making the Malaysian dollar (ringgit) exchangeable with the Brunei and Singapore dollars at par. Malaysia withdrew from the agreement in 1973.

currency board and a central bank is that the currency board cannot and will not lend to any commercial bank or financial institution within the system.

"A sound currency is one that is stable, credible, and fully convertible. Stability means that current annual inflation is relatively low, usually in single digits. Credibility means that the issuer creates confidence that it will keep future inflation low. Full convertibility means that the currency can buy domestic and foreign goods and services, including buying foreign currencies at market rates without restriction" (Hanke and Schuler, 1994: 1). The Malayan Currency Board issued a sound currency by that definition.

The Malayan Currency Board and the Currency Ordinance of 1938

The Currency Ordinance (No. 23 of 1938 in Singapore) accepted the report of Sir Basil Blackett (1934), which recommended participation by the Malaya States, both Federated and Unfederated, in the Currency Ordinance. Sir Basil Blackett was a British civil servant and an expert in international finance. He was appointed by the Malay States to make suggestions on how the region could benefit from the profits of a common currency. A key point of his report was that if all the Malay states were to participate, it was necessary that identical legislation be passed in each state (King: 20). The Malay States joined the currency board to receive seignorage from Straits Settlements notes circulating in Malaya (Krus and Schuler 2014: 222). After previously enjoying the convenience of no cost, effort, or responsibility regarding the currency, Malaya now agreed to participate in all three burdens for a share in the profit. The Currency Ordinance went into effect on October 21, 1938, announced in the *Straits Settlements Government Gazette* as Notification No. 2999, and officially established the currency notes as legal tender in the Malaya States. It was enacted "to constitute a Currency Commission to provide for and control the supply of currency to the territories administered by the Governments participating in this Agreement" (Straits Settlements Currency Ordinance, 1938).

The Malayan Currency Board was a pure foreign-exchange currency board. By the 1930s it had become standard practice in British colonies to replace older currency board legislation, requiring boards to hold some assets in gold or silver (in practice, gold or silver coin) with financial assets denominated in sterling. Unlike many banknotes, the Malayan currency notes made no promise to pay, but merely contained a legal tender statement. The notes did not represent some specific commodity, say silver or gold (King: 38). The coins and notes circulated by the Currency Board did have an exchange value, which was fixed rate at 2 pence 4 shillings sterling on demand at any office established in accordance with the Currency Board laws. The ordinances of 1938 and 1951 specified that the Currency Fund providing backing for notes and coins was to be invested in British or British Empire securities other than those of the participating governments. The British Secretary of State for the Colonies was however granted discretion to allow investment in other securities, which could have included local securities but in practice never did. The currency commissioners were permitted to charge, from any person obtaining currency notes or sterling, a commission of three-sixteenths of a penny in respect of every dollar issued (about 0.67 percent). This was later decreased to one-eighth of a penny (about 0.44 percent) for the purchase or sale of sterling respectively (Drake 1966: 5).

The Currency Board established three accounts relating to the new currency notes, which were first issued in 1940. Those accounts were the Income Account, the Currency Fund, and the Currency Surplus Fund.

The Income Account included all income receipts arising from interest and dividends on investments, interest on deposits, discounts on treasury bills, profit on telegraphic transfers (T.T.) on London or commissions in connection with the issue or redemption of currency notes or coins. All expenditures for the administration of the Currency Board were also recorded in the income account, such as the cost of printing notes, coinage, salaries, freight, insurance premia, Crown Agents'[2] commissions, cost of police guard, cost of audit, etc. These costs were subtracted from the gross income in order to find the net income to be divided between the Currency Fund and the Currency Surplus Fund (King 1957: 43). In some years, income was greater than expenses, so an amount equal to one per cent of the value of the Currency Fund was appropriated from the Income Account to the Currency Fund, also called the capital account. If on the last day in any financial year, there was a surplus in the Income Account after appropriations were made, the surplus was to be transferred to the Currency Surplus Fund for distribution to the participating governments (Lee 1986: 17).

The Currency Fund Proper, also sometimes called the Capital Account, was solely managed by the Currency Commissioners and held in London by the Crown Agents or by the Commissioners at their offices for meeting the redemption of currency (Currency Enactment 1939, FMS Government Gazette 1939: 560). The following two items were paid into the Currency Fund: Sterling received in exchange for currency notes or coin, and the proceeds of any transactions relating to the reminting of coin held by the Fund or the sale of any coin held for the account of the Fund less the expense involved (King 1957: 48). The Currency Fund was composed of two portions: The Liquid Portion and the Investment Portion. The Liquid Portion, initially called the Coin Portion, was mostly held by the Crown Agents as deposits at the Bank of England and other banks, or as United Kingdom Treasury bills, short-term loans, and "money at call" to the London money market. It was created to meet "reasonable" demands for sterling in exchange for currency. This was roughly 10 percent of the Fund (Drake 1966: 20). The Investment Portion,

[2] The Crown Agents for the Colonies were a body in London that acted as an investment agent for many colonies.

making up the remaining 90 percent of the Fund, included invested securities, of which roughly 70 percent were United Kingdom government securities.[3] Investments were made in the name of the Crown Agents or appointed trustees on behalf of the Commissioners. As the Currency Board issued currency notes, these notes are listed as a liability of the Currency Fund, in addition to nickel, cupro-nickel, and bronze coins in circulation[4].

The Currency Fund differed from its predecessor, the Currency Guarantee Fund (established in the Straits Settlements Currency Ordinance of 1923), which held current coin and sterling received in exchange for currency notes in the Straits Settlements. The Currency Guarantee Fund had also contained both an investment and a liquid portion, but only required a minimum backing of 40 percent for notes in circulation, whereas the Ordinance of 1938 backed notes 100 percent. The 1923 ordinance had allowed the investment portion to be invested in both British and Indian securities, whereas the updated ordinance allowed only investments in the United Kingdom or sterling securities. The Currency Guarantee Fund had been the only fund established by the Currency Ordinance of 1923, and therefore was also tasked with handling currency income and expenditure for the upkeep and maintenance of notes in circulation. In the Currency Ordinance of 1938, the three accounts better suited the operations of the Currency Board and clearly distinguished responsibilities.

The Currency Fund was valued, according to the Currency Agreement, at its "current realizable value." The investment portion was valued at the current market price of the securities at the time of valuation, and the silver coin held on account was valued at the current market value of silver. The value of the sterling assets was converted into Malayan dollars at the fixed rate of 2 shillings 4 pence per dollar.

The Currency Surplus Fund, also called the All-Malaya Fund, was established with the sole purpose to distribute profits to the participating governments, and to be paid any surplus from the Currency Fund Income Account arising after the appropriations have been made to Participating Governments. The profits were a byproduct, not the object, of the currency board's operations (Drake 1969: 32).

The most urgent problem was the distribution of profits, which was solved with a formula suggested by the Blackett Report that took into account the quantity of currency in circulation in each political area, assuming a constant velocity of money (King 1957: 21). The 1938

[3] In the accompanying spreadsheet, the value of the Investment portion is located on both the semi-annual data sheet, as well as the Statement of Investments data sheet under the line item "Total Value of Stock in Dollars."

[4] While nickel, cupro-nickel, and bronze coins in circulation were a liability of the fund, the liability was partially offset by the bullion value of the coin—the corresponding asset (King: 38).

ordinance distributed the profits and liabilities among the Participating Governments as follows:

- Straits Settlements (Singapore, Penang, and Malacca): 37 percent.
- Federated Malay States (Perak, Selangor, Negri Sembilan, and Pahang): 37 percent.
- Unfederated Malay States (Johore, Kedah, Kelantan, Trengganu, Perlis, and Brunei): 26 percent.

The structure of these three accounts remained the same in the Currency Ordinances of 1950 and 1960, continuing until the dissolution of the Currency Board in 1967 (Lee 1986: 16-18).

The Board of Commissioners of Currency, Malaya was made up of five members who were considered public servants for the purposes of the Penal Code. The Financial Secretary of the Straits Settlements, who had been the chairman of its local currency board, was retained as chairman of the Malayan board[5]. Although the Malayan Currency Board included representatives from the Straits Settlements, Federated Malaya States, and Unfederated Malay States, the head office was located in Singapore, which signaled Singapore as the "political and economic centre" (Lee 1986: 18). (There were also offices in Penang, Kuala Lumpur, and later, when the board expanded to Borneo, Kuching and Jesselton [now Kota Kinabalu].) Singapore was the leading port for British trade at the time and also an information center for trade development. The port was known as the "Crossroads of the East" for its key location in international trade. Because of the amount of trade that passed through Singapore, foreign exchange needed to be supplied at a reliable and consistent rate. The Currency Board had the sole responsibility for issuing currency among the member states, and solved the problem of each state setting up independent monetary systems. By pegging the dollar to the sterling with at least 100 percent reserves, the Currency Board created credibility among foreign and domestic investors by ensuring the value of their notes.

Foreign investors were attracted to Malaya for the tin reserves and rubber industry. When the canning industry in the United States expanded in the mid-19th century, demand for tin increased (Uqbah 2014), and continued into the 20th century. Malaya's trade was therefore vulnerable to fluctuations in world commodity prices. While industrial production would to some extent shield Malaya from the volatile commodity price market, the region was organized for agriculture and specialized products (Drake 1969: 5).

Due to the operation of the Currency Board, foreign investors did not fear inflation due to over-issue of currency, because the Currency Board had no discretionary power to expand the

[5] In the Currency Agreement of 1950, his successor, the Financial Secretary of Singapore, was chairman of the Board of Commissioners.

currency issue. The internal credit position was directly related to the external balance of payments position, thus eradicating the possibility for a balance of payments crisis (Lee 1986: 33). In other words, the perfect interchangeability of the Malayan dollar into sterling and the close relationship through the overseas banks with the London money market meant that the Malayan currency system was virtually part of the British currency system (Drake 1969). The currency board was also protected from political pressure because of its carefully structured laws and simple operation. Within the financial system, foreign and domestic banks existed along with the Currency Board. The purpose of the foreign banks was to facilitate trade in rubber and tin. Many of these banks closed during the Japanese occupation during the Second World War (discussed below). After the war had started in Europe but before it had reached Malaya, the Currency Board prohibited the export of foreign and local currency alike without permission, to reduce pressure on the balance of payments (FMS Government Gazette 1940: 735). This measure was similar to those in other parts of the British Empire at the time.

Malaya British Borneo Currency Agreement 1950

The 1950 Currency Agreement contained little that was not already included in the 1938 Agreement. The main new feature was the extension of the geographical coverage of the Agreement to include British North Borneo and Sarawak. With the extension of coverage, the leadership of the Board of Commissioners added a seat appointed by the Governors of British North Borneo and Sarawak and the British Resident, Brunei (King: 42). The 1950 Agreement also devised a new formula to distribute the profit between Singapore and the Federation of Malaya on the basis of "currency per head of population x [times] number of population" (Singapore, Ordinance No. 42 of 1951, Clause 8 (2)):

- Federation of Malaya: 65 percent
- Singapore: 29 percent
- Sarawak, Brunei, North Borneo: 6 percent[6]

New currency notes featuring an updated design to reflect the Board's new name were first issued in 1954 (Lee 1986: 20).

During the Japanese occupation from 1942-1945, the Currency Board had ceased to operate in Malaya. It continued to hold assets in London, beyond the reach of the Japanese. It redeemed Malayan currency for sterling in London, but only to carefully scrutinized parties. The Malayan population continued to hold Currency Board notes because it had confidence in them. Malaya experienced inflation because the Japanese occupation authorities issued their own notes, which eventually became almost worthless. At the same time, the Malaya currency note issue

[6] Sarawak: 3.5 percent, Brunei: 0.75 percent, North Borneo: 2 percent.

increased by almost $200 million as a result of transactions enacted by the Crown Agents on behalf of the Commissioners of Currency. These transactions consisted of the redemption of Malayan currency presented for encashment by evacuees from Malaya, and the issue of Malayan currency to the War Office for use in their operations against the Japanese. All issues of Currency to War Office were at the rate of 2 shillings 4 pence per dollar, and the sterling received was paid into the Malayan Currency Fund held by the Crown Agents (Annual Report, 1941-1946: notes i-iii).

Pre-invasion notes of the amount $221,974,005.30 remained in circulation after the occupation, and were gradually destroyed and withdrawn beginning in September 1945, when Japanese occupation ended. While the pre-invasion notes were no longer considered "money" they remained liabilities of the Currency Fund (King: 43). It remained possible afterwards for noteholders to exchange old notes for new ones at the offices of the Currency Commissioners. A new item, the reserve to cover redemption of pre-invasion notes, was created to set aside unspecified assets for the purposes of redemption. Simultaneously, new issues post-liberation were added to the circulating notes. During the Japanese occupation, the Currency Board was not considered to have authority locally and therefore could not operate as an orthodox currency board. After about half a year of postwar rule by British military authorities, civilian rule returned in early 1946. The Currency Board officially resumed operations on 1 April 1946 (Malayan Union, Ordinance No. 5 of 1946; Singapore, Ordinance No. 4 of 1946; both cited in Board of Commissioners of Currency, Malaya, annual report 1948: 1; see also Krus and Schuler 2014: 220). Conversion into sterling resumed at the prewar exchange rate. The value of notes in circulation as at 31 December 1946 consisted of issues made prior to the occupation and not then withdrawn and issues made subsequently (Annual Report, 1941-1946: 5, note iii)[7].

The Currency Board again declared that pre-invasion notes to the value of $238,804,963.95 would cease to be legal tender with effect from August 1948 and September 1949 (depending on the particulars of the notes). The amount was gradually withdrawn by the Currency Commissioners and reported monthly in the government gazettes. This demonetization was not only in response to the effects of the war, but also to liquidate the Currency Surplus Fund ahead of the new Currency Agreement in 1950 that would include Sarawak and North Borneo. Before the war, both had had locally issued notes, but Malayan currency had been introduced into both on liberation from Japanese occupation. It therefore made sense to include Sarawak and North Borneo in the new agreement because the Malayan dollar had already met Sarawak and Borneo's increased demand for notes and coins (Krus and Schuler, 2014: 203), and was

[7] The amount of issues made prior to the occupation amounted to $174,952,112.41, and the amount of issues made prior to the occupation and not then withdrawn on 31 December 1946 was $230,932,977.99 (Annual Report, 1941-1946: 5).

already in circulation there (Lee 1986: 20). It was then realized that the paper currency note was and would remain the main circulating medium, so the Commissioners were able to invest a larger portion of the Currency Fund. As of 1952, the Currency Fund began investment in securities longer than two years, indicating the Currency Commissioners' understanding that a proportion of the currency would always remain in circulation and need not be 100 percent backed by *liquid* assets (though it remained backed 100 percent by *external* assets) (King 1957: 29). Post-occupation issues consisted of a new series of notes which had been approved before the Japanese occupation but which had not been actually put into circulation (Annual Report, 1941-1946: 5, note iv).

"In 1953 notes of the Board of Commissioners of Currency, Malaya and British Borneo, dated not earlier than 1 July 1941, became legal tender in British North Borneo. The notes were of denominations of 1 cent to Malayan $10,000. British North Borneo Chartered Company notes ceased to be legal tender from 1 September 1953, but remained redeemable for their face value in Malayan currency when deposited at banks or treasuries" (North Borneo annual report 1953: 36, cited in Krus and Schuler 2014: 203). Around the same time, effective 31 December 1952, silver coins issued by the famous Straits Settlements were completely deprived of any transactional value and declared no longer legal tender. Therefore, legal coins in the Malaya and British Borneo currency board system consisted of nickel, cupro-nickel, and bronze denominations less than one dollar (King 1957: 28).

The Currency Agreement of 1960

The independence of Malaya in 1957 and the self-government of Singapore in 1959 necessitated the revision of the Currency Agreement. The new agreement was negotiated to take into account the independent status of the two participants. The new agreement included the Governments of the Federation of Malaya, the States of Singapore and Brunei, and the Colonies of Sarawak and North Borneo. It entered into operation on 1 January 1961. The Board comprised seven members: two from the Federation of Malaya (including the chairman), one from the State of Singapore, one from the Colony of Sarawak, one from the Colony of North Borneo, one from Brunei, and one independent member with banking experience to be appointed by the participating governments. Representatives from Federation of Malaya and Singapore each had three votes apiece, while the rest of the members had only one vote apiece. The Board and its officers and servants were deemed public servants (Currency Agreement 1960).

The relationship between Singapore and Malaya had shifted. The chairman was now a member from the Federation of Malaya and not from Singapore, and the seat of the Board was moved from Singapore to Kuala Lumpur, Malaya (Lee 1986: 20-21). Malaya also had a larger representation on the board, with two members compared to Singapore's one member. Along with the shift in leadership, another important change was the provision that any government could withdraw from the Currency Board, given 18 months' notice (Lee, 1986: 20). This allowed a provision for governments to begin issuing their own currencies. The new agreement laid out careful procedures to provide for withdrawal from the Currency Board should any participating governments choose to do so.

Finally, the agreement also laid out the foundation of reserves of the currency board to be held by the Principal Agent[8], and the limitations on investments of the Currency Fund. The main purpose of the Fund was to meet the demand for redemption of currency. The Currency Fund accumulated all sterling received in exchange for currency notes or coin. At least 30 percent of the Fund had to be held by the Principal Agent in liquid form at all times. The assets of the Fund were to be invested in sterling securities of, or guaranteed by, any Commonwealth Government, or with the unanimous agreement of the Participating Governments, guaranteed by any international monetary institution and held by the Principal Agent or on behalf of the Principal Agent. The board was allowed to hold assets of participating governments up to Malayan $100 million the first year, $200 million the second year, and $300 million in the third and later years (BCCMBB annual report 1960: 3; see also Krus and Schuler 2014: 225).

The liquid portion of the Fund held by the Principal Agent was allowed to be held in any fund controlled by the Principal Agent or balances at any United Kingdom bank, Treasury bills of the United Kingdom government, or sterling securities with less than two years' maturity or guaranteed by a Commonwealth government (Malaya British Borneo Currency Agreement, 1960).

This was the first time that the Currency Board was allowed to invest in non-sterling reserves, as long as the securities matured within five years. This feature gave the Currency Board more discretion over its investment portfolio and diversified the investments of the Board. In practice, though, as the financial statements show, the board did not take advantage of this capability. "This agreement anticipated that the days of the automatic issue of currency, against tender to the Currency Board of pounds sterling, were numbered" (Drake 2004: 144).

The 1960 agreement also provided that the exchange rate could be changed by unanimous consent of the member governments, although in practice it never was.

[8] The Principal Agent was one of the Crown Agents.

Calculations and Tests[9]

Here I perform three statistical tests to measure how orthodox the Malayan Currency Board was according to the definition given near the start of the paper. The tests focus on the period starting in 1946, when civilian rule returned after the Second World War. The prewar period was short and the currency board suspended operations in Malaya during the war, making analysis of the years before 1946 of limited value.

#1: Ratio of External Reserves to Monetary Liabilities of the Currency Board

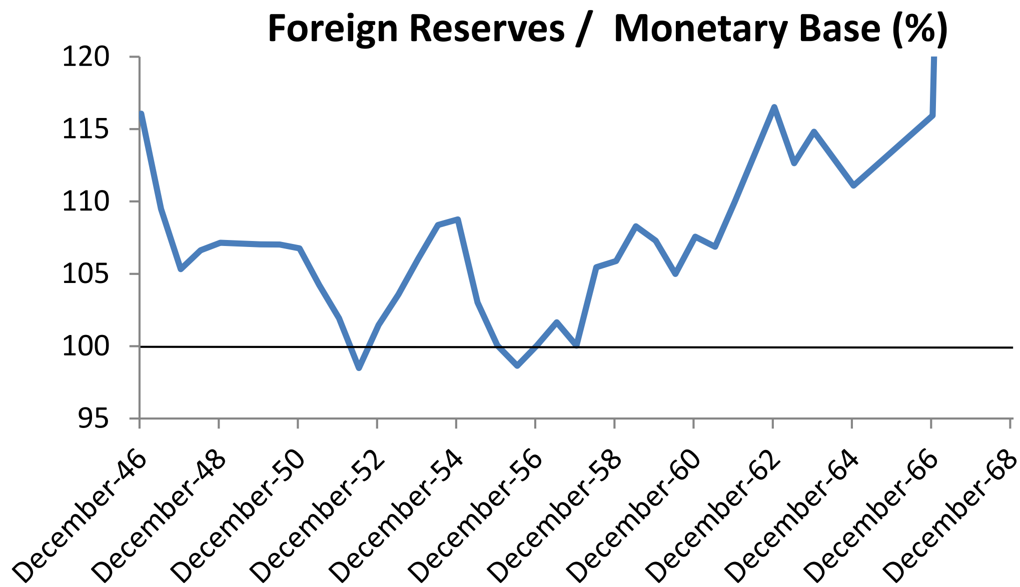
Liabilities are measured as the sum of the whole amount of currency notes and coins in circulation, obtained monthly from the government gazettes. The data were reported semi-annually, in June and December.

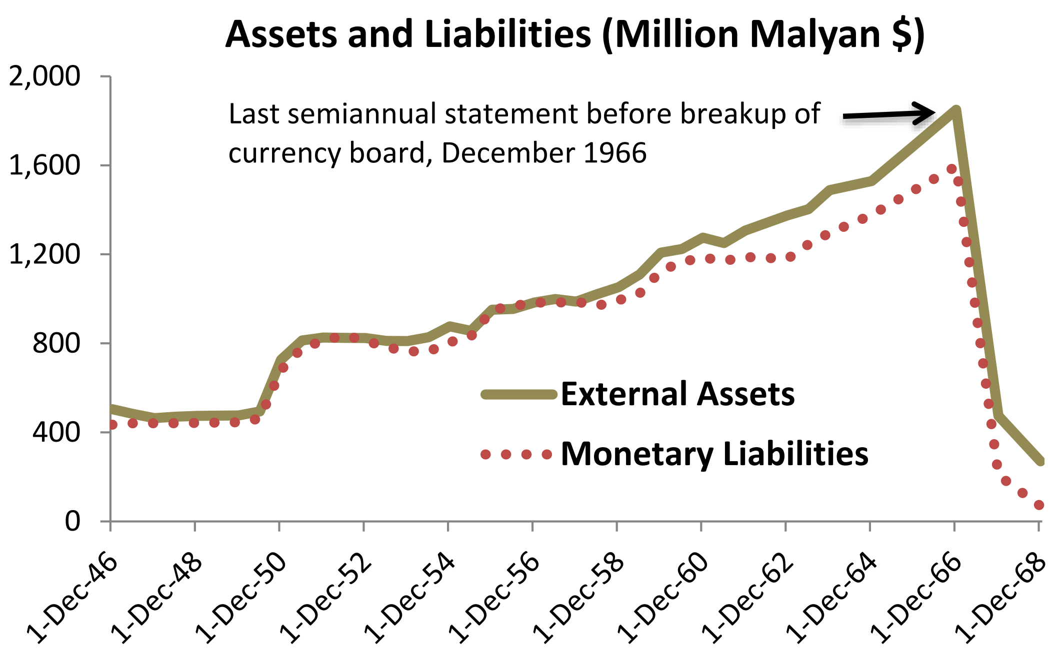
External assets are commodities or foreign securities. Foreign securities are those issued by foreign issuers, denominated in foreign currency, and redeemable in a foreign location. In the case of Malaya's currency board, external assets are measured as the sum of the three portions of the Currency Fund. The flagship feature of foreign securities is that the currency board cannot significantly affect their overall supply. Commodities are also external assets, even if produced locally. Orthodox currency boards hold external reserves equal to 100 percent or more of the monetary base. In 1954, the British Secretary of State for the Colonies decided that the Commissioners could invest a part of the Currency Fund in securities issued by the governments of the countries in which the Malayan dollar circulates. If this freedom had ever been exercised, those assets would not have been considered external assets. The Currency Commissioners, however, failed to exercise the freedom and continued to invest in external assets only.

There was no provision in the Currency Agreement for automatic action when the principle of at least 100 percent reserves had been violated. The Agreement merely gave discretion to the Secretary of State and the High Commissioner for the Federation and the Governors to make up the deficiency out of the general revenue of the participating governments on the same scale as for the distribution of profits. Between 1947 and 1963, the years of which semi-annual data is presented, foreign reserve coverage fell slightly below 100 percent only twice (June 1952 and June 1956).

[9] The Currency Board did not have authority during the Japanese occupation from 1942 to 1945, so those years are excluded from this analysis. The analysis begins in 1946.

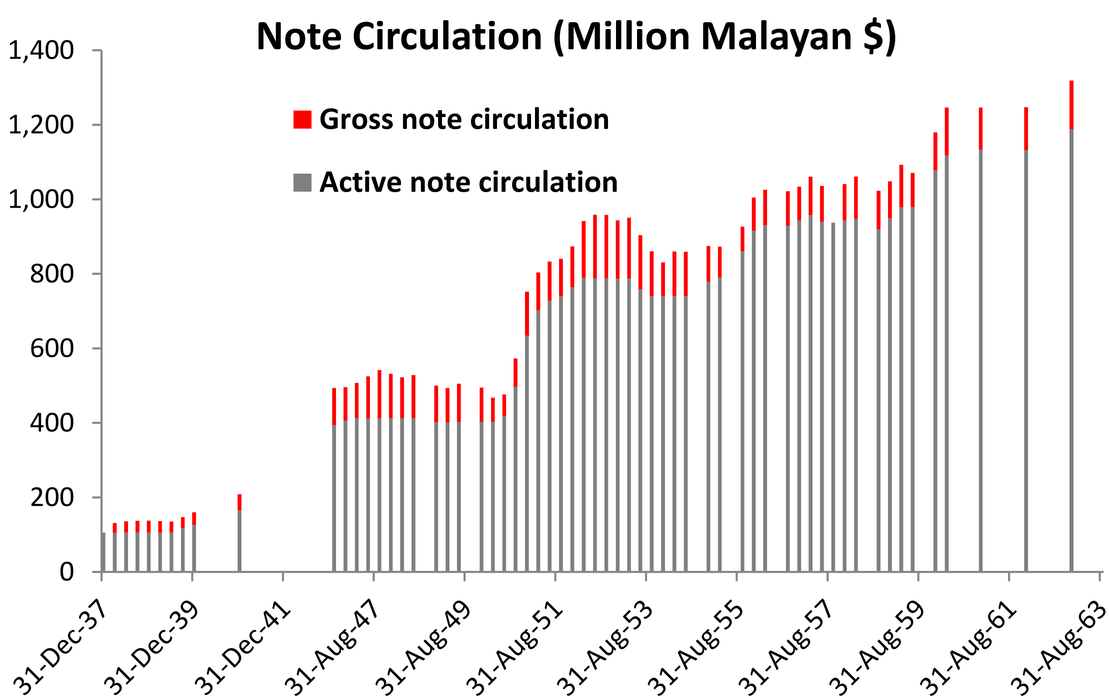
Foreign reserve coverage never exceeded the maximum threshold of 110 percent before 1963. If this had occurred, then annual payments from the Currency Fund Income Account equal to 1 percent of the value of the Currency Fund would have stopped. The rationale of reserves as high as 110 percent was for a margin of protection in case the reserve securities lost their value (Hanke and Schuler 1994: 5). After 1963, the reserve coverage ratio exceeded 110 percent ahead of the breakup of the currency board system and conversion to central banking. These calculations affirm that the Currency Board did, in fact, act as an orthodox currency board by definition of maintaining at least 100 percent reserves.





The monetary base of the Malayan currency board system was the sum of notes and coins in circulation. In an orthodox currency board, at any time, a holder of notes or coins in circulation should be able to redeem those notes or coins for sterling at the fixed exchange rate set by the currency board. The Malayan Currency Board honored that obligation and, according to my calculations, maintained adequate foreign reserves for redemption.

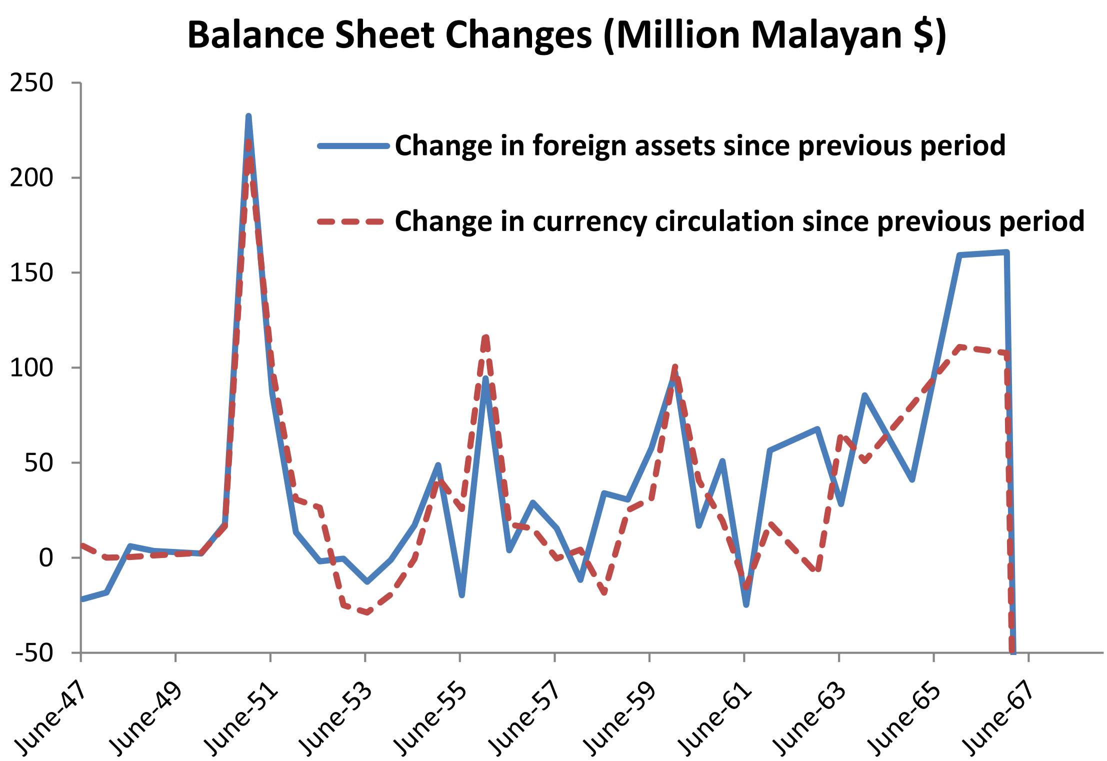
The Gross, Net, and Active amounts of currency in circulation are shown in the accompanying spreadsheet from 1948 to 1960. The amounts are reported for March, June, September, and December each year.[10] Gross circulation includes currency notes and coin in government treasuries and with the banks. Net circulation is gross circulation minus government treasury holdings and active circulation is net circulation minus bank holdings. (Generally, net circulation was so close to gross circulation that it would be hard to see in the graph below, so it is omitted.) Net circulation, in other words, is the total currency notes in the hands of the public and the bank but not in the treasuries (King 1957: 64). The graph below shows that gross circulation exceeded active circulation, as expected of an orthodox currency board. Furthermore, the currency in circulation grew over the time period, showing the currency board's automatic response to a growing economy and growing demand for currency notes. It is important to note that, when British pounds were exchanged for Malayan dollars, the money supply in England was unchanged. Conversely, when Malayan dollars were exchanged for pounds, the money supply in Malaya fell (King 1957: 42).



[10] Some data points are missing, but for the most part the data is comprehensive from 1948 to 1960.

#2: Year-Over-Year Changes in Monetary Liabilities and Foreign Reserves

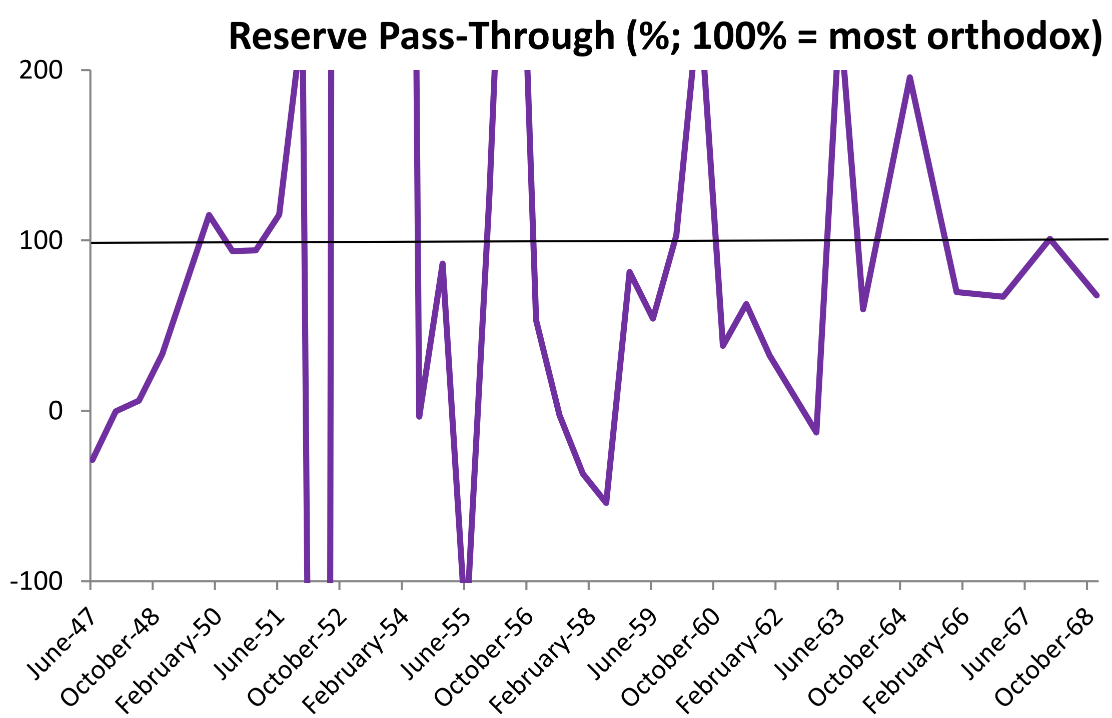
The year over year changes in absolute monetary base and external assets is exactly equal to the year over year changes in total liabilities and assets. The graph below calculates foreign assets as the total Currency Fund as described above, and currency circulation as the aggregate amount of notes and coins reported every six months in June and December in the Singapore, Brunei, and Malaya or Malaysian government gazettes. For most of the Currency Board's existence, no clear pattern identifies either the change in external assets or the change in currency in circulation as having a larger trend than the other. The two are closely correlated until diverging in 1963 ahead of the Currency Board's breakup. The plunge at the end indicates old Malayan currency being redeemed for new national currency in Malaysia, Singapore, and Brunei.



#3: Reserve Pass-Through Ratio

The reserve pass-through ratio measures year-over-year change in the monetary base divided by year-over year-change in net foreign reserves. The monetary based is calculated as the sum of the currency notes and coins in gross circulation. Net foreign reserves are calculated as the sum of the Currency Fund because the entirety of the Currency Fund was held abroad, invested in foreign assets. The reserve pass-through ratio is measured year over year to eliminate seasonal effects and diminish the importance of one-time events. A typical reserve pass-through ratio should be near 100 percent for an orthodox currency board, but in practice may fall between 80-120 percent (cf. Hanke 2008).

Reserve pass-through was volatile from 1950 through 1964, indicating possible unorthodoxy of the Malayan Currency Board. The graph uses six-month data reported in the Singapore and Malayan government gazettes. The analysis below drops data points for which data are missing in the accompanying spreadsheet.



The Breakup of the Currency Board

This essay mentioned the features of the currency board system when discussing the Currency Agreement of 1938 and subsequent agreements of 1950 and 1960. It was these same features that eventually led to the demise of the Currency Board and the transition to a central bank in Malaysia. First, the Currency Board had no discretionary power to increase or decrease currency issue. While this limited fears of inflation due to over-issuance, it eventually became a perceived demerit, as the Currency Board had no power to stabilize the economy with larger currency issues. In the event of falling exports and a balance of payments deficit, the Currency Board could not increase the money supply.

Second, the Malayan dollar was backed by at least 100 percent reserves, which gave investors confidence and increased credibility in the currency. However, during the 1960s, this reserve ratio appeared too conservative. It allegedly caused an unnecessary "locking up" of resources that could have been diverted to development purposes (Lee 1986: 35). Critics argued that Malaya would have achieved the same credibility and confidence with only 75 percent reserves.

Interestingly, the central banks in both Singapore and Malaysia today both have foreign assets substantially greater than the monetary base. In Malaysia, total reserve money equals about 230 RM billion[11], and total foreign assets equal US$ 94.0265 billion[12]. Converting total foreign assets to Malaysia ringgit at the current exchange rate of about 1 RM = 0.23 USD, we have total foreign assets equal to RM 402.4 billion. The resulting ratio of foreign assets to reserve money (also called the monetary base) equals about 175 percent. In Singapore, reserve money equaled S$55.2 billion at the end of 2014, and foreign assets equaled S$345.2 billion[13]. The resulting ratio of foreign assets to liabilities equals about 625 percent.

In 1954, The International Bank for Reconstruction and Development (IBRD) was tasked with assessing Malaya's potential for economic development and to make recommendations. The Mission's conclusion was to recommend a central banking system in Malaya to manage the money and credit situation (Drake 1969). This proposal was endorsed by Mr. G.M. Watson, a Bank of England official, and Sir Sydney Caine, an economic advisor to the government of Singapore. They were engaged by the governments of Malaya, Singapore, and the United Kingdom to investigate the IBRD's suggestion (Drake 2004: 143). When Malaya alone first obtained independence in 1957, it decided to go ahead with the establishment of its own central bank although it left the door open for the anticipated later entry of Singapore.

The Central Bank of Malaya (Bank Negara Tanah Melayu) was then established in 1959 (Drake, 200: 131). At this time, however, it did not have control or authority over the currency supply. Five years later in 1964, "the Bank's jurisdiction was extended over the whole of the then Malaysian area. Notice of replacement was served on the Currency Board, to take effect from June 1966. Bank Negara Malaysia (Central Bank of Malaysia), as it was renamed, stood poised to become the bank of issue and trust Central Bank in the Malaysian environment" (Drake 2004: 145). Later that year, "On 12 December 1964 the government of Malaysia informed the Board that it intended to replace the Board with the Central Bank of Malaysia as the sole currency issuing authority" (BCCMBB annual report 1964: 3). The notification would have ended

[11] Reserve money = Monetary Base = currency in circulation + excess reserves + required reserves.
[12] Bank Negara Malaysia (2015).
[13] According to Monetary Authority of Singapore (MAS) (2015).

the Board's currency issuing authority Malaysia not later than 11 December 1966, and coins a year later. On 5 August 1966, however, Malaysia, Singapore, and Brunei signed an agreement permitting the Board to continue issuing currency for six more months, until 11 June 1967 (BCCMBB annual report 1966: 3; see also Krus and Schuler, 2014: 225).

Singapore proposed to extend the continuation of the currency board system past June 1967, but the proposal was rejected by Malaysia for the following reasons (Lee 1986: 37):

1. It could not soften the impact of external fluctuations on the whole economy, arising from the rise or fall of export earnings.
2. It locked up part of financial resources (foreign exchange reserves) which might otherwise be used for the import of capital equipment necessary for economic development
3. It was deflationary in the long-run and so not suitable for a growing economy with rising income and population

Despite Singapore's plea to extend the currency board system, Bank Negara Malaysia became the sole currency authority in Malaysia effective 12 June 1967 (BCCMBB annual report 1967: 3). Bank Negara issued currency for Malaysia only, while the Currency Board issued currency to the whole Malayan currency area (Lee 1984: 32). The new central bank took over the offices of the Currency Board in Kuching from the Sarawak government, and began to supervise and manage the remaining offices. Offices in Kuala Lumpur, Singapore, Penang, Kuching, and Kota Kinabalu were maintained by the Currency Board under Bank Negara Malaysia's supervision for the remainder of the year. The Board commenced redemption of its currency on presentation by the new currency authorities at the rate of 2 shillings 4 pence per dollar in accordance with provisions in the Currency Agreement. The new currency issuing agents in Singapore and Brunei were the Board of Commissioners of Currency, Singapore, and the Brunei Currency Board, respectively.

Bank Negara Malaysia continues to operate as Malaysia's central bank today. It has maintained some vestiges of the currency board's main features. From 1998 to 2005, it pegged the Malaysian ringgit to the dollar. As mentioned, the bank also maintains foreign assets in excess of the monetary base, although it was believed during the end of the currency board system in the 1960s that a foreign reserve coverage ratio above 100 percent was detrimental to economic success. In 1993, the Bank Negara introduced the Ringgit Malaysia (RM) to replace the use of the dollar sign. "Ringgit" had already been used in the Malay language to signify the currency; now it also became the official name in English.

Conclusion

The Malayan Currency Board acted as an orthodox currency board from 1946 to 1967 because it was the sole issuer of currency, maintained the required amount of reserves, maintained the fixed exchange rate to the sterling, and failed to engage in any central banking activities during its operation. Statistical analysis finds that the currency board was often unorthodox in its reserve pass-through ratio, and isolated dips below 100 percent foreign reserve coverage in 1952 and 1956. It is possible that, in some cases, the reserve pass-through ratio is not a good indicator for currency board orthodoxy. This question merits further study of the data and development of additional tests to measure currency board orthodoxy. This study gathered and digitized currency board data from 1946 to 1967, yet some gaps remain. It is possible that the missing data may affect the significance of the statistical tests.

For most of its existence, the currency board was orthodox by statistical standards measuring the reserve coverage ratio and currency in circulation. The gross and net amount of currency in circulation increased as demand for the Malayan dollar expanded with the growing economy. While Malaya's currency board was ousted for a central banking system effective in 1967, the currency board laid the foundation for Malaya's economic growth throughout the 20th century. Today, Malaysia's economy is the third-largest in Southeast Asia, while Singapore's is the second-largest. The economies of Malay and Singapore remain dependent on trade through the Strait of Malacca and various port cities and on services connected with that trade. The currency board maintained a fixed exchange rate throughout its existence, which helped develop trade relationships that still exist and thrive today.

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