

*History
of the
Monetary Systems
and
Public Finances
in The Bahamas,
1946-2003*

Alvin Rabushka



HISTORY
OF THE
MONETARY SYSTEMS
AND
PUBLIC FINANCES
IN THE BAHAMAS,
1946-2003

Alvin Rabushka

David and Joan Traitel Senior Fellow
Hoover Institution, Stanford University
Stanford, CA 94305



The Nassau Institute

Rabushka, Alvin.

History of the monetary systems and public finances in the Bahamas,
1946-2003 / Alvin Rabushka.

p. cm.

ISBN 13: 978-976-8170-96-5

1. Financial Services Industry—Bahamas.
2. Bahamas—Fiscal policy—20th century.
3. Bahamas—Monetary policy—Social aspects.
4. Financial institutions—Money—Bahamas.

HG173.B3 R33 2010

332.1—dc22

◆ Table of Contents ◆

Chapter

I	Wartime Background	5
II	Postwar Colonial Administration, 1946-1973	8
III	Pounds, Shillings and Pence: The Bahamas Currency Board, 1919-1968	10
IV	The Bahamas Monetary Authority, 1968-1974	25
V	The Public Finances, 1946-1963	27
VI	Internal Self Government: 1964-1973	31
VII	The Commonwealth of The Bahamas, 1973-2003	33
VIII	The Central Bank of The Bahamas, 1974-2003	34
IX	The Public Finances, 1974-2002	47
X	Conclusion	51
XI	Currency Note Act	52
	Selected Bibliography	58

THE NASSAU INSTITUTE is privileged to publish Dr. Alvin Rabushka's History of the Monetary Systems and the Public Finances in The Bahamas 1946 to 2002.

The scholarly essay is essential reading for understanding the Bahamian Monetary System. It is a factual historical record of the Currency Board System of disciplined government borrowing to the flexible Central Banking System established in 1974.

It is a must read for anyone wishing to understand relationships of the Bahamian Monetary System and the Bahamian economy.

WARTIME BACKGROUND

Between 1942 and 1946, the colonial government enjoyed a surplus of revenue over expenditure. It even provided wartime financial assistance to the United Kingdom for the purchase of airplanes, tanks, and the construction of a hospital ward in Malta. Revenue for the five years totaled £3,214,391, which exceeded expenditure of £3,170,924. At the end of 1946, the authorized public debt of the colony stood at a minuscule £245,000. But the net public debt was a much smaller £91,943, or just over £1 for every Bahamian man, woman, and child, because the contribution of revenue into Sinking Funds for the purpose of redeeming official public debt amounted to £153,057. For all practical purposes, the country was free of public debt.

These numbers are no accident. They reflected official British colonial policy. British colonies were generally administered under the colonial regulations, known in full as “Rules and Regulations for Her (or His) Majesty’s Colonial Service.” The colonial regulations date back to 1837 and serve as “directions to Governors for general guidance given by the Crown through the Secretary of State for the Colonies,” especially in financial and administrative matters. The secretary of state was required to give his approval of the annual estimates of each colony before the beginning of each financial year. The overriding principle of colonial financial administration was to insure that colonies did not incur debt and impose a charge on the British Treasury.

Over time, strict adherence to the letter of the colonial regulations, which required the secretary of state to give advance approval for annual expenditures, gave way to a more relaxed practice in which local governors, after the fact, simply transmitted a copy of the annual estimates of expenditure and revenue that he had submitted to the local legislature. The secretary could, if he thought any colony's spending plans were excessive, disallow specific expenditures, but this was rarely enforced. There was no need for London to undertake detailed supervision of Bahamian public accounts as the budget conformed to general Colonial Office policy.

The Bahamas remained free of direct taxation throughout the war, drawing more than half its revenue from customs duties. Other sources of revenue included receipts from the provision of electric power, telegraph services, and telephones, which were then provided directly by the colonial government (rather than by the separate entities of the Bahamas Telecommunications Corporation and the Bahamas Electricity Corporation); fees of court and office; post office revenue; port, wharf, and harbor dues; licenses and internal revenue; real property tax; and interest earnings from investments of government assets. Stamp duties were limited to instruments used in civil proceedings or in such commercial transactions as checks. As normal economic life resumed, The Bahamas enjoyed a fiscal regime that would enhance its international status as a tax haven.

Colonial monetary arrangements typically took the form of a "currency board." (The workings of the Bahamas Government Board of Commissioners of Currency, the official name for the Bahamian currency board, are set forth below.) British sterling money was declared to be the money of account under the British Currency Act. Local currency notes of 4/-, 10/-, £1, and £5 denominations were issued by the Bahamian currency board.¹ At the end of 1946, some £482,800 of Bahamian sterling notes was in circulation.

¹ Most British colonies issued currency board notes of 5/-, 10/-, £1, and £5. The Bahamas was different in that it issued a 4/- note instead of the usual 5/- note found in other British colonies. The reason is that when bank notes were first issued, one U.S. dollar was equal to four shillings (£1 = \$5). Thus the very first Bahamian note issues recognized the close economic relationship between the United States and The Bahamas. Other British colonies simply mirrored the denominations of British bank notes.

Apart from the Post Office Savings Bank, which held deposits of £320,000, the only commercial bank operating in the colony was the Nassau Branch of the Royal Bank of Canada.

POSTWAR COLONIAL ADMINISTRATION, 1946-1973

Postwar colonial administration is divisible into two parts. The first, 1946-1963, followed standard colonial practice. It consisted of a governor appointed from Britain, who was advised by an Executive Council, which included several *ex officio* members of the colonial administration. The 1728 constitution under which The Bahamas was governed provided for a locally elected House of Assembly, chosen on the basis of a narrow franchise tied to residence and restricted to men. Some Bahamians exercised a second vote if they owned or rented real property in a constituency other than that in which they lived. The local legislature had to approve the annual budget and could reject the governor's proposals for expenditure and taxation.

Direct colonial administration was replaced with full internal self-government on January 7, 1964. New constitutional arrangements provided for a cabinet that consisted of a premier and not less than 8 cabinet members selected from the House. Whichever political party secured a majority in the House would be invited to form the government. All executive functions were vested in the premier and his ministers; only foreign affairs and defense remained in British hands. In addition, the former colonial Legislative Council was replaced by a Senate, which consisted of 15 members appointed by the governor. The second vote based on property

qualifications was abolished.

Full internal self-government was accompanied by the Ministry of Finance Act, which created a minister of finance to supervise the colony's finances and take custody of all Crown Land vested in the queen.

This essay first explains the principles that governed the monetary system and the public finances in the postwar colonial period. It next describes the changes in monetary systems as the currency board was replaced by the Bahamas Monetary Authority in 1968 and then the Central Bank of The Bahamas in 1974. It then examines the impact of the change in monetary regimes on the public finances.

POUNDS, SHILLINGS AND PENCE: THE BAHAMAS CURRENCY BOARD, 1919-1968

During the early history of The Bahamas, a wide variety of gold and silver coins circulated. In 1838, the British Currency Act made sterling coins the official currency of The Bahamas. In 1888, the Bank of Nassau was formed, and issued paper currency in denominations of 4/- and £1. When the bank failed in 1917, the government took over responsibility for paper currency.

The Currency Note Act of 1919 established the Board of Commissioners of Currency, provided for the issue of Bahamian government currency notes, and stipulated that Bahamian currency notes be convertible into gold or silver coins on demand. The 1919 Act was superseded by the Currency Note Act of 1936. It declared currency notes issued under the act to be legal tender, and guaranteed the convertibility of Bahamas currency notes into sterling notes or assets on demand. A key change in the two Acts lay in the convertibility of the local note issue from gold and silver coins to pounds sterling. Beyond the requirement to meet day-to-day demands to convert Bahamian currency notes into gold or silver coins between 1919 and 1936, or into sterling assets after 1936, the financial assets of the two currency boards were invested in a variety of sterling securities in Britain or throughout the British empire, with the exception that they could not be used

to buy bonds or other instruments issued by the government of the colony of The Bahamas. The Bahamas currency board could not purchase Bahamian government debt.

Between 1919 and 1968, the monetary system of The Bahamas amounted to an offshore extension of the sterling monetary system in Britain. Bahamians, in effect, used British money in one form or another and were subject to the same rules as residents of Britain. It's just that Bahamian notes looked different from Bank of England notes.

In 1968, the government of The Bahamas established a new monetary institution, the Bahamas Monetary Authority, which replaced the previous colonial currency board. The Bahamas Monetary Authority was a central bank in all but in name. It became a full-fledged central bank in 1974, shortly after independence. The conversion of the currency board into a central bank has had profound consequences for holders of Bahamian money. Specifically, it gave The Bahamas government license to spend beyond its means, which has left Bahamians with a legacy of debt and exchange control on capital flows.

Monetary systems and monetary policy are the most arcane topics in the field of economics. Nevertheless, in order to follow the development of the Bahamian economy since 1946, one must understand the mechanics of the two different monetary systems, the pre-independence currency board and the post-independence central bank, and their economic and fiscal effects.

An Overview of the Currency Board System.² The first currency board was established in 1849 in the British Indian Ocean colony of Mauritius. Currency boards spread slowly until about 1900, after which they became the standard monetary arrangement for British colonies, and later for French overseas territories. They reached their greatest extent in the 1950s, when much of Africa, the Caribbean, and South Asia had currency boards.

2 This summary of the currency board system draws heavily from the work of Steve H. Hanke and several of his colleagues. In particular, see Steve H. Hanke, Lars Jonung and Kurt Schuler, *Russian Currency and Finance. A Currency Board Approach to Reform* (London and New York: Routledge, 1993), pp. 4-11, 63-83, 163-180, and Steve H. Hanke, "Currency Boards," *Annals of The American Academy of Political and Social Science*, Volume 579, January 2002, pp. 87-105;

Currency boards have been in existence in more than 70 countries. A currency board is a monetary institution that issues local bank notes and coins. Although a currency board is an official institution, it is independent and separate from the government itself. A currency board has its own constitution or legal authorization, which specifies its membership and rules of operation. A cardinal principle is that all locally issued currency board notes and coins must be fully backed by a foreign reserve currency. For example, The Bahamas currency board was required to hold £1 in sterling assets for every £1 Bahamian bank note it placed in circulation.

Another key principle of a currency board is that its locally issued notes and coins are fully convertible, on demand, into the reserve currency at a fixed exchange rate. The reserve currency is a convertible foreign currency chosen for its expected stability—sterling was invariably used for British colonial currency boards. (Since the 1960s, U.S. dollars have replaced sterling as the reserve currency in Bermuda and the Cayman Islands, although sterling still backs locally issued notes in Gibraltar, St. Helena, and several other small British dependent territories.)

As reserves—as backing for the local issue of bank notes and coins—a currency board holds low-risk, interest-earning securities and other assets, including demand deposits, payable in the reserve currency. The value of these securities and assets, by law, must be equal to 100 percent or more of the value of the currency board's notes and coins in circulation. A currency board does not typically provide banking services to members of the public, and therefore accepts no deposits.

Currency boards pay for their own operations. They typically earn a small profit from the difference between the interest and dividends they receive on their reserve-currency securities, and the expense of printing and maintaining their notes and coins in circulation. Most currency boards remit to their respective governments any profit beyond what they need to pay their expenses.

There are several very important features of currency boards, which differentiate them from central banks. First, a currency board does not have discretionary control over

the quantity of notes and coins it supplies to individuals and firms. Rather, a board simply responds, in a matter-of-fact manner, to the demand for notes and coins from members of the public as they engage in normal banking and commercial activities. As a result, a currency board does not control the total supply of money that circulates in the economy or the level of bank credit that is generated. The marketplace of individuals and firms, not the board, determines these totals.

A currency board sits at the center of the monetary system, but it is part of a bigger financial system that also includes commercial banks and other financial institutions, such as mortgage banks and credit unions. It is the overall financial system that generates the deposits that determine a country's money supply and the loans that constitute its credit structure. In a currency board's relations with banks, other financial institutions, and with the government, the board is governed by certain rules of behavior concerning issue of currency, exchange rates, convertibility of currency, and the purchase of government debt, as explained below.

Several terms and definitions are required to understand any monetary system, which includes the concepts of money supply and credit. To begin with, the foundation of a monetary system is its monetary base, also known as "high powered base money." In a currency board system, the monetary base consists of the notes and coins it has issued. These notes and coins are fully backed by some hard-money, convertible reserve currency, *which is the real monetary base*. On occasion, but rarely, the monetary base in a currency board system also includes deposits held by commercial banks with the currency board. Since the standard currency board system does not include deposits held by commercial banks with the board, the rest of this description refers to the standard currency board.

The money supply consists of notes and coins held by members of the public (but excluding the notes and coins in the vaults or drawers of the banks that are not in circulation), along with deposits of the public at commercial banks and other financial institutions. Deposits take the form of demand deposits (checking accounts), savings deposits, and

fixed or time deposits, which pay variable rates of interest. Banks use the deposits of their customers, the money supply, to lend money to individuals and firms. These loans represent credit; the total amount of loans outstanding is the total credit of the banking system. The word “cash” refers simply to notes and coins in circulation.

In any banking system, commercial banks are required to hold a certain level of reserves in order to meet the immediate needs of their depositors. Notes and coins count as reserves. Banks are free to lend out the balance of their deposits.

A few more concepts are required to fill out the necessary terminology. Deposits of the public with commercial banks constitute the liabilities of the banks. The banks are liable to return these deposits whenever any member of the public wishes to make a withdrawal. Loans to the public constitute the assets of the banks. The interest that banks charge their borrowers is the money they make from lending. Since interest rates on loans (assets) are higher than interest rates on deposits (liabilities), banks profit from the difference. The bigger the difference, the larger the profit.

From the standpoint of the country as a whole, banks, as profit-seeking enterprises, serve as middlemen between the savers among the public and the borrowers among the public. Individuals and firms deposit their savings with the banks, and the banks lend the deposits, at a profit, to other individuals and firms. In economic terminology, banks are said to intermediate between savers and borrowers. Money for which savers have no immediate use can be put to productive use at a price by other individuals and firms.

Returning to the standard currency board system, commercial banks do not hold deposits with the currency board. Instead, commercial banks hold reserve-currency assets as their main form of reserves. In the case of a British colonial currency board, commercial banks hold sterling reserves, which they can exchange with the currency board for local notes and coins to serve their clients. Banks try to estimate how much local money they need to hold in their vaults at any one time to satisfy their depositors’ requests to convert demand or savings deposits into notes and coins, or to fill

cash needs for Christmas gifts. (Credit cards were not used in The Bahamas during the currency board era.)

A standard currency board maintains a rigid, fixed exchange rate with the reserve currency, which can only be altered in emergencies. The exchange rate is written into the constitution or law that describes the establishment and obligations of the currency board. Almost all British colonies matched domestic sterling notes of 10/- and higher with British sterling notes. A typical currency board holds foreign reserves of 100 percent or more of its note and coin liabilities, as set by law. Many boards have held up to 110 percent foreign reserves.

A currency board maintains full convertibility of its currency. Anyone with reserve currency can exchange it for local notes at the fixed rate and vice-versa. However, a currency board does not guarantee that demand or fixed deposits at commercial banks are convertible into currency board notes and coins. The total money supply is not backed by a reserve currency; only its monetary base is backed by, and convertible into, the reserve currency.

As countries develop, their financial systems grow along with their economies. The creation of assets (loans) by the banking system is based on commercial criteria—the ability of borrowers to repay principal and interest from future earnings generated by the loans. In the case of personal consumer loans, this ability rests on a projected stream of income from a job or a business. The growth of credit mirrors the growth of economic activity. Businesses and individuals with higher earnings and incomes can afford to borrow more to finance expansion or consumption.

Economic growth and the increasing sophistication of the financial system are seen in the movement away from the use of cash to pay salaries and bills. Firms and individuals in advanced countries tend to use checking accounts or electronic transactions, rather than cash, to pay their bills. People put spare cash into savings accounts or fixed deposits to earn interest, but use checks to pay their bills. The ratio of cash to demand deposits ranges from 1 to 5 to as low as 1 to 10 in countries with well-developed financial systems and ad-

vanced economies. The ratio of cash to total deposits, or the total money supply, is smaller still, in the neighborhood of 1 to 15 or more. In countries with poorly developed financial systems and backward economies, such as Russia, the ratio of cash to total money supply is on the order of 1 to 3.

In a currency board system, the expansion of the money supply and credit is determined by the balance of payments. This is exactly the same process as the traditional gold standard in eighteenth and nineteenth century Britain, and other European nations that were on the gold standard.

The mechanics of the gold standard, as with the currency board, were straightforward. In the case of Britain, the Bank of England paid out gold at the rate of £3 17s. 10.5d. per ounce—the Bank's selling price for gold. It purchased gold at the rate of £3 17s. 9d. per ounce—the Bank's buying price for gold. The requirement to buy and sell gold within this range restrained the Bank in its issue of currency, since holders of bank notes could exchange them for gold if they lost confidence in paper money. Exchanging notes for gold reduced the stock of paper money in circulation, arresting its erosion. A rapid drain in the Bank's gold reserves signaled that credit growth in Britain was excessive.

Through the balance of payments, the gold standard worked as an automatic mechanism to determine increases or decreases in Britain's domestic money supply and the resultant levels of income and employment. A favorable balance of payments resulted in an inflow of gold, an expansion of the domestic money supply (as banks, flush with higher deposits, increased their lending), a fall in domestic interest rates (due to the greater availability of credit), and increased business activity (as firms increased their borrowing). As incomes and employment rose, Britons purchased more imported goods and holders of capital would invest some of it overseas where it earned higher interest. This process would ultimately reduce the balance of payments surplus, stopping or reversing further inflow of gold.

Conversely, an adverse balance of payments induced an outflow of gold to pay for the excess value of imports over exports. An outflow of gold, in turn, contracted the domestic

money supply (as funds were withdrawn), pushed up interest rates (reflecting less available credit), and reduced business activity. Incomes and employment fell. At the same time, a fall in domestic costs and prices made British goods more competitive on overseas markets. As imports fell and exports rose, the outflow of gold was stopped or reversed.

This kind of monetary system is automatic in that it works without government interference or management. The economy, in turn, automatically adjusts to the balance of payments. Replace the words “gold standard” with “currency board” and the mechanics are exactly the same. The assets of British colonial currency boards, pounds sterling securities, were themselves convertible into dollars, gold, or other hard assets.

In any monetary system, commercial banks are responsible for holding enough notes and coins in their vaults and drawers to meet their obligations to their depositors to convert deposits into notes and coins on demand. If the government imposes no minimum reserve requirement on commercial banks, then banks typically hold a level of reserves regarded as prudent. To repeat, local currency is 100 percent backed by foreign reserves, but broader measures of the money supply including demand deposits, fixed deposits, etc., are not fully backed. These broader measures of money supply expand or contract in tandem with the rise or fall in the monetary base, which constitute the foreign reserves of the currency board. A decline in the monetary base is a signal to commercial banks to tighten lending; an increase is a signal that banks can expand lending.

Currency boards differ from the central banking monetary systems that now hold sway in most countries around the world in several important ways. To explain these differences, it is first necessary to discuss the concepts of inflation and government budget deficits.

Inflation is defined as an increase in prices, or as a decrease in purchasing power of a unit of money, caused by an increase in the available currency and credit beyond the supply of available goods and services. If money supply grows faster than output, the result is an increase in prices, or a rise

in the price level. Not every good or service will necessarily rise in price, but the overall cost of living, or the consumer price index, will rise. Price stability is one of the primary goals of monetary authorities and central banks all over the world. Stable prices are presumed to be an important precondition of investment and growth. In a world of high and varying inflation, it is difficult for investors to calculate expected returns on investment. This “risk premium” reduces overall investment.

The notion of government budget deficits is easier to understand. A budget deficit occurs whenever government expenditure exceeds government revenue. A deficit can be made up by increasing taxes, or by borrowing money at home or abroad. Most budget deficits are financed through borrowing. Chronic deficits, over time, result in a large public debt. The existence of a large public debt poses a strain on the government budget since it must make interest payments to service that debt. All too often, the government will lean on the central banking authorities to print more money to repay the public debt, which results in higher inflation. Higher inflation robs citizens of their savings and the purchasing power of their income.

Restrictions on Currency Boards. Currency boards have several desirable properties concerning inflation and budget deficits. A currency board cannot create inflation because it does not control the ultimate reserves of the monetary system. It may transmit inflation from the reserve country, but cannot create it because the board cannot independently increase its monetary base. Any increase in its monetary base is a result of an increase in the balance of payments, which reflects the overall health of the economy, not the wishes of the monetary authority itself. (Central banks, in contrast, can print money, even when there is a deficit in the balance of payments.)

A currency board cannot finance spending by the domestic government or domestic state-owned enterprises because it is not allowed to lend to them. A currency board is not a lender of last resort. It does not lend to commercial banks or to other enterprises to help them avoid bankruptcy. In any

country with a currency board monetary system, the government must balance its books and severely limit its borrowing. Commercial banks must be extremely careful when making loans to insure that borrowers can repay.

Finally, a typical currency board needs only a small staff of a few people who perform routine functions that are easily learned. In 1995, the Cayman Islands Currency Board, for example, had a staff of four full-time persons and an annual budget of about \$560,000. About a quarter of its cost was defrayed by the sale of notes and numismatic issues.

Almost without exception, currency boards have succeeded in providing stable financial and currency arrangements. All currency boards have successfully maintained fixed exchange rates and full convertibility into their reserve currencies, whether in pounds sterling, U.S. dollars, or deutschmarks.³ Even during the Great Depression, all currency boards then existing maintained fixed exchange rates and full convertibility, in contrast to most central banks.

Currency board systems have typically succeeded in encouraging foreign investment. The period of maximum foreign investment in The Bahamas, until a fresh burst of investment during 1996-2000, occurred during the 1950s and 1960s when the currency board system was in place. Failures by commercial banks have been minor in currency board systems, compared with much higher failure rates in central bank countries. Fixed exchange rates with a reserve currency have encouraged foreign commercial banks, especially those based in the reserve country, to establish branches in the currency board country. Most local currency banks in The Bahamas are branches of Canadian, American, or British banks. These multinational branch networks have enabled them to diversify risk.

Although the full convertibility inherent in the currency

3 The failure of Argentina to maintain its fixed rate between the peso and U.S. dollar is taken by some analysts to be a failure of its quasi-currency board system. Others argue that the currency board system was ineffective because the country's constitution enabled provinces to spend money without any control from the central government. Steve Hanke has addressed this issue in a recent paper, "On Dollarization and Currency Boards: Error and Deception," *Policy Reform*, 2002, Vol. 5 (4), pp. 203-222. Hanke claims that the Banco Central de la Republica Argentina (BCRA) deviated from currency board orthodoxy by aggressively using discounts and repos, which fueled speculation against the peso. As well, by holding excess reserves, it was able to neutralize changes in its foreign reserves, which meant that the net domestic asset position of the BCRA was extremely volatile. Argentina thus never employed a pure currency board.

board system has resulted in capital flight from some currency board systems during periods of economic and political uncertainty, capital flight has been small compared to capital flight in central banking systems, especially where the threat of foreign-exchange control or the prospect of high inflation has existed.

Summing Up. A typical currency board system relies entirely on market forces to determine the amount of notes and coins that the board supplies. Market forces also determine the other components of money supply, i.e., the public's deposits at commercial banks.

A typical currency board has no active role in determining the monetary base. A fixed exchange rate with the reserve currency, and a fixed reserve ratio of 100 percent or slightly more in foreign reserves, prevent the board from increasing or decreasing the monetary base at its own discretion.

In a currency board system, commercial banks are intermediaries between lenders and borrowers. Commercial banks cannot, for any substantial length of time, lend more to borrowers than depositors wish to deposit with them. The volume of loans granted by commercial banks is limited, first, by their ability to make profitable loans and, second, by their need to maintain sufficient reserves to enable depositors to convert deposits into reserves on demand in order to pay bills in foreign currency.

Despite the inability of a currency board to create reserves for commercial banks at its own discretion, the money supply in a typical currency board system is quite responsive (elastic) to changes in demand for domestic money. The system can acquire foreign reserves through a favorable balance of payments. The rules governing a currency board merely prevent it from creating reserves for commercial banks in an inflationary manner.

The ultimate reserves in a currency board system are the monetary base of the reserve currency. The only way to acquire the ultimate reserves is to obtain them from the reserve country. In its simplest form, this requires a surplus in the current account (trade in goods and services, net factor payments, and investment income), or through foreign investment (which is

part of the capital-account balance of investment and gifts).

Exchange Control Within the Sterling Bloc. The Bahamas currency board notes were fixed to sterling. The link to sterling circumscribed the operations of the islands' currency board because the sterling area, or sterling bloc as it was known, maintained a system of exchange control against other non-sterling area countries. Sterling reserves of British colonial currency boards were considered part of the reserves of the sterling bloc as a whole, although there was free convertibility and exchange within the bloc. Money could be moved freely among Britain, Australia, New Zealand, and British colonies in Africa, Asia, and the Caribbean, but not from these jurisdictions to the United States, Japan, and other non-sterling currency countries.

Great Britain, facing a shortage of foreign currency after World War II, passed an exchange control act in 1947 to provide for the retention and use of gold, currency, securities, and foreign exchange. This was followed in The Bahamas by The Exchange Control Act of 1952, which extended the 1947 British provision to The Bahamas, which earned most of its foreign exchange in U.S. dollars. Exchange control regulations made it obligatory for Bahamians to turn in all U.S. dollars and non-sterling currency to those commercial banks that were designated as authorized dealers. Exchange control was imposed upon payments to foreigners for all goods, services, or capital items outside the sterling bloc. This is a severely restricted version of a currency board in that the reserve currency, sterling, was itself subject to restrictions on its convertibility into other foreign currencies. (In some ways it was more restrictive than the current Central Bank's exchange control and in other ways more lenient. Money was free to flow within the sterling bloc, but tightly controlled to countries outside it)

The Bahamas Currency Board. The practical mechanisms that were utilized by the Commissioners of Currency in the Bahamas, which began with the Currency Note Act of 1919 and terminated with the creation of the Bahamas Monetary Authority in 1968, differed slightly in its day-to-day operations from the standard practices followed by other British

colonial currency boards. The Bahamas currency board did not exercise centralized control over foreign reserves. Each clearing bank kept its own foreign exchange. The currency board was, in effect, a one-way street. When a clearing bank needed new Bahamian bank notes, it would request the notes from the Commissioners of Currency. The bank would then credit the sterling account that the Commissioners held with the Crown Agents in London for the face value of the notes they were purchasing, plus a commission. The commission paid the administrative and printing costs of the currency board.

In contrast to conventional currency board dealings, the Bahamas currency board never sold sterling out of its account with the Crown Agents to the commercial banks to buy back Bahamian bank notes for the purpose of reducing the local note issue. *A chief reason is that the demand by the clearing banks for Bahamian notes to meet the public's demand for local notes invariably increased, and thus there was little need to sell Bahamian notes back to the currency board for sterling.* If the demand for Bahamian notes had ever declined to any significant degree, it would have been in the interest of the banks to return excess Bahamian notes to the Commissioners of Currency in exchange for interest-earning sterling assets.

As previously mentioned, a currency board system cannot create reserves, but can readily acquire reserves through a favorable balance of payments. Between 1946 and 1965, the balance of payments was in persistent surplus, as reflected in the increasing supply of notes in circulation. On December 31, 1946, Bahamian notes totaled £482,800. At the end of 1950, the value of notes in circulation increased to £663,800. Five years later, the supply of local notes had almost doubled to £1,126,500. Five years later, the supply had doubled again, to £2,286,300. At the close of 1965, the last year of the pound sterling era, there was £3,480,388 of Bahamian notes in circulation.

Every Bahamian note issued by the currency board required an equivalent amount of sterling reserves as backing for the note issue. Between 1946 and 1965, the value of Bahamian notes in circulation increased 7.2 times. The currency

board system was clearly able to supply sufficient reserves to the Bahamian banking system to facilitate an orderly expansion of the money supply and credit.

In The Bahamas, the commercial banks took full responsibility for maintaining their own reserves. Each bank bought and sold sterling and local funds as it deemed necessary. There were no restrictions on current or capital account transactions inside the sterling bloc since banks conducted foreign exchange operations entirely from their own reserves. The reserves of the currency board were not involved or put at risk in these foreign exchange transactions. The Bahamas currency board was completely passive in its operations as it provided full backing for the local note issue.

By the mid- to late-1960s, many former and current British colonies, as later Britain itself, converted their local currencies to decimal systems. (Pounds, shillings, and pence are poor tools with which to teach mathematics to elementary school children.) The Bahamas converted to a decimal system in 1966, following passage of the Currency Act of 1965. Both pound and dollar notes remained interchangeable for six months. On conversion day, £3.4 million in Bahamian currency was in circulation, which was 110 percent backed with British government securities.⁴ The government set £1 equal to B\$2.857. At that time, £1 British sterling was equal to US\$2.80. At that exchange rate, one Bahamian dollar was equal to 98 U.S. cents. This was not a convenient rate for U.S. tourists.

In 1967, the United Kingdom devalued sterling. Only Hong Kong and The Bahamas did not go along with corresponding devaluations in their respective sterling-backed decimal currencies. Both Hong Kong and The Bahamas are U.S. dollar-based economies. They earn dollars and use those dollars to purchase imports. It made no sense in either case to follow sterling's devaluation, which would have raised the price of imported goods, thereby increasing inflation in both colonies. Moreover, The Bahamas does not export manufactured goods. It had little to gain from a devaluation, which

⁴ Not all the Bahamian sterling notes were converted into Bahamian dollar notes. The Central Bank of The Bahamas still lists outstanding B\$83,000 worth of sterling notes (about £29,020 in actual old Bahamian sterling notes) outstanding. These are probably in the hands of collectors, lost, or destroyed over time.

would reduce the price of its exports to foreign customers.

As a result, both the currency board and commercial banks in The Bahamas lost millions of dollars, corresponding to the percentage devaluation of sterling against the dollar. The devaluation of sterling meant that the reserves held by the currency board and the commercial banks now were worth less in terms of dollars and hence their ability to purchase U.S. imports. Because The Bahamas was still a British colony, the territory did not have internal authority to shift its sterling reserves into dollars, which would insulate it from future United Kingdom devaluations. Remember, Bahamians live almost exclusively on their U.S. dollar earnings. The Bahamas, which already possessed full internal self-government, pleaded its case in the U.K. and succeeded in obtaining permission to diversify its reserves out of sterling.

The government subsequently terminated the fixed relationship of the Bahamian dollar to sterling and pegged it to the U.S. dollar at a rate one to one, or parity. This new rate eliminated the previous nuisance of a two cents differential between the two currencies.

THE BAHAMAS MONETARY AUTHORITY, 1968-1974

The Bahamas Monetary Authority (BMA) was established in 1968 as a “diminutive central bank.” One explanation for the short-lived BMA, which was replaced by The Central Bank of The Bahamas in 1974, is that while the United Kingdom wanted The Bahamas to shift directly from a currency board to a central bank, the cabinet of the Bahamas government did not want a foreign national to be the first governor. (For example, John Exter, a U.S. citizen, was the first governor of the Central Bank of Ceylon in 1952.)

The BMA inherited the reserves of the currency board and also received an additional capital injection from the government to meet the capitalization requirements set forth in the act that created the BMA. Half of the BMA’s external reserves were placed in dollars. This made more sense than leaving all the reserves in sterling.

The BMA initially had four departments: (1) exchange control, (2) banking, (3) bank supervision, and (4) research. The BMA constituted a substantial enlargement in activity and responsibility compared with the currency board.

The BMA replaced the decentralized system of foreign reserves—the reserves of the currency board and of each separate bank—with a centralized system, under which the BMA would buy and sell foreign exchange. The commercial banks were enthusiastic about placing their reserves under

the control of the BMA because it effectively eliminated their foreign exchange risk. Indeed, the banks demanded that the risk of dealing in Bahamian dollars vis-a-vis foreign currencies be borne by the new monetary authority. The banks were concerned about potential foreign exchange losses stemming from future sterling devaluations.

An important difference between the BMA and the former Board of Commissioners of Currency is that the BMA was only required to hold foreign reserves of at least 50 percent of the domestic note issue, not 100 percent as in the case of the former currency board. *A more important change is that the BMA was authorized to use some of its resources to purchase Bahamian government debt. This change marked the beginning of a discretionary monetary policy and, because it could buy government debt, a discretionary fiscal policy for the government.* The BMA was also authorized to serve as lender of last resort to the commercial banks in the event of a financial emergency.

Even after the switch to a decimal currency, no control was placed on Bahamian sterling transactions until the United Kingdom disbanded the sterling bloc when it floated sterling in July 1972. At that moment, sterling was treated as a foreign currency in The Bahamas. While current account transactions, payment for imported goods and services, were generally approved by the new monetary authority, exchange control now applied to all capital outflows everywhere in the world, including all the former sterling bloc countries. *This change substantially reduced the freedom of Bahamian residents to remit money abroad.*

THE PUBLIC FINANCES, 1946-1963

As indicated at the outset of this essay, the colonial government conducted its affairs under regulations and the philosophy of balancing its budget. Avoiding public debt was a prime objective of fiscal policy. Borrowing was limited to self-financing investments, such as electricity and telecommunications services. In 1946, the modest public debt of The Bahamas consisted of one hotel loan, two telephone loans, and one electricity loan. These loans were scheduled for repayment from future revenues generated by the expansion of these economic services.

Direct Colonial Administration: 1946-1963. Postwar colonial rule in The Bahamas was divided into a period of direct colonial administration, 1946-1963, and one of internal self-government, 1964-1973. During the first period, total government revenue exceeded total expenditure. This pattern continued during the last two years of the pound sterling era, 1964- 1965. Between 1946 and 1965, total revenue amounted to £102,738,606, while total expenditure came to £100,271,794.

Table 1 summarizes annual budget figures for 1946-1965. The table shows that the budget was not in balance every year. It did not have to be. The goal was to insure that the budget be balanced over a period of years. The existence of a rainy-day reserve from the surplus years provided the colonial government with funds to keep the public accounts in balance during deficit years. Over the 20 years encompassed in the table,

the cumulative surplus amounted to £2,466,812. Had deficits persisted, the colonial government would have been forced to reduce spending or raise taxes to keep the budget in balance. Fortunately, this was not necessary.

From time to time, the colonial government issued new public loans to finance the expansion of electricity and telecommunications, as well as construct hospitals, prisons, freight terminals, and roads. Each new loan was accompanied by a sinking fund directed at its redemption.

TABLE 1

Revenue, Expenditure, and Deficits: 1946-1965

Year	Revenue (£ '000)	Expenditure (£ '000)	Surplus/ (Deficit) (£ '000)
1946	833.6	839.3	(15.7)
1947	1,352.8	1,112.5	240.3
1948	1,360.2	1,317.6	42.6
1949	1,330.0	1,510.0	(180.0)
1950	1,579.4	1,658.7	(79.0)
1951	2,044.4	1,828.6	215.7
1952	2,397.1	2,414.3	(17.2)
1953	2,610.7	2,712.3	(101.6)
1954	3,095.5	3,008.5	87.0
1955	3,508.0	3,188.6	319.3
1956	4,078.9	4,193.5	(114.6)
1957	4,939.0	4,314.9	624.1
1958	5,199.0	5,434.5	(235.6)
1959	6,456.8	6,420.5	36.3
1960	7,988.6	8,337.2	(348.6)
1961	8,563.6	8,574.9	(11.3)
1962	8,689.2	9,042.3	(353.1)
1963	9,599.3	9,834.4	(235.1)
1964	12,169.0	11,841.9	327.1
1965	14,953.4	12,687.2	2,266.2

Table 2, facing page, documents the growth in net public

debt (total loans minus sinking funds) and public debt per capita during the pound sterling era. In 1946, the net public debt of The Bahamas stood at a negligible £91,943. At the end of 1963, just before the onset of self-government, the net public debt had risen to £1,651,771. During this period, the increase in public debt roughly paralleled the growth of revenue. The colonial government was able to finance its total budget, including interest and principal repayments on the public debt, while maintaining a balanced budget.

Balancing the budget did not seriously restrict the colonial government's ability to increase spending on public services. Revenue per capita increased from £11.2 in 1946 to £108.3 in 1965. When adjusted for inflation, real per capita revenue grew threefold. Since the population doubled during 1946-1965, real government revenue rose sixfold. By 1965, the government was able to spend six times as much in real, inflation-adjusted pounds as it did in 1946.

TABLE 2

Public Debt in The Bahamas: 1946-1965

Year	Public Debt (£ Bahamas)	Per Capita Public Debt (£ Bahamas)
1946	91,943	1.3
1947	86,024	1.1
1948	69,794	0.9
1950	273,336	3.4
1953	736,380	8.7
1955	1,129,714	11.8
1957	973,949	9.8
1959	1,492,292	14.4
1961	1,433,127	13.1
1963	1,651,771	12.6
1964	2,426,151	18.0
1965	10,434,583	75.6

During the postwar pounds sterling era, the colony's rev-

venue system was extremely stable. Comparing the 1946 and 1962-1963 reports issued by the Colonial Office on The Bahamas reveals the same few sources of revenue—customs duties; port, wharf, and harbor dues; licenses and internal revenue; fees of court or office; post office revenue; telegraphs and telephone; aviation; and several miscellaneous items. The only difference is that the amounts had dramatically risen by 1963.

The government's published estimates of national income only go back as far as 1973. This means that estimates of economic growth before 1973 must be based on indirect information. Since the revenue structure remained intact during 1946-1965, it is reasonable to infer that the economy grew at the same rate as the six-fold growth in real revenue. Doing the arithmetic, a six-fold increase in economic output over 20 years works out to an annual average growth rate of just over 8 percent a year (at 8 percent growth, output doubles every 9 years). High growth resulted in both much higher living standards and higher revenue.

The data published in the annual Colonial Office reports, although very limited, show rapid gains in consumption and investment. The number of private cars increased almost 10 times, from 1,205 to 11,880 during 1946-1963. The value of building permits issued in New Providence rose from £1,415,341 in 1952, the first year for which data are available, to £6,520,231 in 1963.

To summarize, the colonial administration bequeathed to the incoming self-governing administration of The Bahamas a legacy of sound money, no public debt, and a rapidly growing economy.

INTERNAL SELF GOVERNMENT: 1964-1973

Internal self-government brought about a change from the practice of balanced budgets in the direction of chronic budget deficits. There were two main reasons for the change. The first was the normal desire of politicians, as is true in every democratic country, to spend money to satisfy and win the support of constituents. The second was the transformation of the monetary system from a currency board into the Bahamas Monetary Authority in 1968. The new authority was permitted to buy Bahamian government debt, whereas the Currency Note Acts of 1919 and 1936 expressly forbade the purchase of Bahamian government securities by the currency board.

Free from this constraint, the new Bahamian government went on a borrowing binge. The public debt leapt past £10 million in just two short years, a six-fold increase in per capita terms.

The Dollar Era: 1966-1973. The Bahamas switched from sterling to dollars in 1966. Table 3 summarizes the public finances during the remaining years of self-rule before independence. For the eight fiscal years preceding independence, the budget was in surplus five years and in deficit three years, although the deficits during those eight years exceeded the surpluses by more than \$10 million. The real problem was the growing recourse to public borrowing, which increased the

public debt from \$44 million in 1966 to \$109 million at the end of 1973. A new pattern was emerging.

TABLE 3

Revenue, Expenditure, and Public Debt: 1966-1973

Year	Revenue (\$ '000)	Expenditure (\$ '000)	Surplus/ (Deficit) (\$'000)	Public Debt (\$ '000)
1966	53,264	44,750	8,514	44,443
1967	57,250	52,220	5,030	47,609
1968	65,589	64,792	797	65,910
1969	74,572	82,868	(8,296)	72,896
1970	81,318	98,778	(17,460)	83,141
1971	77,503	87,326	(9,823)	95,901
1972	97,748	96,201	1,547	94,737
1973	108,784	101,975	7,819	109,066

Driven by a doubling of tourist arrivals between 1965 and 1974, the economy continued to grow at a healthy pace. Both government revenues and the foreign reserves (the base money of the new Bahamian monetary system) of the Bahamas Monetary Authority doubled. The value of imported goods, electric power consumption, water consumption, private car ownership, and the number of telephone subscribers and local calls more than doubled or tripled. The Bahamas was in the midst of an economic boom.

THE COMMONWEALTH OF THE BAHAMAS: 1973-2003

Bahamians celebrated their independence on July 10, 1973. It was a day of joy and promise. Tourism and financial services, the twin pillars of the economy, were thriving. The budget and the monetary system were in good health. Compared to its Caribbean neighbors, The Bahamas sat comfortably in the select company of “high income” countries.

Two changes dramatically affected the post-independence economy of The Bahamas. The first was the change in the monetary system. The currency board had been replaced by the Bahamas Monetary Authority in 1968; it, in turn, became the Central Bank of The Bahamas in 1974. The second change was in the conduct of the public finances. The previous practice of balanced budgets and the avoidance of debt was displaced by chronic budget deficits and the accumulation of a large public debt.

THE CENTRAL BANK OF THE BAHAMAS, 1974-2003

Independence brought a full-fledged central bank into being in April 1974. The Central Bank of The Bahamas issues and redeems currency, licenses and supervises banks and trust companies, and attempts to regulate the supply of money within the Bahamian economy. The Central Bank advances money to the government, acts as lender of last resort to the commercial banks, and exercises responsibility for managing the country's foreign reserves through a system of exchange control. The Bank tries to maintain sufficient foreign reserves to cover several months worth of imports.

The Bahamas is a member of the International Monetary Fund (IMF). It subscribes to Article VIII of the Fund, which stipulates that no restrictions be placed on current account transactions *unless the balance of payments is in jeopardy*. Such a declaration would mean that the country is running out of foreign reserves.

IMF membership permits the Central Bank of The Bahamas to apply exchange control to capital account transactions, which include foreign loans, foreign equity investments, direct foreign investment, and other inward and outward flows of money. For example, a Bahamian cannot instruct his banker to transfer money abroad to buy stocks, bonds, or property in the United States. Or, to give another example, the National Insurance Fund cannot buy several

hundred million dollars of U.S. securities for its portfolio of investments.

To see why Bahamians are denied these freedoms and why Bahamian financial institutions cannot diversify their holdings with purchases of foreign securities, it is necessary to understand how central banking monetary systems work in general, and, in particular, how the Bahamian central banking system works. It is especially important to see how the current Bahamian monetary system differs from the former currency board.

The Money Supply Process in a Central Banking System.⁵

A central bank is a monetary authority that has *discretionary* control of the supply of local notes and coins (although U.S. dollars are readily accepted in The Bahamas, as they are in several other Caribbean territories), and *discretionary* control over the level of reserves of the commercial banks. A typical central bank also regulates commercial banks, acts as their lender of last resort, gives economic advice to the government, and perhaps helps to operate the government's payments system.

In a central banking system, the central bank can choose to increase the monetary base, which is the foundation for the total money supply and credit. One way to increase the monetary base is simply to print more money. A central bank frequently prints money to finance deficit spending by the government—sometimes in a direct manner by way of the printing press, but usually in an indirect manner by granting credit to the government. A central bank grants credit to the government by creating a deposit for it in the central bank in exchange for Treasury bills, or IOUs.

When the government spends its credit, the amount of money in the hands of the public increases. The public, in turn, deposits some of this money in their bank accounts. As bank deposits increase, commercial banks are able to increase their loans.

Recall that currency boards passively exchange domestic notes and coins for foreign currency at a fixed rate of exchange and therefore allow market forces—the demand for

⁵ See footnote 2.

and supply of credit on the part of individuals, firms, and institutions—to determine the money supply and the level of credit. In marked contrast, central banks actively determine the money supply and level of credit.

A central bank may utilize three different tools to conduct monetary policy. The first tool is targeting interest rates, which raises or lowers the cost of borrowing. The second tool is setting an exchange rate, which it can vary from time to time, to preserve some given level of foreign reserves. The third tool is to try to achieve a specific level or rate of growth of domestic credit, in order to influence the level of economic activity and the rate of inflation.

Central banks often switch back and forth among these tools. For example, a central bank may try to fine tune interest rates to control the demand for credit, at the same time it keeps a watchful eye on the exchange rate and inflation. Or, a central bank may try to fine-tune the exchange rate to insure an adequate level of foreign reserves, as it monitors interest rates or the level of domestic credit. However, once a central bank chooses one of these tools as a firm anchor of monetary policy, the other two are beyond the power of the central bank to influence. A central bank cannot both fix an exchange rate and the interest rate at the same time. Once it fixes one of these rates, the other will be determined by economic forces that respond to whichever rate is fixed.

An important difference between currency boards and central banks is that monetary expansion and the growth of credit in a central banking monetary system can take place on a discretionary basis, independently of the balance of payments. When the domestic money supply and credit in a country with a central bank rise faster than the growth of national output and productivity, the value of local currency will fall against other foreign currencies. That devaluation will show up in the foreign exchange markets if the central bank maintains a floating exchange rate, and if there is no exchange control to prevent the outflow of money.

However, even when the local money supply and credit in a country with a central bank rise too fast, it is still possible to prevent a decline in the exchange rate by maintaining a rigid

system of exchange control on capital outflows. *This is the course that the Central Bank of The Bahamas has followed. It does not allow money to flow freely out of the country. Indeed, this is exactly the problem that now confronts The Bahamas and why a system of exchange control will have to remain in place: the Central Bank has permitted the total money supply, total credit, and other assets in The Bahamas to grow at a much more rapid pace than is warranted or sustainable on the basis of normal economic or commercial criteria.*

The Central Bank of The Bahamas and the Commercial Banking System. The Central Bank of The Bahamas differs from most central banks around the world. The reason is that it has chosen to fix its currency, the Bahamian dollar, at parity with the U.S. dollar.

In order for the Central Bank of The Bahamas to maintain this fixed exchange rate, it must hold sufficient U.S. dollar reserves to meet all current account payments required under Article VIII of the IMF. The value of its U.S. dollar reserves, typically in the range of several hundred million dollars, is determined by the need to finance several months worth of imports. But the crux of the fixed exchange rate is the Central Bank's system of exchange control on capital movements, which prevents individuals, firms, pension funds, and other institutions from buying up the country's limited supply of foreign exchange for investment overseas.

It is important to remember that Bahamian dollars are soft money. They cannot be used to pay for imported goods and services or overseas investment. Bahamians must first earn U.S. dollars or other foreign currencies to pay for the things they buy, most of which is imported. Any reduction in U.S. dollar earnings means a decline in the Bahamian standard of living. Whenever the Central Bank feels that its U.S. dollar reserves are too low, as it did in late 1995 and again in the aftermath of September 11, 2001, it advises the commercial banks to tighten or freeze net credit in order to reduce the ability of Bahamians to buy imported goods. If it has to, the Central Bank will become the Grinch that steals Christmas before it allows the reserves to fall to perilously low levels.

Commercial Banking and the Domestic Money Supply in The Bahamas.⁶ This segment describes the domestic money supply; the next describes the level and composition of domestic credit. The April 2003 “Monthly Money and Credit Aggregates” report published by the Central Bank of The Bahamas reported money supply aggregates as follows:

- # Currency in active circulation, \$144.6 million. Currency, or cash, typically constitutes high-powered base money. This is defined as the M0 measure of money supply. (M0 is the standard measure of base money, or high-powered money, in a normal central banking system. As explained below, it is not the correct measure of base money for The Bahamas central banking system.)
- # Demand deposits, \$676.2 million. M1, defined as the sum of currency and demand (or checking account) deposits, totaled \$820.8 million.
- # Savings deposits, \$657.3 million; and, fixed deposits, \$2,301.3. M2, defined as the sum of savings and fixed deposits plus M1, totaled \$3,779.4 million. This is the most commonly used measure of overall money supply.
- # A final small category, locally-held foreign currency deposits, \$125.9 million. M3, defined as total money supply including locally held foreign currency deposits, was \$3,905.3 million.

The development of a financial system, which under normal circumstances mirrors the development of the real economy, is defined by the various ratios of money supply to the monetary base. In The Bahamas, simple arithmetic shows that the ratio of demand deposits to cash at the end of May 2002 was about 4.7 to 1. This is a slightly high ratio by the standards of nations with well-developed financial systems

⁶ See page 46 for a comprehensive graphical display of The Financial System of The Bahamas as of March 2003.

and economies. In the United States, for example, the ratio is about 3.5 to 1.

The ratio of total Bahamian domestic money, M2, to cash was about 26.1 to 1. This ratio appears very high. In the United States, the corresponding ratio is only about 12 to 1. The ratio of M2 to cash in The Bahamas has risen steadily over the years; in 1984, for example, the ratio was about 17 to 1.

However, the calculations performed in the preceding two paragraphs are not the correct way to assess the development of the financial system in The Bahamas. The reason is that the quantity of Bahamian notes and coins in circulation is not the “real” base money of the Bahamian central banking system. Remember, Bahamian money cannot be used outside the country. The real base money of The Bahamas is its U.S. dollar reserves, which provide the means to pay for almost everything that is consumed in the islands. Put another way, The Bahamas is a politically independent country, but its economy is interwoven with that of the United States. Bahamians derive their living from U.S. dollar earnings and investments and spend most of their income on U.S. goods and services.

Before recalculating the several money supply ratios to the Central Bank’s U.S. dollar reserves, it is interesting to track the growth of the reserves. When the Central Bank was established in 1974, it inherited the reserves of the Bahamas Monetary Authority. They stood at \$41.6 million at the end of 1974. They reached \$100.1 million at the end of 1981. After they reached \$162.5 million in 1984, the reserves fluctuated around \$160 million through 1996. Thereafter they grew rapidly to \$219.5 million, \$338.8 million, and \$404 million during 1997- 1999. They peaked at \$483 million in May 2000, but closed the year at \$342.6 million. They ended 2001 at \$311 million and ended 2002 at \$373 million. The historical pattern is that the reserves tend to rise steadily during the first half of the year and then gradually decline in the second half.

In addition to the country’s official reserves, it is estimated that several tens of millions of dollars of U.S. currency circulate in The Bahamas due to tourist cash spending. This money could also be included in any calculation of the coun-

try's foreign reserves with an important difference that they are in the hands of private individuals and firms, outside the exchange control operations of the Central Bank.

The domestic money supply has, until 1996, grown at a faster rate than the reserves. At the end of 1974, the M2 measure of money supply was \$190.6 million, a ratio of 4.74 to reserves. The ratio of M2 to reserves ranged between 3.92 and 5.03 during 1975-1981. Between 1982 and 1987, the ratio varied between 4.67 and 6.07. Thereafter the ratio steadily increased to 7.19 in 1988, 9.56 in 1990, 11.39 in 1993, and 12.33 in 1996.

In 1996, each U.S. dollar supported almost three times as many Bahamian dollars compared with 1974. However, at the end of 1996, the economy, adjusted for inflation, was only 1.9 times larger than in 1974. *The money supply grew more rapidly than the gross domestic product, which suggests that money supply growth was excessive and unsustainable.*

Luckily for the Bahamas, a massive inflow of foreign capital during 1997-1999 (Atlantis, other hotel, commercial, and residential construction) resulted in an improvement in the country's financial system. For the first time since Independence, the reserves grew at a faster rate than the domestic money supply and credit (see below). The ratio of M2 to reserves fell from 12.33 in 1996 to 11.24 in 1997, to 8.39 in 1998, and 7.91 in 1999. This was a very healthy development, with the domestic money supply underpinned by a much larger level of reserves. In 2000, the ratio reversed, rising to 10.11. Reserves had fallen, but the previous growth in the real economy has resulted in a larger deposit base. As 2001 came to an end, a decline in tourist earnings and a slowdown in foreign investment contracted the reserves to \$311 million. M2 continued to rise, reaching \$3,601 million, which increased the ratio of M2 to reserves to 11.58. In 2002, M2 of \$3,836 was 10.3 times the level of reserves.

The improvement in the financial health of the country's domestic credit structure, the much lower ratio of M2 to the country's high powered base money (the reserves), in 1998-1999 quickly dissipated. The credit freeze imposed by the Central Bank in the aftermath of September 11, 2001, has re-

mained in place through mid-2003, and may have to remain for some months or years to come, to protect the reserves from substantial decline and to preserve the overall stability of the domestic financial system. The reserves are the basis of current and future consumption of imported goods and the standard of living. The higher the level of reserves, the greater the ability of Bahamians to consume imported products (quite apart from any relaxation of exchange control on the capital account).

What happens when money supply and credit grow more rapidly than economic activity? The money has to go somewhere. The answer is that it goes into purchases of consumer goods, real estate, jewelry, and automobiles, to name a few areas. It is no surprise that real estate values rose rapidly between 1996 and mid-2001, since land and property in The Bahamas are not subject to exchange control. The number of new automobiles on the road also rose sharply. Rapidly rising land and housing prices have the adverse effect of making it difficult for Bahamians to afford decent housing.

Let's turn to the counterpart of money supply—the level and composition of domestic credit. Remember, banks make money by lending out deposits. In so doing, they convert the money supply—cash, demand deposits, savings deposits, fixed deposits, and funds borrowed abroad—into credit or loans to the government, to the private sector, and to public corporations.

Domestic Credit in The Bahamas. Domestic credit consists of credit to the government, credit granted to public corporations, and credit to the private sector (both individuals and firms). The “Monthly Money and Credit Aggregates” report of the Central Bank for April 2003 shows the composition of credit as follows:

- # Net domestic credit to the government, \$641.4 million (of which \$142.2 million is foreign currency credit).
- # Domestic credit to public corporations, \$222.3 million (of which \$123.9 million is foreign currency credit).

- # Domestic credit to the private sector, \$4,023.9 million (of which \$455.8 million is foreign currency credit).

These three categories of domestic credit sum to \$4,895.0 million. The ratio of total domestic credit to foreign reserves in April 2003 was 10.6. But this simple ratio fails to show the full relationship between the domestic money supply and domestic credit. Domestic credit of \$4,895 million in April 2003 exceeds total domestic money supply, including \$125.9 million in domestic foreign currency deposits, by \$989.8 million. In other words, there is a large mismatch between the domestic money supply and domestic credit.

The gap is financed by the foreign currency borrowing of the commercial banks. As of December 2002, the negative net foreign assets of the domestic banks stood at US\$723 million. In other words, Bahamian banks borrowed US\$723 million offshore for lending to Bahamian clients in foreign currency. Of the \$4,895 million of domestic credit, \$722 million consisted of foreign currency loans.

But this is not the full picture of the country's financial system. The government's share of domestic credit, including public corporations, was 17.64 percent. The government's apparently modest share of total domestic credit understates the total size of the country's financial system as it omits the bulk of government debt. The national debt of the government as of December 31, 2002, consisted of \$1,805.3 million in direct charges and another \$368.1 million in contingent liabilities, or government guarantees extended to cover the loans of public corporations. Of this sum, foreign currency debt was about \$130.4 million.⁷ Thus the overwhelming bulk of the national debt is denominated in Bahamian dollars.

The keystone of The Bahamas' monetary base, several hundred million dollars of foreign reserves, must support a domestic credit structure of B\$4,895.0 million (April 30, 2003), along with a direct national debt exceeding B\$1,805.3 million

7 The government borrowed US\$125 million in June 2002 to meet unpaid bills of the outgoing Free National Movement Administration. This increased the foreign currency debt of the government from \$36.8 million in December 2001 to \$130.4 million in December 2002. This B\$1,000 million is equivalent to B\$1,000 million in deposits insofar as its purchasing power or claim on the country's foreign reserves are concerned.

(December 31, 2002), of which only B\$641.4 million (April 30, 2003) constitutes credit to the government in the official Central Bank survey. Neither long-term registered stock (government bonds) amounting to B\$1,334 million or the bonds of public corporations, of which B\$208.5 million was outstanding (December 31, 2002), are included in either the money supply or credit. Nevertheless, government bonds represent financial assets, or claims on the government, for those Bahamian individuals and institutions that have bought and hold them. In this regard, they are the dollar equivalent of cash, bank deposits, or Treasury bills.

A full accounting of Bahamian dollars assets would include the value of domestic equities traded on the Bahamas International Stock Exchange, perhaps another \$1,000 million.

Adding government and public corporation bonds amounting to over \$1,500 million (excluding domestic credit reflected in the Central Bank's report) and more than \$1,000 million in BISX equities to the total money supply (including the commercial bank's offshore liabilities that helps to fund domestic credit) yields about \$7,500 million or more Bahamian dollar financial claims (excluding real property). The ratio of this sum to foreign reserves at year's end is nearly 20, which means that every 20 Bahamian dollars rests on a foundation of one U.S. dollar.

Remember, U.S. dollars constitute high-powered money in The Bahamas, on which the entire structure of money supply and credit rests (along with the value of equities traded on BISX and the ultimate purchasing power of government debt). As is true in any national banking system, the soundness of a country's credit structure is determined by the health of its loans. When banks make bad loans, they in effect lose some of their depositors' money. If banks make too many bad loans, they may face difficulty in satisfying depositors' withdrawals. In that situation, banks may become insolvent and forced to close. If there is widespread banking failure, the country's entire credit structure is vulnerable to collapse, with devastating effects on the economy.

The main source of bad loans in many countries is loans made to the government and other public agencies. The rea-

son is that lending to the government is based on political criteria, not on the basis of sound business or commercial considerations. Private enterprises must provide banks with collateral in order to obtain loans. Individuals must prove that they have sufficient earning power to repay their loans. The government does not have to meet these criteria. Nor is the government required to spend its money wisely or productively. Rather, the government's ability to redeem and pay interest on its debt rests on the power to tax, not on a future stream of earnings or income.

Can the Central Bank of The Bahamas refuse to buy government debt? Can commercial banks in The Bahamas refuse to buy government debt? Can the National Insurance Board refuse to buy government debt? Can the country's pension and insurance funds find viable investment alternatives to government debt? The short answer to all these questions is no.

It is politically difficult for any central bank, unless it enjoys customary, legal, or constitutional independence, to refuse to buy the public debt of its government. In any such confrontation, the governor of a central bank would either be fired by his minister of finance or forced to resign. By extension, since central banks act as lender of last resort to commercial banks, the latter are insured against the risk of holding government debt by the central bank. Besides, with exchange control in place, what else can these other Bahamian institutions buy?

As the central bank, commercial banks, and other institutions acquire ever-larger stocks of government debt, the health of the country's financial system and the economy are weakened. More and more of the country's resources have to be diverted from private hands, where it is invested and spent on the basis of market forces and more likely to earn foreign currency, to service and repay this debt.

Think of the government's finances as the country's public-sector credit card. When the government runs a deficit in its budget, it borrows money to balance its accounts. In so doing, it incurs an obligation to repay that money with interest. Where does it get the money to repay the holders of

government bonds? It must repay bondholders by imposing higher taxes or borrowing even more money. But this process cannot go on indefinitely. At some point, the government will be unable to repay its bondholders. This is similar to an individual who has overextended himself by buying too many things on credit and is unable to pay the bank when his monthly bill arrives.

When an individual defaults, he may lose his house, his car, or other possessions. When a country defaults, every citizen loses. The currency depreciates, purchasing power declines, and people become poorer. Foreign investors will remove their money.

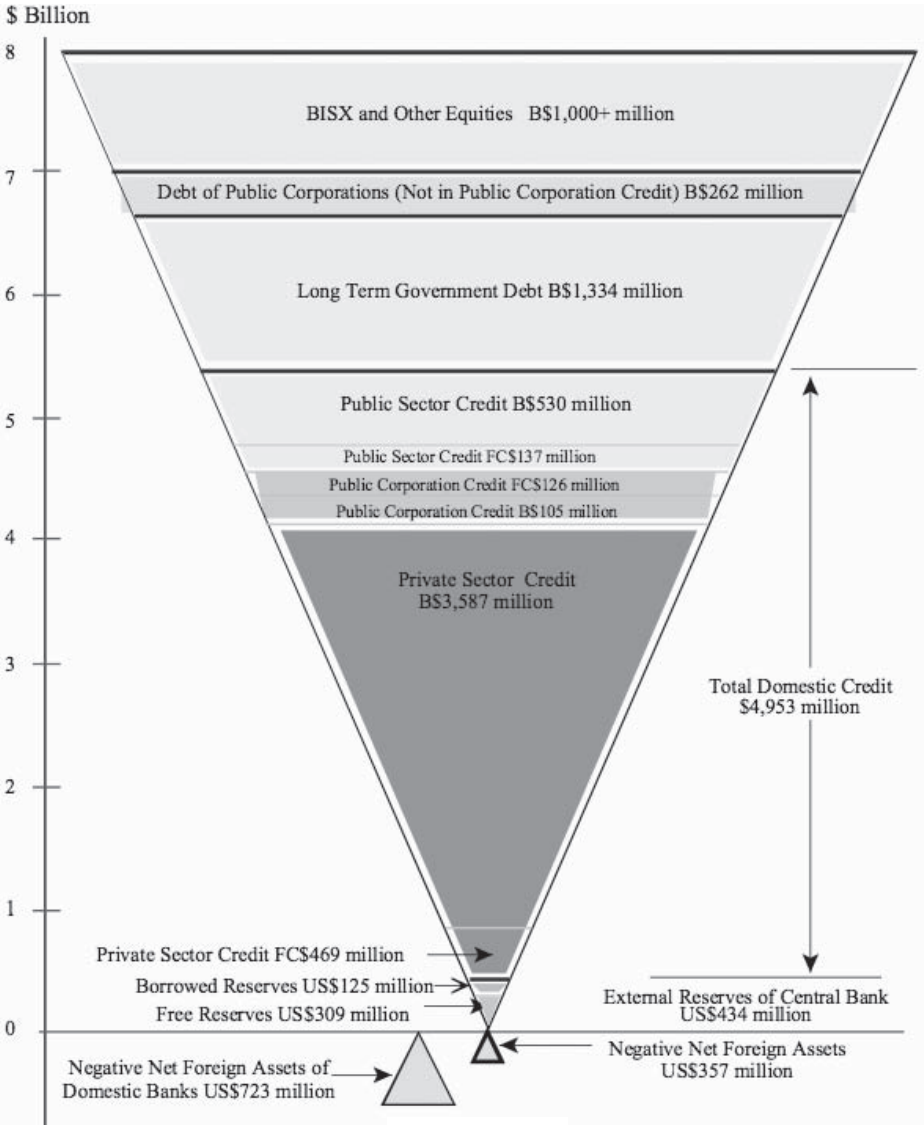
At some point, excessive public debt and credit growth will bring a country's entire financial system, along with its economy, crashing down. This is what happened in Jamaica in the 1970s. This is what happened in Thailand, Indonesia, Malaysia, and The Philippines during summer-autumn of 1997, which resulted in currency devaluations of 50 percent or more and stock market declines of up to 80 percent. This is what recently happened in Turkey and Argentina. The financial systems and economies of many other countries are threatened by excessive debt and credit growth.

To repeat, the entire structure of Bahamian dollar financial instruments rests on a precariously small foundation of U.S. dollar reserves, which must be used to pay import bills. The reserves are way too small to both pay import bills and accommodate even a modest conversion of Bahamian assets into foreign currency. This condition explains the need for capital account exchange control.

What would happen if the Central Bank suddenly ended exchange control? There would be an immediate, perhaps sharp, devaluation of the Bahamian dollar as individuals, firms, and institutions rushed to buy U.S. dollars. After a brief period, a new market rate of exchange would emerge. It's impossible to predict what the new exchange rate would be, or how stable it would remain.

Without exchange control, money would be free to flow in and out of The Bahamas in much the same way as it flows freely among all the advanced industrial democracies of the

world. What's certain is that the Bahamian currency would decline in value against the U.S. dollar. Devaluation of the Bahamian dollar would mean higher prices for imported goods and services, a higher cost of living, a lower standard of living, and a substantial loss in the purchasing power of the savings of the Bahamian people. It would also cost more to service the country's modest foreign debt. This is what happens in every country that suffers a devaluation of its currency.



THE PUBLIC FINANCES, 1974-2002

The public finances of The Bahamas can be examined from several perspectives: (1) the relationship between revenue and expenditure in the government's annual budget, (2) the level of government spending and taxation, which measures the government's claim on the total resources available to the community for private investment and consumption, and (3) the structure and composition of government revenue—what are the primary sources of revenue, what are the rates of taxation, and what are their effect on the economy? This essay is concerned with the first of these perspectives, and how the changes in monetary system and budgetary rules led to annual budget deficits and a large public debt.

The Budget. The function of the budget, which the minister of finance presents to the House of Assembly in his annual Budget Communication, is to compare proposed expenditure for the coming year with past outlays, current appropriations, and how he plans to pay for the coming year's programs. The last time the budget was in surplus in The Bahamas was in 1973. Since then, the budget has been in deficit every year, which has required the minister of finance to impose new or additional taxation or resort to additional public borrowing.

Table 4 summarizes the public finances during 1974-2002. (Table 4 presents calendar year fiscal data based on the

International Monetary Fund's Government Statistics Format basis.) A regime of modest deficits during 1974-1980 gave way to sharply higher deficits the following three years, between 1981 and 1983. During 1984-1987, this pattern was reversed, reducing deficits to a much lower level. Since 1988, very large deficits have again been the rule. Chronic deficits have been the rule both in good times and bad times. The consequence, as seen in the right-hand column in the table, is the relentless growth in public debt.

The increase in the public debt can be expressed in other ways. The rise in public debt per person—the burden of the national debt on every man, woman, and child in The Bahamas—was from a modest \$762 in 1974 to a heavy, burdensome level of \$6,966 in December 2002. The public debt has been rising much faster than per capita income, which means that an increasing share of every Bahamian's income will have to be taxed away in the future to service and repay the debt.

The debt has increased from 1.22 times revenue in 1974 to 2.45 times revenue in 2002. This trend of rising debt to revenue is not sustainable without serious repercussion. About twice as much revenue was allocated to meet interest and principal payments in 2002 as in 1974. For the 2002/2003 fiscal year, the budget allocated \$70 million for redemption of debt and another \$104.3 million for interest on the debt.⁸

It is important to understand that the public debt represents money already spent by the government. Unlike business loans, which are based on some form of collateral and the likelihood of higher earnings in the future, government loans are backed only by the power to tax.

In 1974, the public debt of \$141 million represented about 23 percent of the gross domestic product. In 2002, the public debt, including contingent liabilities, amounted to about 43 percent of GDP. In terms of the country's foreign reserves, the public debt has risen from about 3 times the average end-of-

8 There is circularity in this flow of funds. The National Insurance Board receives the largest chunk of interest, which it deposits in the commercial banks or uses to purchase more government debt. Insurance funds, pensions funds, and the commercial banks also receive interest, which they use to purchase more debt or increase their bank deposits. Interest payments are the largest source of investment income for the NIB. Still, the \$103 million in annual interest and \$70 million in debt redemption have to be collected in taxes or borrowed. These sums are a claim on national resources that cannot be used productively.

TABLE 4
The Public Finances of The Bahamas: 1974-2001

Year	Revenue \$ million	Expenditure \$ million	Deficit \$ million	Public Debt \$ million
1974	115.4	155.1	-39.7	141.0
1975	120.7	134.8	-14.1	149.5
1976	137.4	159.8	-22.5	172.5
1977	139.7	169.0	-29.3	218.7
1978	166.3	202.2	-35.9	233.0
1979	202.1	210.3	-8.2	275.2
1980	244.1	251.9	-7.8	298.9
1981	282.2	344.4	-62.2	359.8
1982	273.5	361.7	-88.2	434.7
1983	298.2	366.6	-68.4	505.3
1984	333.4	350.0	-16.6	511.9
1985	376.8	405.2	-28.4	542.9
1986	398.9	411.1	-12.2	610.4
1987	436.1	457.4	-21.2	606.9
1988	432.6	519.0	-86.4	659.7
1989	448.0	550.7	-102.7	789.1
1990	497.8	569.7	-71.9	919.2
1991	490.4	604.1	-113.7	1,169.4
1992	534.6	622.7	-88.1	1,289.2
1993	536.3	615.4	-79.1	1,410.5
1994	613.6	635.0	-21.4	1,473.9
1995	655.2	693.0	-37.7	1,490.6
1996	678.9	743.3	-64.4	1,546.6
1997	728.5	863.8	-135.3	1,681.9
1998	761.3	842.8	-81.3	1,780.4
1999	859.1	919.8	-50.7	1,884.3
2000	940.8	950.4	-9.6	1,884.3
2001	931.4	998.4	-67.0	1,967.4
2002	885.5	1,022.9	-127.8	2,173.4

year reserves in 1974 to just under 6 times that level in 2002.

A public debt equivalent to 43 percent of GDP is not excessive by world standards. In the U.S., the national debt exceeds 50 percent of GDP. In some European countries, the ratio is over 100 percent. But as this essay has made abundantly clear, there is an enormous difference between Bahamian

government debt and U.S. government debt. Those who hold U.S. government bonds and Treasury bills can sell them at any time for U.S. currency, which can be used to buy goods and services or make investments anywhere in the world. In marked contrast, those who hold Bahamian government bonds and Treasury bills can only sell them for Bahamian currency, which cannot be used anywhere except in The Bahamas.

CONCLUSION

The decision to abolish the currency board and establish a central bank, a decision taken by almost all of the former British colonial territories upon attaining independence, has resulted in chronic budget deficits and the accumulation of a large public debt. Monetary policy is a key determinant of fiscal policy because the main source of government revenue, import duties and stamp tax on imports, depends on the level of domestic credit. An increase in domestic credit results in a higher level of imports, which translates directly into increased customs duties. A freeze or contraction in domestic credit results in stagnation or a decline in customs duties. So long as government policy is committed to maintaining parity between the Bahamian and U.S. dollars, the looseness or tightness of monetary policy dictates the level of government revenue, and makes it impossible, any time soon, to relax exchange control on the capital account.

CURRENCY NOTE ACT OF 1936

AN ACT TO MAKE PROVISION WITH RESPECT TO THE
CURRENCY NOTES OF THE COLONY OF THE BAHAMAS,
AND TO PLACE THE ISSUE OF SUCH CURRENCY NOTES
UPON A PERMANENT BASIS.

[1st November 1936.]

1. This Act may be cited as The Currency Note Act.
2. In this Act:-

“Crown Agents” means the person or persons for the time being acting as Crown Agents for Overseas Governments and Administrations in England.

“Prescribed” means prescribed by regulations made under this Act.

3.—(1) A board of Commissioners of Currency (in this Act referred to as “the Commissioners”) shall be established for the purpose of this Act and shall consist of the person for the time being lawfully discharging the duties of Receiver General and two other persons nominated by the Governor of whom one only may be the holder of a salaried office under the Crown.

(2) The Commissioners shall have an office in the City of Nassau and may employ such agents, officers, and persons as may from time to time be authorised by the Governor in Council.

(3) Any act of the Commissioners may be signified in writing under the hands of the Commissioners.

4.—(1) It shall be lawful for the Commissioners, subject to the provisions of this Act, to provide and issue and re-issue currency notes of the Government of the Colony (hereinafter referred to as “Currency Notes.”)

(2) Currency Notes issued under this Act shall be of such denominations and of such form and design and printed from such plates and on such paper and be authenticated in such manner as may from time to time be approved by the Secretary of State.

(3) The plates shall be prepared and kept and the notes printed, issued and cancelled in the manner and in accordance with the conditions prescribed for the purpose of preventing fraud and improper use.

5. Currency Notes issued under this Act shall be legal tender in the Colony for the payment of any amount, and shall be deemed to be the current coin of the Colony for the purpose of the Penal Code and The Truck Act and any other like enactment which is for the time being in force in the Colony.

6. The Commissioners shall issue on demand to any person desiring to receive currency notes in the Colony, currency notes to equivalent value (at the rate of one pound for one pound sterling) of sums in sterling lodged with the Crown Agents in London by the said person, and shall pay on demand through the Crown Agents to any person desiring to receive sterling in London the equivalent value calculated as aforesaid of currency notes lodged with them in the Colony by the said person: Provided that:-

(1) No person shall be entitled to lodge with the Crown Agents or Commissioners as the case may be less than such minimum sum as may be prescribed for the purpose of obtaining currency notes or sterling as the case may be; and

(2) the Commissioners shall be entitled to charge and levy from any person obtaining currency notes or sterling a commission at such rate or rates not exceeding one per centum as may from time to time be prescribed and in addition the cost of any telegrams sent by the Commissioners or by the Crown Agents in connection with any transfer as above described.

7.—(1) There shall be established a fund to be called “The Note Security Fund” and there shall be paid into the said fund:-

- (a) all monies and investments standing to the credit of the Note Guarantee Fund now in existence; and
- (b) the equivalent value in sterling of all currency notes issued otherwise than in exchange for currency notes already issued.

(2) There shall be charged upon the said fund the sterling payments made by the Commissioners in respect of notes lodged with them under the provisions of section 6 of this Act.

(3) The Note Security Fund shall be held by the Crown Agents and may be invested in securities of, or guaranteed by, the Government of any part of the British Empire (except the Government of the Colony) or such other securities as the said Crown Agents, with the approval of the Secretary of State, may in their discretion select: Provided that a proportion of the fund shall be held in liquid form and such proportion may be determined and varied from time to time by the Governor in Council in directions (the issue of which is hereby authorised) to the Crown Agents.

(4)-(a) All dividends, interest or other revenue derived from such investments or from the employment in any other manner of the money of the fund and all commissions paid to the Commissioners as provided

in section 6 of this Act shall be paid into an account to be called "The Currency Note Income Account."

- (b) There shall be charged upon the said Account:—
- (i) all the expenses incurred by the Commissioners and by the Crown Agents in the preparation, transport and issue of the currency notes and the transaction of business relating thereto; and
 - (ii) a sum equal to one per centum of The Note Security Fund, that is to say the amount made up of the liquid monies of the fund together with the estimated market value of the investments in the fund on the last day of each year which shall be paid annually into the fund:

Provided that the Governor in Council may with the approval of the Secretary of State direct that any expenditure of an exceptional nature may be charged upon The Note Security Fund and not upon The Currency Note Income Account.

- (c) If on the last day in any year there is a surplus in The Currency Note Income Account it shall be transferred to the general revenue of the Colony and any deficiency in the Account on that day shall be met from monies to be appropriated out of the said revenue: Provided that:—
- (i) if on the last day in any year the face value of the currency notes in circulation exceeds the amount of the fund calculated in the manner provided in sub-paragraph (ii) of paragraph (b) of this subsection there shall be paid into the fund the whole of the said surplus in The Currency Note Income Account or such part thereof as shall make up the monies of the fund as aforesaid to an amount equal to the face value of the currency notes in circulation and

(ii) if on the last day in any year the amount of the fund so calculated exceeds one hundred and ten per centum of the face value of the currency notes in circulation the Governor in Council may with the sanction of the Secretary of State direct:—

that the whole or part of the excess over the one hundred and ten per centum shall be transferred from the fund to the ordinary revenue of the Colony; and that the annual appropriation out of The Currency Note Income Account of the one per centum aforesaid shall be wholly or partially discontinued for so long as it shall appear that the necessity for such annual appropriation no longer exists.

(5) The liquid portion of the fund may be held in cash or on deposit at the Bank of England or in Treasury Bills or may be lent out at call or for short terms in such ways or invested in such readily realisable securities as may be approved by the Secretary of State.

8.—(1) The Commissioners shall cause to be published half-year in the Gazette an abstract showing:—

- (a) the whole amount of currency notes in circulation on the last day of the half-year;
- (b) the total amount of The Note Security Fund on the said day the value of the invested portion of the fund being calculated on the latest known market price of the securities held by the fund; and
- (c) a list of the securities held by the fund showing in each case the nominal value the cost price and the latest known market price;

and shall submit to the Governor and the Secretary of State a statement of their transactions during the previous year.

(2) The accounts of all transactions of the Commissioners shall be audited by the Auditor of Public Accounts by such persons as the Governor may nominate and in accordance with such regulations as the Governor in Council may make for the purpose.

9.—(1) The Governor in Council may with the approval of the Secretary of State make regulations:—

- (a) prescribing anything which by this Act is to be proscribed;
- (b) directing and controlling the calling in or demonetisation of currency notes issued under this Act; and
- (c) generally for the better carrying into effect of the provisions of this Act.

(2) All such regulations shall be published in the Gazette of the Colony and shall thereupon take effect as if enacted in this Act, and the power to make regulations shall be deemed to include the power to vary or revoke any regulations so made and published.

THIS ACT REPEALS THE GOVERNMENT CURRENCY NOTE ACT OF DECEMBER 18, 1919, WHICH ESTABLISHED THE INITIAL CURRENCY BOARD.

SELECTED BIBLIOGRAPHY

Steve H. Hanke, "Keynes's Russian Currency Board," in: S.H. Hanke and A.A. Walters (eds.). *Capital Markets and Development* (San Francisco: Institute for Contemporary Studies Press, 1991). (with K. Schuler)

Steve H. Hanke, *Currency Boards for Eastern Europe*, The Heritage Lectures No. 355 (Washington, D.C. The Heritage Foundation, 1991). (with K. Schuler)

Steve H. Hanke, *Teeth for the Bulgarian Lev: A Currency Board Solution* (Washington, D.C.: International Freedom Foundation, 1991). (with K. Schuler)

Steve H. Hanke, *A Currency Board Solution for the Albanian Lek* (Washington, D.C.: International Freedom Foundation, 1991). (with K. Schuler)

Steve H. Hanke, *Monetary Reform for a Free Estonia: A Currency Board Solution* (Stockholm: SNS Forlag, 1992). (with L. Jonung and K. Schuler)

Steve H. Hanke, "Currency Boards," in: Peter Newman, M. Milgate and J. Eatwell (eds.), *The New Palgrave Dictionary of Money and Finance*, Volume 1 (London: The Macmillan Press Limited, 1992). (with A.A. Walters)

Steve H. Hanke, *Russian Currency and Finance: A Currency Board Approach to Reform* (London and New York: Routledge, 1993). (with L. Jonung and K. Schuler)

Steve H. Hanke, *Currency Boards for Developing Countries: A*

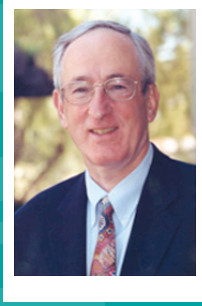
Handbook (San Francisco: Institute for Contemporary Studies Press, 1994). (with K. Schuler)

Steve H. Hanke, "The Case for an Indonesian Currency Board," *Journal of Applied Corporate Finance*, Vol. 11, No. 4 (Winter 1999). (with K. Schuler)

Steve H. Hanke, "A Monetary Constitution for Argentina: Rules for Dollarization," *The Cato Journal*, Vol. 18, No. 3 (Winter 1999).

Steve H. Hanke, "Currency Boards," *Annals of the American Academy of Political and Social Science*, no. 579 (January-February 2002): 29-36.

Steve H. Hanke, "What Went Wrong in Argentina?" *Central Banking*, Vol. XII, No. 3 (February 2002): 43-48. (with K. Schuler)



Alvin Rabushka is the David and Joan Traitel Senior Fellow at the Hoover Institution. He is an expert on taxation. His books and articles on the flat tax, with Hoover fellow Robert Hall, have provided the foundation for numerous tax reform bills. His book *Taxation in Colonial America* was just released by Princeton University Press. His other research areas are economic development in Pacific Rim countries, Israel, and the transition economies of Central and Eastern Europe, notably Russia.



THE NASSAU INSTITUTE



9 789768 170965