The Bank of England as registrar

The past quarter of a century or so has seen almost revolutionary change in the work of the Bank as registrar. The earlier history of the Registrar's Department[1] *as the principal registrar*[2] *for government stock, and the legislative and technical changes which affected its work in those times, have been fully described in previous articles.*[3] *This article, while briefly recalling some of that earlier history, surveys in more detail the past twenty-five years or so since the principal constituent parts of the department were brought together in a new building at New Change, and looks at the changes that have taken place.*

As registrar, the Bank maintains registers for marketable sterling securities issued by the UK Government and for securities issued by certain other bodies, now mainly local authorities. All the marketable securities managed by the Bank are traded on The Stock Exchange for cash settlement, which means that payment should normally be made against delivery of the stock on the next business day after a bargain is struck. The work of registrar involves the department in the issue of new stocks, the recording of transfers of ownership and, where appropriate, the subsequent issue of certificates of title, the payment of dividends, the redemption or conversion of stocks and the amendment of the register to reflect, for example, new addresses, alteration of dividend instructions, or the death of a stockholder.

History of the Registrar's Department

The article in the March 1963 *Bulletin* traced the origin of the department's registrar function to the directive, given to the Bank under the 1694 Charter, to keep a register for its own capital stock, and went on to mention the authority extended by Parliament in 1715 for the Bank to receive subscriptions for a government issue of 5% Annuities, the first of many issues of various government securities. Some two hundred years later, in the early part of the present century, the bookkeeping system of handwritten ledgers remained virtually unchanged. However, the system of Inscribed stock—whereby the name of a holder was inscribed, ie recorded in the Bank's books as his evidence of title—had been modified over the years. Originally, transfer was by personal attendance, with each party to the transfer (the transferor, ie the seller, and the transferee, ie the buyer), or his attorney, having to attend at the Bank to sign the transfer books; the transferee's name would then be inscribed in the Bank's ledgers.[4] From the early nineteenth century, the transferee no longer had to sign personally or by attorney, although retaining the right to do so.

In 1912, Registered stock, a form of stock which had long existed for other securities, was introduced for British government stock; transfer was by common form of transfer deed, which had to be executed by both parties, whose signatures had to be witnessed, with the new holder receiving a certificate of title. Thereafter the two categories of stock co-existed for many years. In 1939, when the Registrar's Department was moved into the country as a wartime measure, Inscribed stock was made transferable in the same way as Registered stock. At the same time, the issue of securities in bearer form was prohibited. The Inscribed category of stock was in fact abolished in 1943 and all stock on the Bank's register is now Registered stock. Personal attendance at the Bank by the recipients of dividends was also necessary at one time,[5] but from 1869 Parliament authorised payment by means of warrants sent through the post. The facility for stockholders to have dividends paid direct to a bank account was introduced shortly afterwards, with one payment being made to each bank in respect of all the dividends to be credited to its individual customers.

Technical developments

In 1934, the department replaced the handwritten ledgers, which had endured for nearly 250 years, with a register kept on loose-leaf account pages, with alterations to capital as transfer forms were submitted being entered by operators using accounting machines; the new system in fact lasted for 30 years or so until shortly after the department moved to New Change. Dividend warrants, which had previously been printed from plates kept up to date by the printers as an account altered, were from the early 1930s produced from stencils. In order to pay dividends (some six million payments a year at that time) the department had to maintain, in addition to the account page register, around three million metal stencils (showing particulars of the payee) and a secondary register

(1) As part of the reorganisation of the Bank which took effect on 1 March 1980, the former Accountant's Department was renamed the Registrar's Department to give a more accurate description of its function, although for statutory reasons the Chief Registrar still retains the traditional title of Chief Accountant. The title 'Registrar's Department' is used throughout this article.

(2) Certain government stocks may also be held on the registers of the Bank of Ireland and the Department for National Savings.

(3) In the March 1963 and September 1968 *Bulletins*.

(4) The extract, reproduced on page 416, from Chapter LV of the Pickwick Papers(first issued in book form in 1837) gives a colourful description of the visit of Sam Weller and his father to the Consols Office of the Bank.

(5) Recorded in a lively painting by George Elgar Hicks 'Dividend Day at the Bank of England' exhibited at the Royal Academy in 1859, and in the possession of the Bank.

A visit to the Consols Office of the Bank(1)

Mr Weller senior and his son Sam, accompanied by some friends and by Mr Wilkins Flasher, a stockbroker, and Mr Solomon Pell, a lawyer, visit the Consols Office of the Bank.

"Wilkins Flasher, Esquire, now condescended to receive Mr Solomon Pell's instructions, and having filled up some printed forms, requested the party to follow him to the Bank: which they did: Mr Weller and his three friends staring at all they beheld in unbounded astonishment, and Sam encountering everything with a coolness which nothing could disturb.

Crossing a court-yard which was all noise and bustle; and passing a couple of porters who seemed dressed to match the red fire engine which was wheeled away into a corner; they passed into an office where their business was to be transacted, and where Pell and Mr Flasher left them standing for a few moments, while they went up stairs into the Will Office.

'Wot place is this here?' whispered the mottled-faced gentleman to the elder Mr Weller.

'Counsel's Office,' replied the executor in a whisper.

'Wot are them gen'l'men a settin' behind the counters?' asked the hoarse coachman.

'Reduced counsels, I s'pose,' replied Mr Weller. 'Ain't they the reduced counsels, Samivel?'

'Wy, you don't suppose the reduced counsels is alive, do you?' inquired Sam, with some disdain.

'How should I know?' retorted Mr Weller; 'I thought they looked wery like it. Wot are they, then?'

'Clerks,' replied Sam.

'Wot are they all a eatin' ham sangwidges for?' inquired his father.

'Cos it's in their dooty, I suppose,' replied Sam, 'it's a part o' the system; they're alvays a doin' it here, all day long!'

Mr Weller and his friends had scarcely had a moment to reflect upon this singular regulation as connected with the monetary system of the country, when they were rejoined by Pell and Wilkins Flasher, Esquire, who led them to a part of the counter above which was a round black board with a large 'W' on it.

'Wot's that for, sir?' inquired Mr Weller, directing Pell's attention to the target in question.

'The first letter of the name of the deceased,' replied Pell.

'I say', said Mr Weller, turning round to the umpires. 'There's somethin' wrong here. We's our letter—this won't do.'

The referees at once gave it as their decided opinion that the business could not be legally proceeded with, under the letter W, and in all probability it would have stood over for one day at least, had it not been for the prompt, though, at first sight, undutiful behaviour of Sam, who, seizing his father by the skirt of the coat, dragged him to the counter, and pinned him there, until he had affixed his signature to a couple of instruments; which from Mr Weller's habit of printing, was a work of so much labour and time, that the officiating clerk peeled and ate three Ribston pippins while it was performing.

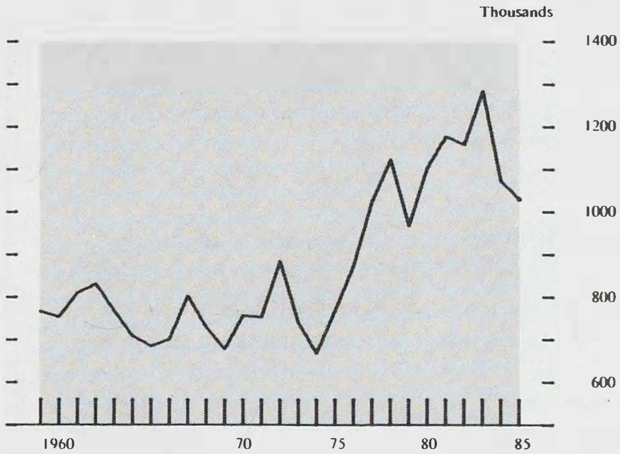
(1) From 'The Posthumous Papers of the Pickwick Club', Chapter LV, by Charles Dickens.

showing calculations of gross dividend, tax and net payment. This dividend preparation system was expensive, firstly because two additional sets of records had to be maintained, and secondly because all the dividend and tax calculations were performed manually, a change in the tax rate involving something like 40,000 hours effort to make the change to the secondary dividend preparation register.

Once the department was established at New Change in 1958, experimental dividend preparation work began with punched card files kept up to date by a first generation Powers-Samas computer in conjunction with a calculator and high speed printer. The first dividends were paid by this method in July 1960 on 2½% Consolidated Stock, thought to be the first computer-produced dividends in this country. Over a period of five years, cards for three million accounts were punched, to enable dividends to be calculated automatically and produced with minimal clerical assistance. This operation completed, the punched card records were transferred in 1965 to the newer medium of magnetic tape, used with two ICL computers. At this stage the stock registers were still held on the old loose-leaf account pages.

In 1967, there began the process of putting the registers themselves on to magnetic tape. This was done by taking the dividend preparation tapes, which were in effect an embryo register, and expanding the information on them over a period of two years or so to form a register on tape, with access still to the account pages for historical information. The process was completed by 1969, from which time only one set of records, on magnetic tape, was required for both the register and dividend work, as

Number of transfers



Calendar year 1959–68, year to end-February 1969–85.

against three sets ten years earlier. Moreover, the one keying operation involved in input to the register created not only the register record—from which on a fixed date (the balance or record date) the computer could produce a dividend file—but also, where appropriate, the certificate of title, which previously had been typed separately. With the register maintained on computer the department was able to despatch fresh certificates five days after receipt of the relative transfers, compared with nine days previously, and this removed the need for separately prepared transfer receipts which had been issued under the old system. The automation of dividend preparation work, together with economies in various clerical processes, were major factors in a saving of some 17% in staff numbers (from 1,756 to 1,465) between 1959 and 1969.

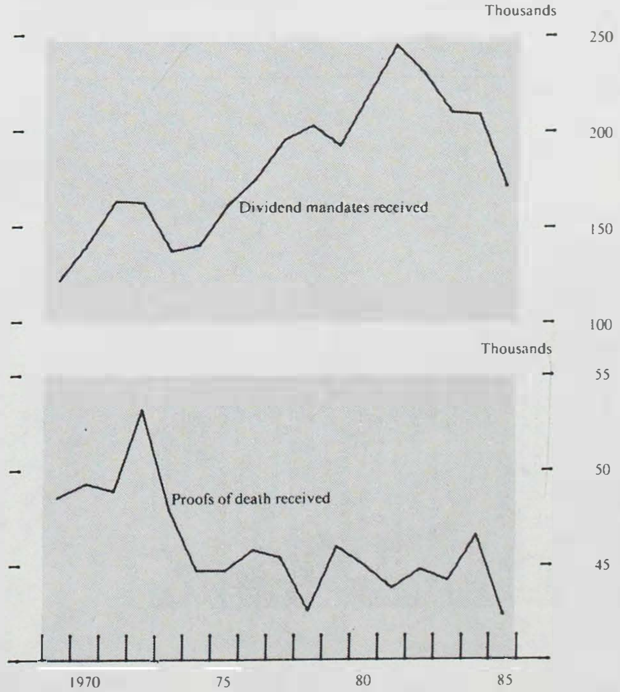
The redemption of 6% Exchequer Stock 1970 on 1 March 1970, and the exchange of 3% Savings Bonds 1960-70 into 8½% Treasury Stock 1980-82 on the same date, were the first operations of their kind to be carried out with stocks on the magnetic tape register. The latter operation, involving some 49,000 requests for conversion out of the 139,000 accounts in Savings Bonds, was the largest single conversion since the huge War Loan exercise of 1932. It was possible to use the computer to perform what would otherwise have been the time-consuming clerical tasks of addressing communications to all the stockholders, of creating the new accounts in 8½% Treasury Stock 1980-82 for the Savings Bonds holders who accepted the offer, and of preparing the new certificates. In this way the whole operation was telescoped and substantial economies of manpower were achieved.

A further area of potential saving was in the handling of dividend and other warrants when presented for payment, and the maintenance of the associated records. Until 1964, paid warrants had to be sorted by hand and the amount of each unpresented warrant abstracted from the dividend records and the total agreed with the outstanding cash balance, a time-consuming and laborious task. The addition of magnetic ink characters to the bottom of the warrants, so that they could be sorted and totalled by machine, was a first step forward. However, a much larger advance was made in September 1969 with the introduction of the warrant reconciliation system in which a sorting machine read the magnetic ink characters on warrants being presented through the clearing system and wrote the details to a magnetic tape. This tape could then be compared by computer with the original tape prepared at the time of issue of the warrants, allowing the paid items to be marked off with the date of presentation. A daily reconciliation could be effected, and lists of outstanding unpaid items produced when required. Introduction of this system allowed a reduction of two thirds (some 24 people) in the staff engaged on this work and an even greater reduction in the space occupied.

New computers (ICL 1904s) were installed in 1973 and the registers were then transferred from magnetic tape to direct access storage discs. With the register on tape, alterations had to be made clerically against a paper printout of the relative account, with a separate specialist office responsible for inputting the alterations to the computer, initially by punched cards, but subsequently by punched paper tape. With the registers on disc, an on-line system was inaugurated in 1975 allowing staff to inspect and amend accounts by direct access and input through keyboards connected to video terminals, with the amendments stored for subsequent daily update of the register. This avoided the need for paper printouts of accounts (unless there was a query to be investigated away from the screen) and largely eliminated the need for separate specialist inputting staff.

At this stage there still remained two large paper-based alphabetical indexes, maintained clerically: one in loose-leaf form for each stock, containing the name of

Dividend mandates and proofs of death received



Year to end-February.

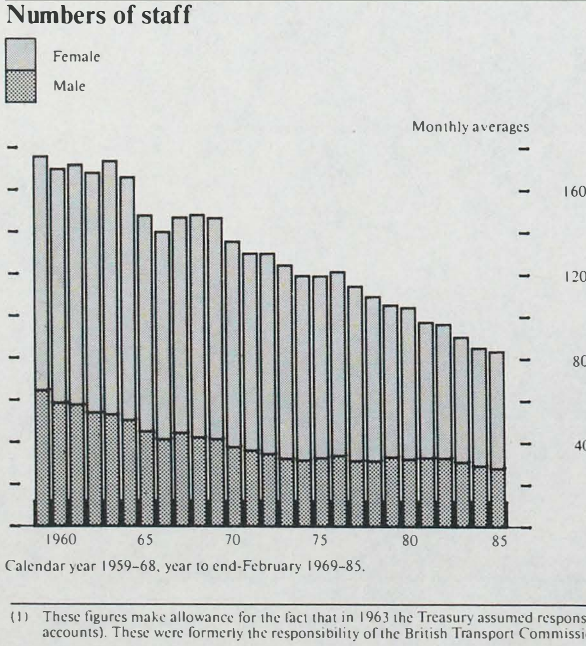
each stockholder; and the other a card index covering all stocks, including, in addition to stockholders, the names of legal personal representatives and nominees for dividends. In May 1977, these indexes were replaced by a computer-held on-line index, created by copying names and addresses from the register, and automatically kept up to date in respect of subsequent amendments to the latter. Access to the on-line index is obtained via the terminals which are now used for amending the register.

The present computer configuration is based on two machines in the ICL 2900 series, and various improvements in the hardware (the computers themselves) and in the software (the operating programs) have allowed work in the computer operating area to be reduced from three shifts a day to two.

Staff numbers

The effect on numbers of staff of these developments in work methods has been very marked. Following the reductions mentioned earlier, the monthly average number of staff fell from 1,465 in 1969 to 1,297 in 1971, in spite of higher work volumes and the changes required by decimalisation (the latter raised considerable problems for the department since virtually all stocks were transferable in multiples of one old penny). This fall in numbers can be attributed to use of the new system for redemptions and conversions, new dividend accounting, and the transfer of the register from account pages to magnetic tape. From 1971 to 1975, there were further staff savings of 110, mainly from implementation of the on-line system, and from direct input. By 1978, numbers had fallen by another 100, mainly attributable to the automation of the indexes. Since then further savings of approximately 250 have been made: significant factors in this decrease were continuing benefits from the computer system, alterations to clerical procedures, and consequent increases in productivity achieved by the staff. The fall in staff numbers over the years was achieved without any major disturbance to staff relations. The great bulk of the jobs eliminated, although they included an appropriate proportion of supervisors and managers, were of a routine clerical nature, mostly very repetitive and mechanical, and offering little scope for initiative.

Numbers of staff



Calendar year 1959–68, year to end-February 1969–85.

At the time of the voluntary severance scheme (introduced by the Bank to cope with the staff surplus created by the abolition of exchange controls in late 1979 and open to most sections of the banking staff) the department released 170 experienced staff, some one sixth of its work force, who asked to take early retirement; and over the following months successfully absorbed and trained replacement staff from elsewhere in the Bank. In the past twenty-five years changes in work methods arising from computerisation were also the major factor in the reduction of the office area occupied by almost 50%, from 221,500 sq ft in 1959 to 123,500 sq ft in 1985 (significant reductions in storage accommodation were also achieved).

Other changes

Select Committee on Nationalised Industries

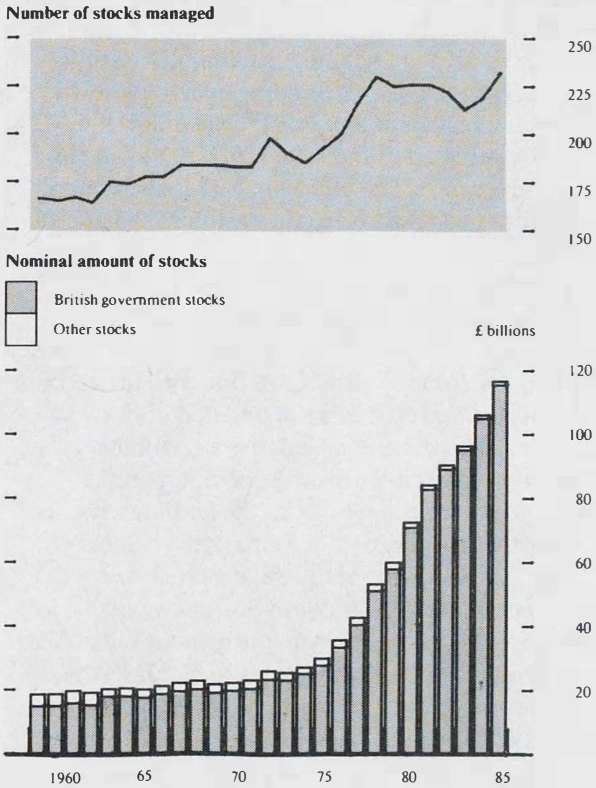
The first report on the Bank by the parliamentary Select Committee on Nationalised Industries, produced in 1970, recommended that in respect of a service which the Bank provided for the Government, such as the issue, management and redemption of stocks, the Bank should charge full costs, rather than make a nominal or substantially reduced charge, as had been the case for many years. Accordingly, since 1971/72 the full costs incurred in management of the National Debt have been recovered from the National Loans Fund.

Changes in borrowers

Over the past fifteen years there has been a notable change in the composition of borrowers for which the Bank acts as registrar. During the 1960s, non British government stocks accounted for around 12% of the total nominal amount of stocks managed by the Bank and for some 20% of accounts.[1] However, with the market for new issues of corporate and local authority fixed-interest stocks becoming almost dormant, and with an increase in government issues, the proportion of total nominal stock managed for borrowers other than the Government fell steadily during the 1970s. By February 1985, the position had been reached where non British government stock accounted for only 1% (£1,210 million) of the total nominal stock managed by the Bank (£106,194 million), and for 4% of the accounts. In the ten years to February 1985, the Bank issued only nine stocks (not including local authority short-term bonds) on behalf of borrowers other than the British government, with seven of these stocks being issued in the first three years of that period.

(1) These figures make allowance for the fact that in 1963 the Treasury assumed responsibility for £1.4 billion British Transport stocks (300,000 accounts). These were formerly the responsibility of the British Transport Commission and as such in the non British government category.

Stocks[a] managed by the Bank

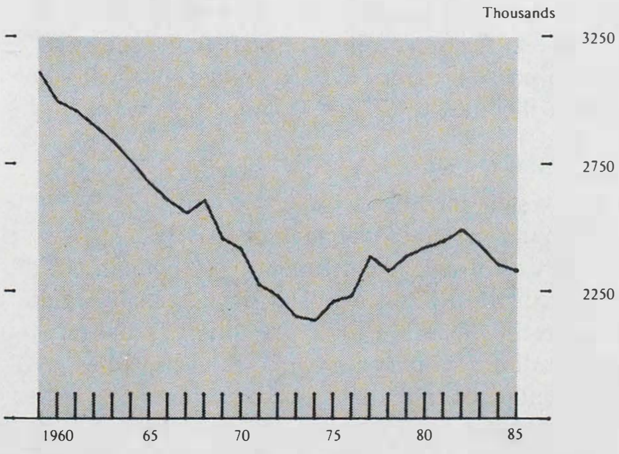


Number of stocks managed: end-year 1959–68, end-February 1969–85.

Nominal amount of stocks: end-February.

(a) Including local authority short-term bonds.

Number of accounts



End-February.

Local authority short-term bonds

A new instrument of borrowing which emerged during the period was the local authority short-term bond. Under the Local Government (Financial Provisions) Act 1963, local authorities were empowered to issue short-dated bonds, of between one and five years' maturity. The first issue of 'yearling' bonds for which the Bank acted as registrar was made in August 1964. Since then, the Bank has made a number of issues on behalf of various local authority customers. Although the sums of money raised and the number of accounts are small by comparison with stocks managed by the Bank, particular features of local authority bonds, such as a one-day transfer cycle (ie the certificate in the purchaser's name has to be available on the day that the underlying transfer is lodged) mean that special work processes have to be followed.

Changes in the issue and nature of government stocks

There have been changes too in the method of issue and in the nature of government stocks. In July 1973, the Registrar's Department assumed responsibility for the new issues work previously undertaken by the Banking Department's[1] Loans Office. The conventional method of issue at that time was an offer for sale at a fixed price. In the spring of 1979, however, a form of tender was introduced for new issues, and all offers for sale to the public since then have been made by tender, in some cases without a stated minimum price. The Treasury have also on many occasions since the end of 1979 authorised the creation of small 'tranchettes' of existing stocks and made them available to the Bank for direct sale to the market via the Government Broker.

While issues of stock to the Bank have reduced somewhat the volume of new issue work handled by the department, steps have also been taken to extend the range of gilt-edged instruments, with the result that the stocks themselves have tended to contain features which make management of them more complex. For example, holders of the first three issues of index-linked stocks (first issued in March 1981) were limited broadly to pension funds and certain other financial institutions with UK pension business, a limitation which involved considerable work in ensuring that holders were in fact eligible (the restriction was later removed). Other features incurring more complex management were first the reintroduction in 1977 of part payment at the time of issue of British government stock, involving extra work as instalments become due; and second the issue of a variety of convertible stocks bearing a number of options to convert into another stock, in whole or in part, over a range of dates, a feature involving writing to holders each time a conversion option approaches, and then processing applications from those who exercise the option. Work generated by these conversion options tends to be concentrated in the final days of each operation, and a very popular conversion could require rapid redeployment of resources.

Other responsibilities

The department has been active in providing assistance with aspects of the Government's recent sales of certain public sector shareholdings, and the benefit of its experience has been sought in other privatisation operations. The department acted as lead receiving banker in respect of offers for sale of British Petroleum p.l.c. shares in 1977, 1979 and 1983; and of shares in

(1) At the time the Loans Office in fact formed part of the former Cashier's Department. Responsibility for, among other things, the banking functions of the latter was assumed by the Banking Department under the reorganisation of the Bank in 1980.

Cable and Wireless p.l.c. in 1983. This role involved co-ordinating a consortium of commercial bank new issues departments as well as handling some applications and, where appropriate, the subsequent instalment payments. The department also dealt with the issue of compensation stock under the Aircraft and Shipbuilding Industries Act 1977, and earlier under the Iron and Steel Act 1967.

The issue of bearer securities—where title passes from one person to another on delivery of the bearer document—was prohibited in 1939, primarily to reinforce exchange controls in preventing the transfer of capital abroad. Nearly twenty-five years later, and in order to encourage investment from overseas, the Treasury in 1963 authorised the reintroduction of bearer facilities, both for existing stocks with a bearer facility as part of the original prospectus, and for new issues. The proportion of government stock in bearer form, however, remains very small, even though (since the abolition of exchange controls in 1979) bearer securities no longer have to be held in the custody of an authorised body such as a bank or solicitor.

In 1980-81, there was heavy involvement in the complex settlement arising from the offer made by the Zimbabwe Government to holders of the eleven Government of Southern Rhodesia stocks which were on the Bank's register and in respect of which no moneys to make dividend or redemption payments had been received since 1965.

Legislation

A major legislative change affecting the work of the department during the past twenty-five years was that brought about by the Stock Transfer Act 1963[1] which simplified the method of transfer of certain securities by introducing a new 'stock transfer form'. This provided that a transferee need no longer sign a transfer form and that the signature of the transferor need no longer be witnessed, thus making the form simpler to handle for all concerned.

Perhaps the most far-reaching changes were the provision in the Government Stock Regulations 1965 for the register to be kept in computer form rather than on paper, and the provision in the Stock Transfer Act 1982 which modified the requirement of the 1963 Act that transfers should be by instrument in writing, and authorised certain transfers to be made through a computer system without a signed transfer form. This alteration was in preparation for a computer-based system to replace Jobbers' Counter (see below). Among minor legislative changes in the regulations governing the department was the authority given in the Government Stock (Amendment) Regulations 1981 to destroy transfers after 30 years, a measure leading to savings in storage costs.

Changes in the future

The one part of the department where work methods generally have remained unaltered by computerisation is Chief Registrar's Office (Bank Buildings), better known as 'Jobbers' Counter', for many years located in Head Office, but now situated in Bank Buildings, and still close to The Stock Exchange. The office maintains a system of loose-leaf account pages showing the certifiable balances (ie the balances against which the Bank will certify sale transfers) of jobbers, discount houses and a number of other institutions. These balances are compiled from the nominal amounts of stock entered in stock transfer forms lodged at Jobbers' Counter for registration into the account holder's name. As the register is not updated until two days after transfer forms are lodged, these certifiable balances are always in advance of the position on the register. Although they do not record the legal ownership of stock (only the register itself does that), the balances reflect prima facie evidence of title, and as such are accepted as representing the amount of stock available for use to certify sale transfers. As previously mentioned, one of the basic features of the government stock market is that payment for a transaction normally takes place on the day after the bargain is made. Because of this, and of the large sums of money which change hands, this work has to be dealt with rapidly in accordance with a strict timetable, on which the gilt-edged market relies. Within the confines of that timetable, the certifiable balance system allows the Bank to certify (ie annotate) a transfer so that the jobber can then deliver the certified transfer to the broker who has bought the stock from him, and receive payment. A separate 'over-the-counter' system of accelerated certification against transfers in the course of registration is also provided at New Change for those who do not have facilities at Jobbers' Counter.

As a result of fears in the 1970s that the gilt-edged settlement system might be so severely strained as to break down in a period of high market activity, a Joint Committee on Gilt-Edged Settlements was set up in 1977 under the aegis of the Bank and The Stock Exchange, and produced its final report in 1979. The interim proposal was that deadlines should be set for various processes leading to settlement and these were introduced progressively between September 1979 and March 1980. The committee's long-term proposal was for the clerically based facilities at Jobbers' Counter to be expanded and replaced by a computerised 'book entry' system for settling bargains: among other advantages this would provide a means for moving stock between participants without the need for stock transfer forms or certificates; for the issue of associated payment instructions to members' banks; and for the appropriate amendments to be sent in computer-readable form to the registrar, who would still maintain the record of legal ownership of stock. Such a system— known as the Central Gilts Office Project—is now under development jointly by the Bank and The Stock Exchange and will take account of the

(1) Fully described in an article 'UK security markets: the new transfer system' in the December 1964 *Bulletin*.

envisaged new market structure. The first phase of this system is to be introduced in January 1986 when those who at present have certifiable balance facilities, plus other 'core' members of the market, will have direct access to a computerised version of these balances and will be able to deliver stock electronically among themselves in settlement of bargains without the need to complete transfer forms. The register will be updated subsequently to reflect these movements. The system is capable of enhancement in due course to widen the membership and to provide further facilities.

Conclusion

Looking back over the 250 years or so of the Bank's involvement in maintaining the government stock registers, the first system, that of handwritten ledgers, lasted for over two hundred years, whereas the second, that of loose-leaf account pages and operator controlled accounting machines, lasted only for approximately thirty. The register has been held in electronic form (first magnetic tape, latterly on discs) for fifteen years.

The fall in the number of staff since 1959 by just over a half (from a monthly average of 1,756 in 1959 to 830 in the year ended February 1985), and the reduction of nearly 50% in the office space occupied, reflect the progress made in eliminating the paper needed inside the department to maintain the registers and prepare the payment of dividends.

Attention is now turning towards the reduction of paper used in communication with stockholders, and the Central Gilts Office Project, when completed, will result in a marked reduction in the volume of paper transfers and certifications to be handled. As regards the handling of dividends paid direct to a bank, work is in hand to permit the use of the existing electronic fund transfer systems, provided that the necessary information about the payment continues to be given to the recipient: this would help to reduce the amount of paper being handled through the banking system.

While it is now possible to see ways in which the bulk of communications with market makers and dealers might be done electronically, a clerical workforce will continue to be essential to deal with individual stockholders' transactions and with the large volume of correspondence generated by servicing over two and a quarter million accounts.