CHAPTER III

NEW-BANKNOTE ISSUANCE PROCESS

This chapter describes how banknotes are issued from the BOT and the involvements of the three parties in this function. Those three parties are Department of Economic Research, Issue Department, and Note Printing Works.

3.1 Department of Economic Research

The Economic Research Department involves with managing all economic information including forecasts of banknotes in circulation for the Issue Department. It uses the regression analysis technique for the forecasts. The model used is as follows:

$$\ln VN = -2.33 + 0.99\ln GDP - 0.02RS - 0.05D8586 \qquad (3.1)$$

$$\ln M1 = 0.03 + 0.52\ln GDP - 0.02RS - 0.08D8586 \qquad (3.2)$$

where VN = value of notes in circulation,

GDP = gross domestic product at the current price (million baht),

RS = saving deposit rate

D8586 = dummy variable involving the existence of ATM during 1985-1986

M1 = the narrow definition of money which consists of banknotes, coins, and

demand deposit (excluding money in the Central bank and Ministry of

Finance).

3.2 The Issue Department

Issue Department is in charge of controlling and operating currency. Its responsibilities are to provide, issue, exchange, maintain, cancel and destroy and prove and investigate bank notes by laws, policy, orders and obligations including operations, benefit and backup of monetary reserve.

This department runs regression analysis again but using historical yearly summed data of issue bank notes. Then it manually uses previous percentages of each denomination as bases to classify each type of bank notes and justify the figures according to the new policy or to what the commercial banks request, such as request to exchange for more new bank notes to put in the ATM machine in suburban area.

The total value for each type of printed bank notes is calculated as this formula:

$$\text{Total Value} = \text{Issue} + \text{Stock} - \text{Verification} + \text{Branch} \qquad (3.3)$$

Issue :   Bank notes that will be issued through out the year.

Stock :   The difference between 3 months stock of bank notes and stock from last year. Usually the stock is for three months issue.

Verification : Estimated bank notes that are selected during verification process.

Branch :   Estimated demand for bank notes at suburban branches: Chieng Mai, Haat Yai, Kon Kaen and Lum Pang, varying by local economics situation.

In 1997, the bank notes are issued by the proportion as follows:

Table 3.1 - Proportion of Each Denomination Issued Banknotes in 1997

Type of Banknotes	Percentage of Issue (Value)
1000	55
500	35
100	7.2
50	1.3
20	1.5

3.3 The Note Printing Works

The involvement of the Notes Printing Works in the issuance of banknotes is the production of new banknotes. The results of forecasting the new issued banknotes play an important role in terms of production planning involving purchasing raw materials, scheduling, human resource management, and so on. Therfore better forecasting will improve production planning.

Important activities of the Note Printing Works also include 1) the design of banknote, 2) plate-making, 3) printing processes, 4) banknote inspection and verification, 5) printing ink manufacturing, and 6) research and development on printing technology.

3.4 Circulation of Banknotes

The sequence of operations and their interactions can be stated as follows. Firstly Department of Economic Research forecasts demands for money in overall value based on GDP and rate of saving by applying regression analysis technique.

Then the figure is brought to Issue Department. Then Issue Department will finalize the figure based on information, do regression analysis on historical data of issued bank notes and classify the overall amount into each type of bank notes by manual.

Finally the figure of each type of bank notes will be brought to Notes Printing Work. If the production capacity is lower than the figure, then Issue Department will retrieve more old bank notes from bank notes verification process to compensate the production limitation and increase the amount of bank notes in the system circulation.

It can be briefly concluded that after issue department uses forecasted demand for money from department of economic research as a guideline, then the figures of issued bank notes in the past are used to run regression analysis to forecast annual issued bank notes in total. Also previous year percentage of each type of bank notes is used as base to forecast the year later.

When banknotes are printed, some of them will be kept as safety stock and the rest will be issue to the system. One day those bank notes in the system will be exchanged back to BOT. Then they will be verified whether they are still usable or

they should be destroyed. For those the banknotes that are still usable, they will be reissued and back to the system again.

From Figure 3.1, the symbols "a,b,c,d,e" stand for each type of banknotes: 1000 baht, 500 baht, 100 baht, 50 baht, and 20 baht. From its experiences, BOT found that the higher values of bank notes will be back to BOT faster than the lower ones.
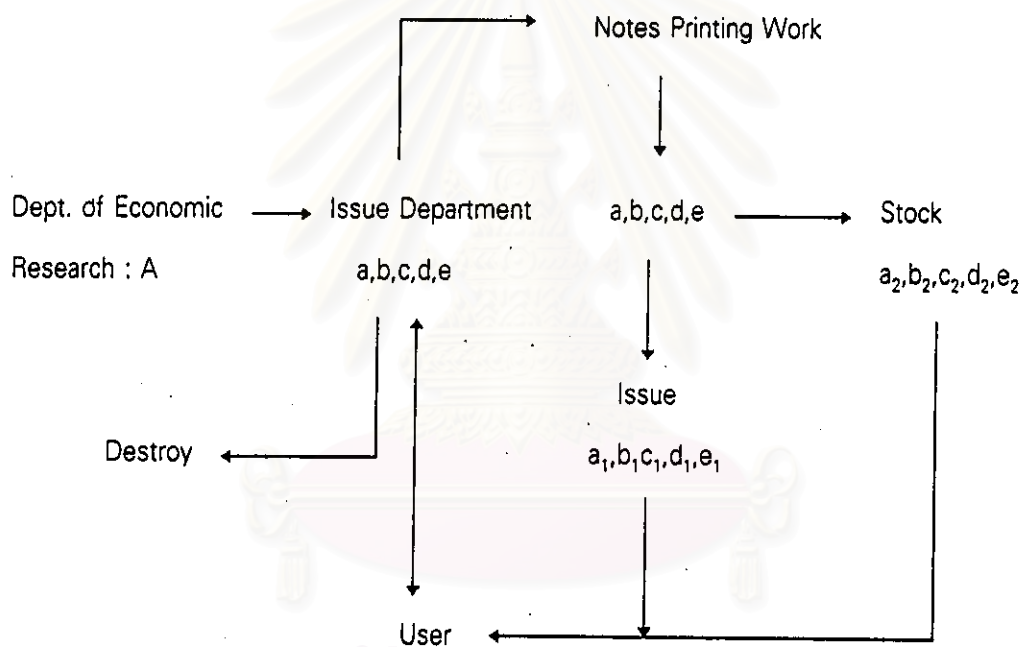
Figure 3.1 - Life Cycle of Banknotes