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An analysis of Qatar and Dubai's Currency Board (1966-1973)

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Abstract. We first analyze the orthodoxy of the Qatar and Dubai Currency Board (1966-1973) through analysis of legislation and statistical tests based on balance sheet data. We then compare an analysis of economic factors such as wage growth, inflation rate, etc. during the currency board period to the post-currency board period. We also provide the history of the currency board's issue of notes. A companion spreadsheet workbook shows the board's note issue, balance sheet, and other data in machine-readable form.

Keywords. Qatar, Dubai, currency board.

JEL. E59, N25.

1. Introduction

The Qatar and Dubai Currency Board was established on 21 March 1966 and lasted until 19 May 1973. Prior to the establishment of the currency board, the Arabian Gulf Currency Agreement had been signed on July 1965 by the rulers of Abu Dhabi, Dubai, Bahrain, and Qatar to provide a joint currency across all four jurisdictions. Due to delays in the implementation of the agreement, Qatar and Dubai decided to form their own currency without Abu Dhabi or Bahrain. The Qatar-Dubai riyal would replace the Gulf rupee (described in more detail below) that had been in circulation throughout the Persian Gulf since 1959.

The number of accessible secondary sources for this period is almost negligible. The only primary sources available are the annual reports published by the Qatar and Dubai Currency Board, and the *Persian Gulf Gazette*, an official publication issued by the British Political Resident, an official who supervises the British protectorates Qatar, Dubai, and the Trucial States (now the United Arab Emirates).

To conduct a quantitative analysis of the Board, we have made the important data available in machine-readable form. We provide a companion spreadsheet workbook containing useful items regarding the Qatar and Dubai Currency Board that we found in its annual reports from 1966 to 1972. (No annual report for 1973 exists since the Board dissolved partway through the year.)

We focus on determining the extent to which the Qatar and Dubai Currency Board operated as an orthodox currency board in its short span of seven years. We do so by performing various statistical tests on the balance sheet items, along with analyzing the legislation associated with the currency board. We do not address whether there were alternatives to the currency board that might have led to better (or worse) economic growth during the period the currency board was active. This paper is the first detailed analysis of the history of the Qatar and Dubai Currency Board. (Symes 1997 focuses on the aspect of the board of most interest to currency collectors, not economists.) We hope that it will be useful in future studies of Qatar or Dubai's economic history.

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2. Origins and workings of the Currency Board's note issue, 1965-1966

Qatar and Dubai were two separate states of the Persian Gulf, but were both administered as British protectorates until 1971. In the absence of locally issued currencies, the Indian rupee had long circulated throughout the Persian Gulf because of the region's trade links with India, which had likewise been part of the British Empire until achieving independence in 1947. In 1959 the government of India introduced the Gulf rupee to segregate the Indian rupee within India from its use in other territories. The Gulf rupee was only valid for use outside of India. It therefore made exchange control easier for India by disconnecting the internal and external circulation of the rupee. The unusual status of the Gulf rupee also made it less attractive for the Gulf states to continue using it. In 1961, Kuwait became the first Gulf state to introduce its own currency, issued by a currency board. Qatar and Dubai followed suit several years later.

The Qatar and Dubai riyal was set equivalent to 1 shilling 6 pence sterling ($13\frac{1}{3}$ riyals = £1), with a parity of 0.186621 grams of gold. At the time the currency board was established, this rate made the riyal equivalent to both the Gulf rupee and the Indian rupee. On 6 June 1966, though, the Indian rupee was devalued to approximately 21.05 rupees per pound sterling. At the time, the orders for Qatar and Dubai riyal notes and coins had been placed in the United Kingdom but the notes and coins had not been received. Hence, for the time being Qatar and Dubai continued to use the Gulf rupee. The devaluation of the Indian rupee adversely affected the Gulf rupee. To protect their countries from those effects, the rulers of Qatar and Dubai thought it would be best for the banks to continue conducting business in Gulf rupees at pre-devaluation exchange rates. To give banks the incentive to do so, the rulers guaranteed that the Gulf rupee then circulating in Qatar and Dubai would be exchanged into the new currency (the Qatar and Dubai riyal) also at pre-devaluation rates.

However, to safeguard Gulf rupees from speculation, the governments of Qatar and Dubai withdrew them from circulation at the end of June 1966. For the period until the Qatar and Dubai riyals arrived, the government of Qatar established an agreement with the Saudi Arabian Monetary Agency, borrowing notes totaling 100 million Saudi Arabian riyals against the collateral of sterling deposits in London. By the end of June 1966 the Saudi riyals were in circulation in Qatar and Dubai, the rate of exchange being 106.5 Gulf rupees for 100 Saudi Arabian riyals. (That was the parity rate between the two currencies.)

The Qatar-Dubai Currency Agreement, signed on 21 March 1966, was amended on 31 August 1966. There were two important changes in the amended agreement. One was that the references to Gulf rupees were replaced by references to Saudi riyals. This provision allowed the holders of Saudi riyals to exchange their holdings into the new currency. The other change was in the amount of currency cover provided by the two governments. Payments of £6 million by the government of Qatar and £2.5 million by the government of Dubai were established under the amended agreement (QCCB 1966, Article 27: 17-18). All the expenditure incurred and all the revenue earned by the Qatar and Dubai Currency Board were debited and credited respectively to the Currency Fund Income Account, the main accounting vehicle for the Currency Board. The net surplus in the Currency Fund Income Account was transferred to the Currency Reserve Fund at the end of each financial year (QCCB 1966, Article 30: 19). If the Board was satisfied with the amount in the Currency Reserve Fund such that it guaranteed the redemption of currency notes and coins not less than 100 percent and contained in addition assets equivalent to 10 percent of the value of currency in circulation, then it would pay any excess amount to the two participating governments. Payment would be proportional to the amount paid by the participating government to the Currency Reserve Fund (QCCB 1966, Article 36: 20-21).

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Qatar and Dubai riyals started arriving by the middle of September 1966, allowing banks to issue the new currency in exchange for the Saudi riyals under the determined rate, i.e., 106.5 Qatar and Dubai riyals for 100 Saudi riyals. The amount of local currency exchanged for Saudi riyals was 74,859,640 Qatar and Dubai riyals. The sterling equivalent for this amount, £5,614,473, was paid solely by the government of Qatar to the Currency Board. This resulted in the governments of Qatar and Dubai signing a supplementary agreement on 29 October 1966. Under the supplementary agreement, the government of Qatar was made responsible for any losses in the Currency Reserve Fund under Article 35 and entitled to all profits under Article 36 (QCCB 1966, Appendix 3: 37-38).

Data provided by the board (QDCB 1966: 40-41) show that there were few redemptions of and frequent issues with the new currency. A possible explanation could be that those who had paid in notes during the exchange period (switching from Saudi riyals to Qatar and Dubai riyals) later slowly drew cash from their accounts. This could have been due to the lack of trust by the population in the new currency. Banks may have also been inclined to keep smaller cash holdings due to liberal regulations issued by the Currency Board.

The Currency Board charged a commission of 0.125 percent on issues and redemption of Qatar and Dubai currency (payable in sterling in London at the rate of 1.5 shillings sterling for 1 QDR). The minimum amount for such transactions was set at 1 million Qatar and Dubai riyals (£75,000) (QCCB 1966, Appendix 4: 39).

There were five members that composed the Board of Directors of the Currency Board, with Qatar and Dubai each appointing two directors (one of them being the chairman) and the fifth director being a technical member from a country outside of the Currency Area (appointed jointly by the rulers of the Qatar and Dubai). The chairman and other board of directors were appointed for a period of no more than two years and were eligible for re-appointment. Z. Sieminski (Zbigniew Sieminski, a Polish economist specializing in money and banking) was the technical member of the board from 1966-1973. The Board was expected to meet at least twice each calendar year and upon any other situation when the Qatar and/or Dubai government(s) deemed meeting necessary. The quorum for a meeting was three directors, including the chairman, the technical member, and a director that represented a different government than the chairman. The Board took decisions based on a simple majority of votes and the chairman could only vote to break ties (QCCB 1966, Article 6: 13-14).

3. Economic conditions in Qatar and Dubai

Qatar's crude oil production in the decade ended 1973 increased at a rate of 11.7 percent annually to 208.1 million barrels (570,137 barrels daily). Qatar's revenue system in the 1970s was mainly dominated by oil receipts, which comprised more than 90 percent of the budget revenue. Due to increased oil output in the decade ended 1970, oil receipts grew at a rate of 10.2 percent annually (QMFR May 1977: 1).

Oil in Dubai was discovered in 1966, and its revenue did not pour in until 1969. Most of the revenue generated from oil was invested in infrastructure development. Prior to that Dubai's economy was based mainly on trade with other countries in the Gulf region. Dubai's population increased rapidly during this period as many workers from nearby countries immigrated to Dubai due to increased demand for labor.

4. The Currency Board year by year, 1967-1972¹

¹ The narrative in this section comes from the annual reports of the Currency Board. Because it is obvious what information comes from what years, and the narrative portion of the annual reports is brief, what follows generally omits citations.

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1967. The most important event that took place in the year 1967 was the devaluation of sterling by 14.3 percent on 18 November 1967. Since there had already been two currency changes in the past 18 months, the governments of Qatar and Dubai took action to prevent further loss of confidence in the local currency arising from devaluation against third currencies. Therefore, the gold value of the Qatar and Dubai riyal remained unchanged at 0.186621 grams whereas its value in terms of sterling was increased, making the exchange rate 1 shilling 9 pence sterling, or approximately 11.43 riyals = £1. These decisions made it necessary to mark down the sterling assets, which resulted in a loss of 14.9 million riyals. A revision to the minimum amount of currency that the Currency Board was allowed to issue in a transaction was made by increasing the issue level to £87,500.

Nevertheless, currency in circulation in Qatar and Dubai increased by 53 percent over the year, primarily because of increased precautionary demand to hold cash as a result of the Arab-Israeli war of June 1967. As is visible in the companion workbook, there had been a high level of redemptions, which might at first be taken as signaling that the circulation in Dubai was falling. That was not the case, however, as the Qatar and Dubai riyal was also a major currency in other Gulf states (QCCB 1967: 2).

It is worth emphasizing that the Currency Board's decision not to devalue against third currencies with the pound sterling was unusual, but not unique. Singapore and Brunei, which also had currency boards, refused to devalue for the same reason as Qatar and Dubai. Unlike most other currency boards of the time, the Qatar and Dubai Currency Board had two anchors, gold and the pound sterling, and had to choose between them. It chose gold as the anchor but retained a link with the pound sterling by continuing to use sterling rather than gold as the currency for which it issued and redeemed riyals. Its policy was consistent with the international monetary system of the time, in which members of the International Monetary Fund declared gold parities for their currencies. If they allowed redemption of their currencies in gold, however, it was only allowed for central banks, and even then often only occasionally and grudgingly.

The consolidated balance sheets provided by the banks in Qatar and Dubai show enormous growth in the banking system, visible in rising amounts of local discounts, private deposits and advances. Growth in local discounts and advances shows greater utilization of financial resources (banks) by the population of the two states, showcasing the increase in confidence by the local population in the banks.

At the end of 1967, the Currency Board held 23.2 million riyals worth of gold and 27.9 million riyals worth of short-dated British government securities, equal to 17.7 percent and 21.3 percent respectively of total currency in circulation. The balance of the Currency Board's assets, 73.0 million riyals, equal to 55.9 percent of currency in circulation, was invested in highly liquid British Treasury bills. The Currency Fund Income Account showed a profit of nearly 900,000 riyals for the year (equal to 7.28 percent of the average total assets).

In 1967, the market value of British government securities held by the Currency Board fell below their cost as the Bank of England increased its policy rate to the unusually high level of 8 percent. The Currency Board valued these securities at market value on the balance sheet, but because it usually held them until maturity, the decline did not truly inflict losses on their final value.

1968. In 1968, the Directors of the Currency Board made two major decisions. In January, they decided to diversify the Board's assets, which they achieved by reducing the proportion of sterling holdings and purchasing assets denominated in other foreign currencies. The rationale of the step was to lower the risk of further devaluation of sterling. Hence, sterling was reduced to 50 percent in the external reserves by the end of July, with 28 percent in other foreign currencies (U.S. dollars and Swiss francs) and 22 percent in gold. In September, the Currency Board signed the Sterling Guarantee Agreement with Britain. Under this agreement, the Currency Board was required to maintain the existing proportion of sterling in its

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external reserves, and the British government in return guaranteed the Board's sterling reserves (in U.S. dollars) against the risk of depreciation of sterling (against the dollar). This decision arrested further diversification of external reserves.

The consolidated balance sheets of banks in Qatar and Dubai in 1968 showed a 75 percent increase in deposits for the year and a rise in total assets of the banks in Dubai by approximately 700 million riyals. This again points out to Dubai's significance as a Gulf trading center. The assets of banks in Qatar, along with demand deposits, time deposits, advances and discounts increased as well over the course of the year. The banks in both states also considerably increased their foreign reserves to increase residual liquidity.

At the end of 1968, the Currency Board had 30.8 million riyals worth of gold and 79.7 million riyals worth of short-dated British government securities, representing 21.0 percent and 54.4 percent, respectively, of total currency in circulation. The Currency Fund Income Account showed a profit of 7.3 million riyals for the year ended (equal to 59.01 percent of the average total assets). Also, since the Currency Board's Swiss franc and U.S. dollar holdings were invested as time deposits with foreign banks, the Board's cash with foreign banks increased as compared to 1967.

British Government securities were henceforth valued on the balance sheet at cost, rather than at market value as they had been in 1967. The high interest rates in London in 1967 that had led to the market value of the securities being less than the cost came down in 1968.

1969. The strength of the Qatar and Dubai riyal was a major reason for the strength of the banking systems in both states. There was no effect on the activities of the Currency Board or the banks when international currency markets experienced crises in 1969 from the devaluation of the French franc in August and the revaluation of the Deutsche Mark in October. The fluctuation of total external assets was low in 1969, hence, the investment policy formulated by the Currency Board in 1968 continued during 1969. There was an increase in foreign liabilities of commercial banks as local residents deposited more external assets in relation to the Qatar and Dubai riyals. Foreign currencies offered higher interest rates than the riyal, though accompanied by higher exchange rate risk.

At the end of 1969, the Currency Fund Income Account showed a profit of 8.9 million riyals (equal to 71.95 percent of average total assets). Also, since the Board followed the previous year's investment strategy, there was no fundamental change in the Board's assets.

1970. In 1970, there was no need for a major change in the composition of the Board's foreign exchange holdings. The fact that Qatar and Dubai riyal was backed by holdings of external assets, equal to around 110 percent of the currency in circulation, contributed to continued confidence in the currency. The volume of banking business grew and the banking network expanded. Over the year, there was strong growth in advances to finance local economic activities and foreign assets held by the banks.

At the end of 1970, the Currency Fund Income Account showed a profit of 11.0 million riyals (equal to 88.93 percent of average total assets). The increase in profit was mainly due to larger average holding of external assets and higher interest rates on the international money markets.

1971. Due to speculation against the U.S. dollar and a record balance of payment deficits in the United States, international foreign exchange markets experienced what for the time were enormous fluctuations. A drain of gold reserves led the United States to suspend the convertibility of the dollar into gold and to impose a surcharge on imports on August 15. On December 15 the dollar was officially devalued by 7.89 percent in terms of gold, though in practice it was still not redeemable into gold. However, none of this affected the value of the Qatar and Dubai riyal, whose gold parity remained unchanged. Issues and redemptions continued to be effected in sterling at the same rate of exchange.

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As the end of 1970 had approached, so had the maturity of the dollar term deposits in which the Board had invested. The Board decided to gradually switch into other currencies, hence, at the time of the devaluation of dollar in 1971, the Board held no dollar assets. The proportion of sterling holdings correspondingly increased from 32.2 percent in 1970 to 56.9 percent at the end of 1971. Among commercial banks, there was a substantial increase in deposits denominated in local currency both in Qatar and Dubai, whereas the increase in deposits denominated in foreign currency was relatively small (primarily due to currency uncertainties in the foreign markets). Following the further increase in number of banks in both Qatar and Dubai, banks expanded their advances and discounts to local businesses and increased their holdings of external assets.

At the end of 1971, the Currency Fund Income Account showed a profit of 11.1 million riyals (equal to 89.73 percent of the average total assets). The increase in profit despite falling interest rates in the international money markets is due to higher average level of assets that the Board had along with exchange profits on holdings of Deutsche Marks and Swiss francs that the Board possessed.

On 2 September 1971 Qatar achieved full independence from Britain as a sovereign state, and on 2 December 1971 Dubai achieved independence from Britain as a member of the United Arab Emirates. However, the actions of the Currency Board remained unchanged in both Qatar and Dubai.

1972. The re-emergence of speculative capital movements connected with further stresses in the international monetary system of the period prompted the British government in June 1972 to announce a supposedly temporary measure that the exchange rate of sterling would float. The value of sterling in dollars and other currencies declined. To maintain the gold parity of the riyal, the Board decided that it would set the exchange rates for issues and redemptions of currency in sterling from day to day. To reduce the effect of large fluctuations in the value of sterling, the Board widened its exchange rate spread to 0.5 percent on either side of the middle rate, or 1 percent total. The Board also stopped charging the usual commission of 0.125 percent on issues and redemptions.

The Board again had to face substantial losses in its sterling holding due to its depreciation. The Sterling Guarantee Agreement was designed to come into effect when the sterling-dollar rate depreciated below the \$2.40 level that had prevailed since 1967. Due to the devaluation of the dollar in 1971, the sterling-dollar rate had changed to \$2.6057. So, when sterling depreciated, the Board could not claim compensation from the British government until the rate fell below \$2.40. This happened in October, and on November 23 the Board became eligible for compensation under the Agreement. The compensation amounted to nearly 2.8 million riyals, based on the difference between \$2.40 and the closing middle rate of \$2.3506. This amount covered a part of the loss suffered by the Board.

The Board made no changes in its investment policy. However, an increase in currency circulation affected total holdings of external assets, reflected in a rise in sterling holdings. The increase in circulation was due to the rising economic activity in Qatar and Dubai along with the continued confidence of the currency's stability in turbulent times. There was also a large increase in deposits denominated in local currency at commercial banks.

At the end of 1972, the Currency Fund Income Account showed a surplus of 10.1 million riyals (equal to 81.65 percent of the average total assets). Earnings on sterling assets were high due to the rise in interest rates in London after June 1972 along with increase in Board's sterling holdings. However, low interest rates on Swiss franc and Deutsche Mark deposits meant that they did not yield great profits.

5. The end of the Currency Board, 1973

As previously explained, Dubai became an emirate in the United Arab Emirates (U.A.E.) on 2 December 1971. Following this event, the U.A.E. authorities took steps to establish a unified and independent currency system, which was completed by the issue of the U.A.E. dirham on 19 May 1973. Therefore, Qatar and Dubai signed an agreement on 9 May 1973 ending the Qatar-Dubai Currency Agreement of 1966. The new U.A.E. monetary authority, called the United Arab Emirates Currency Board, was established on 19 May 1973. Despite its name, it was actually a central bank: its minimum foreign reserve ratio was 70 percent of the monetary base, not 100 percent, and it lent to banks (United Arab Emirates Currency Board annual report 1977: 15-16, 24, 27). It was converted into the United Arab Emirates Central Bank, which had still more typical central banking characteristics, in 1980. On 19 May 1973 the Qatar Monetary Agency (QMA) took over all the assets and liabilities of the Qatar-Dubai Currency Board. The redemption of Qatar and Dubai riyals was completed within 90-day period, beginning from 19 May 1973. The Qatar riyal was issued with the same gold content as the Qatar and Dubai riyals. Even though QMA had the powers of a traditional central bank, the QMA law stipulated that the agency must maintain a reserve of external assets equal to 100 percent of the currency in circulation (QMFR May 1977: 3-4). The Qatar Central Bank, the current monetary authority, replaced the QMA on 5 August 1993.

The Qatar Monetary Agency's annual report does not state any reason why the government of Qatar wanted to establish a more activist monetary authority.

6. To what extent was the Qatar-Dubai currency agreement a Currency Board? A first cut

An orthodox currency board has a fixed exchange rate between the local currency and a foreign currency, maintains net foreign assets that are 100 percent or slightly more of the board's total monetary base, and provides full convertibility with the anchor foreign currency (Hanke 2002: 205). To what extent did the Qatar and Dubai Currency Board actually possess these characteristics during the period 1966-1973?

The Qatar and Dubai Currency Board maintained a constant official exchange rate in terms of gold. It used the pound sterling, however, as its intervention currency in foreign exchange markets. Since sterling and the dollar fluctuated with respect to gold, the riyal's exchange rate fluctuated too. During 1966-1967, 1 riyal = 1.5 shillings sterling = 0.186621 gram of gold. Even though the Qatar and Dubai riyal had an official exchange rate in terms of gold, gold was not the de facto anchor currency. From late 1967 to mid 1972, the anchor currency was the pound sterling, at 1 riyal = 1.75 shillings sterling = 0.186621 gram of gold. During the second half of 1972, as mentioned earlier, the pound sterling started to float. The Currency Board then switched to the U.S. dollar as the de facto anchor currency at 1 riyal = US\$0.228.

It might seem unclear from the above paragraphs whether the Qatar and Dubai Currency Board was actually an orthodox currency board for the whole of its life. Hence, to better understand and determine the orthodoxy of the Qatar and Dubai Currency Board (1966-1973), we will now perform certain statistical tests on the collected data in the companion workbook.

7. The data and tests

We digitized annual balance sheet data on the Qatar and Dubai Currency Board from 1966 to 1972. The only primary source available to us was the Qatar and Dubai Currency Board annual report. The report had all the necessary data from 1966-1972 to digitize balance sheets, so we were able to run various analytical tests on the Qatar-Dubai Currency Board. No data were available for 1973 as both Qatar and Dubai were transitioning out of the currency board in that year.

7.1. Domestic assets

For a currency board to be considered orthodox, it is imperative that the percentage value of its domestic assets as a share of total assets should be close to zero. Usually, a small amount of domestic assets is held by the board in order to pay for staff salaries, etc., but that is all.

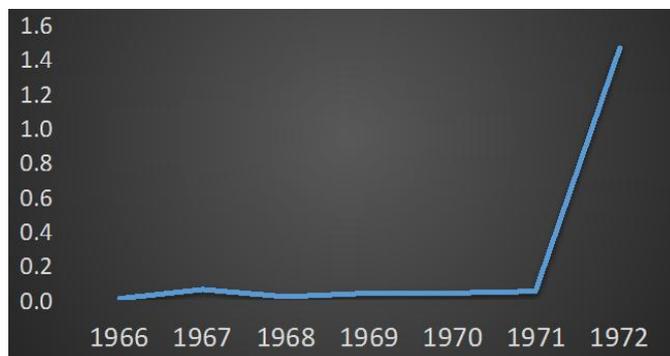


Figure 1. Domestic Assets

Figure 1 shows that the Qatar and Dubai Currency Board was an orthodox currency board by this measure. Even in 1972 its domestic assets, though larger than before, remained below 2 percent of the total. The reason for the increase was that in 1972, sterling started floating. The depreciation of sterling relative to gold inflicted a substantial loss on the Board, hence the Board decided to sell its sterling holdings during that year. The Board parked some of the proceeds in local assets, as can be seen from the data in the companion workbook.

7.2. Foreign assets and the monetary base

As previously stated, an orthodox currency board maintains foreign assets of 100 percent or slightly higher of the monetary base, formed of its notes and the coins in circulation plus demand deposits, if any. The graph (Figure 2) shows the amount of net foreign assets held by the Currency Board as a percentage of the monetary base annually from 1966 to 1972.

In the graph, net foreign assets is the sum of gold reserves, foreign securities, compensation received under the Sterling Guarantee Act, and interest due but not received (which was overwhelmingly interest deriving from foreign assets). Since there were no foreign liabilities, net foreign assets were equal to gross foreign assets.

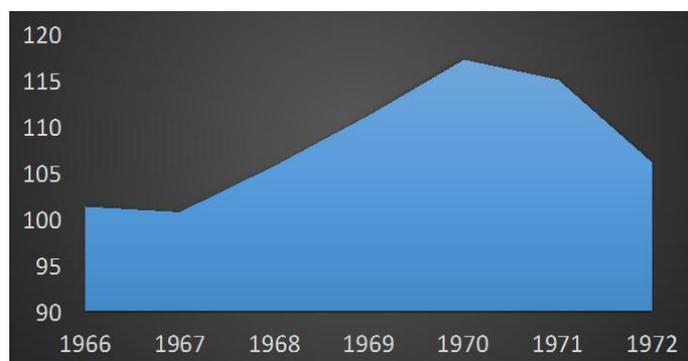


Figure 2. Foreign assets and the monetary base

As mentioned in the 1970 annual report of the Currency Board, the strength of the currency was due to external assets backing no less than 110 percent of the currency in circulation. The graph shows that the foreign reserves as a percentage of the monetary base were always higher than 100 percent during the period the

Currency Board was active. There is a steep increase in external asset coverage from 1967 to 1970 because the circulation of the currency grew strongly during the period, the backing grew, and the Board distributed as profits all assets in excess of 100 percent of the monetary base. Another reason for the strong growth is that, in 1967, sterling was devalued by 14.3 percent, the Board decided to change its investment strategy, and the new strategy generated higher returns.

In 1971, the U.S. dollar was affected by fluctuations in the international exchange market. Hence, at the end of the year (when the Board's dollar term deposits were reaching maturity) the Board decided to switch some assets back into sterling. That is why there is a downward slope from 1970 to 1971. The further decline in the percentage of net foreign assets in 1972 is due to the losses arising when sterling floated and depreciated against other currencies and gold.

7.3. Foreign assets and the monetary base

Another test of the orthodoxy of a currency board is the reserve pass-through ratio — the year-over-year change in the monetary base of a board compared to the annual change in the foreign assets held by the board. For an orthodox currency board, this ratio should be around 100 percent for the reason that any change in the monetary base must be mirrored by a change in the foreign assets in order to maintain a backing of around 100 percent (Hanke 2008: 57).

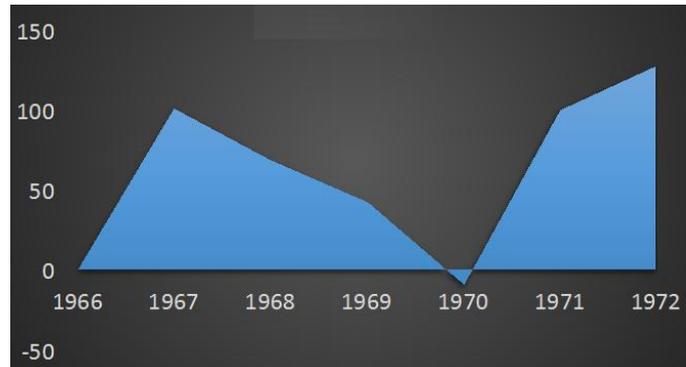


Figure 3. Foreign assets and the monetary base

Figure 3 shows that that the reserve pass-through ratio fluctuated greatly during the Qatar-Dubai Currency Board's life. When we ran tests 1 and 2, the Board proved to be orthodox; Figure 3 suggests that it was not. However, it is important to understand that especially for small currency boards such as that of Qatar and Dubai during 1966-1973, minor fluctuations in the market value or market cost of securities, or the timing of expenditures and receipts, can strongly affect the reserve pass-through ratio. Therefore, to further test the orthodoxy of the board we analyzed the monetary base and foreign assets in a different way, by comparing the annual change in monetary base to that in the foreign reserves.

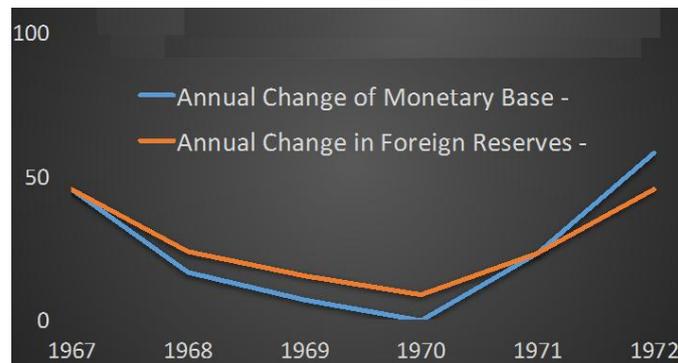


Figure 4. Annual change in monetary base and foreign reserves

Figure 4 shows that the annual changes in the monetary base and annual changes in net foreign assets were close and moved in the same direction in every year of data. Net foreign assets grew faster than the monetary base in each year except 1972. When recalling that sterling was allowed to float freely in 1972, leading to its depreciation against the riyal and hence the depreciation of the Currency Board's sterling assets, the data in Figure 4 suggest that the Board was orthodox.

7.4. A note on profitability

The chief financial advantage of a currency board for a government over dollarization or free banking (private, competitive currency issue by banks and possibly other firms) is that a currency board generates profits for the government. To check if the Board was profitable during 1966-1973, we calculated the net revenue, profit as a share of total assets. The profit generated by the Board was the balance transferred to the Special Reserve Fund (difference in amount between the Currency Reserve Fund and the currency in circulation) in the expenditure statement.

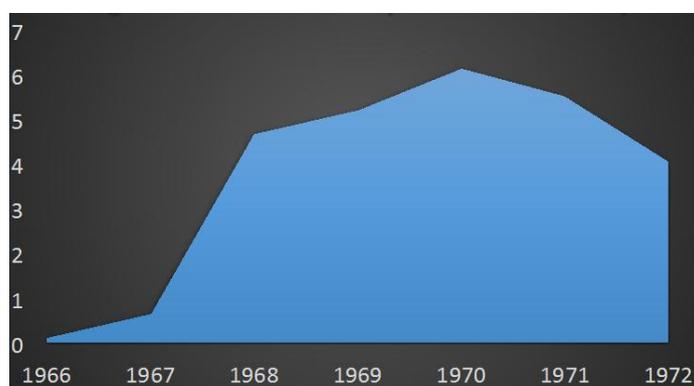


Figure 5. Net revenue (% of total assets)

As Figure 5 shows, the Board was profitable throughout its existence. The profitability of the Board was low during 1966 because it only operated for part of the year and it was just coming into existence. Hence, there was an added cost for creating a new stock of notes and coins. This can be verified by looking at the expenditure statement for 1966 in the companion workbook. The following year, sterling was devalued, reducing the value of the Board's assets in riyal terms. Thus, 1967 was also a year of low profitability.

The Currency Board changed its investment portfolio in 1968, and, since the portfolio maintained almost the same composition until 1971, the new strategy seems to have worked well for the Board. The decrease in profits in 1972 arose from the effects of the floating of sterling, discussed previously.

We avoided using any tests related to terms of monetization, tests related to currency held by the public and the banks, because we believe year-over-year comparisons of currency in circulation among the banks and the public is not of great use for determining the trends in the economies of Qatar and Dubai during this period. The data we have are based on the Gregorian calendar, whereas patterns of cash holding were apparently more closely linked to the Islamic calendar, whose month ends vary in relation to those of the Gregorian calendar (QCCB 1967: 2).

7.5. GDP Growth rate comparison – Qatar and Kuwait (1966-1972)

To get a general idea about the success of the Qatar and Dubai Currency Board with respect to its role in the wider economy, we compare Qatar to Kuwait. Both were small economies heavily dependent on oil exports. The GDP growth rate of Qatar was higher than that of Kuwait during the period Qatar and Dubai's currency

board was active, except in 1967, suggesting at the very least that the currency board was not a hindrance to growth.

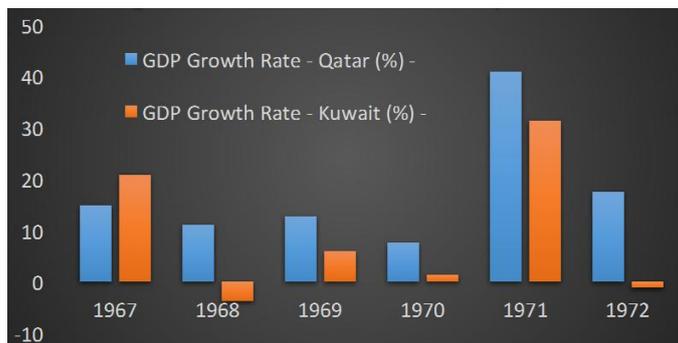


Figure 6. GDP growth rate comparison

We chose Kuwait for the comparison because the GDP data for other comparable Middle Eastern countries was not easily available for the period 1966-1972. The growth rate calculations can be accessed through the companion workbook. As previously mentioned, Kuwait established a currency board in 1961. It replaced the currency board with a central bank in 1969.

8. Conclusion

By examining the legislation upon which the Qatar and Dubai Currency Board (1966-1973) was built, it is certain that it was intended to behave as an orthodox currency board during the period it was active. The annual reports stated that the Board planned to maintain 110 percent foreign assets backing.

The data from the statistical tests of currency board orthodoxy are mixed. Domestic assets were low, indicating orthodoxy. The reserve pass-through ratio was volatile and often far from 100 percent. We cannot claim that the data are inaccurate because there are no missing data; everything is accounted for in the annual reports.

On balance, though, if we take account of the factors (such as fluctuations in the international markets, etc.) associated with certain years during which the Board was active, the reserve pass-through test seems to be an outlier and we can see that the Qatar and Dubai Currency Board was actually an orthodox currency board. Not only was it orthodox, it was also profitable and promoted growth of the financial system, as seen by the net revenue and the expansion of the banking system in Qatar and Dubai during the 1970s.

Postscript: Companion Spreadsheet Workbook

An accompanying spreadsheet workbook contains all the important data, graphs and calculations associated with this paper. The workbook also contains data digitized but not used in the paper, which may be useful to other researchers.

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