



UNIVERSITI PUTRA MALAYSIA

**CURRENCY BOARD VERSUS
CENTRAL BANK IN A CURRENCY CRISIS**

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PENGESAHAN KEASLIAN LAPORAN

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Tandatangan

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BY

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ABSTRACT

From June 1997 till presently had been a period of economic turmoil for many parts of the Asian region . There has been experiences of economic overheating , inflation , deficit balance of payments , rising interest rates coupled with the downward spiral of the stock markets and currency devaluations .

This has brought about numerous debates on the causes and remedies of this crisis. Among them are the usefulness of the currency board regime in regulating the exchange rates of the countries involved. This is an alternative system to the present regime of central banks in managing the countries' money supply.

The currency board basically is a monetary regime whereby the exchange rate of the country is fixed with a chosen anchor currency whereby all its money supply must be 100% backed by its foreign reserves.

The central bank system employs the floating exchange rate which has been unsuccessful in warding off speculations on the currency. Further many other disadvantages will be discussed in this thesis.

This thesis discuss the comparative characteristics between the currency board and the central bank monetary regime in all its advantages and disadvantages .

An attempt is made to define the currency board and the central bank and the many versions associated with them. (i.e., classical , modern and AEL-Argentina, Lithuania , Estonia -model)

A closely related concept to the currency board , namely dollarization is also discussed.

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CHAPTER 1

INTRODUCTION

There has been numerous debates regarding the benefits and costs of a currency board versus a central bank in managing the recent currency crisis that has enveloped the Asian countries.

Prior to this crisis , the term ‘currency board’ was not heard of but now is frequently mentioned in the mass-media. Besides currency board , another term that is dollarization will also be discussed briefly in this thesis.

1.1) THE ASIAN CURRENCY CRISIS

On July 2, 1997 Thailand devalued its currency against the U.S. dollar, triggering a Southeast Asian currency crisis that has led to devaluation's in Indonesia, Malaysia, Singapore, the Philippines, Taiwan, and Vietnam.

On 1 July 1997, just before Thailand devalued the baht, the exchange rate of the Indonesian rupiah was 2,431 per dollar. Then, in January 1998, the exchange rate is more than 12,000 per dollar, and it recently touched 17,000 per dollar.

Under the current floating exchange rate, nothing prevents the rupiah from falling to 15,000 or 20,000 per dollar as the loss of confidence in the rupiah becomes outright panic. Central banking system has worked poorly in Indonesia to mitigate its currency crisis.

Among the currencies that have suffered speculative attacks in the East Asian currency crisis but has not devalued very much are the Hong Kong dollar and Singapore dollar.

The Hong Kong dollar came under speculative attack against the U.S. dollar during the week of October 20-24. The attack peaked on October 23. Overnight interest rates in the inter-bank market rose as high as 300 percent a year in response to a deliberate tightening by the Hong Kong Monetary Authority (their currency board) to discourage speculation against the Hong Kong dollar. Hong Kong's stock market plunged 10.4 percent, to its lowest price-to earnings ratio. The following day, overnight interest rates in Hong Kong fell to 7-8 percent a year, again in response to deliberate action by the HKMA.

Schuler (Feb 1998) suggests that Indonesia should imitate Hong Kong and establish a currency board. Simply announcing that Indonesia intended to establish a currency board in the near future would probably make the rupiah appreciate considerably from its current, incredibly cheap level. A more valuable rupiah would also enable at least some Indonesian companies to avoid defaulting on their foreign debt.

What anchor currency should Indonesia choose ? The most likely choice is the U.S. dollar. The dollar is the most widely used and widely known foreign currency in Indonesia. It was the anchor currency for the target zone that Bank Indonesia unsuccessfully tried to maintain when the currency crisis began. And the dollar has a high likelihood of continuing to have low inflation. A less likely choice for an anchor currency is the Japanese yen. The yen, though a major international currency, is not as widely used as the dollar.

The currency crisis has been attributed to large cashing out of foreign funds in the country. The manager of the portfolio manager quickly cash out their investment and converted the Ringgit to US Dollar. This lead to the devaluation of the Ringgit. The efforts made by the government to stall the devaluation through the use of international reserve and increasing interest rates has not been completely successful and the Ringgit value has depreciated by more than 40% since July 1997.

CHAPTER 2

DEFINITION OF CURRENCY BOARD & THE CENTRAL BANK

2.1) What is a Currency Board ?

Sir Alan Walters, the architect of Hong Kong's currency board defined a "Currency Board" as follows :

" The main characteristic of the currency board system is that the board stands ready to exchange domestic currency for the foreign reserve currency at a specific and fixed rate. To perform this function the board is required to hold realizable financial assets in the reserve currency at least equal to the value of the domestic currency outstanding. Hence in the currency board system there can be no fiduciary issue. The backing of the currency must be at least 100%. "

Based on the above , a currency board can be defined as an organization that issues notes, coins, and deposits fully backed by a foreign " anchor " currency, and fully convertible into the anchor currency at a fixed rate and on demand. The anchor currency is a convertible foreign currency chosen for its stability. Further , the country that issues the anchor currency is called the anchor country.

As reserves, a currency board holds low-risk bonds and other assets payable in the anchor currency. A currency board holds reserves equal to 100 percent of slightly more of the monetary base, as set by law. A currency board earns profit from the difference between the interest it earns from its anchor-currency assets and the expense of maintaining its notes and coins. A currency board does not have discretionary control of the quantity of notes, coins, and deposits it supplies. Market forces determine both the monetary base and broader measures of the supply of money that include bank deposits and other forms of credit.

The currency board system comprises the currency board, commercial banks, and other financial institutions.

Another characteristic of all genuine currency boards is that they should be prohibited from buying or holding domestic treasury or commercial securities. Since a currency board is constrained to issue currency only in exchange for "realizable financial assets" that are freely convertible into the reserve currency, it is powerless to create domestic money by extending credit as conventional central banks can do. That means that a currency board (unlike a central bank) cannot function as "lender of last resort" either to the state treasury or to commercial banks.

Strict limits on a currency board's power to issue money constrain its operation in two important respects :

- a) the board cannot finance (i.e., monetize) the government's budgetary deficits, and
- b) it cannot regulate the nation's money supply by engaging in open market operations or discounting domestic bank-held paper.

It is these two constraints that attract the most determined opposition to the currency board idea, and at the same time, inspire its greatest admiration.

Dr.Tsang Shu-ki from the Department of Economics , Hong Kong University , has also further attempts to define the currency board under 3 different identities , i.e., the classical currency board , modern version currency board and the AEL (Argentina , Estonia and Lithuania) model . These differing versions were attempts by the respective economies to adapt and change accordingly to their capability and current environment. These versions are discussed below.

- a) The Classical model issues notes and coins with 100% foreign reserves backing at a fixed exchange rate . This exchange rate is supposedly anchored at the same level because of 2 processes , the specie-flow mechanism (similar to the gold standard) whereby outflows of capital would contract the money supply , push up interest rates and induce a counter-flow automatically within a small time frame and without government intervention.
- b) Under the modern model , Dr.Tsang argues that in a open financial economy, this presumed balance of payments is far from perfect in the presence of expectations and uncertainty . He argues that higher interest rates may not induce the

expected counter-flow of capital , if the exchange rate itself is in doubt. The higher interest rates may indicate and be interpreted as a sign of weaknesses . This was exhibited recently in the Asian currency crisis whereby all the prevailing governments attempted to prevent the spiraling interest rate decrease via increased interest rates but to no avail.

- c) The AEL model is a model adopted by Argentina, Estonia and Lithuania , latecomers to the currency board camp. This model suggests that arbitrage will technically bind the exchange rate . This model suggests that since the foreign reserves cover at least 100% of the cash in circulation , any attack on the market exchange rate away from the official rate , should allow people to convert their bank deposits into cash , enter the currency board to exchange the cash into foreign currency at the stronger official rate and then sell the foreign currency in the market, fetching an arbitrage profit. This selling pressure will bring the market exchange rate back to the level of its official rate.

2.2) A brief history and assessment of currency boards

More than 70 countries have had currency boards. The first currency board was established in 1849 in the British Indian Ocean colony of Mauritius. Currency boards spread slowly until about 1900, when a few other British colonies and Argentina, an independent country, established currency boards. After 1900, currency boards

became the monetary arrangement of choice for British colonies and for some independent developing countries. Currency boards reached their greatest extent in the 1950s, when much of Africa, the Caribbean, and South Asia had currency boards. Besides Hong Kong, other countries near to Indonesia that have had currency boards are Singapore, Malaysia, the Philippines, Brunei, and Burma.

Figure 3.1 summarise the selection of current existing countries with the currency board system and the anchor currency chosen.

Figure 2.1 – Selection of Existing Countries with Currency Board

	Country/Territory	Date of Establish	Population as at July 1994	Currency Peg
1)	Argentina	1991	33,912,994	US dollar
2)	Bermuda	1915	61,158	US dollar
3)	Brunei	1967	284,653	Singapore \$
4)	Cayman Islands	1972	31,790	US dollar
5)	Estonia	1992	1,616,882	Deutsche mark
6)	Falkland Islands	1899	2,261	Pound sterling
7)	Faroe Islands	1940	48,427	Danish krone
8)	Gibraltar	1927	31,684	Pound sterling
9)	Hong Kong	1983	5,548,754	US dollar
10)	Lithuania	1994	3,848,389	US dollar

(Sources : Hanke , Jonung & Schuller , 1993 ,CIA World Factbook 1994/95 , IMF publications)

Currency board systems have been successful in encouraging foreign investment. With currency boards, many countries have taken the decisive step from primitive monetary conditions to modern monetary systems that include sophisticated banking and foreign-exchange services. Inflation in currency board systems has been low. Economic growth has usually been satisfactory, and in some cases spectacular. Trade in export goods that have remained characteristic of certain countries originated during the years of the currency board system. Export of cocoa and peanuts in West Africa, rubber and tin in Malaysia, and textiles and financial services in Hong Kong all developed under currency boards.

Currency board systems have typically been stable. All currency boards have successfully maintained fixed exchange rates and full convertibility into their anchor currencies, although in the 1970s some currency boards linked to the pound sterling changed to other more stable anchor currencies. Even during the Great Depression, all currency boards then existing maintained fixed exchange rates and full convertibility, unlike almost all central banks then existing. The oldest remaining currency board, in the Falkland Islands, has maintained a fixed exchange rate of Falklands 1 pound sterling per 1 pound British sterling since it opened in 1899.

Despite the economic success of currency board systems, governments converted most currency boards into central banks in the late 1950s and the 1960s. Some governments were influenced by theoretical arguments that a central bank could

promote economic growth better than a currency board. Newly independent countries established central banks because of the association of the currency board system with colonial rule, and because older, more established countries had central banks. A central bank was a symbol of independence, like a national flag. The actual performance of currency boards has been close to the ideal they have established to strive for, namely, to maintain full convertibility into the anchor currency at a fixed exchange rate according to strict rules of procedure.

CHAPTER 3

DEFINITION OF CENTRAL BANKS

3.1) What is a Central Bank ?

A central bank is an organization that has discretionary monopoly control of the monetary base.

“ Discretionary control ” is the ability to choose a monetary policy at will, at largely unconstrained by rules. The “ monetary base ” comprises notes and coins issued by the currency board or central banks, plus deposits held by commercial banks at the currency board or central bank. The monetary base counts as reserves when held by commercial banks, but not when held by the public.

Deposits by the public at commercial banks and notes and coins held by the public or by commercial banks, constitute cash.

Reserves mean the medium used to settle payments. (In practice, near-monies such as accounts at money market mutual funds may be almost as liquid and widely accepted in payment as deposits at commercial banks.)

Pervasive inflation and exchange rate instability cast grave doubts on the feasibility of active monetary policy as it is actually conducted in most countries. The record indicates that most central bank's attempts to manage the money supply or to manipulate interest rates cause more harm than good. That is because the conduct

of sound monetary policy demands independence from political pressures, transparent , valid and timely economic information, as well as considerable competence and courage that are rarely found within the world's central banks. Most developing nations, as well as industrial ones, would be better off if their monetary authorities had neither the power nor hubris to attempt it.

3.2) A Scorecard for Central Banks

Critics ask, can the state finance its budgetary deficits if the treasury cannot count on the monetary authority to buy its bonds and notes ? How can a monetary authority bound by such an iron rule of currency emissions have sufficient flexibility to " fine tune " the money supply or otherwise conduct an active monetary policy ?

In fact, the depoliticization of monetary emissions is the currency board system's chief virtue. Currency boards make it difficult for governments to spend more than they can tax or borrow in free capital markets which actually provide a great service to a country. By impeding monetization of budgetary deficits, a currency board goes far to promote fiscal discipline that otherwise would be impossible to achieve.

CHAPTER 4

A COMPARISON OF CENTRAL BANKS AND CURRENCY BOARDS

Major benefits of the currency board system are :

- making a nation's currency and exchange rate regimes more transparent, rule-bound, and predictable;
- placing an upper bound on the nation's base money supply, a bound that is determined by net capital inflows;
- forcing the government to restrict its borrowings to what " arms-length" foreign and domestic lenders are willing to lend it at market interest rates; and
- engendering confidence in the soundness of the nation's money in direct proportion to the length of time it is maintained in harmony with other supporting policies.

Figure 4.1. Characteristics of A Currency Board versus A typical Central Bank

	Currency Board	Typical Central Bank
1	Fixed exchange rate with anchor currency	Pegged or floating exchange rate
2	Foreign reserves of 100 percent	Variable foreign reserves

3	Full convertibility	Limited convertibility
4	Rule-bound monetary policy	Discretionary monetary policy
5	Not a lender of last resort	Lender of last resort
6	Does not regulate commercial banks	Often regulate commercial banks
7	Transparent	Opaque
8	Protected from political pressure	Politicized
9	High credibility	Low credibility
10	Earns seigniorage only from interest	Earns seigniorage from inflation
11	Cannot create inflation	Can create inflation
12	Cannot finance spending by domestic government	Can finance spending by domestic government (As recently witnessed in Indonesia)

13	Requires no “ preconditions ” for monetary reform	Requires “ preconditions ” for monetary reform
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A currency board maintains a truly *fixed* exchange rate with the anchor currency. The exchange rate is permanent, or at most can be altered only in emergencies. The exchange rate may be written into the law governing the currency board. A typical central bank, in contrast, maintains a pegged or floating exchange rate rather than a truly fixed rate. A pegged exchange rate is constant for the time being in terms of an anchor currency, but carries no credible long-term guarantee of remaining at its current rate. A floating exchange rate is not maintained constant in terms of any anchor currency. The exchange rate maintained by a central bank is typically not written into law, and can be altered at the will of the central bank or the government. When a typical central bank suffers strong pressure to devalue the currency, it devalues, as Bank Indonesia did in 1997.

As reserve assets against its liabilities (its notes, coins, and deposits), a currency board holds anchor-currency bonds; it may also hold bank deposits and a small amount of notes in the reserve currency. It holds *foreign reserves of 100 percent* or slightly more of its note, coin, and deposit liabilities, as set by law. A typical central bank has variable foreign reserves : it is not required to maintain any fixed, binding ratio of foreign reserves to liabilities. A typical central bank also holds domestic-currency assets, which a currency board does not.

A currency board has *full convertibility* of its currency : it exchanges its notes and coins for reserve currency at its stated fixed exchange rate without limit. Anybody who has anchor currency can exchange it for currency board notes and coins at the fixed rate, and anybody who has currency board notes and coins can exchange them for anchor currency at the fixed rate. A typical central bank has limited convertibility of its currency.

A currency board has a *rule-bound monetary policy*. A currency board is not allowed to alter the exchange rate. Nor is a currency board allowed to alter its reserve ratio or the regulations affecting commercial banks. A currency board merely exchanges its notes and coins for anchor currency at a fixed rate in such quantities as commercial banks and the public demand. When the demand for money changes, the role of a currency board is passive. Market forces alone determine the money supply. A central bank can alter at will, or with the approval of the government, the exchange rate, its ratio of foreign reserves, or the regulations affecting commercial banks. It is not subject to strict rules like a currency board.

A currency board is *not a lender of last resort*. Commercial banks in a currency board system must rely on alternatives to a lender of last resort. A typical central bank, in contrast, is a lender of last resort.

A currency board does not regulate commercial banks. It concentrates only on issuing the monetary base. A typical central bank, in contrast, often regulates commercial banks.

The activities of a currency board are *transparent*, because a currency board is a very simple institution. A central bank is not a warehouse; it is a speculating institution whose effectiveness partly depends on the ability to act secretly .

A currency board is *protected from political pressure*. It is protected by its own transparency, or, better yet, by any such law that the country should impose upon implementation . Some central banks are politically independent in the sense that their governors, once appointed, have sole control of the monetary base and cannot be fired by the government during their fixed terms of office. Even the most politically independent central banks sometimes yield to strong political pressure.

A currency board has *high credibility*. Its 100 percent foreign reserves, rule-bound monetary policy, transparency, and protection from political pressure enable it to maintain full convertibility and a fixed exchange rate with the anchor currency. A typical central bank has low credibility. Because a typical central bank has discretion in monetary policy, is opaque, and is politicized, it has the means and the incentive to break promises about the exchange rate or inflation whenever it wishes.

A currency board *cannot finance spending by the domestic government or domestic state enterprises because it is not allowed to lend to them.*

A currency board is no guarantee against potentially destabilizing capital inflows which can bring monetary expansion, inflation, real appreciation of the domestic currency, reduced international competitiveness, and large current account deficits, all of which can generate pressures to devalue and make nervous money managers even more skittish.

If private capital inflows are large and if significant portions of them come in the form of short-term loans or speculative portfolio investments, then the potential for destabilization capital flight can arise irrespective of the receiving nation's monetary regime. A currency board's fixed exchange rate is very unlikely to be creditable if it is perceived to be overvalued vis-à-vis the reserve currency either because it was set that way initially or subsequently became overvalued as a result of an inflation-induced real appreciation.

4.1) Responsible Policies

The issue here is whether a country with a currency board system is, by virtue of having that system, less vulnerable to destabilizing international capital flows than one operating a more conventional central bank with fiduciary currency. On that point, the emerging evidence from Estonia and Argentina, together with that of countries such as Hong Kong where currency boards have prevailed for many years, is very

positive though not conclusive. It indicates that a country with a currency board is indeed more likely to be resilient to the destabilizing forces operating in today's integrated global currency markets. By encouraging more transparent and disciplined fiscal and monetary management, a currency board makes it more likely that the supporting cast of other policies and institutions will also be in place.

Most important of all, a nation's replacement of its central bank with a currency board should symbolize that nation's seriously enhanced commitment to maintaining a sound currency and a stable exchange rate. Such credibility in the eyes of domestic and foreign investors is the greatest asset of a currency board.