Trade Finance System (Import Module)

by

Ms. Oranuch Kanokvechayant

Final Report of the Three - Credit Course
CS 6998 System Development Project

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Computer Information Systems
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Project Title	Trade Finance System (Import Module)
Name	Ms. Oranuch Kanokvechayant
Project Advisor	Dr. Thotsapon Sortrakul
Academic Year	July 1999

The Graduate School of Assumption University has approved this final report of the three-credit course, CS 6998 System Development Project submitted in partial fulfillment of the requirements of the degree of Master of Science in Computer and Information Systems.

Approval Committee:

(Dr. Thotsapon Sortrakul)
Advisor

(Prof.Dr. Srisakdi Charmonman)
Chairman

(Air Marshal Dr. Chulit Meesajjee)
Dean and Co-advisor

(Asst.Prof.Dr. Vichit Avatchanakorn)
Member

(Assoc.Prof. Somchai Thayarnyong)
MUA Representative

July 1999

ABSTRACT

This report will explain only Import Module which is one part of the trade finance system for the flow of imported products between the ordering customers and beneficiary that contract with the Bank such as Letter of Credit, Shipping Guarantee and Bills for Collection. The new system is expected to hare data integrity, data consistency, reliability, user friendliness, timeliness, high performance and productivity with which the main importance is the need to support operational level especially for Finance and Accounting department interface.

This bank has various systems that are controlled by the host computer. This software application run bases on VM/VSE with Mainframe on Relational Database with COBOL programming language.

The trade finance system (Import Module) Implementation Project is implemented by SDLC methodology that consists of Context Diagram, Data flow Diagram, Format File Layout and Input / Output Layout

ACKNOWLEDGEMENTS

This project is the conclusion of the effort of the writer. The process of work is not easy so it took a lot of time, around 1 year, for the development, implementation and configuration. Firstly she would like to take this opportunity to acknowledge with high gratitude to Dr. Thotsapon Sortrakul who is her project advisor for his suggestion though out this project study and checking of the format of this project. Many thanks to her father for many recommendations and reminder not to waste time 2 semesters ago.

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I. INTRODUCTION

1.1 Background of the Project

The system development is plan need to consider developing the system into a computerized system which is called " Import Module " . It is an on-line, real-time trade system which supports all of the Trade Deal Type Requirements of a bank's import department, together with its associated interfaces to other systems of the bank. Import Module tracks all import transactions from the beginning to the end of a deal, and has the built-in flexibility to change with market demands as well as the specific bank's needs.

1.2 Objective of the Project

The Objective of the project for Import Module are as follows :

- To determine the information requirement by interviewing the concerned staffs and investigating hard date
- To analyze specification of the Import Module
- To design the recommended system including the software development and the hardware development
- To develop and test the software package for the system

1.3 Scope of the Project

The project is focused on the import letter of credit, Trust Receipt and Bill for Collection.

In order to reduce the manual work, reduce paper work, improve loan management and increase customer satisfaction, a computer information system is necessary. The project will cover the following areas :

1.3.1 Process Customer and Limits Profile

- employ the Customer database to update the change and create new customer
- employ the Limits database to update the change and verify limit from the Loan and Guarantee Department

1.3.2 Process Online Import Module

During the on-line process, all the update activities against the deal files can be recorded. The scope of the data to be recorded can be defined and changed (and may

also be switched on or off) at any time; for example, recording only the updates to the Customer and Limits databases.

- Import Letter of Credit

  The project can keep the information for the issuance of sight or time commercial letters of credit. It can calculate the commission of service.

- Trust Receipt

  The project can keep the information for the loan. And it can calculate the interest of sight or time for full and partial payment.

- Bill for Collections

  The project is related to the processing of incoming collections. It's provided with direct access to numbers.

1.3.3 Process Batch Import System

Various reports can be produced from the accumulated historical data set. It can process job daily, weekly and monthly. It can calculate the accumulated interest and due dates.

II. THE EXISTING SYSTEM

System analysis is conducted under the structured system analysis and design and is purposed to understand the existing system. Information is gathered by interviewing some staff and observing documents and operation.

2.1 Background of the Existing System

The Trade Finance System involves the following :

- Import Division
- Export Division
- Foreign Exchange Division
- International Business Development
- Administration Division
- Correspondent Banking Division
- International Business center

This project has only The Import Module. The Import Module involves three services : Import Letter of Credit , Shipping Guarantee and Import Bills for Collection. This system is operated by the Import Division under the supervision of the International Banking Department of Bangkok Metropolitan Bank.

The import module has necessary documents such as letter of credit, invoice, bill of lading, bill of exchange and so on which are derived from foreign bank in collecting money from customer buyer. The customer can loan the money from the bank by Trust Receipt. It means that the customer who has no money can receive the products first. The bank pays the money to the foreign bank in advance. So the customer must pay the interest, change and commission the amount later on.

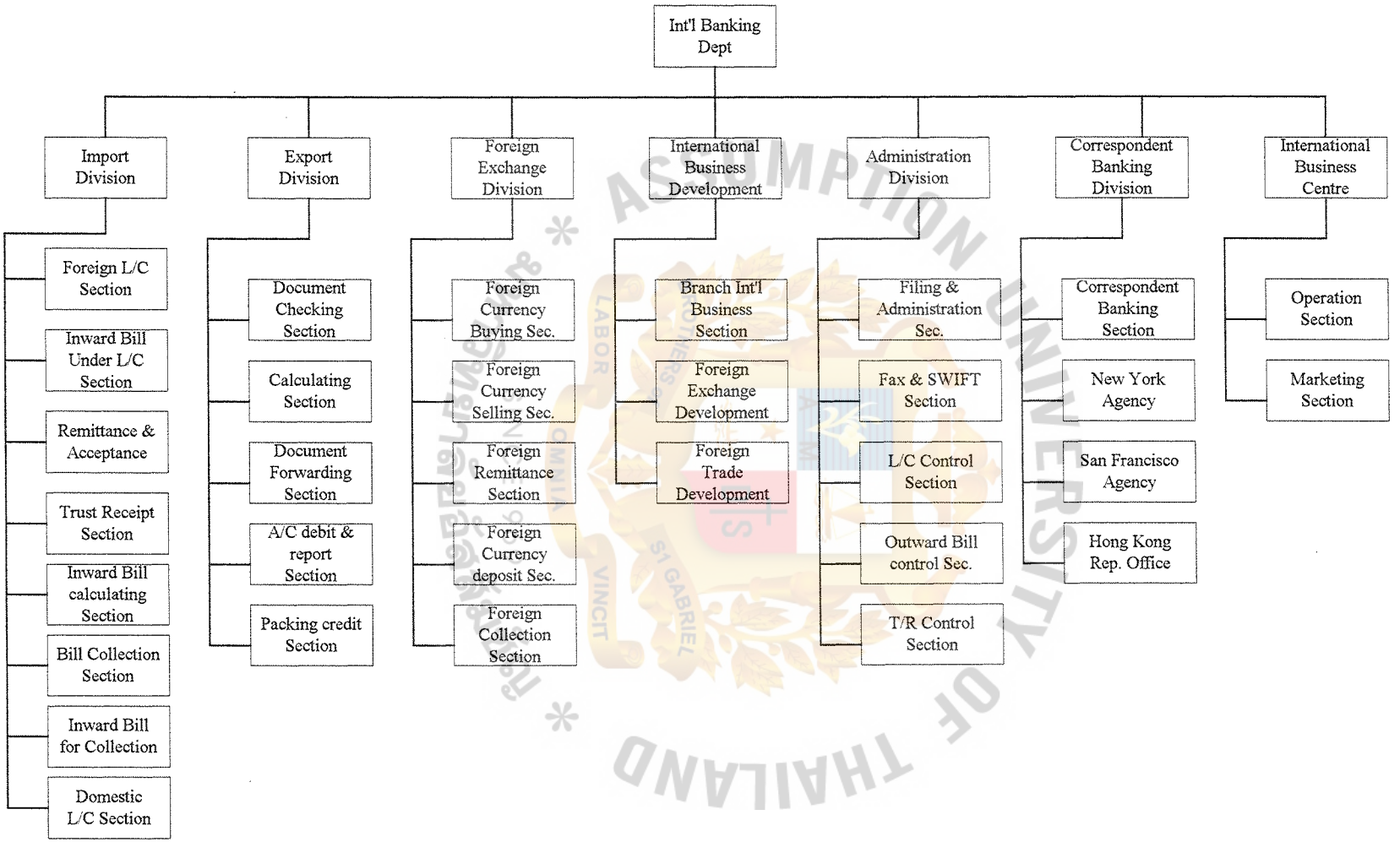

Figure 2.1. Organization Chart.

2.2 Exist Business Function

There are many business entities interacting with the Import Module, some provide input to and receive output from the system while some only receive output from the system, shown in figure 2.1 and described as follows :

Two-way interaction entities are

- Customers
- Foreign Bank
- Trade Finance Department

Report-requested entities are

- Account Department
- Bank of Thailand
- Audit Department
- Management
- Non-Performing Loan

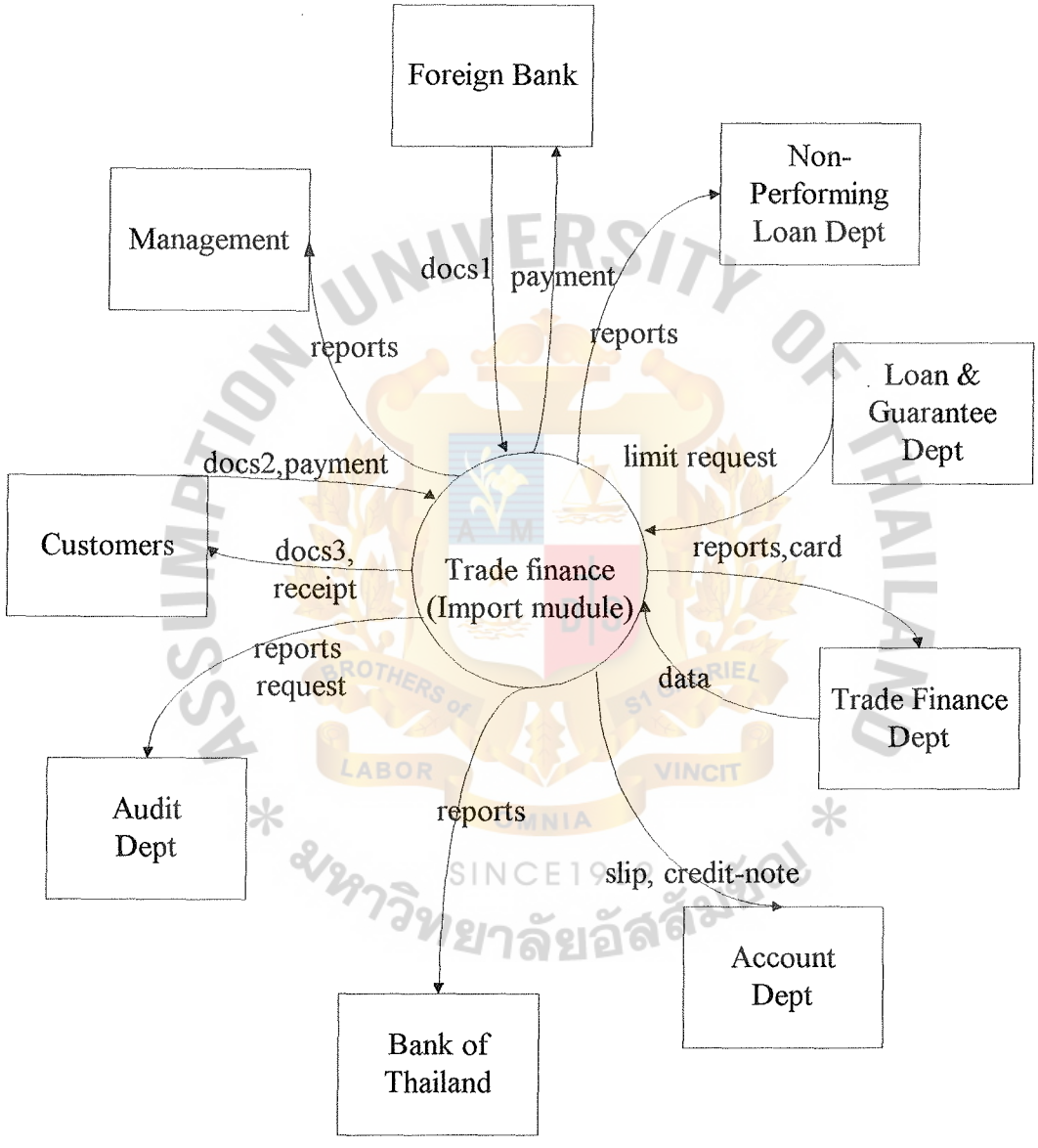

Figure 2.2. Context Diagram of the Existing System.

The operation of the import module involves maintaining the system environment, receiving and processing foreign request, processing collection and/or customer and processing foreign currency for the payment and/or foreign bank. These business functions are performed manually by the import division's staffs, shown in figure 2.2, and explained in the following paragraphs.

2.2.1 Keep Record of Various Data Stores

Lacking integrated database system, various entities using similar database have kept redundant data for their own operation. Without exception to the International Banking Department, it has to keep record of exchange rate, credit limit amount of customer, customer information in the form of document filing in sequence order.

2.2.2 Add New Customer

Certain information is requested from the new arrival customer in order to be kept in customer folder in the form of document filing.

2.2.3 Process Request Verification

The customer request issuance letter of credit. The staffs verify the documents and credit limit amount of customer from Loan & Guarantee Department.

2.2.4 Process Import Service

Then they send the letter of credit application form to the foreign bank. And the staffs receive the documents from the foreign bank, such as Bill of Exchange. So the customer must confirm the bills of exchange. If the type is Bill for collection, it is to be kept in the bill for collection folder in the form of document filing. The type is Letter of credit to be kept Inward bill Under L/C.

2.2.5 Payment Process

The customer must pay the money according to the Bill of Exchange or request Trust Receive in the next step. So the customer will receive the receipts in the sight bill or debit note for due date in the term bill.

2.2.6 Trust Receive Process

The customer requests the trust receive which has trust receive credit-limit. The customer must pay the principal amount and interest amount when the term bill date is due.

2.2.7 Process Account

And the staffs send the manual slip, the debit/credit note, to the Account Department.

2.2.8 Report Preparation

The staffs must provide manual reports to the Bank of Thailand, Management, Audit request and so on by using the customer, Bills for collection, Inward bill under L/C, Credit-limit and Debit-credit note (Manual Slip) folder in form.

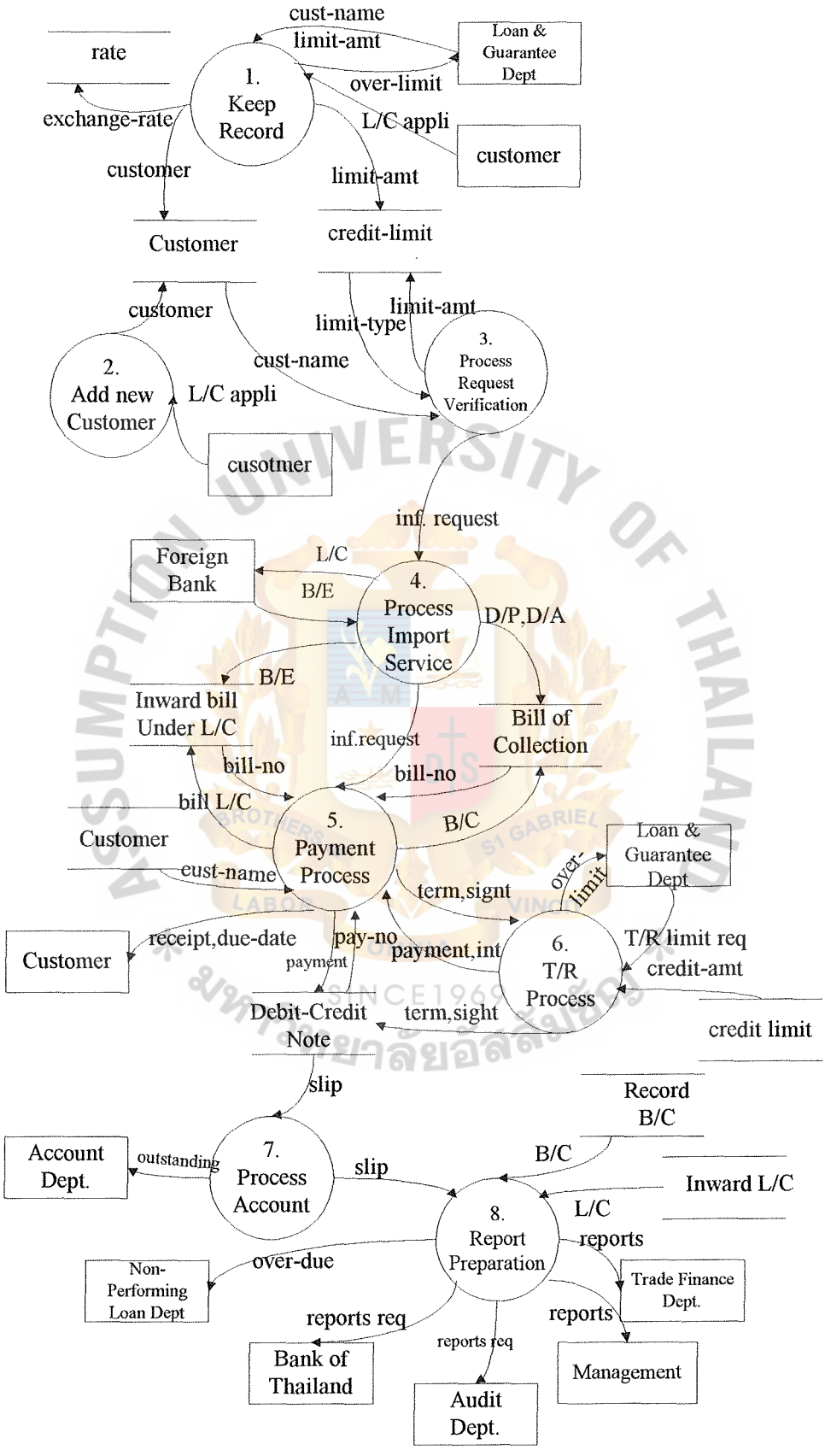

Figure 2.3. Data Flow Diagram Level 0 for the Existing System.

2.3 Problem Identification

Certain problems currently occurring are as stated below :

- The number of request increases gradually, therefore, the Bank's staffs are faced with overload work since most functions are performed manually and processing time is long.
- The risk of human error rate is high especially when there are a lot of requests to handle.
- The requested reports are not timely delivered because information is gathered and summarized manually.
- There are a lot of redundant data stores. Various entities have to create their own data stores to keep the information instead of using integrated database. Currently the data stores are kept in the form of documents.
- Customer and Foreign Bank cards are not timely updated because of work overload.
- The customer name and Foreign bank name are used as reference to them because there is no identification number assigned. Therefore, it is not convenient in searching for the information.

2.4 The Existing Hardware

Currently the Bank uses IBM mainframe to support most systems in the Bank with exception to the International Banking Department which uses a manual system and a few stand alone P/C only for some reports.

2.4.1 Hardware and Software of the Bank

- IBM mainframe
- VM/ES9000 operation system
- Dump Terminals

III. THE PROPOSED SYSTEM

With the objectives to reduce current problems and prevent additional problems, the computerized system is designed. The proposed system is intended to serve all user requirements and to increase efficiency and effectiveness of import service.

3.1 User Requirement (System Specification)

The new system is configured to detect problem and cater user requirement as follows :

- Batch processing reduce access time and high performance.
- User friendly screen provide comfortable work
- Easy function
- The system must have error default on screen to warn user when input is incorrect
- Security is controlled by the system
- Report must be cleared and produced on time.
- The system should check digit for the numbers

3.1.1 Input Requirement

The following document is required as input of the system.

- Application Letter of Credit Form
- Bill of Exchange (Draft)
- Invoice
- Bill of Lading
- Packing List
- Letter of Guarantee

3.1.2 Output Requirement

- Receipt / Debit Advice
- Proof Sheet Report
- Daily Account Transaction File
- Daily Account Transaction report
- Import Finance Outstanding Report
- Commission Report
- Accrued interest Report

3.2 System Design

We must design how the interaction among modules actually take place-that is, the exact nature of the uses relation between any modules. The set of services that each module provides to its clients (i.e., the proposed module as it relates to other modules) is called its interface. The corresponding services are said to exported by the module and imported by the clients.

Two-way interaction entities are

- Foreign Bank

  Imported the documents (Bill of Exchange, Bill of Lading, Invoice)

  Exported to pay the money

- Customers

  Imported to request the application form, pay the money for the Bill of Exchange

  Exported to copy the documents, and Receipt / Debit Advice

- Audit Department

  Imported to inquire the data in the system

  Exported to request the reports for auditing the system

- Trade Finance Department (International Banking Department)

  Imported to data entry in the system

  Exported to some reports

One-way request entities are

- Bank of Thailand

  Exported to some reports

- Account Department

  Exported to the transaction report and file interface

- Loan & Guarantee Department

  Imported to request the credit limit of the customers report

- Non-Performing Loan Department

  Exported to the bad finance of customers file interface

- Management

  Exported to the MIS reports

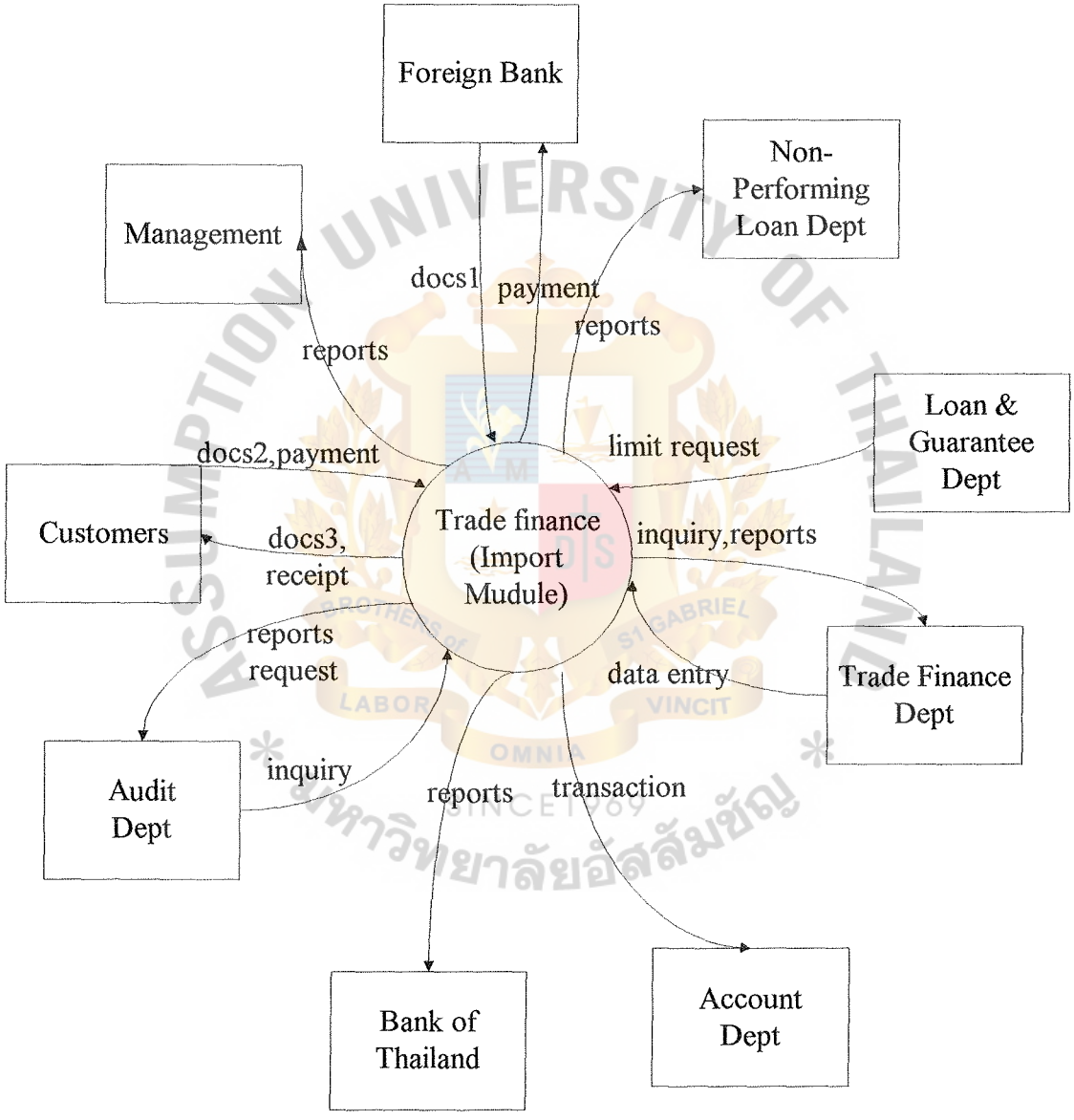

Figure 3.1. Context Diagram of the Proposed System.

3.3 The Proposed System Overview

The Proposed System's Context Diagram and Level 0 of Data Flow Diagram are shown in figures 3.1 and 3.2. The proposed system's operation include four processes : Process Customer & Limit Profile, Process Online, Process Batch and Prepare & print reports

3.3.1 Process Customer & Limit Profile

The customer must open the new customer and request the credit limit amount from Loan & Guarantee Department. Then the bank's staffs fill in the customer information and fill in the exchange rate on the screen

3.3.2 Process Online

- The customer requests the letter of credit application. The bank's staffs fill in the data entry screen. The system will calculate the commission and charge amount immediately.
- The bank's staffs send the L/C application to the foreign bank.
- The foreign bank send the bills of exchange back to the bank for collecting in the money. The system will calculate the principal amount for sending to the foreign bank.
- If the customer has no money, he/she must request trust receipt for loan of the money. The system will calculate the interest amount and due-date.
- The shipping guarantee and the bills for collection can be done.
- The bills are to have due-date. But if the customer cannot pay the money, the system will convert to trust receipt over due and send the information to the Non-Performing Loan department.

3.3.3 Process Batch

Various reports can be produced from the accumulated historical data set. It daily, weekly and monthly processes the job. It calculates the accumulated interest amount and credit/debit transactions for interface to the Account Department.

3.3.4 Prepare & Print Reports

The bank's staffs (input-output staffs) will print the reports and send them to the department requesting them.

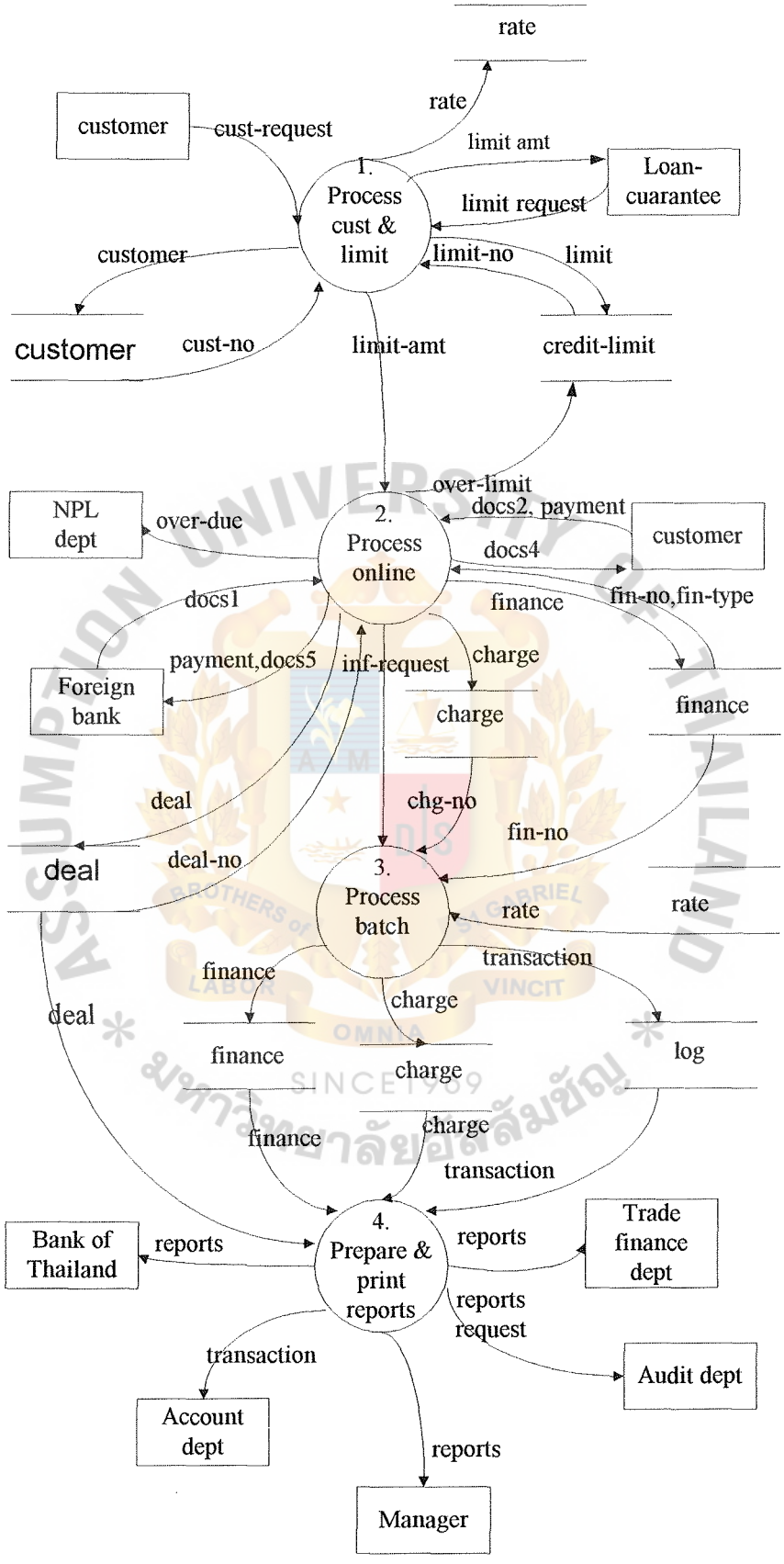

Figure 3.2. Data Flow Diagram Level 0 of the Proposed System.

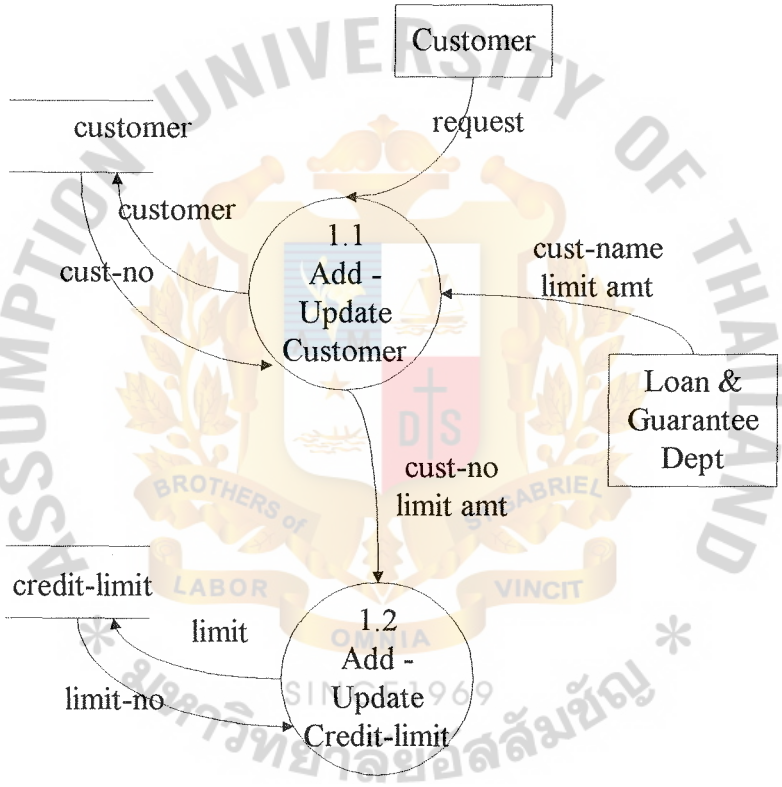

Figure 3.3. Data Flow Diagram Level 1 of the Proposed System Process Customer & Credit-limit Profile.

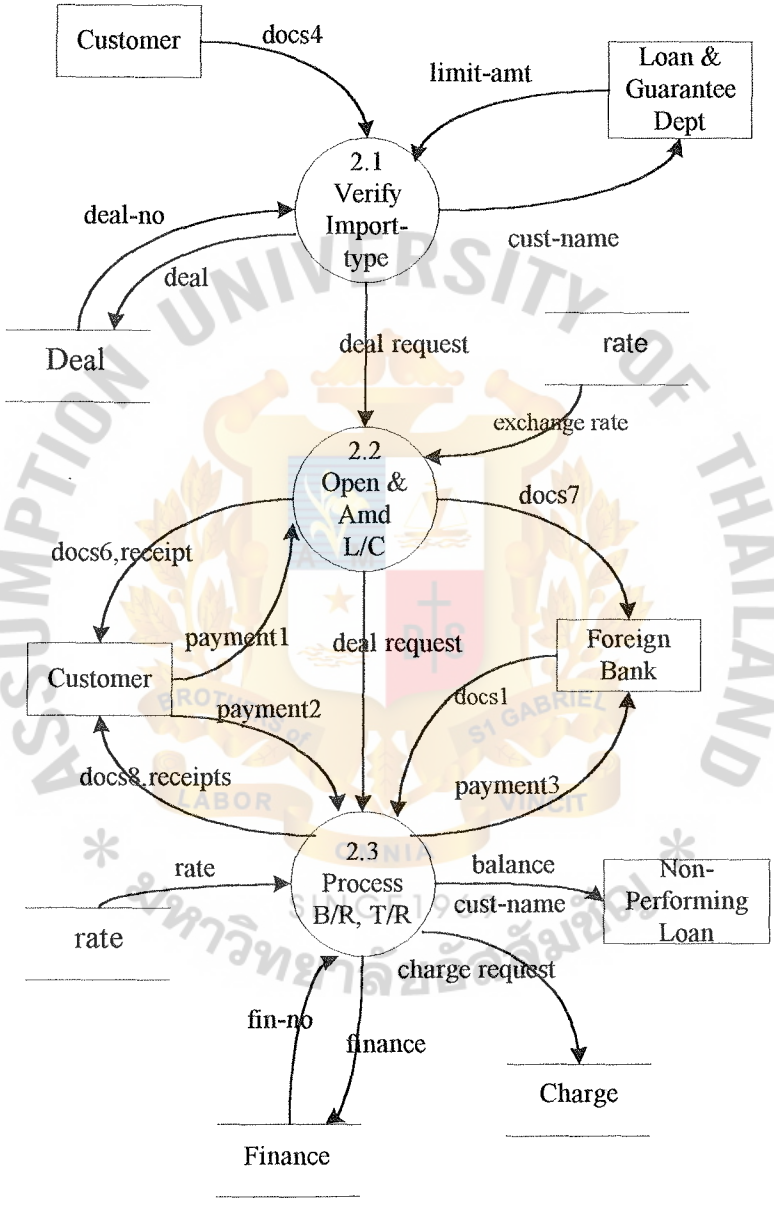

Figure 3.4. Data Flow Diagram Level 1 of the Proposed System Process Online System.

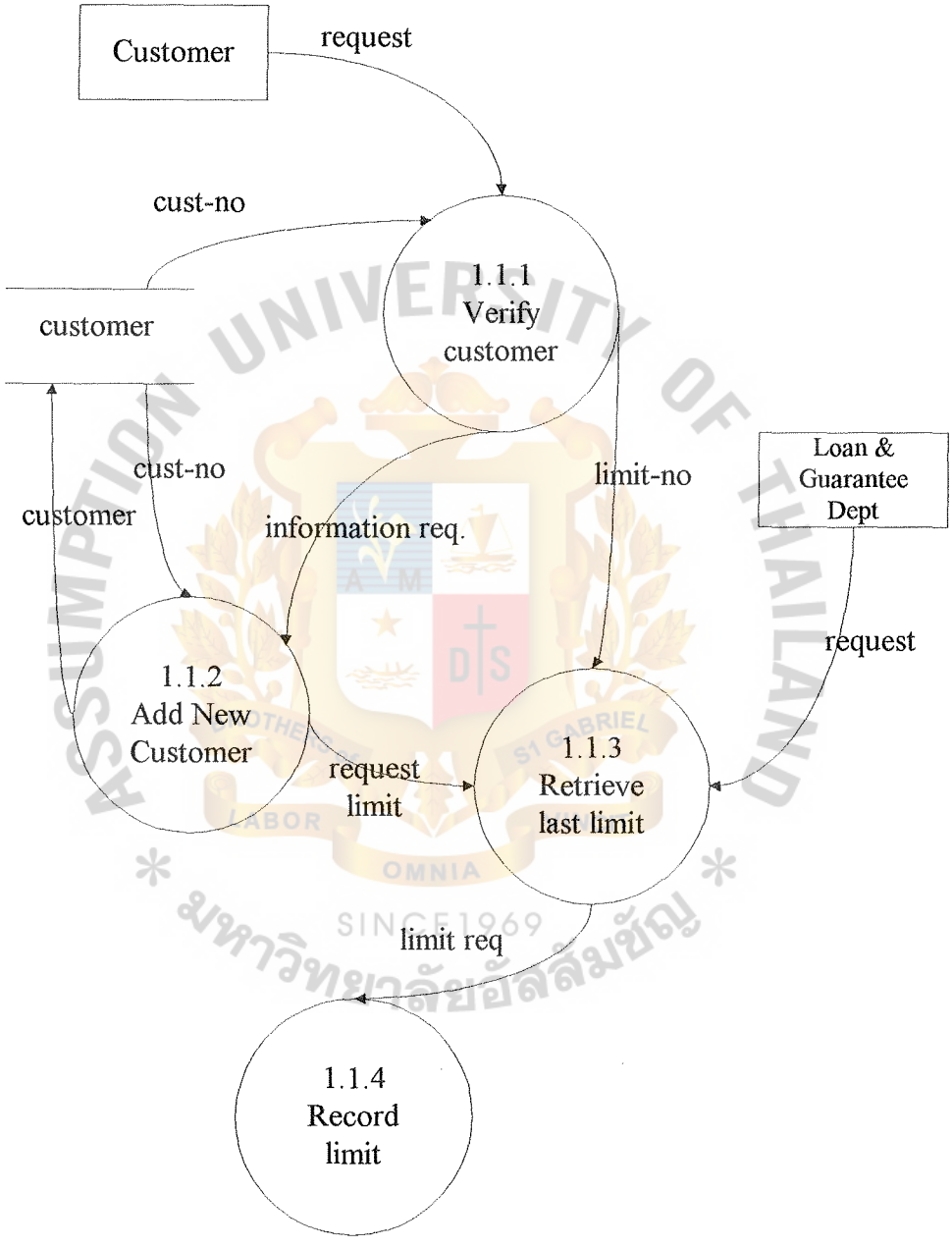

Figure 3.5. Data Flow Diagram Level 2 of the Proposed System Add, Update Customer.

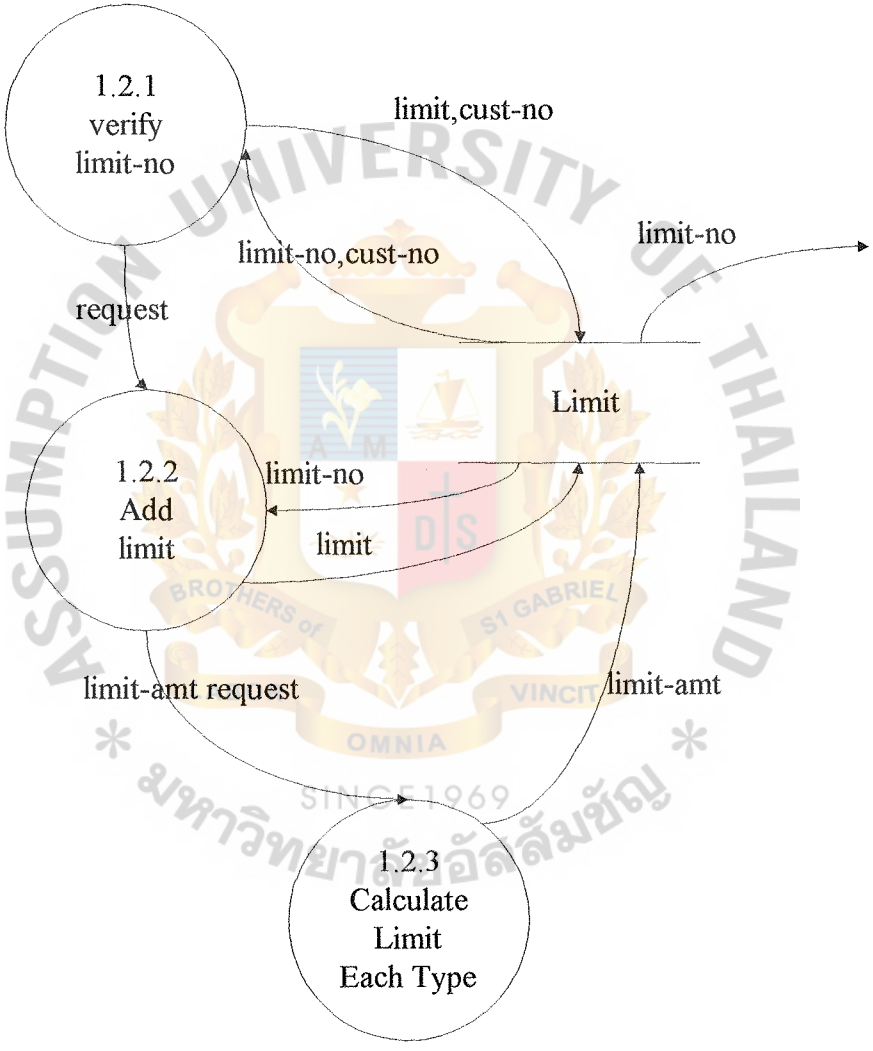

Figure 3.6. Data Flow Diagram Level 2 of the Proposed System Add & Update Credit-limit.

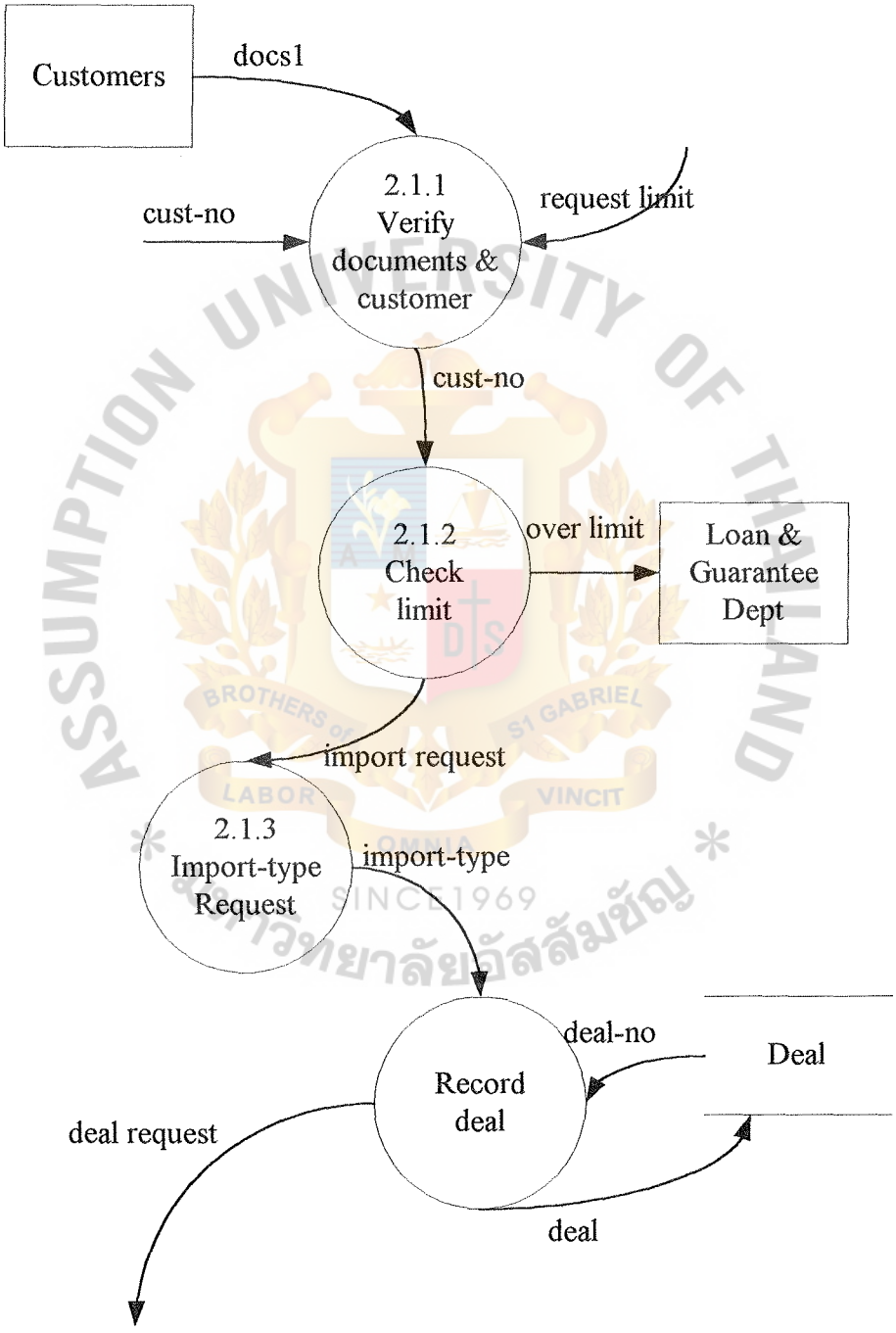

Figure 3.7. Data Flow Diagram Level 2 of the Proposed System Verify Import-Type.

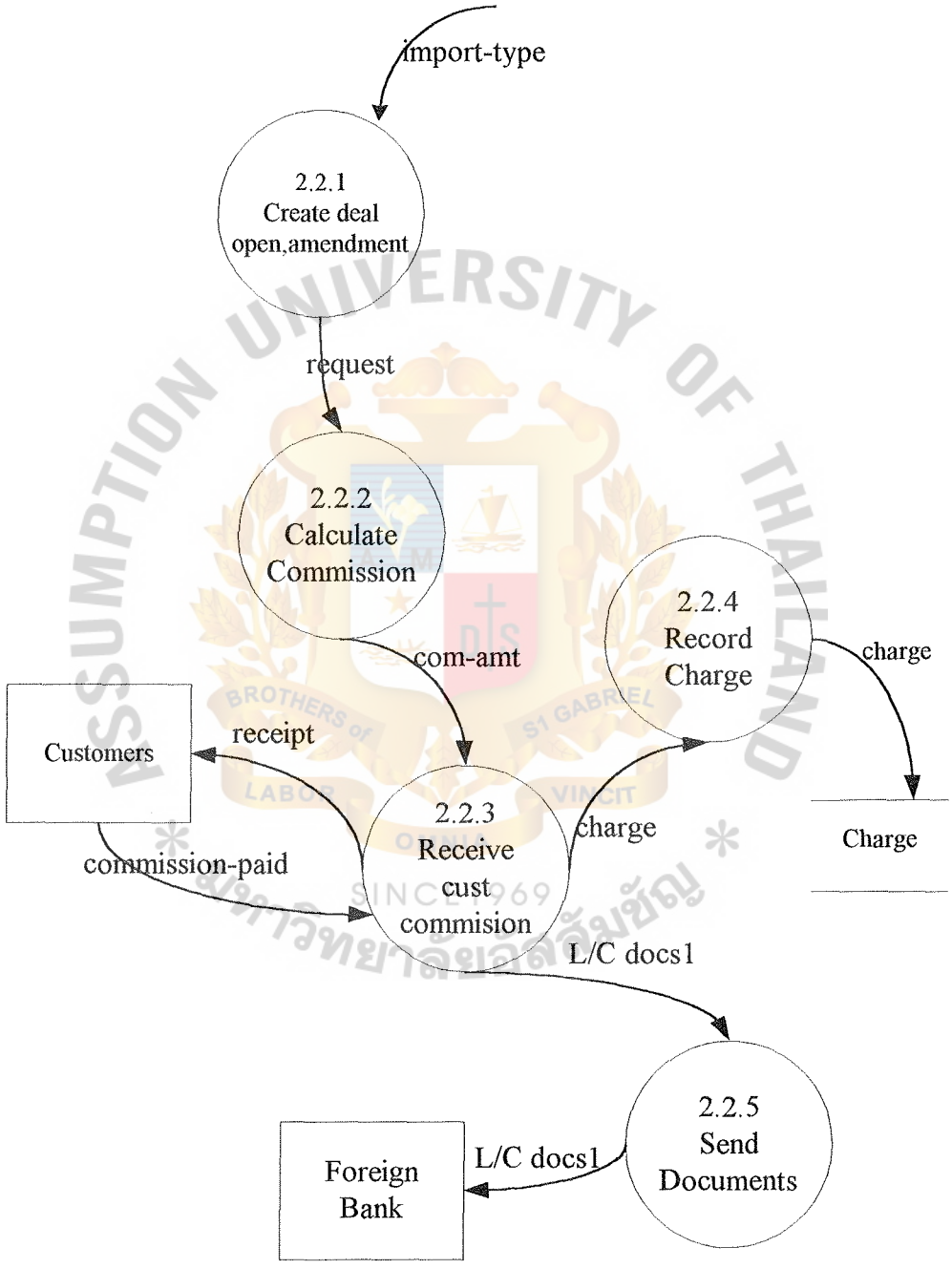

Figure 3.8. Data Flow Diagram Level 2 of the Proposed System Open & Amendment L/C.

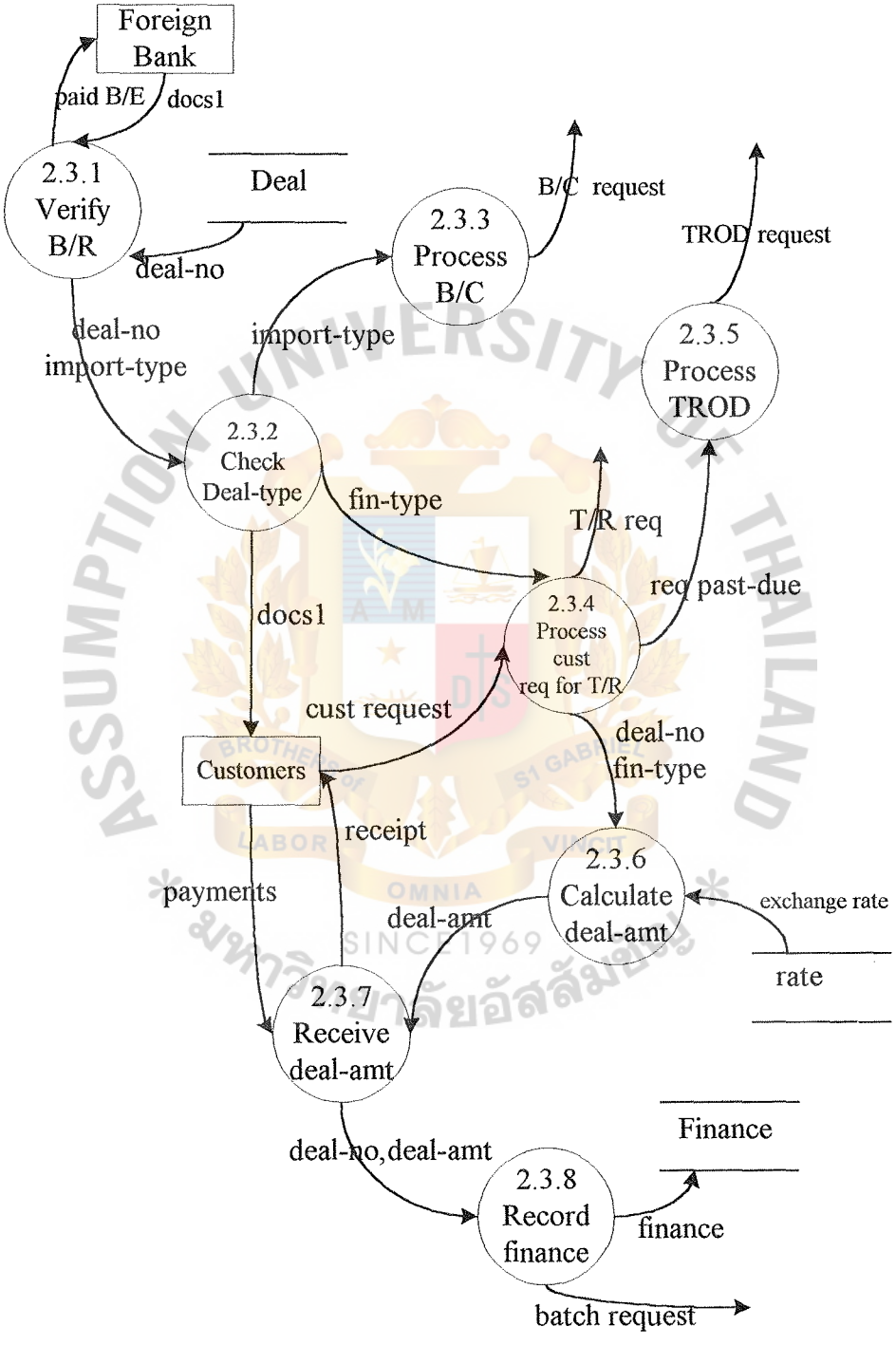

Figure 3.9. Data Flow Diagram Level 2 of the Proposed System Bills for Receive.

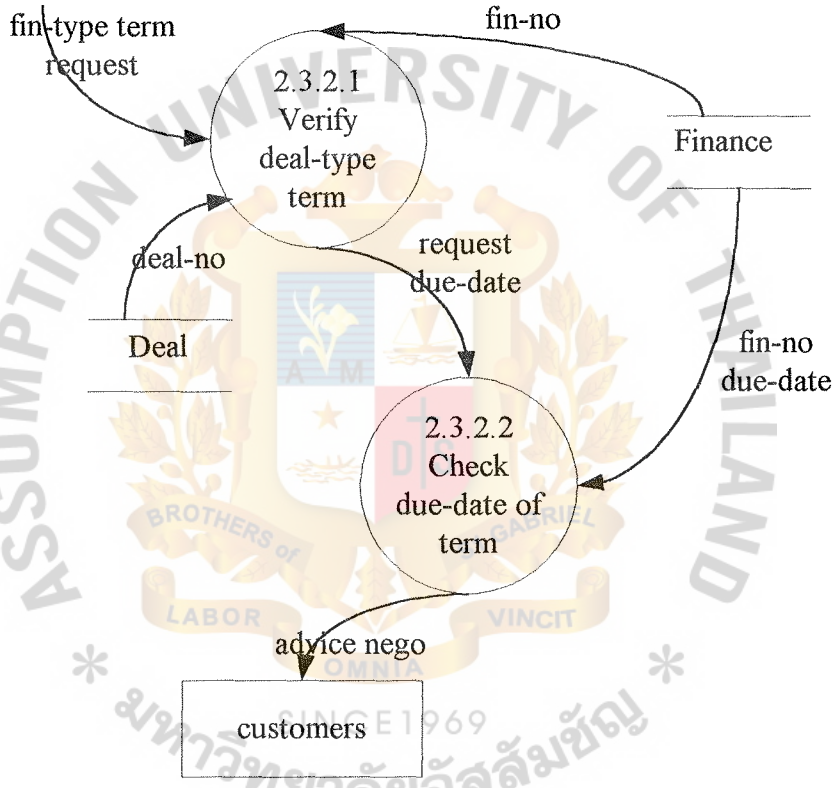

Figure 3.10. Data Flow Diagram Level 3 of the Proposed System Term of Bill for Receive.

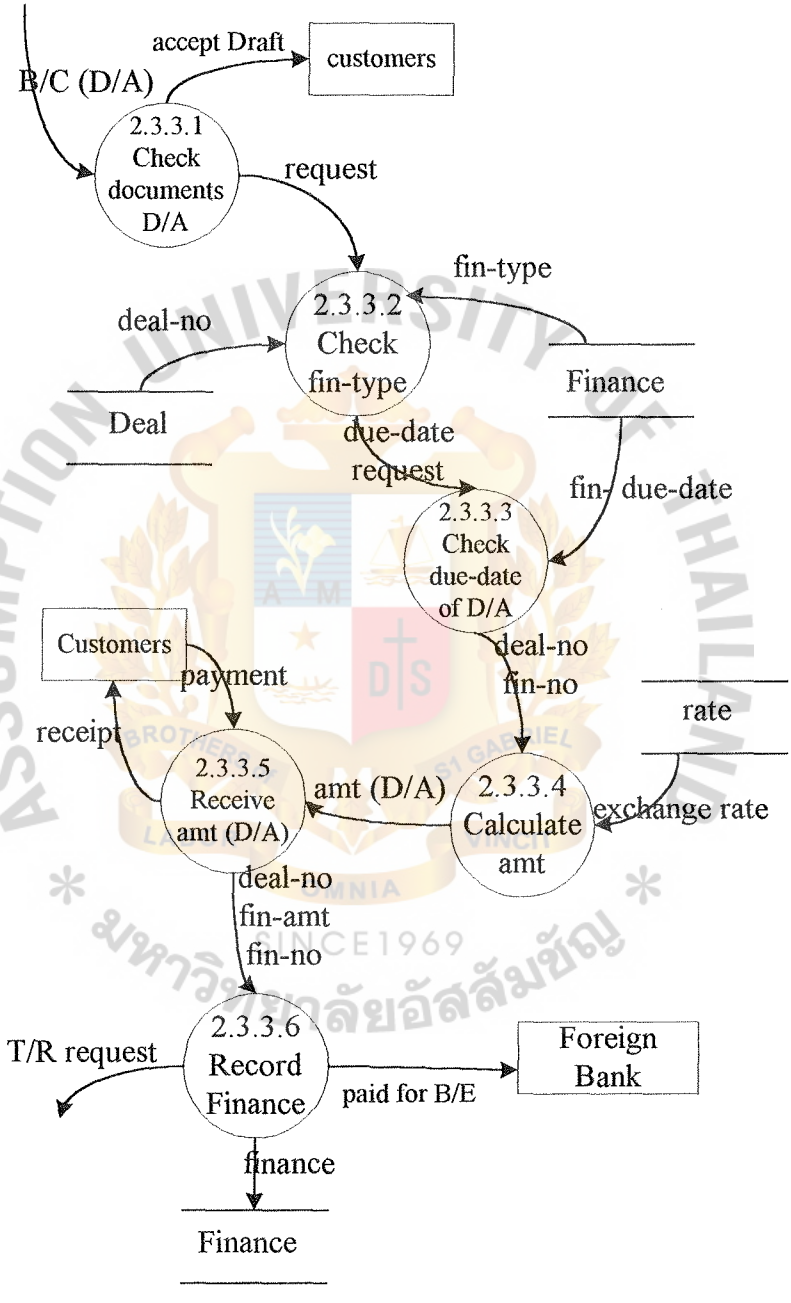

Figure 3.11. Data Flow Diagram Level 3 of the Proposed System Bill of Collection (Documents for Acceptance).

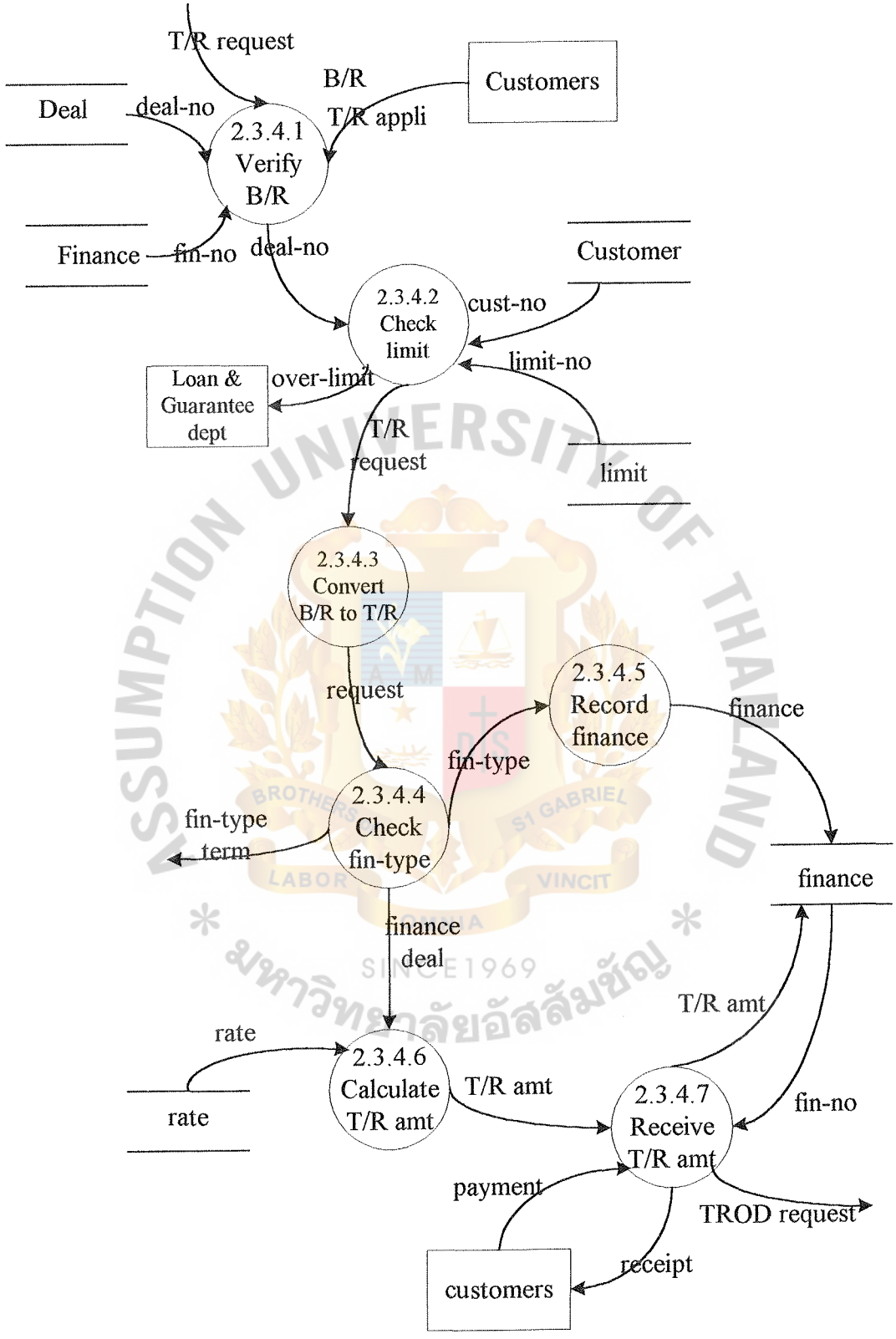

Figure 3.12. Data Flow Diagram Level 3 of the Proposed System Trust Receive.

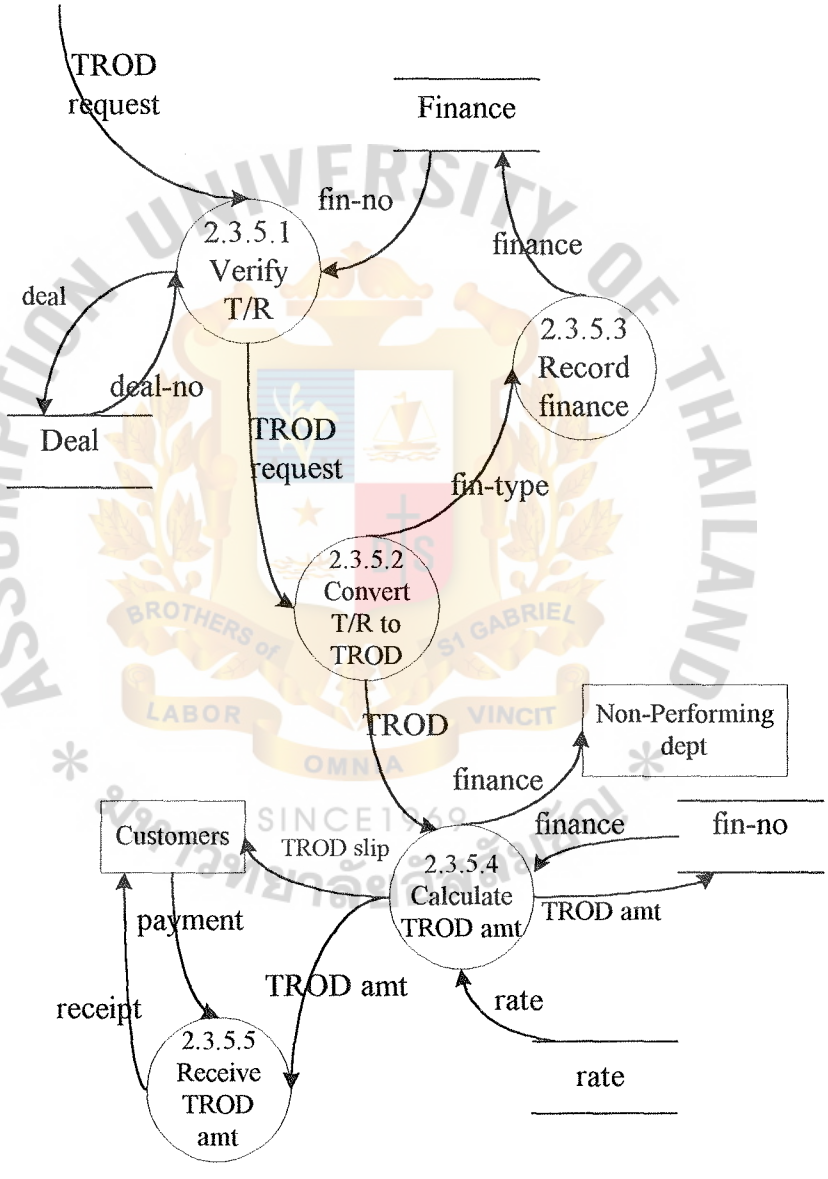

Figure 3.13. Data Flow Diagram Level 3 of the Proposed System Trust Receive Over Due.

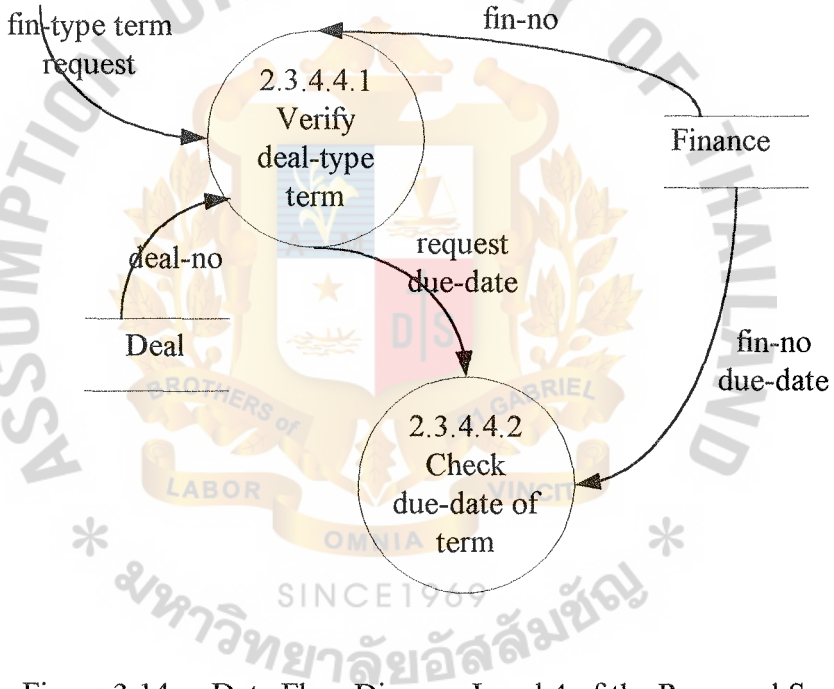

Figure 3.14. Data Flow Diagram Level 4 of the Proposed System Trust Receive of Term.

3.4 Screen Design

There are various matters being considered in designing screens in Trade Finance System (Import Module), all of which user friendly is the first consideration. Other matters of screen design are

- Keep screen presentation consistent
- Facilitate user movement among system
- Have good layout and easy to key-in
- Provide similar layout to input documents

3.5 Input / Output Design

3.5.1 Input Forms

All input forms, presented in Appendix D, are preprinted forms designed to be easy to use by users and convenient in recording in input screen.

The following input forms are on the next page.

3.5.2 Output Documents

All output documents, presented in Appendix E, are developed to provide reliable hard copy to user management, internal entities and external entities. The following output documents are on the next page.

LOGIN DATA SCREEN

BKK METROPOLITAN BANK
INT'L BANKING DEPARTMENT 14.00 27/09/1998

LOGIN DATA

BANK ID : ____

DEPARTMENT : ____

USER ID : _____

PASSWORD : _____

HELP LANGUAGE : __

NEW PASSWORD : _____

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE

Figure 3.15. Input Login Data Screen.

DEAL IDENTIFICATION SCREEN

BKK METROPOLITAN BANK *IMPORT* *LETTER OR CREDIT* *ISS000*
INT'L BANKING DEPARTMENT 14.00 27/09/1998

DEAL IDENTIFICATION

CUTOMER ID : _____ N/A : _____
_____
_____

CUST REF NO. : _____

OUR L/C NO. : _____ DESC. : _____

STATUS
1. CREATE
2. UPDATE
3. DIPLAY
4. CANCEL
SELECT : ___ 5. PRINT

15. EXIT

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 10=PREV

Figure 3.16. Input Deal File Screen.

REPORT NO. XXXXXXX
PROGRAM NO. XXXXXXX
DEPT.CODE =XXX

BANGKOK METROPOLITAN BANK
CUSTOMER ACTIVITY REPORT
AS AT DD MONTH YYYY
CUSTOMER : XXXXXXXXXXXXXXXXXXX

PAGE NO. XXX
RUN DATE. DD/MM/YYYY
RUN TIME. HH:MM:SS

DEAL TYPE	PERIOD	DEALS COUNTER	TOTAL DEAL ACCUMULATION	TOTAL COMMISSION	TOTAL NO. OF LOANS	LOANS ACCUMULATION
LETTER OF CREDIT	CURR MONTH	9999	9,999,999,999.99	9,999,999,99	9999	9,999,999,999.99
	CURR YEAR	9999	9,999,999,999.99	9,999,999,99	9999	9,999,999,999.99
	PREV YEAR	9999	9,999,999,999.99	9,999,999,99	9999	9,999,999,999.99
BILLS FOR COLLECTION	CURR MONTH	9999	9,999,999,999.99	9,999,999,99	9999	9,999,999,999.99
	CURR YEAR	9999	9,999,999,999.99	9,999,999,99	9999	9,999,999,999.99
	PREV YEAR	9999	9,999,999,999.99	9,999,999,99	9999	9,999,999,999.99
TOTAL	CURR MONTH	9999	9,999,999,999.99	9,999,999,99	9999	9,999,999,999.99
	CURR YEAR	9999	9,999,999,999.99	9,999,999,99	9999	9,999,999,999.99
	PREV YEAR	9999	9,999,999,999.99	9,999,999,99	9999	9,999,999,999.99

Figure 3.17. Customer Activity Report.

REPORT NO. XXXXXXX	BANGKOK METROPOLITAN BANK	PAGE NO. XXX
PROGRAM NO. XXXXXXX	IMPORT DETAIL FINANCE OUTSTANDING REPORT	RUN DATE. DD/MM/YYYY
DEPT.CODE =XXX	AS AT DD MONTH YYYY	RUN TIME. HH:MM:SS

SEQ.	DEAL NO.	CUST-NAME	FINNO	E FF-DATE	DUE-DATE	CUR	FC-FIN-AMT	RATE	TH-FIN-AMT
XXX	999-99-999999-9	XXXXXXXXXXXX	XXX	DD/MM/YYYY	DD/MM/YYYY	XXX	999,999,999.99	999.99999	999,999,999.99
XXX	999-99-999999-9	XXXXXXXXXXXX	XXX	DD/MM/YYYY	DD/MM/YYYY	XXX	999,999,999.99	999.99999	999,999,999.99
XXX	999-99-999999-9	XXXXXXXXXXXX	XXX	DD/MM/YYYY	DD/MM/YYYY	XXX	999,999,999.99	999.99999	999,999,999.99
XXX	999-99-999999-9	XXXXXXXXXXXX	XXX	DD/MM/YYYY	DD/MM/YYYY	XXX	999,999,999.99	999.99999	999,999,999.99
XXX	999-99-999999-9	XXXXXXXXXXXX	XXX	DD/MM/YYYY	DD/MM/YYYY	XXX	999,999,999.99	999.99999	999,999,999.99
XXX	999-99-999999-9	XXXXXXXXXXXX	XXX	DD/MM/YYYY	DD/MM/YYYY	XXX	999,999,999.99	999.99999	999,999,999.99
		** GRAND AMOUNT **					999,999,999.99		999,999,999.99

Figure 3.18. Import Detail Finance Outstanding Report.

3.6 Hardware and Software Requirements

3.6.1 Hardware Requirement

- Personnel Computer
  - Inter Pentium II processor 400 MHz
  - 512 KB Internal Cache
  - Intel 440 BX chipset
  - 32 MB SDRAM memory
  - 4.3 GB HDD
  - 1.44 MB Floppy Disk Drive
  - Monitor 14"
- Lan Card
  - For workstation : Ethernet 32 Bit, PCI Bus for UTP
  - For printer : Ethernet for print server
- Hub
  - Link Builder FMS II 12 ports TP
- Electrical wiring
  - UTP cable
  - Patch Panel for 15 ports

3.6.2 Software Requirement

- Trade Finance System (Import Module)
- Window 98 for workstation
- MS Office
- Emulate S/W

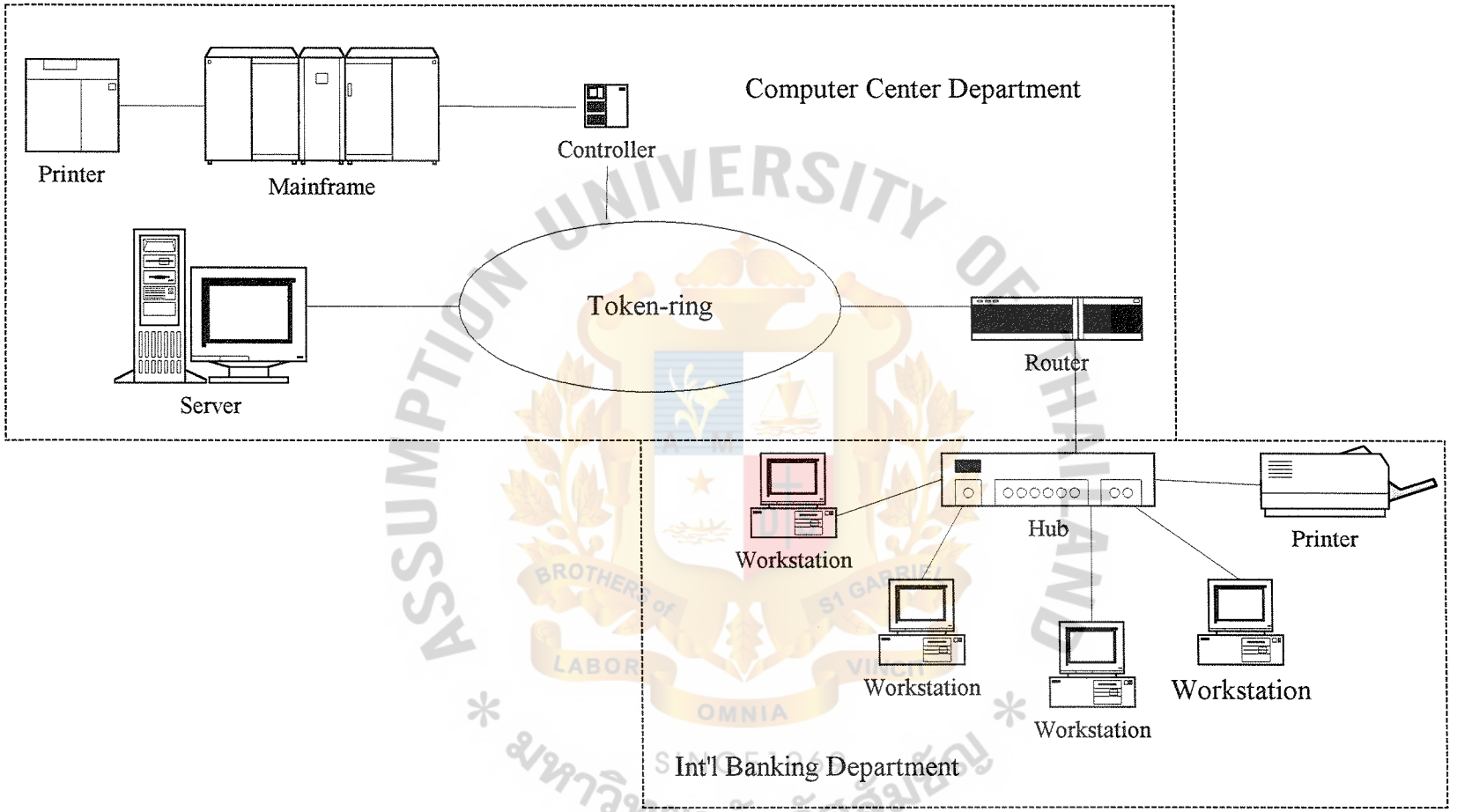

Figure 3.19. System Configuration.

3.7 Security and Controls

3.7.1 Security

- Routine Backup Tape
- Table space environment
- Snapshot Backup Schedule
- Confidential report for particular user
- Resource Access Control Facility to protect data files from unauthorized access.

3.7.2 Control

- Log file report with the concurrent report or anything from the system and the other system
- All processors must have audit trail
- The result must be analyzed and interpreted
- The proper information is to be presented to the committee and executive officers
- Executive officers who are involved in follow up with zone managers and branch manger about the performances are assisted.
- Cost modification should be formally reported to and approved by management.
- The result and defined problem in the document are to be tested and revised and approved by user and analyst.
- The program and document must be in the same way.

3.8 Cost / Benefit Analysis

3.8.1 Cost – Benefit

System Development cost estimably

Table 3.1. Cost – Benefit Analysis per Year, in Baht.

Cost items	Quan	Salary	Period (Month)	Amount	Total Amount
Feasibility					
• System Analyst	2	25,000	1	50,000	
• Overhead Cost				10,000	
Sub Total					60,000
Functional system design					
• System Analyst	2	25,000	1	50,000	
• System Design	2	25,000	1	50,000	
• Overhead Cost				10,000	
Sub Total					110,000
Programming					
• System Design	2	25,000	1	50,000	
• Programmer	2	25,000	1	50,000	
• Overhead Cost				10,000	
• CPU Times	200			200,000	
Sub Total					310,000

Table 3.2. Cost – Benefit Analysis per Year, in Baht (continue).

Cost items	Quan	Salary	Period (Month)	Amount	Total Amount
Conversion and Acceptance					
• System Analyst	2	25,000	1	50,000	
• System Design	2	25,000	1	50,000	
• Programmer	2	20,000	1	40,000	
• Users	10	5,000	1	50,000	
• Overhead Cost				20,000	
• CPU Times	40hrs			40,000	
Sub Total					250,000
Total					714,000

3.8.2 Implementation Cost

Table 3.3. Cost – Benefit Analysis for Implementation per Year, in Baht.

Cost items	Unit Price	Unit	Total
Hardware			
• PC Server	115,500	1	115,500
• PC Workstation	30,000	4	120,000
• Server Printer	50,000	1	50,000
• Switching Hub	48,000	1	48,000
• Router	200,000	1	200,000
• UPS	100,000	1	100,000
Sub Total	543,500		633,500
Software			
• Netware	100,000	1	100,000
• Software License	10,000	4	40,000
Sub Total	110,000		140,000
Total	653,500		773,500
Tangible Benefit (per year)			
• Increase service providing capacity			2,400,000
• Effective managing of profit per customer			1,500,000
• Reduce volume of paper works			200,000
Total			4,100,000

3.8.3 Cost – Benefit Analysis

Table 3.4. Cost / Benefit Analysis for 5 Years, in Baht.

Cost items	Year 1	Year 2	Year 3	Year 4	Year 5
Investment					
• Hardware	633,500				
• software	140,000				
Total	773,500				
Implementation Cost					
• Development Cost	100,800				
• Training Cost	50,000				
• Conversion Cost	50,000				
Total	200,800				
Operation Cost					
• Software maintenance	20,000	17,000	14,400	12,200	10,400
• Hardware maintenance	40,000	34,000	29,000	24,600	20,800
Total	60,000	51,000	43,400	36,800	31,200
Accumulative cost	1034300	51,000	43,400	36,800	31,200
Operation cost saving					
• Software maintenance	8,500	8,500	8,500	8,500	8,500
• Hardware maintenance	17,000	17,000	17,000	17,000	17,000
Total	25,500	25,500	25,500	25,500	25,500

Table 3.5. Cost / Benefit Analysis for 5 Years, in Baht (continue).

Cost items	Year 1	Year 2	Year 3	Year 4	Year 5
• Increase volume 20% per year can get benefit increase 15%	400,000	450,000	470,000	470,000	500,000
• Increase com. Charge	60,000	80,000	120,000	170,000	250,000
Accumulative benefit	485,500	555,500	615,500	665,500	775,500
Different	(548800)	504,500	572,100	628,700	744,300

3.8.4 Compare Cost and Benefit

Table 3.6. Compare Cost and Benefit, in Baht.

Year	Cost	Benefit	Different	Cumulative Different
1	1,034,300	485,500	(548,800)	(548,800)
2	51,000	555,500	504,500	(44,300)
3	43,400	615,500	572,100	527,800
4	36,800	665,500	628,700	1,156,500
5	31,200	775,500	744,300	1,900,800
Total	1,196,700	3,097,500	1,900,800	1,900,800

3.8.5 Payback Period

Payback period is determined to get the number of years required to accumulate earning sufficient to cover the cost of the purposed system.

The formula of Payback Period is :

$$P = I / (1-T) * R$$

Where P = Payback Period (Years)

I = Investment cost + Software Implementation cost

T = Tax Rate (45 %)

R = Annual Saving

P = 974,300 / (1 – 0..45) * 4,100,000

Intangible Benefit

- Increase customer satisfaction from faster and convenience service which will lead to increase in the Bank's reputation as well.
- Increase staff motivation from easier and less work.
- Better decision making since information is up-to-date and timely prepared.
- Facilitates the attainment of organizational objective, facilitates access to information
- Provides a competitive advantage
- Increase communication capacity and quality
- Improved accuracy – System provides data verification

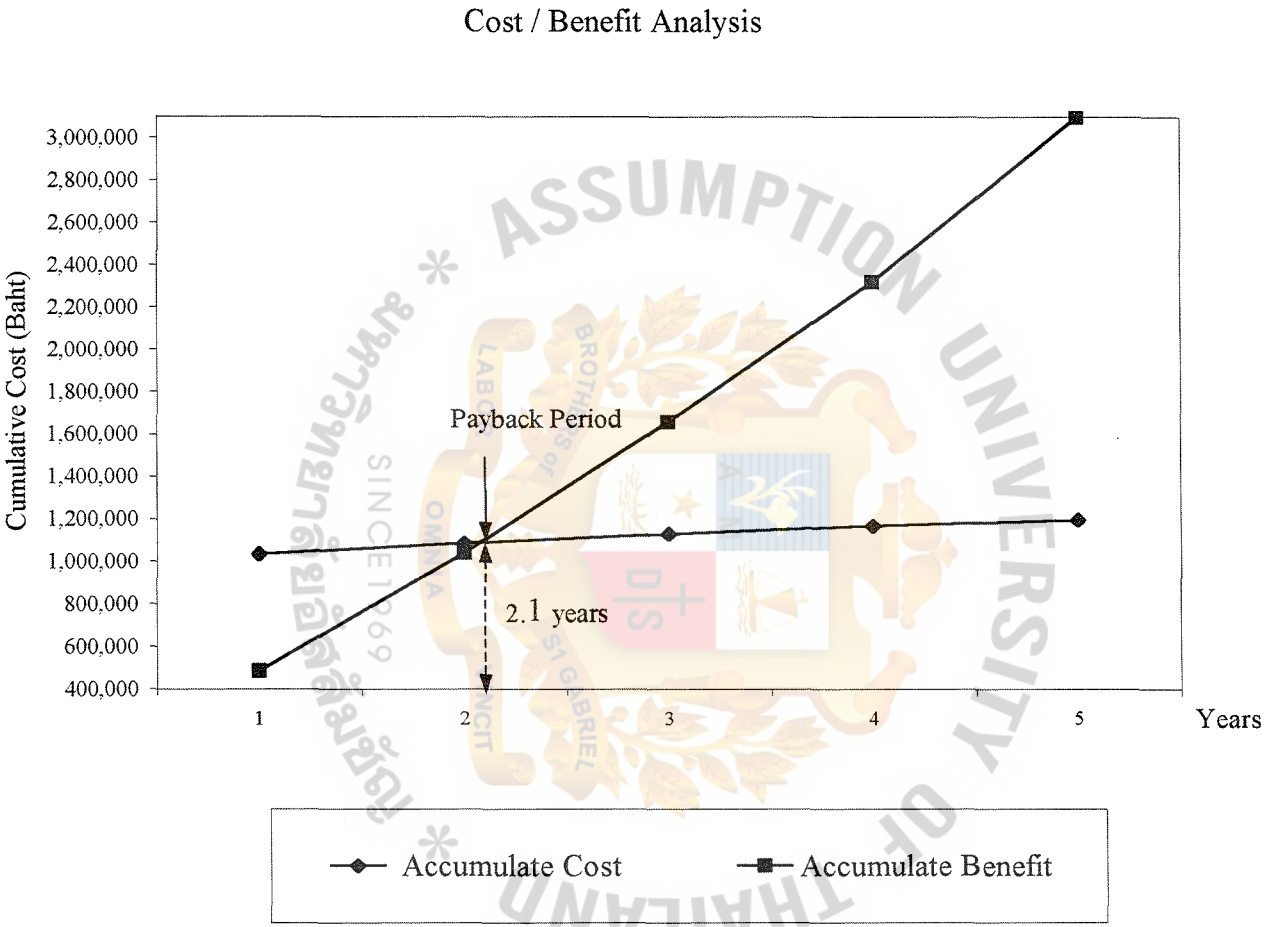

Figure 3.20. Graph of Cost-Benefit Analysis.

3.8.6 Breakeven Point

Cost Comparison between the Exist System and the Proposed System

The table list of the existing system and the proposed system cost in 5 years. This table shows that the proposed system costs less than the existing system before three years as shown in the following table calculation and chart in Figure 3.21 :

Table 3.7. Total Cost of the Existing System,

Cost items	Years				
	1	2	3	4	5
I. Investment Cost	0	0	0	0	0
II. Implementation Cost	0	0	0	0	0
III. Programmer(2) + Analysis(2)	100,000	110,000	120,000	130,000	140,000
IV. Operating Cost & Maintenance	440,000	484,000	529,440	551,384	601,900
Total Cost (Baht)	540,000	594,000	649,440	681,384	741,900
Cumulative Cost (Baht)	540,000	1,134,000	1,783,440	2,464,824	3,206,724

Table 3.8. Total Cost of the Proposed System.

Cost items	Years				
	1	2	3	4	5
I. Investment Cost	773,500	0	0	0	0
II. Implementation Cost	200,800	0	0	0	0
III. Programmer(2) + Analysis(2)	100,000	110,000	120,000	130,000	140,000
IV. Operating Cost & Maintenance	60,000	51,000	43,400	36,800	31,200
Total Cost (Baht)	1,134,300	161,000	163,400	166,800	171,200
Cumulative Cost (Baht)	1,134,300	1,295,300	1,458,700	1,625,500	1,796,700

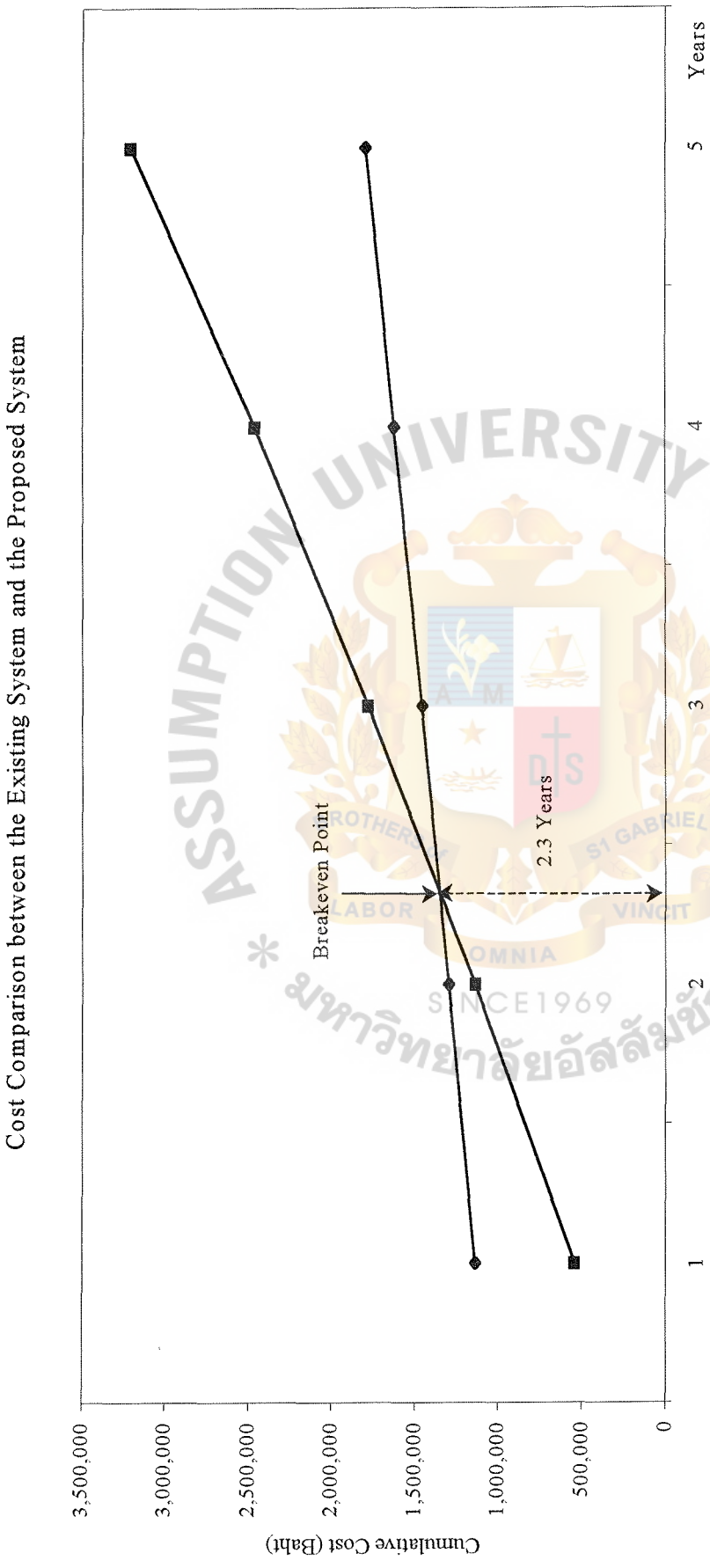

Figure 3.21. Cost Comparison between the Existing System and the Proposed System.

IV. PROJECT IMPLEMENT

4.1 Overview of Project Implementation (Schedule / Resource Utilized)

The project schedule was designed to cover the whole System Development Life Cycle (SDLC).

The reasons for setting the schedule are as the follows :

- We can know the step of the development
- We can go backward in case the development system has problems
- We can know the target date
- We can plan for the next step
- Data convesion result can be checked
- Both user training and management can be completed

4.2 Test Plan and Results

There are 3 steps to implementation : System testing, System modification and Data conversion.

- Testing

  Testing is an essential process to assure quality of the software, any errors found are debugged. The system is desk-checked and checked with test data before putting into protection. The desk-check is done through out the program coding process by following each step in the program on paper to verify the way the system will work. The finished modules are tested with test data either on individual module test or linked module test. The outputs are checked for errors to be corrected. With this testing method, the system capacity is proved in handling normal operation.

  Finally the whole system has to be tested by users whether the system is accepted through acceptance test. The unpleasant test result requires system modification. On the other hand, the software installation can start.

- Training

  Training activities are conducted to familiarize personnel with the new system. Personnel receiving training includes system operators, direct users and management. The objective of the training must be clarified and evaluation of training allowed when it is completed.

- Conversion

  The parallel run would be performed during the first three months of using the new system. The existing system (manual) will go on togeter with the new system and their outputs are compared to ensure accuracy and complete operation. After ensuring the quality of the new system, the existing system will be stopped.

- Post implementation evaluation

After using the system for three months, the evaluation should be held in order to ensure that

1.The system goals and objectives have been achieved.

2. Operation on Trade Finance (Import Module) service is faster and has fewer documents.

3. User service requirements have been met.

The modification on the system has to be done if the system does not ensure the above consideration or unexpected limitations are found.

Cost-benefit analysis may be difficult to apply since information systems provide information about objectives for the first time, making it impossible to compare performance before and after the implementation of the system. The system utility approach to evaluation can be more comprehensive than the others if it is expanded and systematically applied.

The Project Planning are presented by Grant Chart in Figure 4.1

ID	Task Name	Start	Finish	Late Start
1	**SYSTEM ANALYSIS DESIGN & IMPLEMENT**	**12/3/98**	**16/3/99**	**12/3/98**
2	**System Analysis**	**12/3/98**	**12/6/98**	**12/3/98**
3	**DFD Specification**	**12/3/98**	**12/6/98**	**12/3/98**
4	Import Letter of Credit	12/3/98	12/6/98	12/3/98
5	Trust Receipt	12/3/98	12/6/98	12/3/98
6	Bill for Collection	12/3/98	12/6/98	12/3/98
7	**System Design**	**16/6/98**	**8/9/98**	**16/6/98**
8	Database Design	15/6/98	31/7/98	15/6/98
9	Input/Output Document Design	30/6/98	31/7/98	30/6/98
10	Data Dictionary	30/6/98	31/7/98	30/6/98
11	Screen Layout	3/8/98	7/8/98	3/8/98
12	Reports Layout	10/8/98	8/9/98	10/8/98
13	**Implementation**	**10/8/98**	**16/3/99**	**28/9/98**
14	Programming	10/8/98	15/1/99	6/10/98
15	Data Conversion	10/8/98	15/1/99	28/9/98
16	Testing	26/2/99	26/2/99	8/3/99
17	Training	1/3/99	5/3/99	9/3/99
18	Acceptance Test	26/2/99	26/2/99	15/3/99
19	Production	5/3/99	15/3/99	5/3/99
20				

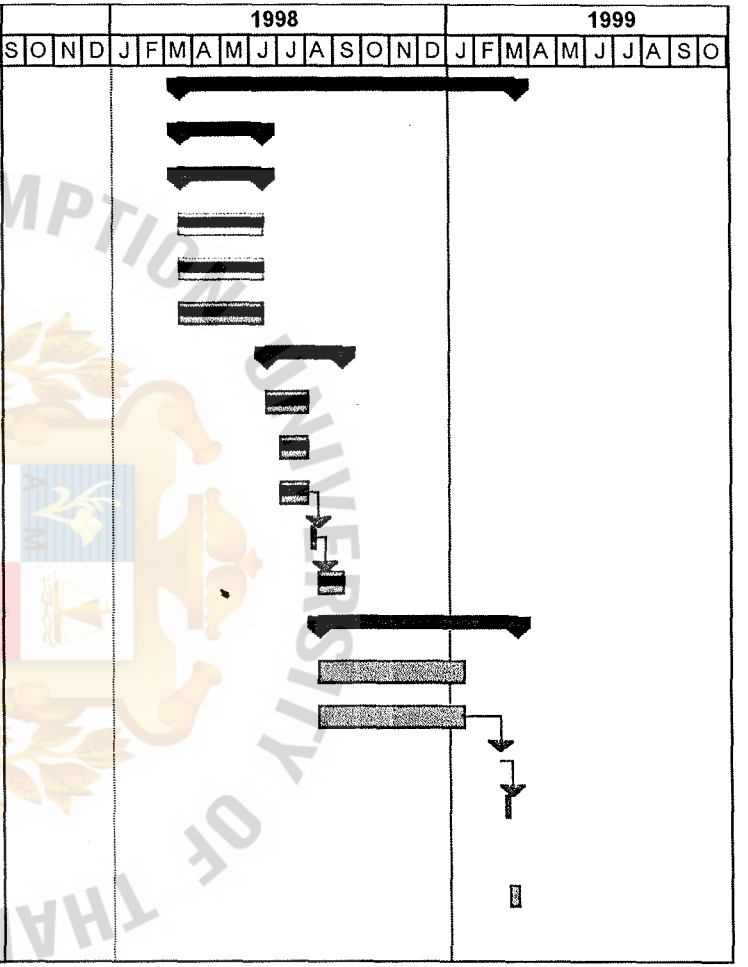

Figure 4.1. Project Plan.

V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Data are the most valuable resources of any organization. Timely data aid in decision making of management and in the daily operation of the Bank's staff. Bundles of data are difficult and time consuming to handle manually. The current problems of Bangkok Metropolitan Bank are :

5.1.1 The number of request increases gradually, therefore, the Bank's staffs are faced with work overload since most functions are performed manually and processing time is long.

5.1.2 The risk of human error rate is high especially when there are a lot of requests to handle.

5.1.3 The requested reports are not timely delivered because information is gathered and summarized manually.

5.1.4 There are a lot of redundant data stores. Various entities have to created their own data stores to keep information instead of using integrated database. Currently most data stores are kept in the form of documents.

5.1.5 Customer and Foreign Bank cards are not timely updated because of work overload.

5.1.6 The customer name and foreign bank name are used as reference to them because there is no identification number assigned. Therefore it is not convenient to search for their information.

To solve current problems and prevent future problems, improvement areas are suggested as follows :

- Reduce manual work by having computerized system doing the time consuming jobs such as
  - finding related information in providing service to customer
  - preparing worksheet
  - preparing customer and foreign bank card
- Use integrated database to reduce redundancy of data stores.
- Let computerized system generate reports on timely basis and when reports are needed.
- Keep a record of the master file up-to-date.
- Develop identification number to assign to customer and foreign bank for easy reference.

In conclusion, the computerized Trade Finance System (Import Module) provides service to the Bangkok Metropolitan Bank. The requested documents and reports can be generated on time by the system. Necessary information in providing Import service is provided in the form of hard copy or output screen.

Degree of Achievement of the Proposed System Compared with the Existing System

Table 5.1 shows the time spent on each process of the Proposed System compared with the Existing System. It shows that each process of the Proposed System spends less time than each process of the Existing System which has to pass many manual work steps. This can be explained as that the Proposed System is more efficient and effective than the Existing System.

Table 5.1. Comparison of Degree of Achievement between the Proposed System and the Existing System.

Process	Existing System	Proposed System
Application Process	1 hr.	45 mins.
Data Entry Process	30 mins.	10 mins.
Inquiry Process	15 mins.	5 mins.
Payment Process	15 mins.	2 mins.
Modification Process	1 hr.	15 mins.
Printing Process	10 mins	5 mins.
Total	3 hrs. 10 mins.	1 hr. 22 mins

5.2 Recommendations

In order to maintain the computerized Trade Finance System (Import Module) and facilitate the overall operation, the following recommendations are noted.

- Integrated computerized system

  The banking business generally has high transaction volumes which are difficult and inappropriate to operate manually. The integrated computerized information system is essential to provide more effective and efficient operation. Moreover current computer hardware and software have higher technology at a cheaper price than those provided in the past and they are worth investing because it's benefit is usually higher than the cost.

Therefore, the Bank and the management should initiate and promote the development of the computerized system for other operations one by one.

The Bank should also consider implementing electronic data interchange (EDI) between the Bank and the customers, so that the Bank's key-in function can be reduced. The customer's request through EDI can be used as input to the system.

- Integrated database

  The integrated database of the whole bank's operation should be gradually analyzed and designed in order to reduce database redundancy and to provide effective control. To accomplish it, data should be collected from each operation.

- Evaluate changes in user requirement

  The computerized Trade Finance System (Import Module) has to be evaluated and modified to fit changes in user requirement. The computer equipments have to be evaluated also to consider acquiring new hardware.

- Input Validation

  Every data entry should be re-keyed by another staff to validate input data.

APPENDIX A

FORMAT FILE LAYOUT OF THE PROPOSED SYSTEM

Format File of Deal File

Table A.1. Proposed System of Deal File.

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
1	Ixdel-deal-no	Num	12	1-12	Deal no / transaction	Running 123-01-000001-5 123=branch, 01=L/C, 02=S/G, 03=B/C 00001=running 5=digit
2	Ixdel-cust-id	Char	34	13-46	Customer id	form customer file
3	Ixdel-cust-ref-no	Char	16	47-62	Customer reference no	
4	Ixdel-invoice-no	Char	16	63-78	Invoice no	
5	Ixdel-lc-col-no	Char	16	79-94	Letter-of-credit /collection no	
6	Ixdel-last-amd-no	Num	3	95-97	Last amendment no	
7	Ixdel-last-adj-no	Num	3	98-100	Last adjust no	
8	Ixdel-last-settlement-no	Num	3	101-103	Last settlement no	
9	Ixdel-last-msc-no	Num	3	104-106	Last miscellaneous no	
10	Ixdel-last-poa-no	Num	3	107-109	Last payment of acceptance no	
11	Ixdel-last-charge-no	Num	5	110-114	Last charge no	
12	Ixdel-last-finance-no	Num	3	115-117	Last finance no	
13	Ixdel-last-release-amd	Num	3	118-120	Last release amendment	
14	Ixdel-last-release-adj	Num	3	121-123	Last release adjustment	
15	Ixdel-country-code	Char	3	124-126	Country code	Country code table
16	Ixdel-del-curr	Char	3	127-129	Deal currency	Currency table
17	Ixdel-expiry-date	Num	8	130-137	Expiry date	yyyymmdd
18	Ixdel-original-amt	Num	15,2	138-152	Original amount	
19	Ixdel-deal-balance	Num	15,2	153-167	Deal balance	
20	Ixdel-liability-deal-balance	Num	15,2	168-182	Liability deal balance	
21	Ixdel-liability-acp-balance	Num	15,2	183-197	Liability acceptance balance	
22	Ixdel-deal-amt	Num	15,2	198-212	Deal amount	
23	Ixdel-liability-deal-rate	Num	11,7	213-223	Liability deal rate	
24	Ixdel-liability-acp-local	Num	15,2	224-238	Liability acceptance local balance	
25	Ixdel-purge-sw	Char	1	239-239	Purge deal	Y=purged, N=depurged

Format File of Operational Letter of Credit

Table A.2. Proposed System of Operational Letter of Credit.

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
1	Ixolc-lc-amt	Num	15,2	1-15	Letter of credit amount	
2	Ixolc-lc-curr	Char	3	16-18	Currency of the L/C amount	Currency table
3	Ixolc-confirm-sw	Char	1	19-19	Confirm	Y/N table , default is N
4	Ixolc-confirm-amt	Num	15,2	20-34	Confirm amount	
5	Ixolc-amt-terms	Num	1	35-35	Amount terms	Amount terms table , default is 0 (exactly)
6	Ixolc-vary-amt	Num	15,2	36-50	Vary amount	
7	Ixolc-vary-prct	Num	4,2	51-54	Vary percent	
8	Ixolc-country-code	Char	3	55-57	Country-code	Country table
9	Ixolc-city-name	Char	20	58-77	City-name	
10	Ixolc-goods-origin	Char	3	78-80	Goods origin	Country table
11	Ixolc-goods-desc	Char	35	81-115	Goods description	From ixicd-goods-desc
12	Ixolc-available-with	Num	1	116-116	Available with	Available with table
13	Ixolc-settlement-by	Num	1	117-117	Settlement by	Method of settlement table , default is 2 (acceptance)
14	Ixolc-sight	Char	1	118-118	Sight	Y=sight , N=terms , default is Y, sight table
15	Ixolc-tenor-days	Num	4	119-122	Tenor days	
16	Ixolc-draft-after	Char	2	123-124	Draft after	Draft after table
17	Ixolc-draft-date	Num	8	125-132	Date of maturity	yyyymmdd
18	Ixolc-effective-date	Num	8	133-140	Effective date	Default : system date
19	Ixolc-expiry-date	Num	8	141-148	Expiry date	yyyymmdd
20	Ixolc-expiry-country	Char	3	149-151	Expiry country	Country table
21	Ixolc-expiry-place	Char	20	152-171	Expiry place	
22	Ixolc-days-for-presentation	Num	3	172-174	Days of presentation	Default : 21 days
23	Ixolc-inco-terms	Char	1	175-175	Incoterm	Incoterms table, default : A (cif)
24	Ixolc-shipment-by	Char	1	176-176	Transportation type	Transportation type table
25	Ixolc-first-shipment-date	Num	8	177-184	First shipment date	Yyyymmdd
26	Ixolc-last-shipment-date	Num	8	185-192	Last shipment date	yyyymmdd
27	Ixolc-port-from	Char	24	193-216	Port from	
28	Ixolc-port-to	char	24	217-240	Port to	

Format File of Internal Control Data

Table A.3. Proposed System of Internal Control Data.

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
1	Ixicd-deal-desc	Char	35	1-35	Deal description	
2	Ixicd-lc-lg-type	Char	2	36-37	Letter of credit / letter of guarantee type	L/C type table, default : 1 (ordinary L/C)
3	Ixicd-link-to-deal-no	Num	12	38-49	Link to deal no	From ixdel-deal-no
4	Ixicd-type-of-link-to	Char	1	50-50	Type of link	Link type table
5	Ixicd-transmit-via	Char	1	51-51	Transmit via	Transmit via table, default : S (swift)
6	Ixicd-transmit-doc-via	Char	1	52-52	Documents received via	Transmit via table, default : A (airmail)
7	Ixicd-cust-branch-id	Char	3	53-55	Bill branch id	Department table
8	Ixicd-first-date	Num	8	56-63	Application date	Default : system date
9	Ixicd-second-date	Num	8	64-71	Application arrival date	yyyymmdd
10	Ixicd-second-hour	Num	4	72-75	Application arrival hour	hhmm
11	Ixicd-third-date	Num	8	76-83	Issue date	Default : system date and time
12	Ixicd-third-hour	Num	4	84-87	Issue hour	
13	Ixicd-goods-category	Char	16	88-103	Goods category	Goods description table
14	Ixicd-insurance-cover-sw	Char	1	104-104	Cover note/open Policy	C=cover note, O=open policy, I= irrelevant, default : I
15	Ixicd-insurance-co-code	Char	3	105-107	Insurance Company code	Insurance company table
16	Ixicd-insurance-co-name	Char	16	108-123	The insurance company name	Insurance company table
17	Ixicd-insurance-policy-no	Char	16	124-139	The insurance policy note	
18	Ixicd-by-1	Char	6	140-145	Type of account 1	Account type table
19	Ixicd-account-1	Char	31	146-176	Account no. 1	
20	Ixicd-curr-1	Char	3	177-179	Foreign currency 1	Currency table
21	Ixicd-by-2	Char	6	180-185	Type of account 2	Account type table
22	Ixicd-account-2	Char	31	186-216	Account no. 2	
23	Ixicd-curr-2	Char	3	217-219	Foreign currency 2	Currency table
24	Ixicd-by-3	Char	6	220-225	Type of account 3	Account type table

Table A.4. Proposed System of Internal Control Data (continue).

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
25	Ixicd-account-3	Char	31	226-256	Account no. 3	Currency table
26	Ixicd-curr-3	Char	3	257-259	Commission	Collected as a
27	Ixicd-comm-factor	Num	8,6	260-267	factor rate	commission for
28	Ixicd-comm-fixed-amt	Num	15,2	268-282	Foreign currency3Commission fixed amount	opening the deal Currency table
29	Ixicd-comm-fixed-amt-curr	Char	3	283-285	Foreign currency	Exchange rate type table
30	Ixicd-comm-fixed-rc	Char	1	286-286	Rate code for the currency	
31	Ixicd-application-approved	Char	1	287-287	calculation Application	
32	Ixicd-lc-col-no	Char	16	288-303	approved Letter of credit /	From customer-id
33	Ixicd-cust-ref-no	Char	16	304-319	collect number Customer	Yes/No table, default : N
34	Ixicd-preadvice-sw	char	1	340-340	reference number Preadvice (y/n)	

Format File of Finance File

Table A.5. Proposed System of Finance File.

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
1	Ixfin-no	Num	3	1-3	Finance number	Running on create finance
2	Ixfin-create-step-type	Char	3	4-6	Finance created step type	
3	Ixfin-create-step-no	Num	3	7-9	Finance create step number	
4	Ixfin-type	Char	4	10-13	Type of loan	Finance type table
5	Ixfin-curr	Char	3	14-16	Loan currency	Currency table
6	Ixfin-correct-for-date	Num	8	17-24	Correct for date	System date
7	Ixfin-status	Num	1	25-25	Finance status	1 = regular 2 = irregular 3 = pastdue
8	Ixfin-irregular-cause	Char	3	26-28	The cause of the irregularity	
9	Ixfin-status-date	Num	8	29-36	Date of change of status	
10	Ixfin-eff-date	Num	8	37-44	Effective date of the finance	default is system date
11	Ixfin-period	Num	3	45-47	Period	
12	Ixfin-due-date	Num	8	48-55	Loan maturity date	eff-date + period
13	Ixfin-usance-limit	Num	3	56-58	Usance limit	not is use
14	Ixfin-ref-no	Char	16	59-74	Reference number	
15	Ixfin-pri-amt	Num	15,2	75-89	Principal loan amount	default is deal amount
16	Ixfin-pri-conv	Num	15,2	90-104	Amount of the principal converted finance	
17	Ixfin-pri-paid	Num	15,2	105-119	Amount of the principal paid	
18	Ixfin-int-amt	Num	18,5	120-137	Interest amount	
19	Ixfin-int-conv	Num	18,5	138-155	Amount of the interest converted	
20	Ixfin-int-upfront	Num	18,5	156-173	Interest advance	
21	Ixfin-int-paid	Num	18,5	174-191	Amount of the interest paid	
22	Ixfin-upfront-days	Num	3	192-194	Days of the upfront	
23	Ixfin-debit-at-maturity-sw	Char	1	195-195	Debit at maturity	Yes/no table
24	Ixfin-debit-by	Char	6	196-201	Type of account	Account type table or monthly interest collect sw = y
25	Ixfin-debit-acc-no	Char	34	202-235	Account number	Monthly interest collect sw = y

Table A.6. Proposed System of Finance File (continue).

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
26	Ixfin-forward-contract-no	Char	16	236-251	Forward contract number	
27	Ixfin-current-int-type	Num	1	252-252	Current interest type	Fixed/floating or interest type table
28	Ixfin-fixed-up-to	num	8	253-260	Fixed due date	Default is the due date
29	Ixfin-fixed-fund	Num	9,6	261-269	Cost of fund interest rate	
30	Ixfin-fixed-margin-type	Char	1	270-270	Fixed Margin type	P (positive), N (negative), Z (zero) , default : P , Margin type table
31	Ixfin-fixed-marging	Num	9,6	271-280	Fixed margin interest rate	Default as defined in the customer or bank margin general level
32	Ixfin-float-type	Num	1	281-281	Type of floating interest rate	Floating rate type table
33	Ixfin-float-margin-type	Char	1	282-282	Floating margin type	The same as fixed margin type
34	Ixfin-float-margin	Num	9,6	283-291	Floating margin interest rate	
35	Ixfin-float-penalty-1	Num	9,6	292-300	Penalty fields	
36	Ixfin-float-penalty-2	Num	9,6	301-309		
37	Ixfin-insurance-policy-sw	Char	1	310-310	Insurance(Y/N)	
38	Ixfin-paid-up-to-date	Num	8	311-318	Paid up to date	Calculated from daily process
39	Ixfin-godown	Char	3	319-321	Warehouse code	Godown list table
40	Ixfin-conv-from-fin-no	Num	3	322-324	Converted from finance number	
41	Ixfin-conv-step-id	Char	6	325-330	Converted from step id	
42	Ixfin-conv-eff-date	Num	8	331-338	Effective date converted from finance	Default : release date
43	Ixfin-int-update-date	Num	8	339-346	Interest updated date to	Default : system date
44	Ixfin-int-update-time	Num	4	347-350	Interest updated time to	Default : system time
45	Ixfin-proc-eve	Char	3	351-353	Process events	
46	Ixfin-pay-curr	Char	3	354-356	Paying currency	
47	Ixfin-pay-rate-code	Char	1	357-357	Paying rate code	Exchange rate table
48	Ixfin-int-pd-charges	Num	18,5	358-375	Interest amount past due charges	

Format File of Debit / Credit

Table A.7. Proposed System of Debit / Credit File.

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
1	Ixchg-charge-serial-no	Num	5	1-5	Charge serial number	System running
2	Ixchg-step-id	Char	6	6-11	Charge step ID	
3	Ixchg-charge-id	Num	6	12-17	ID code of debit/credit	Debit/Credit table
4	Ixchg-charge-cr	Char	3	18-20	ID of party being credited	Parties table
5	Ixchg-charge-dr	Char	3	21-23	ID of party being debited	Parties table
6	Ixchg-charge-curr	Char	3	24-26	Currency code	Currency table
7	Ixchg-charge-amt	Num	15,2	27-41	Amount of the transaction	
8	Ixchg-charge-when	Char	1	42-42	Event at which the transaction	When table N=released L=later
9	Ixchg-charge-auto-sw	Num	1	43-43	Charge auto flag	0=manual 1=auto
10	Ixchg-settled-at-type	Char	3	44-46	Settled at type	depend on
11	Ixchg-settled-at-no	Num	3	47-49	Settled at number	charge-when
12	Ixchg-cr-calc-curr	Char	3	50-52	Credit calculated by currency	
13	Ixchg-cr-rc	Char	1	53-53	Credit rate code	exchange rate table
14	Ixchg-cr-rmb-rate	Num	11,7	54-64	Credit remitting bank exchange rate	depend on rate code
15	Ixchg-cr-cst-rate	Num	11,7	65-75	Credit customer exchange rate	depend on rate code
16	Ixchg-cr-actual-rate	Num	11,7	76-86	Credit actual rate	
17	Ixchg-cr-change-amt	Num	15,2	87-101	Credit transaction amount	
18	Ixchg-cr-local-rate-code	Char	1	102-102	Credit local rate code	exchange rate table
19	Ixchg-cr-local-exch-rate	Num	11,7	103-113	Credit local exchange rate	depend on rate code
20	Ixchg-cr-local-amt	num	15,2	114-128	Credit local amount	ixchg-cr-charge-amt * ixchg-cr-local-exch-rate
21	Ixchg-dr-calc-curr	Char	3	129-131	Debit calculated by currency	
22	Ixchg-dr-rc	Char	1	132-132	Debit rate code	exchange rate table
23	Ixchg-dr-rmb-rate	Num	11,7	133-143	Debit remitting bank exchange rate	depend on rate code

Table A.8. Proposed System of Debit / Credit File (continue).

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
24	Ixchg-dr-cst-rate	Num	11,7	144-154	Debit customer exchange rate	depend on rate code
25	Ixchg-dr-actual-rate	Num	11,7	155-165	Debit actual rate	
26	Ixchg-dr-change-amt	Num	15,2	166-180	Debit transaction amount	
27	Ixchg-dr-local-rate-code	Char	1	181-181	Debit local rate code	exchange rate table
28	Ixchg-dr-local-exch-rate	Num	11,7	182-191	Debit local exchange rate	depend on rate code ixchg-dr-charge-amt *
29	Ixchg-dr-local-amt	Num	15,2	192-206	Debit local amount	ixchg-dr-local-exch-rate
30	Ixchg-conv-chg-sw	Char	1	207-207	Transaction convertd by	Default : N (NO)
31	Ixchg-comm-period	Num	3	208-210	Commission period	
32	Ixchg-comm-type	Char	1	211-211	Commission type	Minimum= N Maximum=X
33	Ixchg-fin-no	Num	3	212-214	Finance number	Derived from ixfin-no
34	Ixchg-original-curr	Char	3	215-217	Original currency	Derived from ixolc-lc-curr/ixocl-cl-curr
35	Ixchg-original-amount	Num	15,2	218-232	Original amount	Derived from ixolc-lc-amt/ixocl-cl-amt
36	Ixchg-original-rate	Num	11,7	233-243	Original exchange rate	
37	Ixchg-dr-cr-local-difr	num	15,2	244-258	Different between Debit and Credit local	Ixchg-dr-local-amt – Ixchg-cr-local-amt

Format File of Payment

Table A.9. Proposed System of Payment File.

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
1	Ixpay-drawing-amt	Num	15,2	1-15	Amount of this payment	Default : deal amount
2	Ixpay-confirmed-amt	Num	15,2	16-30	Confirmed amount	
3	Ixpay-over-lc	Num	15,2	31-45	The letter of credit sum is exceeded.	
4	Ixpay-doc-presentation-date	Num	8	46-53	Documents presentation date	yyyymmdd
5	Ixpay-doc-arrival-date	Num	8	54-61	Documents arrival date	
6	Ixpay-doc-source	Num	1	62-62	Method of payment	Source of payment table
7	Ixpay-doc-in-order	Char	1	63-63	Documents in order (Y/N)	Yes/No table
8	Ixpay-draft-no	Char	16	64-79	Number of draft	
9	Ixpay-pay-category	Char	6	80-85	Payment category	Bill category table
10	Ixpay-transportation-name	Char	16	86-101	Transportation name	
11	Ixpay-transport-doc-no	Char	16	102-117	Number of transport document	
12	Ixpay-transport-doc-date	Num	8	118-125	Date of transport documents	yyyymmdd
13	Ixpay-port-from	Char	24	126-149	Port of embarkation	
14	Ixpay-port-to	Char	24	150-173	Destination	
15	Ixpay-invoice-no	Char	16	174-189	Supplier's invoice	
16	Ixpay-invoice-date	Num	8	190-197	Date of invoice	
17	Ixpay-late-presentation-sw	Char	1	198-198	Late presentation	Yes/No table
18	Ixpay-late-shipment-sw	Char	1	199-199	Late shipment	Yes/No table
19	Ixpay-lc-expiration-sw	Char	1	200-200	Expiration of L/C	Yes/No table
20	Ixpay-poa-installment	Num	3	201-203	Pay of acceptance installment	
21	Ixpay-apa-category	Char	6	204-209	Actual payment category	
22	Ixpay-warning-code	Char	6	210-215	Warning code	
23	Ixpay-rmt-bank-ref-no	Char	16	216-231	Remitting bank reference number	
24	Ixpay-pres-bank-ref	Char	16	232-247	Presentation bank reference number	
25	Ixpay-cust-ref-no	Char	16	248-263	Customer reference number	Derived from customer file
26	Ixpay-draft-date	Num	8	264-271	Date of draft	

Table A.10. Proposed System of Payment File (continue).

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
27	Ixpay-transportation-type	Char	1	284-284	Transportation type	Transportation table
28	Ixpay-rmt-neg-inter	Num	11,2	272-272	Negotiating bank interest amount	
29	Ixpay-conv-int-sw	Char	11	273-283	Converting negotiating bank interest	Default : N Yes/No table
30	Ixpay-rmt-neg-comm	num	1,2	285-295	Negotiating bank commission	
31	Ixpay-conv-comm-sw	Char	1	296-296	Converting negotiating bank commission	Default : N Yes/No table
32	Ixpay-rmt-neg-charg	Num	11,2	297-307	Negotiating bank charges amount	
33	Ixpay-conv-chg-sw	Char	1	308-308	Converting negotiating bank charges	Default : N Yes/No table
34	Ixpay-br-interest-sw	Char	1	309-309	Bill for received interest	Default : n Yes/No table
35	Ixpay-br-interest-rate	Num	11,7	310-320	Bill for received rate	Derived from B/R rate
36	Ixpay-br-interest-amt	Num	11,2	321-331	Bill for received amount	Calculated BR interest amount
37	Ixpay-conv-br-int-sw	Char	1	332-332	Converting bill for received interest amount	Default : N Yes/No table
38	Ixpay-conv-drw-amt-sw	Char	1	333-333	Converting drawing amount	Default : N Yes/No table
39	Ixpay-amt-to-conversion	Num	15,2	334-344	Amount to be converted from deal to local currency	
40	Ixpay-rate-code	Char	1	345-345	Rate code for conversion	Exchange rate type table Default : 1 (mid rate)
41	Ixpay-rate	Num	11,7	346-356	Conversion rate	
42	Ixpay-converted-amt	Num	15,2	357-371	The total converted amount, in local currency	
43	Ixpay-book-num	char	7	372-378	Foreign currency exchange booking number	

Format File of Customer

Table A.11. Proposed System of Customer File.

SEQ	Field-name	Type	Length	Position	Description	Remark (Value or Condition)
1	Ixcst-customer-id	Char	9	1-9	Customer id	
2	Ixcst-customer-name-eng	Char	34	10-43	Customer name in english	
3	Ixcst-customer-name-local	Char	50	44-93	Customer name in local	
4	Ixcst-parent-company-id	Char	9	94-102	Parent company id	
5	Ixcst-cust-branch	Char	3	103-105	Customer branch	
6	Ixcst-economic-sector	Char	6	106-111	Economic sector	Economic sector table
7	Ixcst-customer-type	Char	1	112-112	Customer type	Customer type table
8	Ixcst-cust-classification	Char	1	113-113	Customer classification	
9	Ixcst-cif-id	Char	34	114-147	Customer information file id	
10	Ixcst-risk-grade-category	Char	3	148-150	Risk grade category	1-5 level
11	Ixcst-imp-no	Char	16	151-166	Import number	derived from deal segment
12	Ixcst-address1	Char	50	167-216	Address 1	
13	Ixcst-address2	Char	50	217-266	Address 2	
14	Ixcst-telephone-no	Char	16	267-283	Telephone number	
15	Ixcst-cust-mail-box-no	Char	30	284-313	Customer mail box number	
16	Ixcst-country-of-residence	Char	3	314-316	Customer country of residence	Country code table
17	Ixcst-statement-frequency	Char	1	317-317	Statement frequency of customer	'n'=nostatement 'd'=daily 'w'=weekly 'm'=monthly 'q'=quarterly 'h'=halfyearly 'y'=yearly
18	Ixcst-limit-approval-date	Num	8	318-324	Limit approval date	yyyymmdd
19	Ixcst-account-open-date	Num	8	325-332	Account open date	yyyymmdd
20	Ixcst-account-delete-date	Num	8	333-340	Account delete date	yyyymmdd

APPENDIX B

DATA DICTIONARY FOR DATA FLOW DIAGRAM

Data Dictionary of Data Flow Diagram

- Amd : Amendment
- B/C : Bills for Collection
- B/E : Bill of Exchange (Draft)
- B/R : Bills for Receive
- Charge : Dr Customer
  Cr Commission
- Chg-no : Charge Number
- Commission-paid : Pay commission for open L/C or amendment L/C
  Commission = ¼ % per 3 months, Minimum = 1,000 Baht
- Com-amt : Commission Amount
- Cust : Customer
- Cust-no : Customer Number
- Cust-request : Customer Request
- Cust-name : Customer Name
- Cust-request : Customer request
- D/A : Documents for Acceptance
- Deal-amt : Principal amount + Interest amount
- Deal-no : Number of Bill of Exchange
- Dept. : Department
- Docs1 : Bill of Exchange (Draft), Bill of Lading, Invoice,
  Insurance, Packing List
- Docs2 : Application Letter of Credit form, Proforma Invoice,
  Application for Amendment

- Docs3 : Acceptance for Bill of Exchange, receipt/debit advice copy from Docs1
- Docs4 : Receipt/Debit Advice, Draft
- Docs5 : Accept Draft, Discrepancies
- Docs6 : Deal number (Letter of Credit number), Receipt for Commission
- Docs7 : Application Letter of Credit by SWIFT/TELEX
- Docs8 : Receipt/Debit Advice, copy from Docs1
- D/P : Documents Against Payment
- Fin-amt : Finance Amount
- Fin-no : Finance Number
- Fin-type : Finance Type B/R term or B/R sight
- Import-type : 01 = Letter of Credit, 02 = Shipping Guarantee, 03 = Bills for Collection
- Inf. Request : Information Request
- Int : Interest
- L/C : Letter of Credit
- L/C appli : Application Letter of Credit Form
- L/C docs1 : Application Letter of Credit by SWIFT/TELEX
- Limit-amt : Limit Amount
- Limit-no : Limit Number
- Limit-req : Limit Request
- Payment1 : Pay commission for open L/C or amendment L/C Commission = ¼ % per 3 months, Minimum = 1,000 Baht

- Payment2 : Pay Principal amount and Interest amount

  Interest amount =

  (Principal amount * days * interest rate) / year

  Or pay commission of bills for collection

  Commission = 1/8 % per Deal number (B/C number)

  Minimum = 1,000 Baht
- Payment3 : Payment to Foreign
- Report req : reports request
- S/G : Shipping Guarantee
- T/R : Trust Receive
- T/R appli : Application Trust Receive Form
- TROD : Trust Receive Over Due Date

APPENDIX C

INPUT / OUTPUT SCREEN LAYOUT

SUB SYSTEM MENU

BKK METROPOLITAN BANK
INT'L BANKING DEPARTMENT 14.00 27/09/1998

SYSTEM MENU

IMPORT - 1. LETTER OF CREDIT
2. OUTGOING GUARANTEES
3. DOCUMENTARY COLLECTION
4. INQUIRY
5. GENERAL
6. REPORTS
7. RATES

SELECT : ___

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 10=PRE

Figure C.1. Sub System Menu Screen.

MAIN MENU

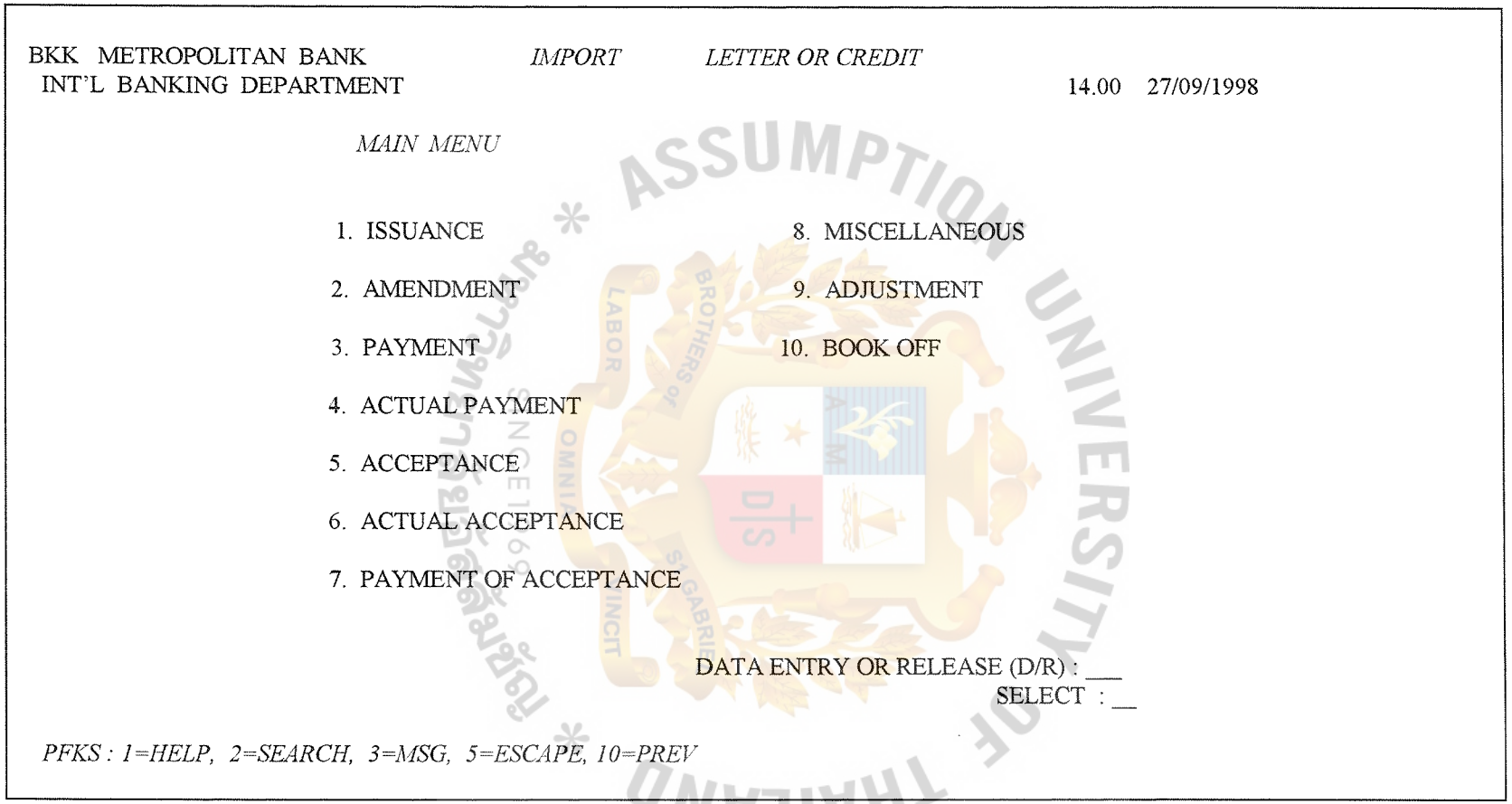

Figure C.2. Main Menu Screen.

REPORTS MENU SCREEN

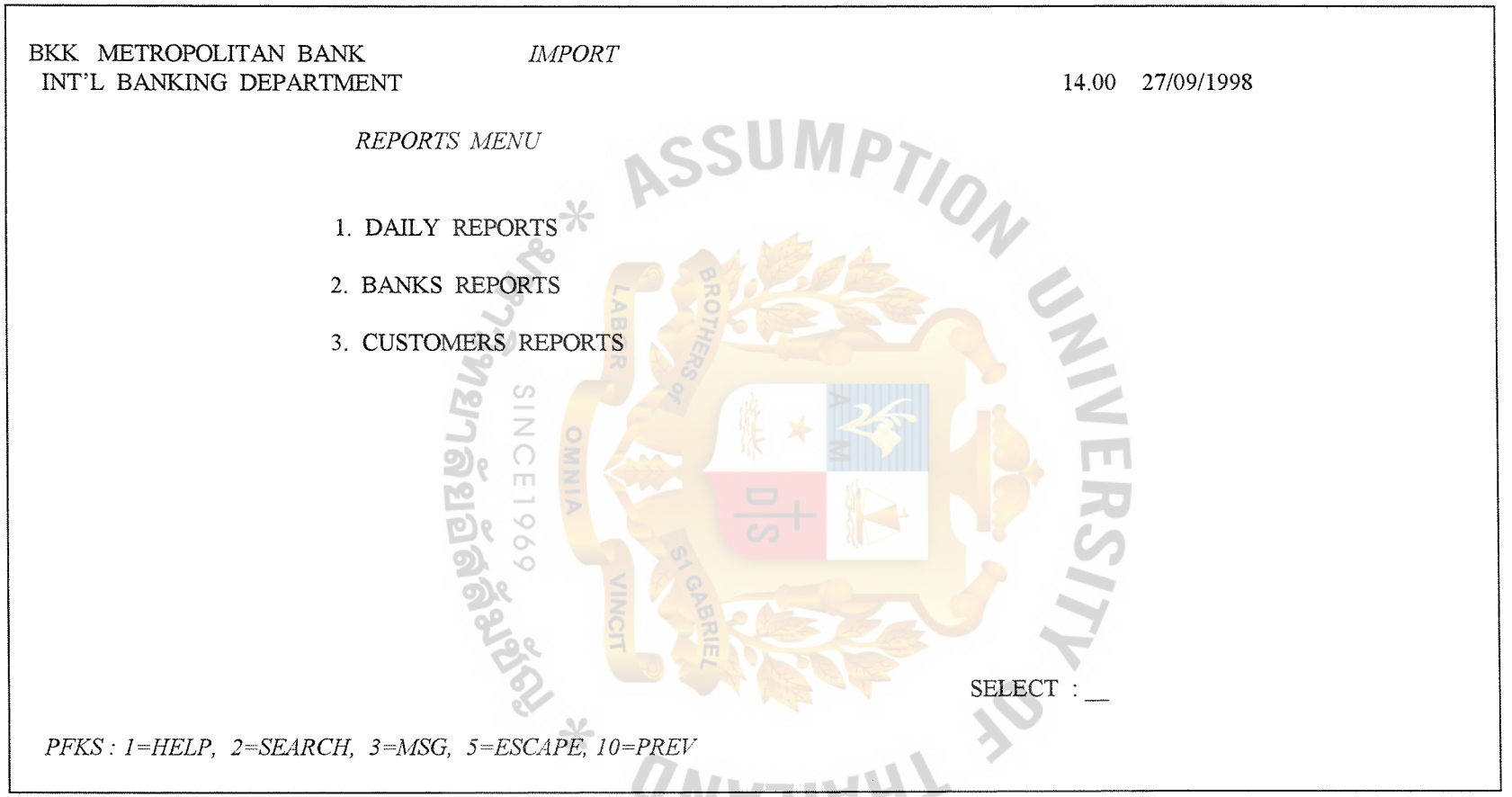

Figure C.3. Report Menu Screen.

DATA GROUPS MENU SCREEN

BKK METROPOLITAN BANK *IMPORT* *LETTER OF CREDIT* *ISS000*
INT'L BANKING DEPARTMENT 14.00 27/09/1998

DISPLAY DATA GROUP

1. INTERNAL CONTROL DATA
2. OPERATIONAL DATA
3. FINANCE
4. DEBITS & CREDIT
5. TEXT

SELECT : _

===> PLEASE SELECT OPTION OR HIT PF10 TO RETURN

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 10=PREV

Figure C.4. Data Group Menu Screen.

INTERNAL CONTROL DATA SCREEN

BKK METROPOLITAN BANK *IMPORT* *LETTER OR CREDIT* *ISS000* 14.00 27/09/1998
INT'L BANKING DEPARTMENT 555-01-0000001

DISPLAY INTERNAL CONTROL DATA 1

DEAL DESCRIPTION: _____

L / C TYPE : __ _____ PREADVICE (Y/N) : __

LINK TO DEAL NO. : _____ TYPE OF LINK : _____

SEND LC/AMD VIA : _____ DOCUMENTS RECEIVED : _____

ADVISING BANK L/C : _____

CUSTOMER INSTRUCTIONS : _____

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 10=PREV, 11=NEXT

Figure C.5. Input Internal Control Data Screen.

OPERATIONAL DATA SCREEN

BKK METROPOLITAN BANK *IMPORT* *LETTER OR CREDIT* *ISS000* 14.00 27/09/1998
INT'L BANKING DEPARTMENT 555-01-0000001

DISPLAY OPERATIONAL DATA

L/C AMOUNT : _____.00 CURR : _____
CONFIRM(Y/N) : _____ CONFIRM AMOUNT : _____. 00
AMOUNT TERMS : ___ VARY AMOUNT : _____.00 OR %: ____.00
COUNTRY : _____ CITY : _____
GOODS DESC. : _____ ORIGIN : _____

AVAILABLE WITH : _____ SETTLEMENT BY : _____
DRAFT DRAWN ON : _____
SIGHT : _____ TENDOR DAYS : _____
DRAFT AFTER : _____ OR DATE : _____

EFFECTIVE DATE : _____ EXPIRY DATE : _____
EXPIRY COUNTRY : _____ PLACE : _____
DAYS OF PRESENTATION : _____ INCOTERM : _____
TRANSPORTATION TYPE : _____
FIRST SHIPMENT DATE : _____ LAST SHIPMENT DATE : _____
FROM : _____ TO : _____

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 10=PREV, 11=NEXT

Figure C.6. Input / Output Operational Data Screen.

PARTIES SCREEN

BKK METROPOLITAN BANK *IMPORT* *LETTER OR CREDIT* *ISS000* 14.00 27/09/1998
INT'L BANKING DEPARTMENT 555-01-0000001

DISPLAY PARTIES

- APPLICANT-
ID : _____ EXT : __
_____
_____
_____

- BENEFICIARY -
ID : _____ EXT : __
_____
_____
_____

- ADVISING BANK -
ASSIGNMENT BY (C/U/S) : __
ID : _____ EXT : __
_____
_____
_____

- ADVISE THROUGH –
ID : _____ EXT : __
_____
_____
_____

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 10=PREV

Figure C.7. Input / Output Parties Screen.

FINANCE SCREEN

```
BKK METROPOLITAN BANK        IMPORT     LETTER OR CREDIT    APA001       14.00 27/09/1998
INT'L BANKING DEPARTMENT                                                   555-01-0000001

CREATE               CREATED LOAN              CREATED  APA001
TYPE      : ____________________               CURRENCY  : ___    CURRECT FOR : __/__/__
STATUS  : ________      CAUSE  : ________________                   STATUS DATE : __/__/__
EFF DATE : __/__/__     PERIOD : ______   DUE DATE : __/__/__
-------------------------------------------------------------------------------------------
ENROUTE :   PRINCIPAL            INTEREST       REF NO
AMOUNT  :               0.00                    0.00

CONVERTED :                     0.00            0.00
UPFRONT      :                  0.00            0.00   DAYS  : _____          TOTALS
PAID            :               0.00            0.00                                   0.00
BALANCE     :                   0.00            0.00                                   0.00
DEBIT AT MATURITY (Y/N) : __   BY : ___   ACC NO : _________    LIEU-COMM (Y/N) : __
FORWARD CONTRACT NO  : ______________   PAYMENT CURR : ____   RATE  : __
CURRENT INT TYPE      : ______________   MARGIN TYPE   MARGIN          PENALTIES
   FIXED- UP TO : __/__/__   FUND :  0.000000   __________   0.000000
   FLOATING-TYPE  : _______________             __________      0.000000      0.00000
                                                                                   0.000000
-------------------------------------------------------------------------------------------
EFF DATE =  RELEASE DATE ? (Y/N)  :  __


PFKS :  1=HELP,   2=SEARCH,   3=MSG,   5=ESCAPE,   10=PREV
```

Figure C.8.   Input / Output Finance File Screen.

DEBITS AND CREDIT SCREEN

BKK METROPOLITAN BANK *IMPORT* *LETTER OR CREDIT* *ISS000* 14.00 27/09/1998
INT'L BANKING DEPARTMENT 555-01-0000001

UPDATE *DEBITS AND CREDITS* *PAGE NO. : 0001*

ID	DESC	AMOUNT	CURR	DR	PARTY CR	WHEN	STEP	FROM AT	SETTLED
____	_____	_____.00	____	___	___	__	_____	_____	
____	_____	_____.00	____	___	___	__	_____	_____	
____	_____	_____.00	____	___	___	__	_____	_____	
____	_____	_____.00	____	___	___	__	_____	_____	
____	_____	_____.00	____	___	___	__	_____	_____	

DISPLAY ALL OR OPEN DEBITS/CREDITS (A/O) : __
NO MORE DEBITS/CREDITS

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 10=PREV

Figure C.9. Output Debit / Credit File Screen.

TEXT EDITOR SCREEN

```
                                IMPORT TEXT EDITOR
DESCRIPTION : _____                                          TEXT ID : _____
COMMAND  ....+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8

<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<
<<      >>                                                                  <<

                                SIZE : XXXX  LINE :  XXXX  COPY FROM →
                                                           FIND →

 PFKS : 3=END,  5=CAN, 6=FIND, 7=SB, 8=SF, 9=COPY, 10=TOP, 11=BOT, 12=WRAP
```

Figure C.10. Output Text Editor Screen.

CUSTOMER PROFILE 1 SCREEN

BKK METROPOLITAN BANK *IMPORT*
INT'L BANKING DEPARTMENT 14.00 27/09/1998

DISPLAY CUSTOMER PROFILE 1

CUSTOMER ID : _____
BILL BRANCH ID : ___ SECTION ID : _____
LOCAL BSA : _____
CLASSIFICATION : _____
CUSTOMER TYPE : _____
PARENT COMPANY ID : _____
LIMIT APPROVAL DATE : _____
ACCOUNT OPEN DATE : _____ ACCOUNT DELETE DATE : _____
RISK GRADE CATEGORY : _____
NAME : _____
_____
ADDRESS : _____
_____
_____

CURR : ____ BY : _____ ACCOUNT NO. : _____
CURR : ____ BY : _____ ACCOUNT NO. : _____
CURR : ____ BY : _____ ACCOUNT NO. : _____

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 6=EXT, 10=PREV, 11=NEXT, 12=WHO

Figure C.11. Input / Output Customer Profile 1 Screen.

CUSTOMER PROFILE 2 SCREEN

BKK METROPOLITAN BANK *IMPORT*
INT'L BANKING DEPARTMENT 14.00 27/09/1998

DISPLAY CUSTOMER PROFILE 2

CUSTOMER ID : _____

TELEPHONE NO. : _____
TAX ID. : _____
CONTACT PERSON : _____
COUNTRY OF RESIDENCE : _____
ZERO VALUE DATE (Y/N) : _____
A.R.M ID : _____ FIN-PRCNT : _____.00
INSURANCE COVER : _____ STATEMENT FREQUENCY : _____
IMPORT (Y/N) : ___ UPPER AMOUNT : _____.00 EXPIRY : _____ CURR : _____
BLANKET INDEMNITY (Y/N) : ___ EXPIRY DATE : _____
COMMISSION – FACTOR PERCENT : _____ EXPIRY DATE : _____
BDS CUSTOMER TYPE : _____ BDS SPREAD CODE : _____
TYPE OF FLOATING RATE : ___
COMMENTS : _____

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 6=EXT, 10=PREV, 11=NEXT, 12=WHO

Figure C.12. Input / Output Customer Profile 2 Screen.

LIMIT CUSTOMERS SCREEN

BKK METROPOLITAN BANK *IMPORT*
INT'L BANKING DEPARTMENT 14.00 27/09/1998

LIMITS CUST : _____

LIMIT CATEGORY	LIMIT AMOUNT USED	MAX DEAL AMT. PENDING AMT.	CURR	EXPIRY DATE
XXXXXXXXXXXXXXXX	.00	.00		
	.00	.00		
XXXXXXXXXXXXXXXX	.00	.00		
	.00	.00		
XXXXXXXXXXXXXXXX	.00	.00		
	.00	.00		
XXXXXXXXXXXXXXXX	.00	.00		
	.00	.00		
XXXXXXXXXXXXXXXX	.00	.00		
	.00	.00		
XXXXXXXXXXXXXXXX	.00	.00		
	.00	.00		
XXXXXXXXXXXXXXXX	.00	.00		
	.00	.00		

PFKS : 1=HELP, 2=SEARCH, 3=MSG, 5=ESCAPE, 6=EXT, 7=PAGEB, 8=PAGEF, 10=PREV, 12=WHO

Figure C.13. Output Limit Customer Screen.

RATE MANAGEMENT SCREEN

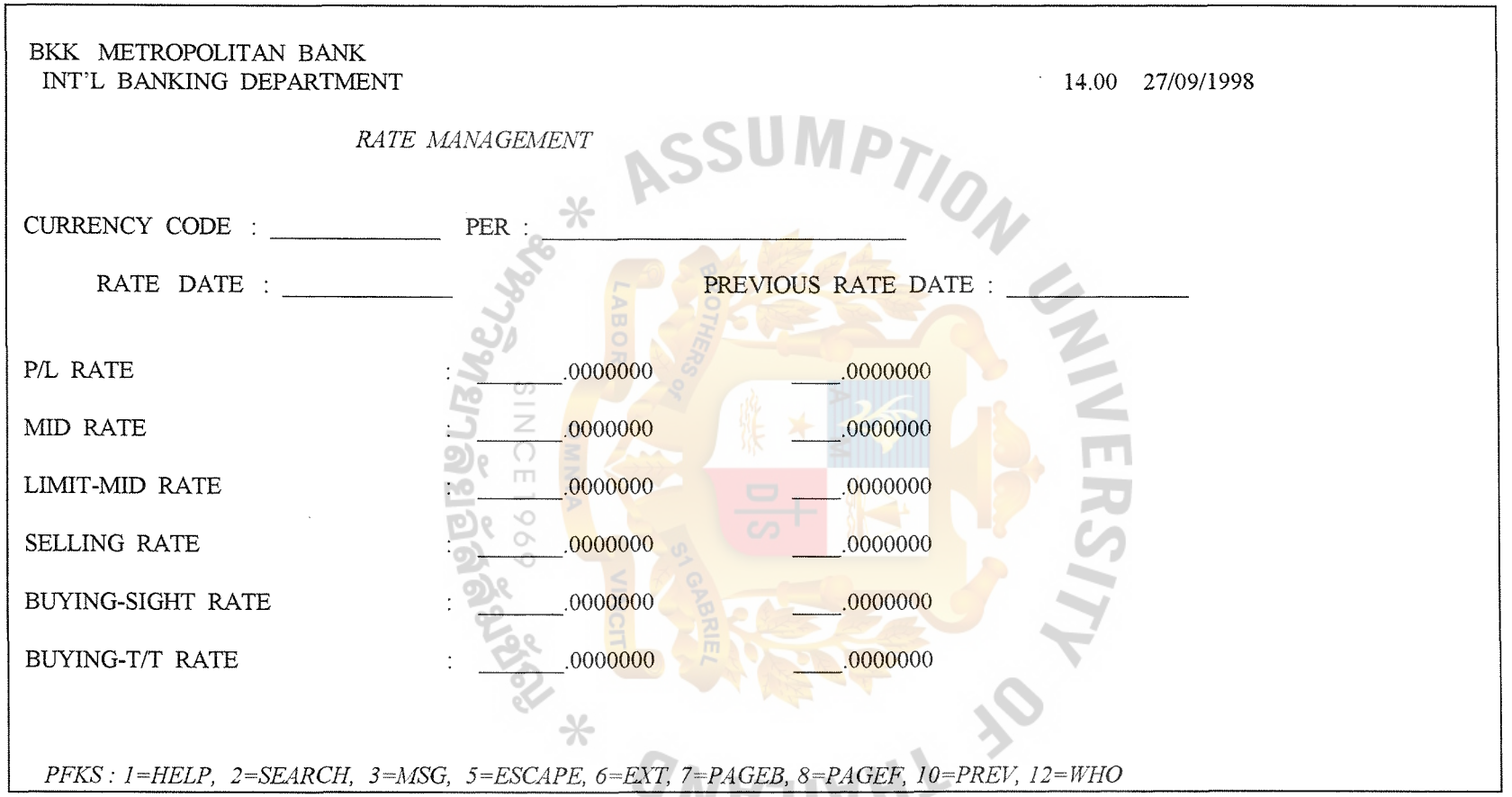

Figure C.14. Input / Output Rate File Screen.

APPENDIX D

DATA DICTIONARY FOR INPUT / OUTPUT SCREEN LAYOUT

DEAL STEPS

Brief general descriptions of deal steps for Import module are given below :

ISSUANCE	(ISS): Establishes the initial terms of the deal.
AMENDMENT	(AMD): Changes the initial deal data established in the released Issuance step.
PAYMENT	(PAY): In sight settlements, records and requests the payment amount from the customer.
ACTUAL PAYMENT	(APA): In sight settlements, records the customer payment and transfer funds to the beneficiary.
ACCEPTANCE	(ACP): In time settlements, records and requests Acceptance of the draft amount by the customer.
ACTUAL ACCEPTANCE	(AAC): In time settlements, records the customer's acceptance of the draft and notifies the Remitting Bank.
PAYMENT OF ACCEPTANCE	(POA): In time settlements, records the customer's payment of the acceptance draft.
MISCELLANEOUS	(MSC): Processes other deal activities which are either not part of another step or part of a step that has already been released.

DATA GROUPS

A Data Group is a collection of data logically related to an aspect of a deal.

Data Group	Data Group Description
INTERNAL CONTROL DATA	Administrative and control data describing the relationship between the bank and its customer.
OPERATIONAL DATE	Operational data defining the deal according to data received from the applicant. Within this option are special screens defining the Amount, Currency, Documents and Terms applicable to the deal, the Parties, and additional Parties involved.
FINANCE	The Finance option controls the granting and repayment of loans.
DEBITS & CREDITS	the accounting system's sub-ledger. All deal-related invoices are prepared through this option. Commissions, rates of exchange, etc., are calculated, and all movements of money throughout the deal can be followed. Debits and credits are entered automatically or manually.
TEXT	Access to the text and correspondence composer for all deal-related correspondence, both local and overseas. Correspondence may be added manually, but most is sent automatically at the appropriate deal step by IMEX. This option displays the number of copies, destination and method of dispatch of correspondence and texts,

	deal specific information may be added through special paragraphs and special terms. A merchandise description, unlimited in length, may also be maintained.

DEAL IDENTIFICATION SCREEN

Field	Field explanation
CUSTOMER ID	Customer's identification code. MANDATORY for initial deal creation. Customer file.
N/A	displays the customer's name and address. Customer file.
CUST REF NO.	Customer's reference for the deal. MANDATORY A single line of text under this field displays Special Instructions associated with this customer, as entered in the Customer File. If no special instructions are entered, the line remains blank.
OUR L/C NO	Deal number which is system generated to Create mode. Afterwards it is typed in by the user.
DESC.	Displays the description of the deal if opened previously.
STATUS	This field is blank when a deal is being created. Otherwise it displays the step status, which may be one

INTERNAL CONTROL DATA

Field	Field explanation
DEAL DESCRIPTION	Brief, free text description of the deal to facilitate deal identification in the future.
L / C TYPE	Type of letter of credit, (ordinary, Back to Back, etc.). L/C Type Table
PREADVICE (Y/N)	Indicates whether a Preadvice is to be issued for the deal.
LINK TO DEAL NO.	If this deal is linked to another deal, then the number of the "linked to " deal is entered here and the TYPE OF LINK field is MANDATORY.
TYPE OF LINK	Type of link (code) between the two deals i.e. Shipping Guarantee, etc. Link Type Table
LC / AMD SENT BY	Customer's instruction on the method of sending correspondence abroad (e.g. Airmail, SWIFT). Transmit via Table
DOCS RECEIVED VIA	Method by which documents are to be received from abroad (e.g. airmail, courier). Transmit via Table
ADVISING BANK LC	Deal number assigned by the advising bank to the deal.
CUSTOMER INSTRUCTIONS	Two lines of free text for entering the customer's special instructions

OPERATIONAL DATA SCREEN

Field	Field explanation
L/C AMOUNT	Letter of Credit amount.
CURR	Currency of the L/C amount.
CONFIRM (Y/N)	Specifies whether the Letter of Credit amount of any part of it is confirmed (y) or not (n)
AMOUNT TERMS	Code indicating the terms governing variations in the deal amount. Amount Terms Table
VARY AMOUNT	The amount by which the deal may vary from the Letter of Credit.
OR %	The percentage amount by which the deal amount may vary from the Letter of Credit.
COUNTRY	Country (code) with which the deal is being transacted. Country Table
CITY	Name of the city within the above-mentioned country.
GOODS DESC.	Displays a brief description of the deal as entered in the Internal Control Data screen. May be changed
ORIGIN	Country of origin of the goods. Country Table
AVAILABLE WITH	The Nominated bank according to ICC regulations. Available with Table
SETTLEMENT BY	Method of settlement. Method of Settlement Table
DRAFT DRAWN ON	Specifies on which party the draft will be drawn. Draft Drawn on Table

SIGHT	Is the settlement by Sight, Time or Installments. Sight Table
TENOR DAYS	Number of days from the DRAFT AFTER event for deferred payment.
DRAFT AFTER	Code of the event for beginning the tenor days counting. Draft After Table
OR DATE	Date of maturity.
EFFECTIVE DATE	Date when the deal becomes effective.
EXPIRY DATE	Date when the deal expires.
EXPIRY COUNTRY	Location of the expiration of the letter of credit. Country Table
PLACE	City within the country of expiration.
DAYS OF PRESENTATION	Numbers of days for presentation of documents.
INCOTERM	Specify according to which price base the deal is calculated. Incoterms Table
TRANSPORTATION TYPE	Method of shipment of goods. Transportation Type Table
FIRST SHIPMENT DATE	Earliest date for shipment.
LAST SHIPMENT DATE	Last date for shipment.
FROM	Port from which the goods are transported.
TO	Port to which the goods are transported.

PARTIES SCREEN

Field	Field explanation
ID	ID of Party.
EXT	Extension of Party.

DEBITS AND CREDIT SCREEN

Field	Field explanation
ID	ID code of debit / credit. Debit/Credit Table
DESC.	Short description of the debit / credit transaction is displayed. Debit/Credit Table
AMOUNT	Amount of the transaction.
CURR	Currency code in which the amount is specified. Currency Table
PARTY DR	ID of Party being debited. Parties table
PARTY CR	ID of Party being credited. Parties Table
WHEN	Event at which the transaction will be activated. When Table
FROM STEP	The system displays the deal step and number in which the debit/credit was taken.
SETTLED AT	If the WHEN code is N (now), after release the system displays the deal step and number on which the debit/credit transaction was effected (dependent on the event specified in the WHEN field). If the WHEN code is L (later), then after deal is released the code must be manually changed and the entries will be generated.

FINANCE SCREEN

Field	Field explanation
Finance Definition fields	
TYPE	Type of loan. Displayed from the Deal finances screen, but may be changed here. Finance Type Table
CURRENCY	Loan Currency. Displayed from the Deal Finances screen, but may be changed here. Currency Table
CORRECT FOR	The finance details including interest calculations are displayed correctly for this date.
STATUS	Finance status as of the CORRECT FOR date; e.g. Regular.
CAUSE	If STATUS is Irregular, this field reflects the cause of the irregularity. If there are a number of Causes, this is the last Cause reported is displayed.
STATUS DATE	Date of change of STATUS/CAUSE.
EFF DATE	Effective Date of the Finance. Default is system date, but it is possible to enter another date.
PERIOD	Number of days for which the loan is given.
DUE DATE	Loan maturity date (EFF-DATE + PERIOD)
Finance Data Fields	
ENROUTE	Number of Interest Exemption Days
PRINCIPAL AMOUNT	Principal loan amount.

PRINCIPAL CONVERTED	Amount of the Principal Converted to a different finance. This field is only relevant at the time of the conversion of the loan.
PRINCIPAL PAID	Amount of the Principal already paid.
PRINCIPAL BALANCE	Balance for a given date is calculated as follows: PRINCIPAL BALANCE = PRINCIPAL AMOUNT – PRINCIPAL PAYMENTS – PRINCIPAL CONVERSIONS
INTEREST AMOUNT	Accrued interest, up to correct for date.
INTEREST UPFRONT	Amount of the interest Advance.
INTEREST DAYS	Number of days of the Upfront. The user may either enter the Upfront amount or the number of days. In the latter case, the system calculates the Upfront amount from the number of days and enters this amount in the Upfront field. This calculation is based upon the interest parameters entered below.
INTEREST CONVERTED	Amount of the interest converted to a different finance. This field is only relevant at the time of the presentation of the loan.
INTEREST PAID	Amount of the interest already paid.
INTEREST BALANCE	The interest balance for a given date is calculated as follows. INTEREST BALANCE = ACCRUED INTEREST – UPFRONT –INTEREST PAYMENTS – INTEREST CONVERSIONS

REF NO	Loan Reference Number.
TOTALS	Total paid amount and balance to be paid are displayed.
DEBIT AT MATURITY (Y/N)	Whether the loan is to be automatically debited (by a daily process) on the due date. If Y, then the following two fields are completed. Yes/No Table.
BY	Type of account. Accounts Type Table
ACC NO	Account number
LIEU-COMM (Y/N)	Whether to charge a commission in lieu of the standard commission when THE DEBIT AT MATURITY field is Y and no foreign currency exchange is involved.
FORWARD CONTRACT NO	Forward Contract Number when the loan is converted to another loan or booking number in case of a currency exchange.
PAYMENT CURR	Currency in which the loan will be charged on the due date. When the loan is paid or when the By and ACC NO fields are filled in Currency Table
RATE	Type of exchange rate. If the payment currency and the finance currency differ. Exchange Rate Table.
CURRENT INT TYPE	Fixed or Floating. The interest type current on the correct for date. Interest Type Table

UP TO	Date on which the fixed interest type will be replaced by a floating interest type. The default is the DUE DATE. The UP TO date must be less than or equal to the DUE DATE. If it is LESS than the due date, a warning appears on the screen.
FUND	Cost of fund interest rate.
MARGIN TYPE	Indicates whether the margin is : P (Positive)-Regular interest to the cost of fund. N (Negative)-Discount to the cost of fund. Z (Zero) In this case a non reported margin does not mean a missing value, but an explicit user request for a zero margin. Margin Type Table
MARGIN	Fixed margin interest rate according to type of deal
FLOATING TYPE	Type of floating interest rate. Default is defined in the customer or bank's rates profile. Floating Rate Type Table
PENALTIES	Two penalty fields that appear only in display mode for a finance that has reached past due status
EFF DATE = RELEASE DATE (Y/N)	If the date on which the loan is to become effective is the Release Date of the step. A loan may be entered on the date, or may be effective retroactively on a date earlier than the Release Date. In these cases, EFF DATE is not equal to the Release Date. Yes/NO Table

LOGIN SCREEN

Field	Field explanation
BANK ID	Operating Bank code number
DEPARTMENT	User's department number Department Table.
USER ID	User's identification code. (If Fast Login is implemented, this field is protected.)
PASSWORD	User's password for verification of user's ID. (If Fast Login is implemented, this field is protected.)
HELP LANGUAGE	Code selecting the language of the HELP screens Default : E (English) Language Table
NEW PASSWORD	New user-specified password. When the system specifies a new password to be entered, or when the user desires to change the password. (If Fast Login is implemented, this field is protected.)

FUNCTION KEYS

The programmed function (PF) keys available at any one time are listed at the bottom of each system screen. The following is a list of the function keys.

Key	Screen Name	Function
PF1	HELP	Activates the Help function.
PF2	SEARCH	Carries out a search in the appropriate table.
PF3	MSG	Enables the user to receive a more detailed Description of system messages.
PF4	RETURN	Returns from a Help, Search or MSG screen, Back to the screen from where the function was Engaged.
PF5	ESCAPE	Moves to the previous screen or menu.
PF6	EXT	Switching to other systems of the Bank.
PF7	PAGEB	Scroll backwards.
PF8	PAGEF	Scroll forwards.
PF9	FORCE	Allows the user to continue to the next system Screen even though data entry on first screen is incomplete, without losing the information entered on the current screen. All data entered on the FORCE screen must satisfy level 1 error checking conditions.
PF10	PREVIOUS	Displays previous screen.
PF11	NEXT	Displays next screen.
PF12	WHO	Displays the department number and user ID of the user logged on at the terminal.

APPENDIX E

REPORTS SCREEN LAYOUT

REPORT NO. XXXXXXX | BANGKOK METROPOLITAN BANK | PAGE NO. XXX

PROGRAM NO. XXXXXXX | COMMISSION REPORT | RUN DATE. DD/MM/YYYY

DEPT.CODE =XXX | AS AT DD MONTH YYYY | RUN TIME. HH:MM:SS

DEAL TYPE	PERIOD	DEALS COUNTER	TOTAL DEAL ACCUMULATION	TOTAL ACTUAL COMM.	TOTAL THEOR. COMM.	TOTAL ACCP COMM.	TOTAL THEOR COMM
LETTER OF CREDIT	CURR YEAR	999	9,999,999,999.99	9,999,999.99	9,999,999.99	9,999,999,999.99	9,999,999.99
	PREV YEAR	999	9,999,999,999.99	9,999,999.99	9,999,999.99	9,999,999,999.99	9,999,999.99
GUARANTEES	CURR YEAR	999	9,999,999,999.99	9,999,999.99	9,999,999.99	9,999,999,999.99	9,999,999.99
	PREV YEAR	999	9,999,999,999.99	9,999,999.99	9,999,999.99	9,999,999,999.99	9,999,999.99
BILLS FOR COLLECT	CURR YEAR	999	9,999,999,999.99	9,999,999.99	9,999,999.99	9,999,999,999.99	9,999,999.99
	PREV YEAR	999	9,999,999,999.99	9,999,999.99	9,999,999.99	9,999,999,999.99	9,999,999.99
TOTAL	CURR MONTH	999	9,999,999,999.99	9,999,999.99	9,999,999.99	9,999,999,999.99	9,999,999.99
	CURR YEAR	999	9,999,999,999.99	9,999,999.99	9,999,999.99	9,999,999,999.99	9,999,999.99
	PREV YEAR	999	9,999,999,999.99	9,999,999.99	9,999,999.99	9,999,999,999.99	9,999,999.99

Figure E.1. Commission Report.

REPORT NO. XXXXXXX | BANGKOK METROPOLITAN BANK | PAGE NO. XXX

PROGRAM NO. XXXXXXX | ACCRU INTEREST BY DETAIL | RUN DATE. DD/MM/YYYY

DEPT.CODE =XXX | AS AT DD MONTH YYYY | RUN TIME. HH:MM:SS

SEQ.	DEAL NO.	CUST-NAME	EFF-DATE	DUE-DATE	PER	FINNO	CUR	RATE	ACCRU-INT	ACCRU-INT-TH
			FROM-DATE	TO-DATE	CAL-DAY	INT-RATE		FIN-BAL	INT-AMT	
			EVE-TYPE	EVE-DATE				EVE-PRI-AMT	EVE-AMT	
XXX	999999999999	XXXXXXXXXXX	DD/MM/YYYY	DD/MM/YYYY	999	999	XXX	999.9999999	999,999,999.99	999,999,999.99
XXX			DD/MM/YYYY	DD/MM/YYYY	999	999.9999999		999,999,999.99	999,999,999.99	
XXX			XXXX	DD/MM/YYYY				999,999,999.99	999,999,999.99	
XXX	999999999999	XXXXXXXXXXX	DD/MM/YYYY	DD/MM/YYYY	999	999	XXX	999.9999999	999,999,999.99	999,999,999.99
XXX			DD/MM/YYYY	DD/MM/YYYY	999	999.9999999		999,999,999.99	999,999,999.99	
XXX			XXXX	DD/MM/YYYY				999,999,999.99	999,999,999.99	
		TOTAL ACCRU-INT-THB PER PAGE								999,999,999.99

Figure E.2. Accrued Interest by Detail.

REPORT NO. XXXXXXX | BANGKOK METROPOLITAN BANK | PAGE NO. XXX

PROGRAM NO. XXXXXXX | PROOF SHEET REPORT | RUN DATE. DD/MM/YYYY

DEPT.CODE =XXX | AS AT DD MONTH YYYY | RUN TIME. HH:MM:SS

ACCOUNT NO.	NAME OF ACCOUNT	DEBIT AMOUNT	CREDIT AMOUNT
99999999	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	999,999,999.99	999,999,999.99
99999999	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	999,999,999.99	999,999,999.99
99999999	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	999,999,999.99	999,999,999.99
99999999	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	999,999,999.99	999,999,999.99
99999999	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	999,999,999.99	999,999,999.99
	** GRAND AMOUNT **	999,999,999.99	999,999,999.99

Figure E.3. Proof Sheet Report.

REPORT NO. XXXXXXX | BANGKOK METROPOLITAN BANK | PAGE NO. XXX

PROGRAM NO. XXXXXXX | DEALS LIST PER DEPARTMENT | RUN DATE. DD/MM/YYYY

DEPT.CODE =XXX | AS AT DD MONTH YYYY | RUN TIME. HH:MM:SS

DEAL-NO	DEAL-DESC	AMOUNT	CURR	STEP	MAIL	SWIFT	TELEX	OPEN-DATE
RELEASE-DATE	CUST-ID	CUST-NAME		RELEASE-NAME				
XXX-XX-XXXXXX-X	XXXXXXXXX	9,999,999,999.99	XXX	XXX999	99	99	99	99/99/9999
99/99/9999	XXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXX				
XXX-XX-XXXXXX-X	XXXXXXXXX	9,999,999,999.99	XXX	XXX999	99	99	99	99/99/9999
99/99/9999	XXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXX				
XXX-XX-XXXXXX-X	XXXXXXXXX	9,999,999,999.99	XXX	XXX999	99	99	99	99/99/9999
99/99/9999	XXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXX				
XXX-XX-XXXXXX-X	XXXXXXXXX	9,999,999,999.99	XXX	XXX999	99	99	99	99/99/9999
99/99/9999	XXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXX				

Figure E.4. Deals List per Department.

Bangkok Metropolitan Bank Public Company Limited

TAX ID _____

RECEIPT DEBIT ADVICE

DATE : _____

TO :
_____
_____

OUR REF : _____
BILL AMOUNT : _____

BENEFICIARY : _____

DEBIT ADVICE (IMPORT DIVISION)

WE HAVE PASSED THE FOLLOWIN DEBIT ENTRY (IES) :

PARTICULARS	ORIGINAL CCY & AMOUNT SETTLE CCY & AMOUNT	RATE FC NO.
**********	**********	**********
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

B/R NO. _____
T/R NO. _____
INT. FROM _____ TO _____
DUE _____

FOR BANGKOK METROPOLITAN BANK

_____ RECEIVED BY _____
AUTHORIZED SIGNATURE (S)

Figure E.5. Receipt / Debit Advice.

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