

a history of banking
role of the banks **5**
the movement of note

银行专业英语

译注读物

how to handle cheque
the clearing system
borrowing from a bank
banks & computers
banks and overseas trade
the balance of payments
how a banker looks at

中国金融出版社

~~银行专业~~英语译注读物

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译 注 说 明

《银行专业英语译注读物》选自英国银行教育中心(BES)的教材,全套共六册。

这套书扼要地介绍了英国银行的起源、职能、业务和管理技巧,以及一些与国际金融有关的知识。其文字简练,内容通俗,适合已具有中等英语水平的金融专业干部、大中专师生和业余爱好者学习专业英语时参考和使用。我们希望它能有助于提高读者的专业英语水平,并扩大专业知识面;但对书中的某些观点,有待读者去鉴别和分析。

本书的各分册均包含三个部分:原文、注释、汉译文。考虑到读者已有一定英语水平,我们只对书中的专业词汇和较难理解的词句作了注释;至于英语基础语法和专业本身的理论和实务,则没有作为重点加以说明。

本册内容为《银行与电子计算机》。它由中央财政金融学院郝国华、陈抗风翻译、注释。全书由中国银行总行纪衡同志总校订。在校订时,吸取了暨南大学吴俊麟和吴振新两同志的意见。限于注、译、校者的英语和业务水平,加之时间匆促,书中不免有不妥和错误之处,请读者批评指正。

中国银行教材编审小组

Contents

(目 录)

BANKS & COMPUTERS	(1)
1. WHY DO BANKS NEED TO USE COMPUTERS?	(3)
2. COMPUTER TERMINOLOGY	(4)
3. COMPUTER LANGUAGE	(5)
4. WHERE ARE COMPUTERS USED IN BANKING?	(6)
(1) Automated Cheque Clearing	(6)
(2) Computers for Branch Accounting	(8)
(3) Computers for storing information	(9)
(4) Computers for retrieval of information	(10)
(5) Computers for paying Standing Orders	(10)
(6) Computer for Direct Debiting	(11)
(7) Computers for Cash Dispensing	(12)

5. OTHER COMPUTER APPLICATIONS	···	(13)
(1) Company registers	·····	(13)
(2) Trustee ² Services	·····	(14)
(3) Overseas and International Operations	·····	(15)
(4) Personnel and Payroll Systems	·····	(16)
6. COMPUTERS AND OUR FUTURE	·····	(16)
注 释	·····	(19)

银行与电子计算机	·····	(23)
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前 言	·····	(24)
1. 为什么银行需要使用电子计算机?	·····	(25)
2. 电子计算机的专门术语	·····	(25)
3. 电子计算机语言	·····	(26)
4. 银行业务在哪些方面使用电子计算机?	·····	(27)
(1) 支票自动交换	·····	(27)
(2) 电子计算机用于分行帐务核算	·····	(28)
(3) 电子计算机用于储存信息	·····	(29)
(4) 电子计算机用于取回信息	·····	(30)
(5) 电子计算机用于办理持续有效的支 付命令项下的付款	·····	(30)
(6) 电子计算机用于直接借记业务	·····	(31)
(7) 电子计算机用于办理现金配付	·····	(32)
5. 电子计算机在其他方面的应用	·····	(33)

(1) 公司股东登记册	(33)
(2) 受托服务业务	(33)
(3) 海外和国际业务	(34)
(4) 人事和工资制度	(34)
6. 电子计算机与未来	(35)

BANKS & COMPUTERS

PREFACE

This booklet explains how and why computers are used in banking. It shows that computers can store vast amounts of information, process this information quickly and report the results.

Computers benefit our community by:

- (1) increasing capacity to enable banking to be made more widely available
- (2) supplying more banking services
- (3) controlling the costs of these services
- (4) providing bank staff with better working conditions, predictable working hours and relief from some of the more boring and repetitive work.

1. WHY DO BANKS NEED TO USE COMPUTERS¹ ?

Ever since numbers were first invented, machines have been used to help count and calculate. One of the simplest of these machines is the abacus², an early invention which is still being used in some countries; the most complex of machines is the modern computer. The word 'compute' means calculate, and a computer is just a calculator. Any problem which can be reduced to mathematical terms can be solved very quickly by computers. Nevertheless, all a computer does³ is handle or 'process' information or 'data'.

Banking is a business which requires much counting and calculating. During the past twenty years, the number of people with bank accounts has steadily grown; more and more cheques are used to make payments; services that the banks offer to their customers have also been extended. All these developments have been made possible by the introduction of computers with which bank staff carry out the complex tasks involved.

2. COMPUTER TERMINOLOGY⁴ INPUT — PROCESSING — OUTPUT

There are three main elements in a computer system — input, processing and output. All are present on a simple calculator. If you wish to add two and five on a calculator you must first put in, or in computer language ‘input’, this information. You do this by pressing down the two key⁵ (2) then the addition key (+) and then the five key (5). The information is now in the calculator. When you press the equals key (=) the output comes up on the screen⁶ — the number seven (7). Between the input and the output the calculator processes the information.

Inputting information into a computer is little more than that. The first step is to put the information, or data, into a form which the computer can read. The computer must also be given instructions on what to do with the data. These instructions are known as a computer program⁷.

3. COMPUTER LANGUAGE

Programming a computer simply means telling a computer what you want it to do with the information you are going to give it. This is achieved by the use of a computer language. To communicate with computers a number of computer languages have been devised. Some are extremely complex and have helped to create something of a mystique⁸ about the people who know and understand them. Much work is now being done to devise simpler languages which use everyday words. This means that more and more people will find computers easier to use.

In banking most branches that use a computer have an input terminal⁹. The terminal operator feeds in¹⁰ the data to be processed and selects a programme to tell the computer what to do.

The input terminal is linked to a central computer, perhaps miles away, which 'processes' all the data it receives. The processed data is then sent back to the branch. This output can be in a variety of forms. It may be printed on paper — like a bank statement. It can also appear on a visual display unit¹¹ — like a television screen — to be read by an operator. Terminals are not part of the main computer processing system and so they are called 'peripherals'. Their

links with the central computer are through Post Office telephone lines and so the use of a computer through remote terminals is called 'teleprocessing'.

4. WHERE ARE COMPUTERS USED IN BANKING?

(1) Automated Cheque Clearing¹²

One of the major uses of computers in banking is in the handling of cheques. Let us look for a moment at what happens when a typical bank customer pays a bill by cheque. Mr. Smith lives in the small town of Billington, which is near Leeds. He has a bank account at the Billington branch of a major bank. Mr. Smith receives his electricity bill of £ 35. He pays this bill by writing a cheque. He sends the cheque for £ 35 to the Electricity Board in Leeds who in turn pay it into their account at their bank. Mr. Smith's cheque eventually is sent to the Head Office of his bank via the Bankers' Clearing House. There his bank sorts all the cheques it receives and sends them to its own branches. At the local branch in Billington Mr. Smith's cheque is sorted from others and the amount deducted from the account. This system of exchanging cheques is called the Bank Clearing System. It all has to be completed in three working days — a

strict time schedule¹³ which has been agreed between the banks. In the past all this sorting¹⁴ and checking was done by hand. It was boring and repetitive involving a lot of people in long hours of work. It also limited the number of cheques that could be handled by the banks. To overcome this problem the banks started in the late 1950's to use machines which could sort cheques very quickly.

Characters printed in magnetic ink¹⁵ on cheques identify¹⁶ the bank and branch where the account is kept.

Sorting machines are used which can read the magnetic ink characters and sort the cheques into bank and branch order. This method is called magnetic ink character recognition, or MICR¹⁷. In the 1960's the major banks established computer centres in which chequesorting machines were housed. These machines can now handle 2400 cheques a minute. About 6 million cheques are exchanged between the major banks every working day; a pile of cheques over five times as high as Big Ben. Another 2.3 million cheques are exchanged between branches of the same banks. On busy days the banks often have to sort twice as many¹⁸. Only by using computers can the banks cope¹⁹ with this amount of paper-work every day.

(2) Computers for Branch Accounting

The use of the MICR system and the installation of computerised clearing systems meant that the steadily increasing number of cheques being used could be sorted by machine. But the cheques still had to be debited to customers' own accounts. For example, Mr. Smith's cheque for £ 35 must be debited to (deducted from) his account.

This branch accounting was usually all done by hand until about the early 1950's. Records were kept in handwritten ledgers and customers' statements telling them how much was in their account were also handwritten. By the early 1960's, most branches were using accounting machines rather than handwritten ledgers for the process of making entries on customers' accounts. Even so, the task still required many members of bank staff to add all the entries to the ledgers and to customers' statements. This required every item to be entered twice, both on the customers' ledger and then on the statement.

In addition everything had to be rechecked to make sure that no mistakes had been made. The whole process was time consuming²⁰ and subject to human error. A final check on each day's work, a 'balance', had to be completed before staff could leave the bank at the end of the day.

Major checks, or 'balances', were completed either quarterly or half yearly, when bank charges and interest were calculated. The use of computers for this branch accounting was a logical development from using machines to sort cheques. It was at this stage that the branches of the major banks started to use terminals linked to central computers. Magnetic ink character recognition enables the computer to sort the cheques. The input of customers' account details and amounts of cheques paid enables the computer to carry out branch accounting. The calculation of charges and interest is now done speedily by the computer.

(3) Computers for storing information

Storing information about customers' accounts was also a problem for banks. As well as current information, banks have to keep historical records. The row upon row of ledgers and boxes of cheques that were needed took up a lot of space. They were cumbersome²¹ and dusty to handle. Computers now store most of the required information. Full details of ten million accounts for fifteen years occupy a space no bigger than the average classroom. This reduction of storage space required at branches has meant more space and a better working environment²² for bank employees.

(4) Computers for retrieval²³ of information

Bank customers often want information about their accounts; the balance, the last cheque paid, details of specific cheques or credits and so on. This information can now be retrieved from a computer. The branch terminals provide this information even though it is kept on a disk in a computer centre miles away. The central computer can, if programmed correctly, also tell the branches if anything unusual or exceptional appears on customers' accounts. Statements are processed by the computer for each account. These are produced on printers at speeds of several thousands of lines per minute.

(5) Computers for paying Standing Orders

Customers can request the banks to make regular payments from their account. These instructions are called standing orders. They are used for paying regular bills including life insurance premiums, building society mortgage repayments, rates, hire purchase repayments and so on. In the past, the banks kept diaries of customers' standing