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Improvements in the Savings Bank Informatory System Concerning the Population's Deposits

In this paper the authors analyze the results and advantages of centralizing and mechanizing the evidence of savings operations. Stress is laid on the improvements already achieved and on further improvements that can be brought to the processing technique for information at the disposal of the Savings and Consignment Bank.

A chain-link of the financial and credit system of our country, the Savings and Consignment Bank* is aimed principally at developing among the population the spirit of thriftiness and good management of money, at keeping the population's spare cash and at performing the discount operations concerning these reserves, thus contributing to the circulation of the population's cash savings and their use in the interest of the development of the national economy.

The more accentuated orientation of the population towards a judicious use of their money incomes through the savings deposited with the Savings and Consignment Bank is reflected in the steadily growing proportion between the annual sums deposited with the Savings Bank and the population's money incomes.

In volume, the sums deposited by the population with the Savings and Consignment Bank were in 1966 almost six times bigger than in 1959, and the balance increase was in 1966 over tenfold higher than in 1959.

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* The original Romanian terminology: *Casa de Economii şi Consemnaţiuni (C.E.C.)*

The process of saving money with the Savings and Consignment Bank involves tens of millions of deposit and return operations, which are recorded in over 5 million personal savings accounts opened by the Savings Bank offices for the deposits' holders. Such an activity calls for the organization and realization of a large size book-keeping record, in keeping with the needs aroused by the service to the depositors and the defence of socialist property. These needs can be summed up as follows:

— performing and systematically keeping of records in the personal account record cards, the possibility being ensured of checking the analytical book-keeping data with the records in the savings bank books, which is a basic condition for exercising the pay-desk banking control, especially at return operations;

— ensuring the exactness of analytical records necessary to the correct calculation of the interests due to the depositors, an element of major weight in the cost of drawn funds;

— preventing, by means of the control exercised with the help of analytical record, the violation of the integrity of the socialist property.

In order to ensure the service to the population in fine conditions, both at the deposited and returned sums, the Savings Bank own operating network included 159 savings bank branches and 1,142 agencies; on the whole, 1,301 offices, of which 340 in the urban and 961 in the rural area.

The economic informatory system of the Savings and Consignment Bank is centred on the territorial-administrative division of the country. The book-keeping record is based on the principle of territorial decentralization, with the savings bank branches as basic book-keeping chain-links; they keep the record of all operations carried out at the own office and at all the authorized operating offices in each county, ensuring at the same time the informatory link with these offices. The central of the Savings and Consignment Bank ensures the unitary methodology of the whole activity of the operative chain. In the domain of record keeping, the Savings and Consignment Bank central jointly with the county (town) directions ensures the centralization of information, with the help of the checking balances and book-keeping reports, and the book-keeping control of the reciprocal discounts concerning the inter-branch operations.

The mechanization of the processing of informatory data and record operations has become an objective necessity which, in its turn, requires the centralization, on a larger scale, of the processing and record systems.

The practical research in the specialty literature concerning the complex mechanization is more and more directed not only towards the centralization but also towards the development of book-keeping and statistical recording in the form of a recording and processing system of the information on the economic phenomena which are the object of the two disciplines, so that the informatory economic system should correspond, in optimum conditions,

and comply with the requirements of the prompt management, with the economic analysis and control, at all levels.

The centralization and mechanization of record operations at the Savings and Consignment Bank are imperative both as a requirement of the economic efficiency and of the specific feature of the operations of this chain-link of the financial system, deriving from the depositors' right to have their money deposited on and withdrawn from the savings bank books all over the country's territory, irres pective of their place of abode, of the units which had issued the savings bank books and the localities in which the money requested to be returned had been deposited.

COMPLEXITY AND AREA OF THE CALCULUS AND RECORD TASKS

The analytical record of savings operations is grounded on a complex book-keeping technique, entailed especially by the variety of operations and their content. These operations consist of:

a) opening of a personal account for each holder of savings bank books issued by the operative offices;

b) centralization at the book-keeping offices of the documents of operations sent in by the operative offices, and their checking;

c) computation and recording of the interests in the documents of operations;

d) sorting of the deposit documents and, separately, of the return documents, per own office and the other book-keeping offices, which keep the account record cards of the savings bank books;

e) re-sorting of the documents belonging to the own book-keeping office, per issuing offices of the savings bank books in which the operations have been recorded (irrespective of the offices which performed them), and then, within each issuing office, per savings instruments, in the increased succession of the savings bank books serial number;

f) value totalling of the deposit and, separately, of the return documents concerning personal accounts, per each issuing office of the savings bank books in which the operations have been effected;

g) sorting and value totalling, per book-keeping office, of the deposit documents and, separately, of the return documents, concerning the savings bank books whose personal account record cards are kept at other savings bank branches, and the dispatch of these documents to the relevant book-keeping offices;

h) the extraction from the filling drawer of the account record cards to which are referring the documents of operations concerning the accounts of the own book-keeping office;

i) recording and balancing in the personal account record cards of the deposit and return operations and of the corresponding interests;

j) checking of the exactness of the recordings in the personal account record cards and the establishment of the sum totals of the movements of deposits and interests per offices issuing the savings bank books;

k) recording of the sum totals of the debit and credit movement, as well as of the deposits and interests, in the card indexes of the issuing offices;

l) centralization of the record data concerning the movement of deposits and interests, per issuing offices, and confrontation of the sum totals with the totals drawn during the preparatory work (item *f*);

m) the aggregate control of the interests computation;

n) the introduction of the personal account record cards into the filling drawers, after the operations have been recorded;

o) the monthly totalling of the daily movement of each record card, both of the deposits and interests, the entry of the sum totals in the book-keeping cards of the issuing offices and the drawing of the new general balances of the deposits and interests.

Important yearly operations of large proportions are added to the calculus, record and checking of the current operations, namely:

— the inventory of the balances and the checking of the concordance with the data of the synthetic book-keeping record within the end of year operations;

— the adding, at the commencement of each year, to the balances of the personal account record cards, of the interests due to the holders of savings bank books for the previous year;

— the calculus of the appropriate interests (to the balance of the personal account record cards after the adding of the previous year's interests) and the registering of the new interests in the personal account record cards, as well as their totalling up per issuing offices of the savings bank books and the carrying over of the sum totals in the synthetical records.

During the performing of these annual operations of large volume, the recording in the personal account record cards of the current operations is suspended, a fact which asks for supplementary efforts in the ensuing period for bringing the analytical recordings up to date.

The number of accounts and of the savings operations has considerably risen, as shown in the data below:

Table 1

The evolution of the number of accounts and of savings operations

Year	Number of personal account record cards	Number of savings operations	
		Total	Number of operations per account
1950	694,509	1,516,315	2.2
1955	1,355,804	4,532,428	3.3
1960	2,705,125	15,659,017	5.8
1965	4,311,499	27,761,464	6.4
1970 (envisaged)	6,000,000	40,000,000	6.6

The number of operations carried out each year is in fact increased to hundreds of millions of computations and recordings entailed by the processing phases of the recording process.

The tasks of calculus and recording incumbent on the Savings and Consignment Bank — if we bear in mind only those tasks related to the receipt, keeping and return of the money savings of the population, which form the basic activity of the institution — amounted to 560 million of calculi and recordings in 1965, and by 1970 they will attain 800 million.

The performing of such a big volume of calculi and recordings is, at the same time, a matter of book-keeping technique and, especially, an important problem of labour organization.

For such a volume of calculi and recordings, the rationalization and simplification, as well as the modernization through mechanization of calculus and recording operations, appear as an objective necessity.

In order to improve the economic informatory system underlying the management of the activity of its offices, the Savings and Consignment Bank has worked out a plan of gradual mechanization of book-keeping recordings of savings operations, starting with the mechanization of operations at the Bucharest offices which involve the highest number of accounts and operations (one million of personal account record cards with 5.5 million operations annually, totalling 112 million computations and recordings, i.e. 20 per cent of the all-country total).

Initially, the mechanization of the savings recordings was achieved at a number of savings bank branches in Bucharest City, on the basis of decentralization, by means of the *Ascota* book-keeping machines 170/25 and 170/15. Experience showed that in the decentralization system the mechanization of book-keeping operations did not provide a sufficiently higher working efficiency, due to causes inherent in this system.*

Taking account of this fact, the Savings and Consignment Bank has adopted the principle of gradual record centralization through the setting up within the Bucharest City Savings Bank Direction of a single calculus and book-keeping record centre for savings operations, which is called *The Department of Mechanized Recording of Savings Operations***.

The application of the centralized principle of the savings account of the Bucharest units and of keeping the records of operations in these accounts was preceded by the solving of the acknowledgement of the balance of return operations and the computation of the interests due to the holders at the clearing of the savings bank books.

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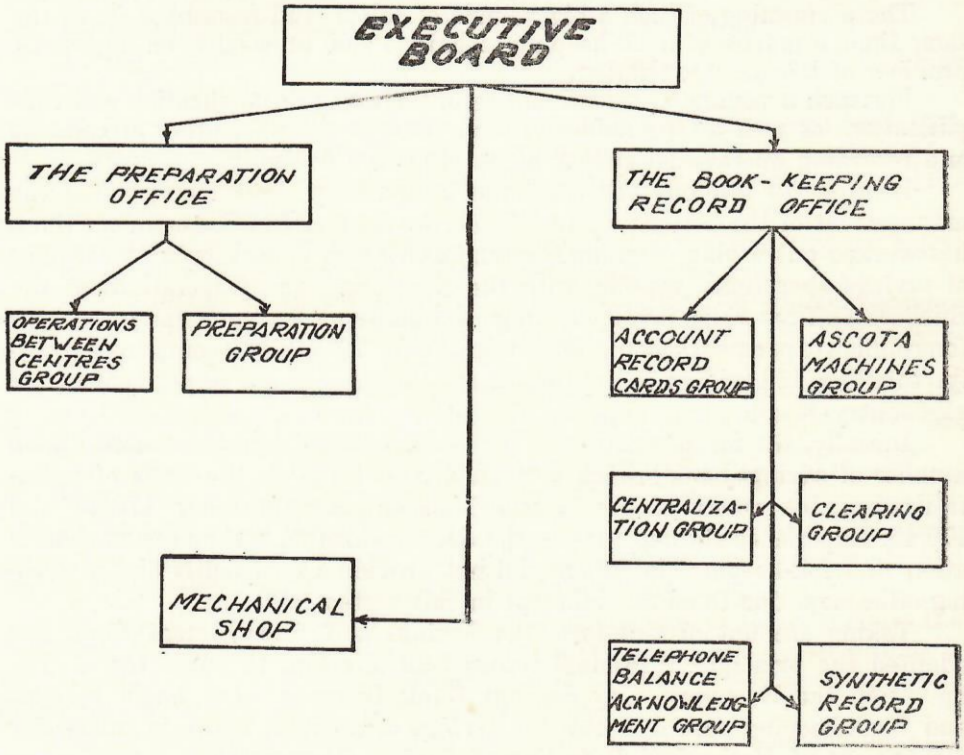
* The non-uniform use of the machine capacity, the need for an increased number of spare machines for possible breakdowns, the insuficient number of the specialty technical personnel for the supervision of machines, the lack of space, etc.

** This department has taken over from the former district savings bank offices and the decentralized agencies of the Savings Bank in Bucharest the almost one million savings accounts and all the computation and record work required by the operations carried out on savings bank books issued by the savings bank offices, and the procuration in the limits of Bucharest as well as the discount operations with the savings bank branches all over the country carried out between offices, on the the savings bank books.

ORGANIZATION AND TECHNIQUE OF THE CARRYING OVER AND PROCESSING OF INFORMATORY DATA WITHIN THE BUCHAREST CITY SAVINGS AND CONSIGNMENT BANK DIRECTION

The department of mechanized recording of savings operations under the Bucharest City Savings and Consignment Bank Direction has the following organizing structure :



The department of mechanized record of savings operations working under the Bucharest City Savings and Consignment Bank Direction has been endowed with book-keeping machines of the *Ascota* type, class 170 and 171, with 12, 25 and 35 computers, and with adding machines *(Ascota Simplex* and *Duplex*, *Olivetti*, *Supermetall)*. The technical endowment has proceeded in keeping with the present recording task of 20,000 operations daily.

To each recording operation corresponds a control lever. The following control levers are used at the department of mechanized recording of savings operations :

— for recording current operations in the personal account record cards (the movement of deposit and interest during the year) ;

— for the annual inventory of balances (deposit and, separately, interest, and the balance resulting from the deposit to which the interest due to

the holder for the previous year has been added) and the introduction in the record cards of the balances since the start of the year and of the interests due in the new year;

— for the centralization of the informatory data put down in the personal account record cards, totalled up within the current recording operations, per issuing office of the savings bank books;

— for the recording of the sum totals of the savings movement (deposits and interests) in the card indexes — ledger cards.

PRIMARY DOCUMENTS AND THE PREPARATORY OPERATIONS CONCERNING THE PROCESSING OF INFORMATION

The operative, book-keeping technique of the deposit and return operations in savings bank books used at the operative offices of the Savings and Consignment Bank all over the country is based on three documents of primary recording:

— *The deposit paper*, for the initial or subsequent deposits;

— *The return paper*, for the *partial* withdrawals from the deposit for which the depositors are given interests or interests and prizes, and for the *partial or total* withdrawals of deposits to which only prizes are granted*;

— *The clearing request (paper)*, in case of the liquidation of the savings bank book to which interests or interests and prizes are granted.

All the operative offices forward the recording documents to the savings bank branches to which they are subordinated, irrespective of the offices up and down the country that have issued the documents in which the operations have been recorded and of the branches that keep the personal account record cards of the savings bank books.

The documents of operations regarding the personal accounts kept at other branches are dispatched by the book-keeping offices provided with cummulative balance notes.

All the savings bank offices proper — inclusive those in Bucharest — perform the computation of interests in the course of the year at all deposit and withdrawal operations regarding the savings bank books with interests or interests and prizes, irrespective of the book-keeping offices which are keeping the personal account record cards of the respective savings bank books**.

The computation of interests is performed by means of interest computation tables and the interests are put down in the column "*Interest*" by the operators, in the deposit and return papers.

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* The Savings and Consignment Bank has made available to its depositors the following savings bank books: with interest, with prizes, with interest and prizes, with interests and motorcar prizes, and savings bank books for the building of private homes (with prizes).

** At the deposit and return operations effected by post offices, savings bank desks and the village authorized agent of the savings bank, the computation of interests is made by the savings bank branch which keeps the account record cards.

Table 2

Interest Computation Table

Deposits						May 24		216 days	
Sum	Interest	Sum	Interest	Sum	Interest	Sum	Interest	Sum	Interest
—	—	200	6.00	400	12.00	600	18.00	800	24.00
5	0.15	205	6.15	405	12.15	605	18.15	805	24.15
10+	0.30	210	6.30	410	12.30	610	18.30	810	24.30
15	0.45	215	6.45	415	12.45	615	18.45	815	24.45
20+	0.60	220	6.60	420	12.60	620	18.60	820	24.60
25	0.75	225	6.75	425	12.75	625	18.75	825	24.75
30+	0.90	230	6.90	430	12.90	630	18.90	830	24.90
35	1.05	235	7.05	435	13.05	635	19.05	835	25.05
40+	1.20	240	7.20	440	13.20	640	19.20	840	25.20
45	1.35	245	7.35	445	13.35	645	19.35	845	25.35
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
195	5.85	395	11.85	595	17.85	795	23.85	995	29.85
Returns:						May 23			

The computation and putting down of interests on the deposit and return documents close the series of informatory data needed to their processing within the book-keeping record operations.

The preparatory work preceding the book-keeping processing of information proper concerning the savings operations is performed at the department of mechanized recording by the preparation office, through the two groups: *Operations between offices* and *Preparation*. This work consists of the checking of the value concordance of the documents with the discount bills, the sorting of the documents per savings instruments, and per book-keeping offices, the dispatch of the documents concerning the accounts belonging to other offices.

The sorting of the recording documents per synthetic accounts and per issuing offices proceeds according to a tripartite numbering system of the savings bank books, and the grouping of the documents per book-keeping offices proceeds by means of the symbol nomenclator of the issuing offices. In the tripartite numbering system of savings bank books the number of each savings bank book is formed of three groups of figures:

— the first and second group of figures form together the symbol of the issuing office for the Savings Bank books*;

— the third group of figures represents the current number of the savings bank book.

*The three groups of figures form together the number of the savings bank book** (as for instance: 59-1-30264).*

* Initially, (in 1950), the first group of figures represented the book-keeping office, the second — the savings bank book issuing office, and the third one — the current number of the savings bank book. After the administrative reorganization on new territorial bases the tripartite symbol was maintained, yet with changed content, as shown above.

** The number of the savings bank book also appears on the personal account record card of the analytical record of the book-keeping offices.

The first group of figures of the tripartite numbering system of the savings bank books is used at the same time for establishing the kind of savings bank books, on the basis of the following distribution:

1—100 for savings bank books with interest;
101—200 for savings bank books with prizes;
301—400 for savings bank books with interest and prizes;
701—800 for savings bank books with interest and motorcar prizes;
801—900 for savings bank books for housing construction.

Under this distribution, each operative office issuing savings bank books has for all kinds of savings bank books the same symbol (excepting the savings banks books with prizes), only the first figure of the first group being different according to the savings instruments.

MECHANIZED RECORDING OF OPERATIONS

The account record cards drawn out of the card-indexes are delivered together with the documents of operations to the *Ascota* machine group.

The present working technique of the *Ascota* book-keeping machines, class 170 and 171, is based on the method of recording in the account record card, which is partially superposed on the balance-sheet book of operations.

In the clear space of the book (the first part) the following data are taken over in the machine and recorded in the account book:

a) *from the document of operation:*

1) the full number of the savings bank book (for example: 59-1-6540)*

b) *from the personal account record card:*

2) the balance of the deposit;
3) the balance of interests (the last balance);
4) the last control number.

All the data are posted in the machine successivelly, in the above mentioned order, by operating the keyboard in the middle part of the machine.

The posting in the machine and the reproduction in the account book of the preliminary information comply with the major requirements, bearing in mind that:

— the informatory link is ensured between the account book and the personal account record cards in which the operations had been recorded;

— the four informative items secure the automatic performance of two outstandingly important initial checkings: the *correct bringing out of the personal account record card* corresponding to the savings bank book in which each operation that is to fill the record card has been performed, and the *correct posting in the machine of the balance of deposit and interests*, which together with the value of the operation, conditions the accuracy of the recording result;

— enable, together with the other information put down in the balance-sheet book and in the personal account record cards, the further processing of the information both in the matter of the centralization of the recorded data

* The machine takes over 5916540.

and in the matter of the mathematical control of the accuracy of recordings and of the synthesis informatory data.

The correct bringing out of the personal account record cards and the correct carrying over of the old balances (deposit and interests) from the record cards are automatically checked by the machine through an own information (information no. 5) called the *checking by zero**.

After the posting in the machine of the deposited or returned sum, the machine writes down in columns 6—8 of the account record card and of the balance-sheet book the following data:

6) the date of the book-keeping recording** ;

then, as the case may be:

7) the returned sum, or

8) the deposited sum.

The appropriate interest calculated to the value of the operation which is written as the case may be is posted in the machine in the same way:

9) at returns, in the column minus interest;

10) at deposits, in the column plus interest.

After the posting of the two information concerning the operation recorded (the value of return or deposit, and interest, minus or plus) and the introduction of the respective values in the columns 7—10 of the account record card and in the balance-sheet book, the machine computes the two new balances of the account record card (deposit and interests), the new control number and adds to the new balance of the deposit the new balance of the interests. These sums are then written in the balance-sheet book and in the personal account record card in the columns:

11) new deposit balance;

12) new interest balance;

13) new control number;

14) new balance of the deposit added to the new balance of the appropriate interests for the current year.

After the recording of the operations in the personal account record cards belonging to a ledger group (issuing units), follows the emptying of the totalizators, an operation by which the total of the columns: old deposit balance, old interest balance, deposits, returns, interest plus, interest minus, new deposit balance and new interest balance is written down in the balance-sheet book after the last recorded operation.

When the mechanized recording of all operations in the personal account record cards and the checking of recordings are over, the balance-sheet books are delivered to the centralization group, and the personal account record cards are returned to the account record card group.

Of high importance is the verification of the accuracy of recordings for ensuring the concordance between the data on the personal account record

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* The *checking by zero* is carried out following the subtraction of the value of the information no. 1—3 from the control number (information no. 4). The subtraction proceeds automatically, immediately after the control number of the last operation in the account record card has been carried over by the machine. The result must be 0(*zero*), a figure which is directly written in column 5 of the account record card.

** It is posted only once, at the commencement of work, and is automatically printed at each operation.

cards with the data in the savings bank books and with those of the synthetic recording of the department of mechanized recording of savings operations. This verification is performed by the *Ascota* machine through the "*O*" mark imprinted on the balance-sheet book after the total "*new deposit balance*" and „*new interest balance*". The machine performs this verification automatically, by adding the total of the columns old deposit balance and deposits, and subtracting the total of the columns new deposit balance and return balance. The verification of interests proceeds in the same way.

For the automatic verification of the accuracy of recording in the personal account record cards, the *Ascota* machine secures a flat qualitative superiority of the mechanized recording system over the manual recording system, by eliminating the discordances and the prolonged searches for their tracing and clearing up, a work which is particularly difficult bearing in mind the big volume of accounts and operations.

On the basis of the sum totals of the balance-sheet books gathered form the mechanized recording group, the centralization group centralizes, for the whole department, the informatory data recorded in the personal account record cards. The centralization is performed with the help of adding machines.

On the basis of the centralized situation, the sum totals of the daily movement of deposits and interests are recorded in the ledger group cards corresponding to the issuing offices in whose savings bank books the deposit and return operations had been performed.

The general balance of deposits in the ledger group record cards, which are totalled up, must correspond to the data of the synthetic recording group, for each deposit in part.

At the beginning of each year, the department of mechanized recording of savings operations suspends the recording of the current operations for the new year and performs the following operations:

— the computation of the due interests to the balances at the end of the previous year (deposit plus interests) and their manual writing down in the personal account record cards;

— the carrying over, in the personal account record cards, of the balances at the end of the previous year (deposit plus the interests on december 31st), as initial balances (deposit) at the start of the new year;

— the carrying over of the new year's appropriate interests in the columns balance-interests and the making up of the new control figure corresponding to the initial balances for the new year (deposit and interests);

— the inventory operation, which comprises for each personal account record card, on four columns, the following data:

- deposit balance on December 31st of the previous year;
- the interest for the previous year;
- new deposit balance plus the interests on December 31st of the new year;
- the appropriate interest for the new year;

— the compilation of the lists of interests for the previous year, on the basis of which the Savings and Consignment Bank branches write down in the savings bank books the interests by request of the holders of savings bank books.

IMPROVEMENT IN THE WORKING TECHNIQUE OF THE ASCOTA MACHINES

Considering the wide possibilities of the *Ascota* machines to adapt themselves to the specific work and needs of book-keeping recording, it emerges as outstandingly important, for the establishment of the technology of the mechanized work, the study and thorough knowledge of the technical qualities and possibilities of these machines and the discovery of the best technical solutions for the elaboration of programmes for the control levers of the machines in view of the mechanized performance of book-keeping recordings.

These possibilities are confirmed by the significant improvements provided by the present machine recording technique, based on the superposition of the account record card on the balance-sheet book and the simultaneous recording of the data in both documents. Although the structure of the machine permits the simultaneous recording of the operations in two documents by superposing, before 1966 the successive recordings was employed with the balance-sheet book in the right side and the account record card in the left side of the *Ascota* carriage. According to this system, all the data were recorded in the first place in the balance-sheet bookand then were automatically discharged in the account record card. Although this recording system ensures the control by zero for the identity between the document and the account record card, the accuracy of the discharge of the entries and the final balances in the account record card could not be checked.

The mistakes caused by the machine in case of defects had as a consequence the emergence of discordances between the data of the analytical book-keeping record and of the synthetic book-keeping record, whose subsequent clearing up is particularly difficult due to the big volume of accounts and operations.

The transition from the old to the new recording technique based on the superposition of the account record card on the balance-sheet book and the simultaneous recording in the two documents has eliminated the possibility of an erroneous discharge of data and, at the same time, allowed the totalling, on the vertical line, of the old and new balances of the deposits and interests and the daily checking of the accuracy of all recordings performed. The improvement of the work technique has been achieved following the corresponding change of the control levers of the *Ascota* machines. These improvements were conducive to the qualitative increase of operations as well as the decrease of the number of obligatory stops of the machines (from 30 to 17), a fact that contributed to the rising of labour productivity and the considerable reduction of the computation and recording tasks of the machines.

NEW POSSIBILITIES FOR IMPROVING THE INFORMATION PROCESSING TECHNIQUE

The advantages resulting from the centralization and mechanization of the recording at the savings bank branches in Bucharest may be summed up as follows:

— a considerable qualitative improvement of the analytical recording concerning the sums deposited by the population;

— the achievement of better labour organization, the rising of the workers' qualification, and their specialization on the basis of a better division of the labour, the rising of labour productivity;

— an increased degree of utilization of the book-keeping machines' capacity;

— conditions made available for the further rationalization and simplification of the work involving the processing of data;

— keeping the books up to date, a factor especially important for the service to the depositors and, consequently, for the expansion of the savings drive. Mention should be made, accordingly, of the fact that, following the centralization and mechanization of the book-keeping recordings, the bringing to date of the recordings of operations in the current year — which as shown above, are suspended at the start of the year for the fulfilment of the operations implying the adding of the previous year's interests to the balance of deposits, the inventory and the computation of the appropriate interests for the current year — covers only 3 months instead of 6 months required by manual recordings;

— an almost full elimination of the mistakes in the recordings and, consequently, the securing of full concordance of the analytical record data with the data of the synthetical book-keeping record;

— the efficient division of the pay-desk activity from the recording activity, very favourable to preventing infringement of law.

The steady improvement of the processing of informatory data concerning the money deposited by the population is an important concern of the relevant departments of the Savings and Consignment Bank Central. The practical investigation on the possibilities of improving is directed towards a number of important objectives, whose content is briefly presented below:

a) *Expansion of mechanization of the processing of informatory data.* On the basis of the positive results yielded and of the experience gained following the centralization of the savings account and the mechanization of book-keeping operations in Bucharest City, the expansion of mechanization of the analytical recording of the savings operations is taking place on a county plane.

The mechanization of the analytical recording of savings operations is analyzed in close connection with the telephone confirmation of the balance which must provide an exemplary servicing of the depositors by the operative offices all over the country.*

So far, the processing of the informatory data on savings operations has been mechanized at 12 big savings bank book-keeping branch offices at Brașov, Ploiești, Arad, Jassy and Galați. This year and the coming years will see the mechanization of recording operations at the other book-keeping units of the savings bank as well.

b) *Systematization of the keeping system of personal account record cards.* The personal account record cards of the holders of savings bank books are

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* On this line, since the start of 1967 the use of the teleprinters (*TELEX* apparatus) has been adopted for the delivery of the data necessary to the balance confirmation, at savings bank branches in the county capital town, a fact conducive to rapid and safe delivery between the savings bank centrals in which some one-third of the total number of balance confirmation is concentrated.

arranged in groups at the mechanized recording department according to the savings bank branches in Bucharest. At each branch the personal account record cards are kept in the growing number of the symbols of the subordinate issuing office, and within each symbol, in the growing order of the serial number of the personal account record card.

The keeping, under the condition of city centralization, of the grouping per branches and per issuing office of the personal account record cards, of the totalling up and centralization is grounded on the requirements linked to the survey of the plan fulfilment per issuing units of the savings bank books.

The possibility of the simplification of methodology of distributing the plan targets and the surveying of the plan achievements in Bucharest is now tudied at the Savings and Consignment Bank. The achievement of the simplification in the planning domain and the surveying of the plan fulfilent will create the conditions for the simplification of operations at the Preparationgroup and of the synthetical recording. Thus:

— the personal account record cards might be kept in the growing order of the issuing units symbols, and within each symbol, in the growing order of the account number of the record cards;

— the activity involving the grouping of the documents of operations per savings bank branches might be eliminated;

— the number of the ledger cards* and, through this, the number of the sum totals discharge and of the *control by zero* of the totalling accuracy might be reduced.

Likewise, for the telephone acknowledgement of balance and the settling of the correspondence pertaining to the recording in the personal account record cards, as well as the settling of the demands for the liquidation of savings bank books, and the *finding* of the card-indexes in which the account record cards are kept will be considerably easied.

The systematization of the manner of keeping the personal account record cards will contribute to the rise of labour productivity.

c) *Mechanization of the interests computation, their simplification and control.* The computation of interests at the operations on the savings bank books holds prime of place in the processing system of informatory data concerning the activity of deposits. As many as 25,000,000 calculi of interests to current operations were effected in 1965 on the whole network, to which 5 million interests calculi for the new year to the individual balances were added since the start of the year.

The problem of the interests computation has been partially solved following the introduction of the computer-table of interests which is successfully used in the computation of interests at operations all the year long. The efficiency of the use of interests computers is however less efficient in the computation of interests of the current year, since the balances to which the interests are computed are bigger than the current operations and are formed of figures belonging to a higher mathematical serial number (for instance, 47.865).

It stands to reason that the mechanization of interests computation is of high interest, especially at the computation of interests entailing the new year, an operation which must be performed at the beginning of each year,

* At present, one for each issuing office of savings bank books.

in the shortest span of time, for cutting to the minimum the period when the processing of the documents concerning the current operations is suspended.

At present, the possibility of overcoming the difficulties facing the mechanization of interests computation is analyzed. A solution studied in connection with this problem would be the sorting of documents per operations in each ledger group, prior to the bringing out of the personal accout record cards — eventually, as a final operation of the Preparation group — according to the days in which the operations were carried out. This sorting would permit the computation of interests with a small number of changes of the coefficient of calculus which would be posted in the machine for each operative day. The additional operation entailed by the sorting of documents of operations per days of performed operations would be largely compensated by the elimination of the present work of totalling at the adding machines of the interests calculated and written down in the documents of operations.*

Undoubtedly, the mechanization of interests computation would constitute a step forward and would considerably improve the process of interests computation, the control of calculus included.

For a better service to the depositors and for ensuring accurate operations and preventing alterations having in view the infringement of law, the Savings and Consignment Bank also studies now the mechanization of the recording of deposit and return operations, and of the annual interests in the savings bank books, at the offices having a big volume of pay-desk operations.

The mechanization of the recording of operations in the savings bank books is outstandingly advantageous, as it quickens the service to the depositors, an essential factor in the promotion of the savings drive. Likewise, the mechanized recording of operations in the savings bank books prevents the alteration in their balances, a fact particularly important in the conditions of the savings bank books validity at all operating offices in this country.

d) *Recording of documents according to the kind of operation.* Under the conditions of a big volume of operations, any simplification and rationalization in the activity of processing the informatory data is highly important, having a direct effect upon the rise of labour productivity. At present, within the preparatory work at the department of mechanized recording under theBucharest City Savings and Consignment Bank Direction, the documents of the savings operations are sorted together with the documents of the return operations in the growing order of symbols, and, within each symbol, in the growing order of the current number of the personal account record card.

This manner of sorting the documents is the most advantageous for the bringing out of card-indexes of the personal account record cards in which the operations effected are to be recorded, and their rearrangement in the card-indexes after the recording is over. Still, the alternation of the documents of deposits and of returns within the mechanized recording of operations in the personal account record cards has negative implications on the process of recording in the personal account record cards, which become slower, owing to the fact that the change of the lever's position controlling the stopping of

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* In the mechanized system of the interests' computation, in step with the carrying out of the interests' calculus, the computation machine performs concomitantly the totalling up of the interests, so that at the end of the operation the machine indicates, besides the last performed operation, also the sum total of all interests calculated.

the account record card on the column "*Deposits*" or "*Returns*" is needed at each change of the kind of recorded operation. The omission of the lever position brings about a definite change of the content and result of the recording. Hence, the possibility of mistakes, cancellations, discordances of sum-totals, their correction, etc. That is why the possibility of the separate processing and recording of documents of deposits and returns within each ledger group is studied. Considering that this implies only a single change of the lever, irrespective of the number of recording operations, a correct recording of operation in the column "*debit*" or "*credit*" is secured, by the very invariable kind of documents of operations, both at the deposit and return situation and at the interests situation.

e) *Measures for strengthening the security of recordings performed by mechanized means.* An organizing task of highest importance is to secure, besides the arithmetical concordance of the analytical record data with the synthetical record data, also the accuracy of each record of the analytical accounts record, which must rigorously correspond to the content of the operations effected. This task, of ensuring the real, effective accuracy of recordings can be achieved by efficient organizational measures which would prevent and eliminate the recordings involving infringement of law. This implies the problem of security of recordings and the personal responsibility of the personnel working in the book-keeping record sector.

Manifestly, this problem seems being solved by the signatures on the documents, situations etc., and within the mechanized recording, by the serial number of the book-keeping machine operators, which the machine reproduces at each book-keeping recording. These numbers are the identification mark of the operator performing each recording. At the department of mechanized recording of savings operations the numerical key in the left side of the general key of the *Ascota* book-keeping machines is used for the identification of the workers operating the recordings in the balance-sheet books and in the personal account record cards.

Under the present conditions, when these marks can be changed any time by anybody, this identification system is not efficient and does not serve, practically, to the aim pursued. The efficiency of any nominal control system of recordings is conditioned by the prevention of any possibility of changing, any time and by anybody, the serial numbers, this possibility being assigned only to the head of the mechanized unit or to a specially authorized person. Consequently, the improvement of the construction of the machines is necessary to the effect that the keys bearing the identification numbers of the workers operating the recordings might be blocked after the respective numbers have been fixed in the machine, by means of a control key in the custody of the person entrusted with the security of recordings. Without these measures, the system of mechanized processing of operations incurs risks, facilitating the recording of sham operations.

The possibility of the application of security devices at the *Ascota* machines now in operation is studied at present.

f) *Rising the professional training standard of the analysts and programming operators.* The experience gained by the Savings and Consignement Bank in the domain of mechanization of the processing of information on the population's deposits spotlighted the oustanding importance of a correct

programming of operations. As proved by practice, the book-keeping machines with control lever — a category which includes the *Ascota* machines as well— offer multiple possibilities of adapting them to the specific needs of record and calculus of various economic units. The settling, through the control lever, of the working programme including the kind of operations which are to be performed by the machine, as well as their sequence is a highly responsible job which calls for the thorough knowledge of both the machine itself and its possibilities, and of the specific features of the book-keeping and statistical work. Hence, the analysts and programming workers have to be accountants, economists and statisticians alike, just as technicians specialized in book-keeping machines ; they must have thorough specialty training in the economic and book-keeping domains and to be conversant with the most modern means and methods of mechanization of operations, with application to the specific of the features units where they are employed.

Bearing in mind the development prospects of mechanization and the transition to the complex mechanization of the processing of informatory data concerning the population's deposits, the Savings and Consignment Bank studies the possibilities of organizing the professional training of the future analysts and programming workers, namely the specialization of persons experienced in the activity of the savings bank activity.

The Savings and Consignment Bank also studies the possibility of improving the system of the information processing on the population's deposits, as well as the transition to the complex mechanization by using highly efficient machines provided with punching cards or magnetic tapes, which will enable the further cutting of the time needed for the carrying out of recordings.

The broad possibilities which would be opened by the use of the electronic computers, enabling the considerable cut of the time of operations, would ensure a corresponding solving of the drawing up of the annual inventories and of other book-keeping and statistical situations.

The use of electronic computers implies the previous study and the corresponding solving of the problem concerning the method of the posting and keeping of information. The punched card method, just as the method of punched or magnetic tapes does not meet to the full the specific demands of the Savings and Consignment Bank which, as it was shown, has to keep grouped together the records of the whole movement of each personal savings account. Much more adequate seems to be the use of individual account record cards with magnetic track, enabling both the plain numerical posting of the needed informatory data and the recording of the same information on magnetic tape, a fact which would permit the subsequent, rapid processing of the respective information either for the inventory or for the working out of other situations by means of an electronic computer.

The introduction of the electronic computers would bring about the rapid performing of current operations ; yet, this arises the problem of the full use of the working capacity of the electronic aggregate. This problem might be solved following the centralization, on a wider scale, of the book-keeping record and the expansion of mechanization of operations now performed manually (the record of the current accounts, the record of consignments, the record discounts among branches, both at the county directions and at the Savings and Consignment Bank Central.

AMELIORATION DU SYSTEME D'INFORMATIONS DE LA CAISSE D'EPARGNE ET DE CONSIGNATION EN CE QUI CONCERNE LES DEPOTS DE LA POPULATION

Dans cet article on présente certains problèmes regardant le perfectionnement du système d'étude et d'évidence des informations concernant les dépôts de la population à la Caisse d'Epargne et de Consignation.

Mettant en relief la complexité du processus d'étude des informations et le grand volume des opérations de calcul et d'évidence ayant trait aux dépôts de la population, on analyse les causes qui ont nécessité la centralisation des comptes d'économies à Bucarest. Après avoir exposé les caractéristiques des machines comptables *ASCOTA* 170, introduites pour la mécanisation des opérations d'évidence à la Caisse d'Epargne et Consignation, ainsi que la technique concernant la façon de recueillir et d'étudier les données informatives et le contrôle des enregistrements, on présente la structure de l'organisation du Service de l'évidence mécanisée dans le cadre de la Direction municipale de la Caisse d'Epargne et Consignation de Bucarest, la capacité de travail et l'équipement technique de ce service.

Analysant les résultats et les avantages de la centralisation et de la mécanisation des travaux d'évidence des opérations concernant les économies, on insiste dans cet article sur les améliorations effectuées et sur celles qui peuvent encore être effectuées à la méthode d'étude des informations dans le cadre de la Caisse d'Epargne et Consignation. A savoir: développement de la centralisation et de la mécanisation des travaux d'étude des données informatives, systématisation de l'ordre dans lequel sont conservées les fiches personnelles de compte, mécanisation du calcul des intérêts et simplification de la totalisation et du contrôle de ceux-ci, mécanisation de l'inscription des opérations dans les livrets d'épargne, etc.

En conclusion de l'article on fait des propositions ayant trait à la nécessité d'améliorer la construction des machines comptables en vue d'assurer la sécurité des enregistrements dans les fiches personnelles de compte qui forment l'évidence analytique des dépôts de la population, ainsi qu'à l'amélioration du niveau d'instruction professionnelle des programmateurs. On expose également les problèmes reliés à la nécessité d'adopter des méthodes supérieures d'étude des données informatives à l'aide d'une mécanisation complexe.

УЛУЧШЕНИЕ СИСТЕМЫ ИНФОРМАЦИИ ГОСУДАРСТВЕННОЙ СБЕРЕГАТЕЛЬНОЙ КАССЫ В ОТНОШЕНИИ ВКЛАДОВ НАСЕЛЕНИЯ

В данной работе рассматривается ряд вопросов усовершенствования системы обработки и учета информации в связи со вкладами населения в Государственную сберегательную кассу.

Подчеркнув сложность процесса обработки информации и большой объем исчислительных операций и отчетности, связанных со вкладами населения, авторы анализируют причины, потребовавшие проведения централизации личных счетов вкладчиков в г. Бухаресте. Изложив предварительно характеристику бухарестской вычислительной машины «ASCOTA» введенной

с целью механизации бухгалтерской отчетности Государственной сберегательной кассы, а также и технику сбора и обработки информационных данных и контроля бухгалтерских записей, авторы описывают затем систему организации отдела механизированной отчетности при Городском управлении Государственной сберегательной кассы в Бухаресте, его производительность и техническое оснащение.

Анализируя результаты и преимущества централизации и механизации операций по сбережениям, авторы подчеркивают как уже внесенные улучшения, так и улучшения, которые еще могут быть внесены в технику обработки информации в ГСК, а именно: распространение централизации и механизации операций по обработке данных информации, систематизация порядка хранения личных бухгалтерских карточек (счетов) вкладчиков, механизация вычисления процентов; упрощение операции по их добавлению к капиталу и контролю; механизация записи операций в сберегательные книжки и т. д.

В заключительной части труда помещены предложения в связи с необходимостью улучшения конструкции бухгалтерских машин для обеспечения точности записей в личные карточки, представляющие собой аналитическую отчетность вкладов населения, и с повышением уровня профессиональной подготовки програмировщиков. Наряду с этим, рассматриваются и вопросы. связанные с необходимостью введения ряда более усовершенствованных методов обработки информационных данных с помощью комплексной механизации.