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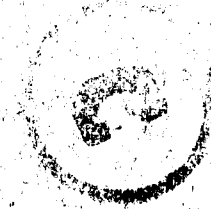
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Railway Accounts and
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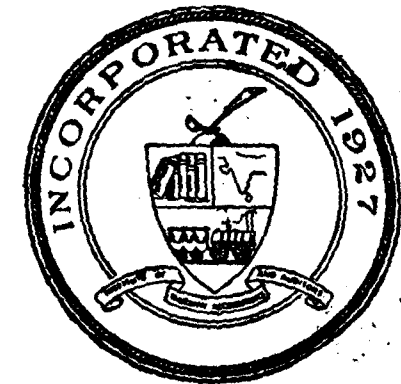
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PARTS I—II

[Vol. IX

RAILWAY ACCOUNTS & FINANCE



THE QUARTERLY JOURNAL OF
The Institute of Railway Accountants
and Auditors

I. Special Articles—

PRESIDENTIAL ADDRESS, Sir CAMERON BADENOCH, K.C.S.I., C.I.E., I.C.S., Auditor-General	1
FOOD SUPPLY ORGANIZATION, T. V. WOODS, Deputy General Manager, B. & A. Railway	12
BUSINESS RESEARCH AS A TOOL FOR RAILWAY MANAGEMENT, GEORGE RUGGE, Atchison Topeka and Santa Fe Railway	19

II. Reviews

A PLAN FOR POST-WAR TRANSPORT ROADS FOR BRITAIN OUTLINE OF RAILWAY AUDIT AND ACCOUNTS	22
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III. Official Papers

RAILWAY BOARD'S REPORT, 1943-44	24
---	----

IV. Notes and Memoranda

RAILWAY BUDGET, 1945-46	25
VALUATION OF STOCK-IN-TRADE	25
DEPRECIATION	30
TIED-MILEAGE UNIT SYSTEM	31
CHANGES IN CLASSIFICATION	32

V. Institute News

CONFERENCE PROCEEDINGS	36
OBITUARY: K. C. SRINIVASAN	38

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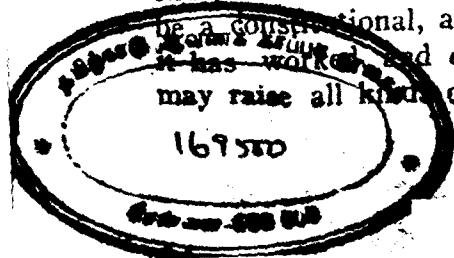
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to date the application of development plans from 1946. We may not be wrong to take the hint for our own work in the Institute. From another point of view also the current year is an important date for the Institute. I find that 1945 will witness the "Coming of Age" of the Institute. I hope it will be possible to celebrate this event in a fitting manner in the course of the year.

I pass on now to the topic which I have selected as the subject of my address to you. I have had some difficulty in choosing this subject; I prefer not to speak on important problems which may in the near future have to be settled by Government, for instance, separation of railway finance, for what I might say might be taken in evidence against me. I also do not desire to discuss technical problems, partly because I am doubtful whether I am sufficient of a technician, and also because I am certain that you have an orgy of technical discussion in front of you. I have decided to speak on Indian audit and accounts during the past two decades—generally in relation to the constitutional development. My survey is confined to Indian Government accounts and audit, the aspect which is of paramount interest to most of us. The developments in the organisation of Commercial accounting and auditing would require further full scale treatment. The survey connects itself, somewhat loosely, it is true, with two constitutional stages, that of the Montagu-Chelmsford constitution and that of the constitution of the Government of India Act, 1935, but more closely with the terms of office of my two distinguished predecessors. Sir Frederic Gauntlett and Sir Ernest Burdon, men wholly dissimilar in outlook and administrative ideas. Such a review may, I hope, give us a better perspective of the future status and role of Government accounts and audit in post-war India.

The peculiar and unique feature of the system of Government accounts and audit in India is their combination in one organisation under an authority which has a large measure of independence of the Executive Government. The system may be a constitutional, an accounting and an audit anomaly, but it has worked, and does work, most effectively. Theorists may raise all kinds of objection to it, but, provided that the



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system is directed with an acute perception of the proper values on the accounting and on the audit sides, and provided it is worked with understanding, with a sense of proportion, and with tact, it can supply all the service of a separated accounting organisation and lose none of the effectiveness and independence of audit. A year or two ago, I had the advantage of an independent comment on our system by the representatives of the Comptroller and Auditor General of Great Britain, who examined the system of Military Accounts and our test audit of them to report on the acceptability of the certificate of the Auditor General of India to the joint Defence Services accounts. They were surprised how even in this sphere of separated audit, the Auditor General was consulted about and made privy to administrative decisions of Government but they recognised how far these previous consultations might obviate objection and promote smooth working.

This basic feature of our system of Government accounts and audit survived the Montagu-Chelmsford Reforms. I was told then that the question of separation had come up, and that many had thought that separation should then be introduced, and that accounts should be provincialised. There was, I think, no doubt at all that responsible opinion in the early twenties considered that the separation of accounts and audit in India was inevitable, and that it was only a question of time and experiment before it would be achieved. Sir Frederic Gauntlett was a reluctant separationist, as he had considerable belief in the system which he had so long practised as an officer of Indian Audit Department. He was, however, influenced very greatly by Mr. Jukes who was an out and out separationist, and the latter tried hard to make Sir Frederic induce Government to decide finally for separation before he retired in 1929. As you know, Military or Defence Services accounts had never been under the Auditor General of India, and after an abortive effort by Sir Frederic Gauntlett in the first half of the twenties to make them fall into line with the rest of the Indian accounting organisation, separation of accounts and audit in this sphere became a recognised feature. In Railways, the drive for separation of accounts and audit received impetus from the successful movement to separate railway finance, and it was

facilitated by the extension of State management to the previously Company-managed East Indian and G.I.P. Railways where separation of accounts and audit already existed in the Government Examiner system. Separation of accounts and audit on Railways was completed in 1929-30. There were separation experiments both in the Central Government accounts and in the accounts of one province, the United Provinces. That the separation system was obviously much more expensive did not seem to matter, and Mr. Jukes thought that the considerable extra sums the United Provinces experiment was costing the Indian taxpayer were fully justified by the increased efficiency of the separation arrangement, the only proof of which, as far as I could find out, was that the United Provinces budgeting was much closer than that of other provinces. Thus during the twenties everything seemed set for complete separation of accounts and audit.

Another marked tendency which displayed itself during the decade of the twenties and during the regime of Sir Frederic Gauntlett was that of specialisation. There was a definite trend towards concentrating specialised knowledge and forming specialised branches to deal with particular manifestations of Government activity. The most noteworthy example of this was the formation of the Commercial Audit Branch, a branch which during its existence under the present Director of Railway Accounts undoubtedly did exceedingly good work. It is perhaps doubtful whether commercial audit, as at present organised could have functioned as effectively but for the development of the specialised Commercial Audit Branch. It seems strange that these separatist tendencies should have been coupled with a policy of centralisation. Those who have held charge of offices during the twenties will remember it. It was not, I think, a good feature of the administration of the Indian Audit Department in those days; it tended to congestion of work in the Auditor General's office and to blurring of the responsibility of Accountants-General and Comptrollers.

A much vexed question of the nineteen-twenties was the justification and scope of what was then described as Higher Audit. The Indian Audit Department was not responsible for the idea behind this activity of the Department. It arose from

a paragraph in constitutional despatch from the Government of India to the Secretary of State for which the then Finance Member was responsible. Those of you who have studied the old *Introduction to Indian Government Accounts and Audit* will remember the paragraph, and I do not need to quote it. At any rate there is no doubt that the seed sown by that dictum of the Finance Member fell on very fertile ground, and there was during the twenties an orgy of higher audit, which led a wit in the Government of India to describe audit as the second industry of India, the first, of course, being agriculture. I think that undoubtedly audit did then run riot. I now feel guilty to some extent myself. It was not confined to a financial audit, but ranged the field of administration and of statistics, and quite frequently got out of its depth. Good results undoubtedly were achieved, but at a cost of somewhat difficult relations between audit and the executive Government, relations which were not improved by the personalities of the head of the Indian Audit Department, or for that matter of the Finance Department.

Despite these doubtful tendencies of the nineteen-twenties, many of which were connected in a way with a period of vigorous life in the Department there was an immense amount of good work and very sound development in Government accounts and audit during these years. A fine system of administration within the Department was developed (a system to which tribute has been paid by officers who recently have received training in it). A high standard of work both on the accounting and the audit sides was established, so high indeed that we all felt most chagrined if we were ever found departing from a state of perfection. We never liked to find that the Indian Audit Department could err, and there was a good deal of trouble if it did. The accounting system was modernised by the introduction of machine accounting, both in Civil offices of accounts and audit and on the Railway side. The development on Civil side, though slow, was probably sounder. On the Civil side, we have never so far had to retrace our steps, a claim which you on the Railway side cannot make, as you suffered undoubtedly during the latter part of the twenties from over-enthusiastic exponents of machine accounting.

That, in very brief outline, is the picture of the twenties, and if the selection for the post of Auditor General in 1929 had been other than it was, these tendencies would have been further developed, and the position of the Indian Audit Department and of the Indian Audit and Accounts Service would have been very different from what it is. Perhaps, however, we may attribute too much to the influence of personalities and too little to the influence of events, for undoubtedly the great slump, which started in 1929 and became an economic blizzard in the following years, influenced very greatly the development of the Indian Government Accounts and Audit system. Economy was imperative, and lack of money put a full stop to certain movements and forced development into more economical and, to my mind, very much sounder lines.

The first important event of the accounts and audit history of the thirties was the decision, partly forced by circumstances and partly due to definite conviction, to stop any further separation of accounts and audit. Where separation was an accomplished fact, as on the Railways and in Military Accounts, there was of course no question of reversal; but where separation was recognised to be in the experimental stage it was terminated. This was an exceedingly important decision in relation to the preparations for the new constitutional settlement ultimately embodied in the Government of India Act, 1935. The preliminary plans for dealing with Government accounts and audit under the new constitution were undoubtedly to separate and provincialise accounts, and it was not without some difficulty that the constitution-makers were persuaded to preserve the existing system in the Civil accounts of the Centre and of the Provinces. It was fortunate for the Indian Audit Department that Sir Ernest Burdon, a convinced adherent of the combined system, happened to be on leave in London in 1933 and used all his influence towards retaining the combined system of accounts and audit for which the Centre should pay. It was also fortunate that Sir George Schuster, the then Finance Member, recognised the efficiency and economy of our arrangements and gave his support to them, a support which was continued by his successor. I think most of us are thankful that this decision was taken, and those of us who have been responsible for

working both statutory separated audit and the combined system consider that we have been more effective as auditors under the latter.

Another direction in which engines were reversed was in connection with specialisation. Here again the decision to break up the Commercial Audit Branch and the Branch of Examiner of Customs Audit, and to make the Provincial Accountants-General and Comptrollers responsible both for Commercial Audit and for Customs Revenue Audit within the areas of their jurisdiction, was enforced partly by the need for economy, but was also due to the conviction of the then Auditor-General that the organisation of the Indian Audit Department should be on an area basis, that the Accountant-General should be responsible for all varieties of Civil audit within that area, and that this organisation should not be compromised by separate specialised branches with jurisdiction cutting across the jurisdiction of the Accountants-General. He believed that the Government accounting and audit staff should be competent to deal with all Government activities whether commercial or departmental and he was opposed to specialisation, at any rate in the gazetted ranks of the Department. I have no doubt at all that this was a sound administrative decision, particularly with Provincial autonomy impending. It merely carried further the decision taken nearly twenty years before to amalgamate Civil and Public Works accounts. This decision did not of course affect the spheres in which specialisation was an accomplished fact, *i.e.* on Railways and in Military Accounts.

Again, a process was started in the early thirties, and pursued consistently throughout the decade, which was contrary to the tendency of the previous decade in the decentralisation of authority, in so far as this was consistent with the administrative, accounting and audit responsibility of the Auditor-General. Senior members of the Indian Audit Department are familiar with this, and there is no need to enlarge. There is no doubt that this movement towards decentralisation tended to develop and emphasise the responsibility and prestige of the various Accountants-General under the Auditor-General, whether Provincial or departmental.

Finally, there has been in the thirties some abandonment of the sphere of higher audit. Practically everything in the nature of administrative audit has been eliminated as being outside the scope of the responsibility of the Indian Audit Department. Audit is financial audit, and, although there may have been some evacuation of previously occupied territory, I am convinced that there has been no diminution in the effectiveness of audit within the jurisdiction that is legitimately its own. I also believe that the decision to abandon certain aspects of higher audit has made for better relations between Indian Audit Department and the Executive Governments particularly the Finance Departments. I am doubtful whether, if the tendencies of the twenties had been further developed, it would have been possible to arrange the alliance between Finance Department of the Central or Provincial Governments and the Indian Audit Department, the terms of which are embodied in the various concordats.

In the sphere of Railway Accounts and Audit, the developments of the nineteen-thirties have, I think, been the logical consequences of the decision taken in the twenties to separate Railway finance and separate Railway accounts and audit. So long as parliamentary control over Railway expenditure was the paramount idea in Railway finance, the system of separate Finance Department control over accounts and accounting establishments continued. But, with the development in the Government of India Act 1935 of the commercial idea in Railway management, there was inevitably the demand that the accounting system should accommodate itself to the separate commercial units in Railways, and not remain an individual organisation with a separate allegiance. Of course now that it is problematical whether the Federal Railway Authority idea will ever be carried out in practice, it may be that the placing of the Chief Accounts officers under General Managers is a premature development. I should not like to attempt a forecast what the high policy which will regulate Railways in this respect will be. But as the management of Railways must depend more on commercial ideas and practice than on theories of parliamentary control over expenditure, the recent decision though doubtless it irks many of you, is inherently a suitable one.

I am, of course, prejudiced because I have been intimately concerned with developments in the Indian Audit Department during the last decade, but I am convinced that the general reversal of policy which it saw has been in the interests of India. The Constitution Act of 1935 provided that Provinces, after a certain time, could elect to have their own Auditor-General, that is to say their own accounting and audit system. I have never heard that any Province even thought of having the matter formally considered. Apart from the saving of money which the present system secures to a province, it provides it with an efficient and experienced organisation, outside politics, giving all the help and co-operation necessary, but also supplying that independence of view which, I believe, is respected and welcomed. The Indian Audit Department in connection with the Reserve Bank of India has carried through the separation of all Provincial and Central balances, a project which was abandoned during the twenties as an almost impossible one. In ordinary times the Department now closes the accounts of all the various Governments with all the inter-Government and inter-departmental adjustments months earlier than before, and it has done all this in its stride without making heavy weather of the problem or being unduly elated over the achievement. The policy of the nineteen-thirties has further preserved for India the Indian Audit and Accounts Service which would inevitably have broken up, had there been separation of accounts and audit and the provincialisation of either or both. I consider that this result is of the greatest value to India.

Finally, I think that this policy has developed in the Provincial Accountant General and his office an authority and an organisation which will provide a readymade Auditor-General of the Province with his Department, should any Province like to take action under Section 167 of the Government of India Act. Again, one would be rash to prophesy what constitutional changes are impending, for constitution-making is probably not yet completed. My own feeling is, however, that we have in the Indian Audit Department a system which is acceptable generally throughout India, and I should be surprised if there is any strong demand that it should be altered.

Limits of time have made this survey necessarily sketchy, and there are several important developments to which I have not been able to make reference. I think, however, that I have mentioned the most important features in the history of Government accounts and audit during the past twenty years in a sufficiently general way to indicate how they fall into place in the past two decades of rapid constitutional development.

In these times, all eyes are turned to the future. Government and private agencies have devoted a great deal of time and effort to draw up plans for the post-war reconstruction period. It is interesting, though hazardous, to speculate on the effects of these large scale developments on the status and role of accounts and audit. I believe Civil Accounts and Audit, though subject to constitutional and administrative changes, will continue to function as they do at present. But most of you are concerned with railways, and one important event that has already occurred is the termination of the contracts of the remaining Company-managed railways and their transfer to direct railway operation. This has not only removed the need for the specialised type of audit to protect the interests of the State as distinguished from those of the Companies, but has also cleared the way for the introduction of uniformity in the treatment of the accounting and audit organizations that was not possible before. The magnitude of the expenditure contemplated in some of the plans under current discussion leaves no doubt as to the important tasks awaiting railway accountants and auditors, the former as financial consultants and accounting authorities, and the latter as the watch dogs of the public. The success of the State management will be largely conditioned by the quality of the financial advice and by proper financial administration of the different systems. The problems which will emerge, and are even now emerging are multifarious and many are old questions in new guise. The depreciation accounting system is at present again under review. The question of deferred maintenance may call for adequate treatment. Even more complex will be the host of problems raised by proposals for amalgamation and regrouping of railways which are now being discussed. I am confident that the technical knowledge and skill of the railway accountant and auditor will be increasingly in demand during the immediate future.

I feel that the present is the time to draw up the agenda for preparedness. What I have referred to are larger questions of financial policy, principle and procedure, but if railway accounting and audit officers are to tackle these satisfactorily, they must not be swamped by routine. Maintenance of records, current check, and scrutiny are of course important, but unless periodically reviewed, they tend to become mechanical, and the essential purpose may be obscured in over elaborate procedure. Paper work tends to grow with tropical exuberance and over-elaboration may increase routine work to overwhelming proportions. It is wise policy to keep all these in constant review. These difficulties are experienced in all countries, and attempts are now being made to solve them. I understand that in the United States, an influential Committee set up by American Railways to deal with the Research Programme for the post-war era, has included subjects such as the simplification and consolidation of division bases for apportioning interline freight revenues, the division of interline passenger revenues, co-ordinated operation of tele-typewriters and card punch equipment for the remote reproduction of statistics and other information, micro-photography for record keeping etc. I think it is time that our railway accountants and auditors acted on these lines in chalking out a programme of preparedness in the context of post-war reconstruction economy. If the Institute, which offers a common platform to railway accountants and auditors can undertake this task, it will be an important contribution to the profession.

This finishes my address to you. I trust that your discussions will proceed with interest and benefit to you all. As I shall be laying aside my office, and may not have another opportunity of attending your meeting, I wish the Institute all success in the future in serving the needs and interests of the Indian railway accountants and auditors.

FOOD SUPPLY ORGANISATION*

I have been asked to tell you something about the Railway Food Supply Organisation and to explain our methods of purchase, manner of distribution of stocks and to mention our procurement difficulties.

First of all, from the limited information at my disposal, I propose giving you a few facts and figures about the organisation as a whole, that is to say for all Indian Railways, as opposed to the B. & A. Railway Organisation only. It was decided to provide foodstuff for railway staff at a time when to obtain a sufficiency of all staple foods was becoming increasingly difficult and when prices of many articles were going up far beyond the means of many railway personnel. Railways were considered 'essential services' obviously, and it was considered necessary to provide some means which would ensure all staff against actual shortage and the consequent possibility of interrupted rail communications and at the same time would provide food at prices within their means and thereby take the place of a dearness allowance which would have had the result of inflating prices still further. Most railways started off in the comparatively small way providing grainshop only—at the more essential stations on their systems—for instance, where there were workshops, providing only the absolute bare necessities, possibly only such items as rice, wheat products, salt, sugar and mustard oil. To-day there are some 510 static and 170 mobile grainshops throughout India providing an average of about 12 different commodities for some 850,000 employees. On the B. & A. Railway we have 42 static and 23 mobile shops serving approximately 132,000 employees including construction labour. On the B. & A. Railway we are to make available the following commodities at all shops:

Rice, atta, wheat, flour, sujee, bajra, barley, dal, sugar, salt, jaggery, tea, chillies, masallas, vegetable ghee, natural ghee, mustard oil, kerosene oil, soap, match, milk powder, potatoes, onions, dhoti, saree and shirtings.

We estimate that the loss to the Railway per single employee if he drew his full ration of each of the item mentioned above would amount to Rs. 22 (based on last year's figures). The Railway Board's figure for the actual saving or relief per employee based on the average quantity of each commodity issued compared with corresponding local market prices was Rs. 16-8 in November on the B. & A. Railway and Rs. 11-4 for all India. We estimate that the yearly loss to the B. & A. Railway taking into consideration cost of grainshop staff, loss on retail issues, handling and incidental charges amounts to not far short of Rs. 2,00,00,000. This excludes cost of freight as also expenditure in connection with construction of shops.

* Lecture delivered at the Tenth Conference, on 13th January, 1945.

And now to tell you something about the methods of purchase and distribution adopted by our own Food Grain Organisation. As you are aware a number of commodities falling under the category of staple food are now controlled by Government and these we are not permitted to purchase in the open market. For such items as rice, wheat, and wheat products, salt and sugar, therefore, we indent monthly on Civil Supplies for our requirements both within and outside Calcutta Rationed Area. In these indents we show our monthly consumption, balance and estimated requirement and, on receipt, we are given an allotment on various Government stockists from whom samples are drawn and, if the quality is satisfactory, deliveries are taken. In connection with the quality of these stocks we have from time to time experienced a certain amount of difficulty, particularly where rice is concerned. The Government, up to the present, distribute only one grade of rice for which we pay, for instance Rs. 15-2, in the rationed area and Rs. 13-14, in the Dinajpur and Bogra areas but depending partly on what stocks are available with mills and partly on the area on which our allotments are made, the quality varies considerably. Provided we have ample stocks on hand we can afford to reject consignments which we consider unsuitable; on the other hand, in view of our somewhat limited depot accommodation, it is always risky to do this, particularly if a large proportion of the stocks allotted to us are low grade. Often in the past, therefore, it has been a question of accepting what we could get or going without. I think I am at liberty to mention that the Government are now considering selling rice of different grades at varying prices, and if they do this I assume that the Railway Board will agree to our varying our concessional prices and selling both coarse and fine rice at prices which will better suit the low as well as the higher paid staff. In that case we would probably only guarantee to sell from our shops what would be termed a standard grade of rice, but as fine rice became available and if we were forced to do, take over coarse or *Aush* rice, so would our prices vary from the standard price. For all commodities our prices are based on the February 1943 market price *minus* 30 per cent and in the case of rice this enables us to sell at 3 as. per sr., namely Rs. 7-8 per md. Under the present arrangement some shops may receive a good quality order while others receive poor quality—or again a shop may receive good rice this month and bad rice the next—all of which, of course, is sold to them at that same price.

This is apt to lead to criticism and complaint particularly when good rice happens to be available in the local markets at a not very much higher cost. The Government procurement scheme, as you may be aware, has proved most successful this year and in fact there has been a large carry over. This is a great achievement and I only hope that this surplus does not consist of large stocks of *Aush* and low grade *denki* and rice which we will be forced to consume at the kind of price I have referred to previously. At all events, I believe I am correct in saying that it is the Government's policy to improve the quality of their purchases in future.

Where other Government controlled commodities are concerned, our main difficulty at the moment lies in connection with the procurement of sufficient sugar and the purchase of any mustard oil at all worthy of the name. As regards the former, reasonable allotments have been made to us by Government but mills are apparently unable to supply primarily, I believe, because they are unable to obtain sufficient wagons. This, I understand, is being taken up by all railways at the next I.R.C.A. Conference and a higher priority is to be pressed for where Railway Food Grain Department stores are concerned. Mustard oil may be considered a Government controlled commodity inasmuch as that all mustard seeds imported into Calcutta (where the majority of Bengal's larger mills are situated) from other provinces are taken over by Civil Supplies and distributed through a panel. Ever since prices were controlled for this commodity it has become increasingly difficult to obtain pure unadulterated mustard oil and we have now had to request Government to allow us to import seeds on our own account which will be crushed under agreement with a specific mill and from which it is hoped that pure oil will be obtainable for distribution to our staff.

As regards purchase of other than controlled commodities we have formed a number of purchase committees for various areas. The Purchase Committee, Calcutta, for instance, is responsible for purchases for all shops in the Calcutta Area as well as for certain outside depots. Each committee is empowered to purchase up to the value of Rs. 30,000 at a time in the case of any one commodity. Normally purchases are made once a month. Tenders are called for from approved firms of suppliers. These with the samples are opened in the presence of the committee who then decide which is the most suitable. The cheapest tender in each case is not necessarily selected as it is our policy to buy good quality foodstuff for our staff at the most favourable price. We did in the past experience a good deal of difficulty in obtaining supplies up to the standard of the purchase samples selected. We now, therefore, insist on each approved tenderer on our books placing a deposit of Rs. 5,000 with our F.A., & C.A.O. Having done this, we enter into a separate agreement with each firm and in this agreement it is specified that in the event of failure or inability to supply goods up to the standard of the purchase sample they will be liable to lose part or whole of their security, in addition to which we may at our discretion buy against the firm debiting them with any additional expenditure which this may entail. After each purchase is made, one sample of the goods selected is retained by us and one given to the Inspector responsible for taking delivery from the firm concerned and one sent to the store-keeper of the depot to which it is intended to despatch the order. Both the inspector and store-keeper are responsible for ensuring that the quality of the consignment offered is up to that of the purchase sample. Over and above this whenever an order is despatched from a depot to a shop one sample is sent to the Food Controller concerned who checks it with the purchase

sample and then sends it on to the shop where the ward-keeper is responsible to see that the consignment on arrival is up to standard. Food Grain Inspectors at the time of their inspection draw samples from various stocks in shops which are sent to the Food Controller for comparison with the purchase sample. By the above means we endeavour to ensure that we do get what we pay for.

In addition to our grainshops we have a number of storage depots. When deliveries are first taken, we despatch consignments to these depots, where they are stored until required to be distributed to shops. All ward-keepers in charge of shops have been supplied with a statement showing, depending on their output, at what level it is necessary for them to recoup any given commodity. When any of the items in their charge falls to this level they issue a requisition indent in the appropriate depot. This at times gives rise to a certain amount of difficulty. The majority of our shops have very little storage accommodation and it is not possible for them to keep in stock more than about 2 to 3 weeks' supplies. Depending on the distance of the shops from the depots we have worked out the level at which the ward-keeper should indent, say when he has a week's supply on hand, assuming that normally it should not take more than 4-5 days for the indent to be complied with. Unfortunately under present day conditions it may take anything from five days to two weeks (a) depending on whether empties can be allotted promptly to this department, or (b) whether the consignment gets through in reasonable time or is delayed *en route* owing to congestion at junction points, etc. This, as you will appreciate, makes things extremely difficult from our point of view—on the one hand we risk having far more stocks sent to shops than they can possibly accommodate, on the other hand running short of various items for days at a time—and if this happens considerable criticism is levelled against us by staff affected and Employees' Associations.

Up to 1 January all grainshop consignments were booked both initially to depots and subsequently to shops, on FSW bills. Since the Railway Board have now ordered that our stocks must be booked at full Tariff rates, we are, this year, booking our consignments on invoices at railway risk. Hitherto the Traffic Department have accepted Foodgrain Department consignments in sealed wagons giving a "said to contain" receipt for what the store-keeper alleged had been loaded. No claim lay with Traffic in the event of shortages and we found that considerable quantities were having to be written off monthly as a result of losses in transit. This was due partly to the fact that only a percentage check of weight was carried out by the store-keeper at the time of despatch and that the weight of bagged goods often varied, partly to actual loss or theft in transit and at transshipment points, and partly, I am afraid, due to dishonesty of staff. Now that all consignments will be booked as public goods it will be necessary for the Traffic Department to ensure that correct weights are booked, and if they fail to do this or in the event of pilferage

en route, claims for shortages detected at destination will be placed by my Department. Should a ward-keeper at destination fail to pass necessary qualified remarks and—or obtain a short certificate in the event of shortage he will be held entirely responsible.

And this brings me to the next point—that of suitable staffing of our shops and depots. Obviously, it would be preferable only to place men in responsible posts in our depot who have a good many years' service. Unfortunately owing to the rapid expansion of our shops and to the fact that other departments are already understaffed this has not proved possible, and it has been found necessary to employ and place in such positions men with no previous service on the Railway at all. A small security is taken from such men, Rs. 500, in case of ward—and store-keepers, but this, in my opinion, is nothing like sufficient, and, in the event of such men deciding on a policy of dishonesty, they are in a position to defraud the Railway out of several thousands of rupees before this can be detected. Admittedly, we could run a police case against them, but it is difficult to prove other than negligence, and, in any case, this will not get back our money for us. This question, therefore, is now under consideration and we are considering increasing both the pay and the security deposit of such personnel on the assumption that they will be less likely to risk losing their jobs if they are paid well and that if their pay is raised they can afford to pay us a higher security.

Next I will touch briefly on the methods we adopt in connection with the accounting for receipt and issue of foodstuffs in shops. For staff, each shop has a ward-keeper who is responsible generally for the efficient and proper working of the personnel under his control; depending on the cards dealt with, a number of clerks, who are responsible for collecting cash, preparing and issuing cash memos, salesmen, who are responsible for the actual issue of stocks on receipt of the cash memos, and *Khalasies* and *Tindals*. As described previously the ward-keeper, in order to obtain stocks, prepares and submits R.I. Notes on the appropriate depot. Three copies of the indent are originally forwarded to the depot concerned where, on despatch of the goods to the shop, one is retained as his record, one is forwarded direct to the Accounts Office, and one is returned to the shop with consignment. This third foil is forwarded by the shop, with his returns to Accounts at the end of the period. On receipt of the consignment in the shop the actual booked weight is taken into account in the stock book—in the event of shortage adjustment is made only on advice from the office of the CFS concerned.

Periodical returns are prepared by every shop and sent to my office and to the Accounts Department. In these returns is shown the actual balance in the shop of each commodity as also particulars of receipt during the period against the numbers of R. I. Notes concerned. In my office stock registers are maintained for every depot and shop in the administra-

tion and in these are recorded all receipts and up-to-date balances *vide* figures provided in returns.

As regard purchases, to each employee is issued a ration card (civil as well as railway in the case of the rationed area). On the day allotted to him for drawing rations, which is twice during a month, he takes his card to the cash memo issuing counter of his shop, where the windows in the ration card for the appropriate period are crossed off, and, on collection of the cash, a cash memo for the purchases required is prepared in duplicate. The carbon copy of this is made over to the first salesman's counter who issues the quantity of goods required which are under his control (for instance, it may be the rice counter), ticks off the appropriate item on the memo and passes it on to the next counter where the same procedure is followed. At the last counter, when the purchaser has collected all the items mentioned in the memo this carbon copy is returned to him and this, with his ration card, he takes to the clerk at the exit gate. This clerk tears off the perforated strip at the bottom of the memo after checking particulars shown therein, especially the total amount, verifies that the commodities in possession of the purchaser are in accordance with the memo, in case of any doubt as to whether an excess quantity has been issued weighment may be necessary and returns the carbon copy and ration card to the purchaser. At the end of the day a check sheet is prepared in which are recorded full-particulars of each cash memo issued. Perforated strips, collected by the clerk at the exit gate, are required to be attached to each check sheet and these are compared by the ward-keeper both with the originals and the check sheet entries. At the end of the period these check sheets are summarised and submitted to the Accounts Office.

In connection with only one commodity is there any variation from the above procedure, this is for eggs and fowls. In this case the purchaser on his ration day, pays for the quantity of each he requires and is issued in return with fowl and/or eggs coupons. In the case of fowls these are in 1/8 lbs. each in order that the exact quantity can be issued depending on the size of the fowls. The purchaser is then permitted to take these coupons to the contractor appointed for the issue of these items, and to obtain either all his eggs and fowls at once or on a number of different days up to the last day of the period which is recorded on the coupons.

In so far as this Administration is concerned stock verifications for all shops and depots are carried out quarterly and all differences between book and ground balances taken up by CFSs and then, if any write-off is required, referred to me with a note of action taken. In addition, inspectors are required to check shops monthly to verify a percentage of all stocks on hand.

There is one other subject in connection with my Department which may be of interest ISR Groceries. All railways are now opening grocery shops to provide for staff drawing Rs. 50/- and above. A limit depending on their pay is placed on what staff can purchase, and in order that every one may obtain his fair share it has been found necessary to restrict certain items which are in heavy demand or are difficult to obtain. The Railway Board's policy is that these shops should be run on a 'no loss' basis and in order to achieve this we add 12.5 per cent. on all cost prices except where controlled rates are applicable. In the Calcutta area we find our prices work out at roughly the same as market prices but it is up country and particularly in such places as Assam that I think these groceries are going to prove of value. In the Trans-Brahmaputra area we intend serving our staff by mobile groceries based on Chittagong, we have already one static

shop in Calcutta and one at Saidpur, and directly rolling stock becomes available we intend operating a mobile based on Saidpur to cover our Cis-Brahmaputra metre gauge area.

And that, Gentlemen, I think summarises the salient points concerning my organisation.

T. V. WOODS.

BUSINESS RESEARCH AS A TOOL FOR RAILWAY MANAGEMENT.

(Under this title was published by Mr. George Rugge of the Atchison Topeka and Santa Fe Railway System as part of his work as 1941-42 recipient of an Alfred P. Sloan Foundation Fellowship for Executive Training in Economics and Business Administration at Massachusetts Institute of Technology. Our acknowledgements are due to Dr. W. P. Fiske, Director, Sponsored Fellowship Program for permission to reprint extracts from the report. Limitations of space make it impossible to do more in this issue than to reproduce the conclusions and recommendations made towards the close of the report. It will be appreciated that Mr. Rugge has discussed a problem of fundamental importance with a good deal of thoroughness. Mr. Rugge's conclusions will be read with special interest in India at the present time when far-reaching post-war transport plans are being discussed.—*Ed.*)

The impact of recent economic, technological, and social changes has focussed the attention of many railroad executives on business research. There is a growing realization that business research can be used as a tool of railway management. This tool will be particularly effective in the future when the survival of the business enterprise will depend upon its ability to recognize and adjust itself rapidly to accelerated rates of change in economic conditions. The principles of the organization and operation of railway business research may be summarized as follows:

1. A permanent research organization should not be started until there is an improvement in the strategic situation of the war.
2. There is a consensus of opinion that the research director should be an assistant to the president or of comparable rank.
3. In choosing a research director, contact should be made with some of the leading industrial research directors to gain a firsthand knowledge of the type of man required.
4. It is probable that a director can be chosen from a railroad's own forces. There will be many war-time jobs on every railroad that will be essentially research jobs. By means of special assignments, many men can be tested.
5. The choice of a director is critical in any research program. The structure of the organization is incidental in comparison.
6. In selecting research personnel, the chances of obtaining young competent men will be greater if the choice is made from college trained men who have demonstrated that they are willing to grow up the hard way on the railroad.
7. A research program should be organized to use regular research personnel. It is not a sound idea to use the regular positions of the research department as training positions for executives, except in the exceptional cases where the men possess the qualities of both line executive and research man. However, every advantage should be taken of the training possibilities offered by a research unit when extra assistance is needed.

8. The business and technical research should be under a common director, and the business research should be the governor of the technological.

9. Business research should begin in those phases of the railroad where the external pressures are tending to produce the greatest instability.

10. Today the most important problems on a railroad requiring business research are probably those related to general management and to traffic. The operating problems require primarily technological research, and many of them which require business research are by their very nature problems of general management.

11. For a small railroad, the business research men will probably have to be concentrated in one central group to be most effective.

12. For a large railroad, the first step is to organize a headquarters group under the director, beginning with one or two men and expanding to five or six men. This group should contain an economist, one or two engineers with operating experience, and a statistician. This group should build up the basic economic data for the company and plan the direction of expansion for the company's research.

13. There should be an executive committee consisting of the president, research director, vice-president of traffic, vice-president of operation, and comptroller. The purpose of this committee would be to formulate the policy of all the company's research, and to help initiate major projects. The administrative control would still rest with the president and the research director.

14. After general management, the traffic department should be considered. The research projects in this department are likely to be extensive and in many cases expensive. For most large railroads that do not now have organized research, the best approach to the traffic research is to begin with small committees chosen by the traffic vice-president and the director of research. The members of these committees should be completely detached from other duties, and should spend their entire time on the specific research project for which they are chosen. These committees should report to, and take orders from, the traffic vice-president, and receive instructions as to standards and methods of research procedure from the director of research. These committees would help acquaint the entire department with the research function. The vice-president of traffic and the research director would also have an opportunity to select the best research director would also have an opportunity to select the best research men by actual test. When the amount of the research work required by the traffic department becomes large enough to require the full time work of six to eight men, the executive research committee should review the situation and decide whether or not a departmental group should be established.

15. The traffic research group should include the railroad company's industrial and agricultural agents and their staffs.

16. The technical research of a railroad will be concentrated on the problems of the operating department, and will, therefore, probably be conducted by the operating department. This research may be centrally located in the department, or it may be decentralized in the various special sections of the department, such as engineering, mechanical, or transportation. The choice made as to the organization of the technical research will, in some degree, influence the location of the business

research men who work on everyday problems for the operating officers. In most cases, the present method of handling these problems is satisfactory, and the staff assistants who do this work are adequate. In many cases, the effectiveness of these men would be increased by greater co-operation with the men in other sections of the department, and by conferences with the research director on research methods.

The technical research of the railroads and all other industries is going to create a great number of business problems of a broad nature for a railroad operating department. To solve these problems some form of research group will probably be found advisable. Most operating departments can draw on their business research personnel who are engaged in everyday staff work. At first, committees should be formed to work on given problems. The committee members should be detached from their regular duties, and the selection should be made by the operating vice-president with advice from the research director. When the work warrants the establishment of a balanced business research group, the executive research committee should review the work and decide whether it should be a departmental group or combined with the central group. Because of the operating department's problems and the large number of employees, it will probably be necessary to have a business research group attached to the operating vice-president. This group would report to and take orders from the operating vice-president, and receive instructions as to standards and methods of research from the research director.

17. The departments, other than the operating and traffic, have comparatively small staffs that are highly specialized, and employees are usually geographically concentrated. For these reasons, the business research problems of these departments can probably be handled most efficiently by a centralized research organization.

18. Care must be taken in establishing research groups in the departments. The executive research committee should make sure that the work is sufficient to occupy a well rounded staff and that the work is not made up of jobs that are the regular responsibility of the line officers. If a well rounded staff cannot be used, it will be better to turn the work over to the centralized group.

19. A new business research group at first should undertake only one project at a time, and the first projects should be those that promise early financial returns. It is very important to carry the first project through to conclusion as soon as possible. The director must personally conduct the first investigation to be sure that unexpected and important procedures and facts are not overlooked by subordinates. Later, the work can be sectionalized.

20. Administrative responsibilities should not be given to the research organization.

21. The methods of control of research should be standardized as soon as possible.

REVIEWS.

A Plan for Post-war Transport: With a Foreword by the Rt. Hon. Sir Arthur Griffith-Boscawen (London: Modern Transport, pp. 51. Price 1s 6d).

This book contains a reprint of a series of articles which appeared in the *Modern Transport*, between February 12, and March 25, 1944, on the subject of "Post-war Transport." The articles dealt with all aspects of the transport problem of Great Britain, in a clear and dispassionate manner. The desire to have so balanced a survey of the subject in book form, is not surprising, and students of transport are indebted to the publishers in responding to it.

The reprint has now the advantage of a foreword contributed by the Rt. Hon. Sir Arthur Griffith-Boscawen, Chairman of the Transport Advisory Council. After referring to the unsatisfactory situation resulting from the lack of far-seeing transport policy, Sir Arthur finds that a return to it after the war, is out of the question, and examines how the difficulty is to be solved. According to him the choice is between the retention of private enterprises and unification of all forms of transport under a single control either of the Government Department or of a Public Board. The trend of informed opinion during the last decade has been in favour of the former. The Transport Advisory Council's report on the "Square Deal" proposed radical changes such as freeing the railways from many of the conditions and restrictions imposed by Parliament especially as to rates. The promising start made by the setting up of the Central Road and Rail Conference might, but for the war, have been followed by carrying out the new proposals. The question whether it is possible to start from where the negotiations were cut off by the war is not clear. But Sir Arthur suggests the desirability in the event of State control of a closer organization of transport 'under one authority with one purse'. The alternative to private operation is complete unification with such exceptions, as coastwise shipping, purely local services, and licenses permitting traders to operate, if necessary, their own vehicles.

The seven articles following the introduction deal with the implications of a policy relying on private enterprise as it affects railways, road transport, canals, and coastwise shipping, ports and airways. A wholtime Transport Council is recommended consisting of four members experienced in, but not connected with, rail, road, canal and coastwise transport with an independent chairman of wide business knowledge and experience. The Council is to see that all steps are taken to bring about co-ordination of internal transport. The change has to be slow and may be effected in a gradual transition.

Turning to road transport, the need for consolidation, and consequently for suitable legislation is emphasised. The needs of passenger transport are discussed and the view is expressed in favour of this section of inland transport being developed by greater extension of co-operative working and provision of more passenger amenities. There is a strong case for maintaining the status quo, and keeping down the pace of the change. War-time use of canals has revealed possibilities of developing them for special types of traffic, and a unified management of all canals is suggested. After referring to docks and harbours and rail participation in air transport, the book concludes with the final observations of the writer. He claims that the unity of organization which can be attained under private enterprise has the merit of avoiding "large-scale revolutionary changes involving the setting up of unwieldy State monopoly so alien to the temperament and

characteristics of our island people." An agreement between road and rail transport is considered an essential preliminary to any policy. The importance of transport planning in connection with town planning is pointed out. Proper road construction which avoids accidents and the ribbon development will not only meet the demand for safe and rapid transport, but increase employment in the motor industry as well.

Roads for Britain: By J. F. Bramley. (Birmingham: The Austin Motor Co., Ltd., pp. 48. Price 5/-).

Mr. Bramley's object in this brochure is "to present in brief, easily understood form, the essence of the mass of information now available for planning" the post-war road system of Great Britain. Throughout he has sought to explain, summarise and illustrate the suggestions and opinions of the authorities who have surveyed the subject, without attempting to criticise or express a preference for one scheme or the other. The introductory chapter presents a brief sketch of the history of roads in England and concludes with a reference to the improvements effected with the advent of motor transport and the direct responsibility assumed for the mainline roads by the Ministry of Transport. The author draws attention to the remarkable wartime engineering feats of road construction the lessons of which are available for post-war road development. He next turns to the proposals outlined in the Bressey Report for London and Greater London, a bold sweeping plan visualising under the peace conditions of 1937 orbital highways, viaducts and tunnels, adapted to take in both rail and air termini. The London County Council's plan in 1943, which took account of radical changes made possible by the effect of bombing is described in the next section. The distinctive feature here is the attempt to break through the medieval administrative divisions and to apply the scheme for the London county as a whole. We have next an account of the Royal Academy and the City of London Plans. The former favours more convenient roads, wider vistas affording uninterrupted appreciation of the monumental features of London's architecture. The latter while agreeing in some respects favours a strictly commercial and utilitarian restoration of the former business life of the City. The plans of the Institution of Highway Engineers and the County Surveyors' Society for Britain are next referred to. The proposals of the Alness Report differ from these in that they view the problem from the point of view of prevention of road accidents. Other contributions to planning are then mentioned, and the recommendations of the Ministry of Transport on specifications for roads are summarised. The brochure concludes with an estimate of the cost of the proposed roads, which may total £ 520 million. This is expected to lead to savings which through elimination of even half the present congestion, traffic jams and delays would add up to £40 million per annum at the end of a ten year plan of development. The insurance claims on accidents alone amount to £10 million. There is undoubtedly a great deal to be gained by a programme of reconstruction in transport. The book concludes with a bibliography of the literature. The brochure is attractively illustrated.

Outline of Railway Audit and Accounts: By L. V. Gopalan, B.A., B.L. (Madras: Messrs. Thompson and Company Limited, 1945. Price Rs. 1-8-0.)

The revised and enlarged edition of Mr. Gopalan's book published 18 years ago is more than welcome. It presents within less than 70 pages, a brief outline of Railway Accounts. After giving a brief sketch of the

history, structure of railway accounts, and stages of audit, Mr. Gopalan proceeds to discuss at length the functions of audit of receipts and expenditure in their several details. He concludes with a brief note on the rules and interpretations. Four appendices are attached in the form of charts illustrating the functions of audit and expenditure, revenue journal entries and the general and subsidiary books of accounts. Mr. Jolly, Chief Accounts Officer, M. & S. M. Railway, who has written the foreword, rightly describes it as a link between the practical study of work in the Accounts Office and a theoretical study of the rules and regulations by which that work is governed. For examinees preparing to appear at departmental examinations, this small book should be found valuable for a rapid revision of railway accounts. For well nigh a generation examinees have been indebted to Mr. Gopalan for his help books. The reader to whom he makes a special appeal will appreciate the revision of the work which takes into account recent developments.

OFFICIAL PAPERS.

RAILWAY BOARD'S REPORT, 1943-44.

The Report of the Railway Board on Indian Railways for 1943-44 has again appeared in the same reduced war-time size as last year. The same arrangement as in the earlier reports is maintained and the comments have been made with commendable brevity. As the financial results are already dealt with in connection with the Railway Budget for the current year, reference may be made here to the other features of railway working during 1943-44.

Passenger traffic set up new records. The number of passengers was 789.3 millions, an increase of 26.8 per cent. Passenger mileage soared even still higher at 32,483 millions, an increase of 33.4 per cent as compared with 1942-43. Responding to the rise in traffic, passenger earnings advanced by 37.5 per cent. to Rs. 67.11 crores. Goods traffic performance remained almost stationary. The net tonnage and net ton mileage showed increases of less than one per cent. over the previous year, but freight earnings disclosed an improvement of 5.77 per cent. to Rs. 162.82 crores.

The operating record of the year reveals the real character of the war-time increases in traffic. As compared with 1938-39 Class I Railways did 74 per cent. more passenger miles with 28 per cent. less train miles. Punctuality of service has suffered to such an extent that only 65 per cent. of Broad Gauge trains and 72 per cent. of Metre Gauge trains arrived without losing time.

The increase in goods traffic was less spectacular, and the net increase, which amounted to 29 per cent, in ton miles was handled with but 7 per cent additional train mileage as compared with the corresponding figures of 1938-39. The reduction in the train mileage would not have been effected if a determined effort had not been made to increase the net freight loads of wagons and trains. The average wagon load increased from 448 tons to 467 tons on the Broad Gauge and from 169 tons to 176 tons on the Metre Gauge. The average speed of goods trains suffered a slight drop, due principally, it is stated, to the heavy strain thrown on line capacity on some of the more important through routes and to the priority movement of military specials.

Against the improvements must be set the decline in the locomotive and wagon utilisation. It is stated that the position under the latter is understated as the work of the wagons on military service is not taken

into account. Loss and damage to goods in transit also appears to have increased, resulting in a serious rise in the number of claims. Applications for refunds of overcharges on goods and parcels have also gone up and the time taken for settlement is reported to be considerably longer. The year has consequently closed with heavy outstanding balances.

The report describes in less detail than usual other aspects of railway working, such as the routine activities of the research departments, purchases of stores, etc. An increase in the strength of staff of 61,874 to 887,295 and enhanced allowances and amenities raised the cost by Rs. 3.84 crores to Rs. 50.32 crores. An important development of the year was the introduction of wireless communication to supply an alternative in emergencies. This is likely to have great peacetime possibilities.

The year 1943-44 was a turning point for railways, and their record of operation can be properly assessed only in the light of the contribution made to the improvement in 1944-45. The report does less than justice to the great effort of railways to turn the corner for the military requirements and the civilian economy.

NOTES AND MEMORANDA.

RAILWAY BUDGET, 1945-46.

The Railway Budget estimates for 1945-46 disclosed a remarkable improvement on the revised estimates of 1944-45. The absence of floods and cyclones, combined with the arrival of new equipment, enabled further increases in traffic—military and civilian—to be successfully tackled. Not only the military operational demands, essential civilian requirements were also fully met. The promise of a contribution of Rs. 32 crores for the last and current years has had a stabilising effect on general finance. Despite wartime conditions, the buoyant revenues have rendered it possible to strengthen the financial position of railways by measures which are referred to elsewhere in this section.

The revised and budget estimates of earnings, expenditure and final results of working are summarised in the statistical tables appended below. The gross traffic receipts for the current year are placed at Rs. 220 crores, or Rs. 5.70 crores higher than last year. Operating expenses exceed last year's figure by Rs. 12.09 crores. Taking depreciation into account the total working expenses were up by about the same amount. The net revenue will be about Rs. 64 crores, lower than the figure for the past three years. The surplus is accordingly expected to be Rs. 36.51 crores, and after the payment of Rs. 32 crores as contribution, the balance of Rs. 4.51 crores is to be transferred to the Railway Reserve.

The principal improvement so far as the immediate future is concerned is to be derived from the prospective relief to the present transport shortage as a result of the new equipment ordered and expected. This amounts to 1,352 locomotives (937 B.G. and 415 M.G.), 46,734 B. G. wagons and 12,481 M.G. wagons. The reference to domestic locomotive manufacture mentioned in the speeches had a reassuring effect, and this has been strengthened by the start made recently by the Tatas.

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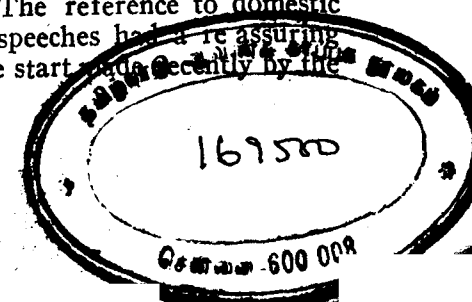


TABLE I.—STATISTICS OF OPERATING RATIOS ON THE PRINCIPAL STATE-OWNED RAILWAYS.

Railways.	EXCLUDING DEPRECIATION.			INCLUDING DEPRECIATION.		
	1943-44	1944-45	1945-46	1943-44	1944-45	1945-46
B. & A.	72	92	66	83	99	74
B. B. & C. I.	43	48	48	54	58	58
E. I.	52	68	104	61	75	111
G. I. P.	39	47	45	48	56	54
N. W. Com.	38	41	39	47	49	47
N. W. Str.	115	105	107	139	129	131
O. & T.	42	56	54	50	64	62
B. N.	61	74	71	73	87	84
M. & S. M.	44	56	53	54	65	61
S. I.	44	51	63	55	61	74
Total ..	49	60	61	59	69	73

TABLE II.—STATISTICS OF RAILWAY RESULTS AND ESTIMATES ON THE PRINCIPAL STATE-OWNED RAILWAYS.
(In crores of Rs.)

	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46
Gross traffic receipts	117.58	135.17	155.48	185.43	214.30	220.00
Operating expenses	55.62	63.54	68.98	90.10	128.56	140.65
Depreciation Fund	12.64	12.68	12.57	16.87	17.01	17.12
Total working expenses	68.26	76.22	81.55	106.97	145.57	157.77
Payments to worked lines	3.03	3.33	2.71	1.87	1.92	2.10
Net traffic receipts	46.29	55.62	71.22	76.59	66.81	60.13
Net miscellaneous receipts	0.85	0.90	1.88	2.78	3.01	3.77
Net revenue	47.14	56.52	73.10	79.37	69.82	63.90
Interest charges	28.68	28.44	28.03	28.53	27.81	27.39
Surplus	18.46	28.08	45.07	50.84	42.01	36.51
Contribution	12.16	20.17	20.13	37.64	32.00	32.00
Railway reserve	6.30	..	8.86	13.20	10.01	4.51

TABLE III.—FINANCIAL RESULTS AND ESTIMATES OF STATE-OWNED RAILWAYS, (Rs. in crores. & % in relation to 1939-40.)

RAILWAYS.	GROSS TRAFFIC RECEIPTS.						PASSENGER EARNINGS.						GOODS EARNINGS.					
	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†
B. & A.	Rs. 18.17	Rs. 26.00	Rs. 27.45	o/o 214	o/o 307	o/o 324	Rs. 1.30	Rs. 8.02	Rs. 8.15	o/o 252	o/o 277	o/o 281	Rs. 12.56	Rs. 10.64	Rs. 13.59	o/o 158	o/o 264	o/o 286
B. B. & C. I.	19.30	20.07	20.65	152	158	162	6.89	7.36	7.43	173	185	187	10.40	10.96	11.10	130	133	139
B. N.	16.92	16.76	16.99	156	155	157	3.30	3.74	3.76	198	224	225	11.74	12.49	11.12	132	123	125
E. I.	33.16	44.74	45.80	155	210	215	9.89	12.19	12.29	188	232	234	16.49	17.11	17.90	176	183	155
G. I. P.	30.40	33.81	34.86	214	238	246	9.71	8.46	8.52	285	248	250	7.07	7.74	7.80	133	145	191
M. & S. M.	13.98	15.83	15.92	178	201	202	5.11	5.65	5.67	252	278	279	15.78	17.04	17.74	148	157	164
N. W. Com.	30.50	35.16	36.08	196	226	232	12.19	13.57	13.65	263	292	294	3.06	3.05	3.12	127	127	129
N. W. Str.	2.34	2.72	2.76	168	196	199	2.75	2.99	3.00	164	178	179	5.13	5.52	5.60	181	181	184
O. & T.	6.30	6.60	6.70	143	150	152	4.11	5.14	5.16	200	251	252	98.32	106.59	111.00	168	157	163
S. I.	10.47	11.67	11.85	192	214	217	61.59	61.50	68.00	222	243	245	..	..	..	..	..	..
Total ..	185.43	214.30	220.00	181	209	214	..	..	..	..	..	..	..	..	..	..	..	..
RAILWAYS.	OTHER COACHING EARNINGS.						PASSENGER EARNINGS.						GOODS EARNINGS.					
	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†
B. & A.	Rs. 2.36	Rs. 4.61	Rs. 4.73	o/o 524	o/o 1024	o/o 1051	Rs. 7.52	Rs. 12.56	Rs. 13.59	o/o 158	o/o 264	o/o 286	Rs. 10.40	Rs. 10.96	Rs. 11.10	o/o 130	o/o 133	o/o 139
B. B. & C. I.	1.58	1.63	1.65	219	226	229	10.40	10.96	11.10	132	123	125	11.74	12.49	11.12	132	123	125
B. N.	1.62	1.78	1.81	476	524	532	11.74	12.49	11.12	132	123	125	16.49	17.11	17.90	176	183	155
E. I.	2.79	10.67	10.90	358	1368	1397	20.47	21.49	23.35	135	142	155	7.07	7.74	7.80	133	145	191
G. I. P.	6.46	7.52	7.67	364	471	482	7.07	7.74	7.80	133	145	147	15.78	17.04	17.74	148	157	164
M. & S. M.	1.64	2.12	2.17	378	631	645	15.78	17.04	17.74	148	157	164	3.06	3.05	3.12	127	127	129
N. W.	3.86	6.44	6.58	315	335	347	5.13	5.52	5.60	181	181	184	98.32	106.59	111.00	168	157	163
N. W. Str.	0.37	0.57	0.59	315	262	265	5.13	5.52	5.60	181	181	184	..	..	..	..	..	..
O. & T.	0.82	0.68	0.69	399	667	682	..	..	..	..	..	..	..	..	..	..	..	..
S. I.	21.57	36.10	36.87	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	21.57	36.10	36.87	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

* Revised estimates.

† Budget estimates.

TABLE IV.—FINANCIAL RESULTS AND ESTIMATES OF STATE-OWNED RAILWAYS. (Rs. in lakhs. & % in relation to 1939-40.)

RAILWAYS.	OPERATING EXPENSES.									
	I.—GENERAL ADMINISTRATION.									
	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1945-46†
B. & A.	Rs. 13.10	Rs. 23.82	Rs. 18.22	o/o 221	o/o 333	o/o 307	Rs. 5.22	Rs. 4.87	Rs. 5.77	o/o 393
B. & C. I.	8.33	9.64	9.87	135	157	160	2.76	2.98	3.16	170
B. N.	10.27	12.40	12.06	168	203	197	3.84	4.06	3.31	184
E. I. P.	17.20	30.36	47.66	162	236	449	5.78	5.67	5.89	267
G. I. P.	13.15	15.87	15.63	183	220	217	3.45	3.50	4.05	212
M. & S. M.	6.15	8.84	8.44	156	224	214	1.77	2.43	2.25	222
N. W. (Com.)	11.62	14.58	14.25	142	178	174	3.64	4.02	4.39	236
N. W. (Str.)	2.70	2.86	2.96	203	215	223	77	98	1.18	170
O. & T.	2.63	3.68	3.62	138	194	191	1.53	1.95	1.84	235
S. I.	4.57	6.01	7.46	138	195	242	28.79	30.92	31.90	224
Total	90.10	128.65	140.65	165	235	257				231

RAILWAYS.	III. OPERATION.									
	II. ORDINARY REPAIRS AND MAINTENANCE.									
	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1945-46†
B. & A.	Rs. 2.75	Rs. 3.48	Rs. 3.35	o/o 149	o/o 188	o/o 181	Rs. 2.57	Rs. 3.47	Rs. 4.09	o/o 269
B. & C. I.	2.42	2.59	2.54	130	139	137	1.44	1.52	1.55	84
B. N.	2.56	2.04	2.79	110	126	120	2.18	2.70	2.54	164
E. I. P.	4.63	4.95	4.96	137	146	147	3.88	4.02	4.07	118
G. I. P.	3.62	3.87	4.0	169	181	192	3.38	3.50	3.57	144
M. & S. M.	1.39	1.54	1.59	121	134	138	1.31	1.47	1.72	147
N. W.	3.38	3.94	4.12	116	135	141	2.49	2.86	2.93	169
O. & T.	0.72	0.77	0.81	109	130	128	43	47	54	125
S. I.	0.81	0.96	0.95	109	130	128	1.07	1.25	1.26	145
Total	22.38	25.22	25.33	131	148	149	18.87	21.59	22.37	138

* Revised estimates.

† Budget estimates.

TABLE V.—FINANCIAL RESULTS AND ESTIMATES OF STATE-OWNED RAILWAYS. (Rs. in lakhs. & % in relation to 1939-40.)

RAILWAYS.	TOTAL WORKING EXPENSES.									
	IV. FUEL.									
	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1945-46†
B. & A.	Rs. 1.38	Rs. 2.35	Rs. 2.71	o/o 226	o/o 385	o/o 444	Rs. 15.02	Rs. 25.78	Rs. 20.23	o/o 351
B. & C. I.	1.15	1.30	1.61	131	148	183	10.46	11.71	12.02	153
B. N.	1.16	1.65	1.99	184	262	316	12.40	14.55	14.24	196
E. I. P.	1.88	2.17	2.42	161	185	207	20.23	33.42	50.72	255
G. I. P.	1.77	2.33	2.40	203	268	276	16.16	18.94	18.72	201
M. & S. M.	1.30	1.85	1.78	173	247	237	7.52	10.24	9.79	197
N. W.	3.09	3.89	4.00	163	206	212	14.48	17.40	17.05	168
N. W. Str.	0.36	0.52	0.57	120	174	188	3.26	3.52	3.62	185
O. & T.	0.79	1.15	1.24	120	174	188	3.13	4.20	4.16	122
S. I.	12.92	17.28	18.75	165	221	239	5.74	7.16	8.81	183
Total	12.92	17.28	18.75	165	221	239	108.84	147.49	159.87	211

RAILWAYS.	NET TRAFFIC RECEIPTS.					PROFIT OR LOSS.				
	1943-44	1944-45	1945-46	1943-44	1944-45*	1945-46†	1943-44	1944-45*	1945-46†	1945-46†
B. & A.	Rs. 3.15	Rs. 22	Rs. 7.22	Rs. 0.28	Rs. 0.28	Rs. -2.63	Rs. -2.63	Rs. -2.63	Rs. -2.63	Rs. -2.63
B. & C. I.	8.84	8.36	8.63	6.08	6.08	5.80	5.80	5.80	5.80	5.80
B. N.	4.52	2.21	2.75	1.30	1.30	-1.05	-1.05	-1.05	-1.05	-1.05
E. I. P.	12.93	11.32	-4.92	7.00	7.00	5.73	5.73	5.73	5.73	5.73
G. I. P.	17.24	14.87	16.14	13.30	13.30	11.05	11.05	11.05	11.05	11.05
M. & S. M.	6.46	5.59	6.13	4.14	4.14	3.32	3.32	3.32	3.32	3.32
N. W.	16.02	17.76	19.03	11.91	11.91	13.70	13.70	13.70	13.70	13.70
N. W. Str.	-0.92	-0.80	-0.86	-2.10	-2.10	-1.94	-1.94	-1.94	-1.94	-1.94
O. & T.	3.17	2.54	2.54	2.05	2.05	1.21	1.21	1.21	1.21	1.21
S. I.	4.73	4.51	3.01	2.58	2.58	1.61	1.61	1.61	1.61	1.61
Total	76.59	66.81	60.13	50.84	50.84	42.01	42.01	42.01	42.01	42.01

* Revised estimates.

† Budget estimates.

VALUATION OF STOCK-IN-TRADE.

We referred some time ago in these pages to the series of recommendations made by the Council of the Institute of Chartered Accountants on accounting practice. The last set of recommendations deal with the important subject of the valuation of stock-in-trade and work-in-progress. The Council state:

"Profit on loss on trading is the difference between the amount for which the goods are sold and their cost, including the cost of selling and delivery. The ultimate profit on loss on unsold goods is dependent upon prices ruling at the date of their disposal but it is essential that provision should be made to cover anticipated losses. Inconsistency in method may have a very material effect on the valuation of a business based on earning capacity though not necessarily of importance in itself at any balance sheet date."

There appears to be no departure from the established practice of taking "the lower cost or market value". The method of calculating this is defined thus:

"Cost should be calculated on such basis as will show a fair view of the trend of the results of the particular type of business concerned. Indirect or overhead expenditure, if included as part of the cost of partly processed or finished products, should be restricted to such expenditure as has been incurred in bringing the stock-in-trade to its existing condition and location. Stock of by-products, the cost of which is unascertainable, should be valued at current selling price (or contracted selling price where applicable), after deducting expenses to be incurred before disposal. The cost of the main product should be reduced accordingly."

Commenting on the recommendations, the London *Economist**, observes that the basis suggested seems to beg some questions. According to this Journal,

market value "should be calculated on the basis of estimated selling value less expenses to be incurred. In estimating this price, regard should be had to abnormal and obsolete stocks, the trend of the market and prospect of disposal. It is not clear whether the figure may be written up when the trend of the market is upwards. It is laid down that to decide, what deduction should be made to reduce stock below cost, it may properly be valued on the basis of the lower of the bulk cost or bulk market value, or more prudently, at the lower of the two for each item or category separately. If goods are purchased forward and not covered by forward sales, provision should be made for any excess over market value, and this should be shown in the accounts. When goods are sold forward and not covered, provision should be made for the excess over anticipated sales value, but it is not stated that this should be shown."

Whatever basis is adopted it must be applied consistently, irrespective of the amount of profit available or loss sustained. Any reduction in stock values which exceeds these recommendations should be shown separately in the accounts as a reserve."

* *Economist*, June 16, 1945, p. 821.

DEPRECIATION.

Explaining a method which yields all information on the status of property depreciated under the group plan, Mr. H. D. Dow in a recent number of the *Railway Age* observes that for the purpose of finding depreciation rates of the past, three classes of property are considered: simple units, complex units and composite groups. Simple units remain intact throughout service life. The normal percentage rate of depreciation is found by dividing 100 per cent. by service life but that rate, when used in connection with original cost must be modified by the service value ratio (service value over original cost). For example, if service life is 20 years, the normal percentage rate is 5 per cent. but if service value equals 90 per cent. of original cost (salvage value being 10 per cent.), the rate is only 4.5 per cent.

Complex units are those composed of various parts. Whenever any of the parts are added or retired during service life, the original cost of the property is changed. Every change in original cost affects the service life of value and thereby alters the depreciation rate. Consider the following example:

From time of original investment in 1900 to final retirement in 1930 is thirty years but due to the 1906 and 1912 changes, service life of value is only 26.6 years.

Original investment in 1900...	\$ 16,000
Addition in 1906	... " 3,640
Retirement in 1912	... " 2,490
Final retirement in 1930	... " 17,150

By reason of interim changes, the normal percentage rates of depreciation is increased from 3.33 per cent. to 3.76 per cent. From this, it is apparent that every investment change during the life span increases the straight line rate of depreciation.

Composite groups include both simple and complex units. The individual units and values are often changed through additions and retirement. Due to revised methods of construction maintenance, and operation, the service life of the new units frequently differ from those of the old. During a single decade considerable change may take place in the average service life of the composite group. For that reason the average service life of the group for a specific period of the past does not of itself provide sufficient data for a reliable forecast of the future. When using the group plan, required by the Interstate (Commerce) Commission several periods in succession must be examined in order to develop a trend curve which will reflect the progressive conditions.

When computing average service life of a group for any specific period of the past, it is not necessary to examine separately the life of each individual unit. The collective units, properly weighted for life and value, have an average service life equal to that of the investment credits. Therefore, the credits may be combined and used for determining average life. All of the dollars are of equal value, so that the

normal average age of retirement is found by assuming that the dollars first installed were the first to be retired.

Average age of retirements during any period within the past 25 years may be obtained through the use of the data found in the engineering report and the valuation order records which show separately the annual deposits and credits of the investment accounts. From these the average life may be obtained but accurate results may be computed with a tremendous saving of effort by charting the data and then scaling the lives. Such charts are simple in construction, and once drawn furnish a comprehensive picture of the situation.

Mr. Dow claims that the chart is produced at a nominal cost and furnishes accurate information which offers a practical solution of the depreciation problem.

MAINTENANCE EXPENDITURE ON AMERICAN RAILWAYS IN 1944.

According to the Interstate Commerce Commission's Annual Report for 1944, the expenditure on the maintenance of way and structures and of equipment during the first six months of the year, exclusive of depreciation and amortization, was at the annual rate of \$ 2.282 million, the largest in history. But, in terms of maintenance work performed, as the report states, "the effectiveness of current dollar expenditures has been substantially reduced by various factors among which are generally higher costs of labour and materials; the payment of increased wages at overtime rates; the cost of uneconomical repairs to old equipment which must be retained in service because of inability to obtain replacements owing to priority contracts; the reduced efficiency of the maintenance labour resulting in greater loss of productive time due to passing trains. While these factors, considered individually, are indeterminate as to the extent of their influence, obviously they have reduced the effectiveness of the current year's expenditure when compared with that of prior years." The Commission state that the expenditure on maintenance during the past three years might have been even larger but for the scarcity of materials as a result of priority controls, and shortage of labour. During this period the deferred maintenance, a result of the excessive wear and tear imposed on the properties, has been increased at an accelerated rate. The Bureau of Valuation of the Commission estimates the present accumulation of deferred maintenance including provision for inadequacy and obsolescence at approximately \$ 300 million, which amounts to about 4 per cent of the annual total maintenance expenses during the past three years, and equals to about 11 per cent. of the total maintenance expenses in 1944.

TIED-MILEAGE UNIT SYSTEM.

The attempt to encourage motor transport of freight to afford relief to hard pressed railway administrations faced with abnormal war-time traffic has given rise to operation of road transport by contract, and to the "tied-mileage unit" scheme. This, as the War Transport Member explained during the last Budget session of the Assembly, is a system by which a contractor is tied to the railway by an

agreement to carry traffic between certain points at a predetermined rate. The statement on the subject laid on the table explained it as follows:

The "tied-mileage unit" scheme is a system whereby the railway runs the commercial side, but contracts out for the operation, paying merely for lorry mileage and idle time, to an operator who is, by an agreement, bound to keep at the disposal of the railway a certain number of lorries in running order. The railway guarantees to the operator a certain mileage rate which covers the running of the vehicles and a certain fixed amount for idle time, payable only if the vehicles are not used on any day. No amount is payable for any single vehicle for more than 26 days. For every idle day charged, the lorry must have been serviceable. If a vehicle has worked for 23 days and is available for the rest of the month, but not used, payment for idle days will be limited to 3 days. If a vehicle actually runs for 26 days or more, there is no idle time that month. Generally idle time is reckoned at Rs. 25 per month and running time at As. 9 a mile. The "buy-in" clause provides for termination of the contract at three months notice and payment for vehicles at cost less a pre-agreed rate of depreciation. Usually the cost is to be written off at 100,000 miles, subject to fair wear and tear. The "tied-mileage unit" system offers definite advantages both to a railway and to the contractor; the railway is relieved of operational details and the contractor is freed from commercial risks.

COAL ACCOUNTING.

In a memoranda submitted to the Public Accounts Committee, the Railway Board explained that it postponed the formulation of the principle of pricing of coal as a result of the decision in the course of the year transferring the State Railway Coal Department to the Supply Department. Under the system adopted, certain rates fixed by the Coal Commissioner will be charged for all coal suppliers whether by private collieries or by State collieries. The profit earned on these rates would be shown as the profit of the collieries concerned. The intention is that the collieries will as soon as possible after the war, revert to the railways and the question that was raised by the Public Accounts Committee will then become an active issue. In view of the transfer to the Supply Department and the special system that has been adopted for the period of the war, the Board did not find it necessary to reach final decision, more especially as they were not able to obtain the views of the Chief Mining Engineer who has throughout the course of the year been busy with more urgent and pressing problems.

COST OF DAMODAR FLOOD DAMAGE.

At a meeting of the Standing Finance Committee for Railways on 13th February, 1945, information was given as regards the total damage done by the Damodar floods and the total expenditure, whether chargeable to Capital, Depreciation Fund or Revenue incurred in

repairing the damage. The total damage done to the East Indian Railway in 1943 was as follows: 3,040 ft. of bank involving approximately 1.6 million ft. earth work; ballast was washed away; 9 masonry arch bridges and 6 to 12 ft. spans collapsed; 16 miles track were twisted and thrown out of alignment; and one gate-lodge collapsed. To repair all these damages well ahead of the monsoons of 1944, over 4,000 men were kept busy for a period of six months, on the work which involved nearly 1,000 ft. of permanent bridging and 590 ft. of additional pile bridging. The total expenditure was Rs. 39.51 lakhs of which Rs. 7.78 lakhs were under capital, Rs. 101 lakhs under Depreciation Fund and Revenue Rs. 30.73 lakhs.

COST OF DOUBLING B. A. RAILWAY METRE GAUGE LINES.

In answer to a question in the Assembly it was stated that 59 miles of Broad Gauge and 169 miles of Metre Gauge lines have been doubled on the Bengal and Assam Railway to meet military requirements. Final costs of these works are not yet available, but the capital outlay is estimated at roughly Rs. 4 crores. The entire amount is paid by His Majesty's Government, while interest and depreciation will be borne by the Bengal and Assam Railway which charges the usual rates for all passenger and goods traffic handled.

SOUTH INDIAN RAILWAY ACCOUNTS SOCIETY.

We are pleased to note the formation on the South Indian Railway, an Accounts Society. The objects of the Society are:

- (a) to provide opportunities for the staff of the different sections of the Accounts Department, as also the Statutory Audit Office, to meet at frequent intervals and discuss topics of railway accounting and finance, particularly bearing on subjects which will be of practical benefit to the staff in the course of their work;
- (b) to arrange for lectures and debates on subjects referred to in para (a) above, and institute prizes, medals, etc.;
- (c) to establish a library containing books on railway accounting and finance as well as general accounts, and to subscribe for magazines and periodicals on such subjects for the benefit of the members.

We wish the new Society all success in serving the interests of the accountants and auditors of the South Indian Railway.

CHANGES IN CLASSIFICATION.†

- (1) The cost of food grains and other commodities have been booked under "Capital Suspense—Stores", and the advances made to the Government grain purchasing officers or other agencies for pur-

† Appropriation Accounts of Railways in India, for 1943-44, Part I.

chase of grains have been recorded under Capital—"Miscellaneous Advances" instead of under Revenue—"Miscellaneous Advances".

- (2) Loss or gain in supply of rations to the construction staff has been booked under "Capital—VI—General Charges". Previously such loss was booked under 'Revenue Grant 6 G'.

- (3) The monetary limit for charging expenditure on renewals of certain assets (other than casual or wholesale renewals of rails, sleepers, bridges, etc.), to the Depreciation Reserve Fund has been temporarily raised from Rs. 2,000 to Rs. 5,000 in view of the present high level of prices.

- (4) It has been decided that rolling stock of any one class forming part of the programme of a year should be grouped together irrespective of the conditions laid down in the relevant rules of grouping.

- (5) A new minor head "Staff Benefit Fund—Investment Account" under the major head "Suspense Account" in Part IV of the section "P—Deposits and Advances" has been opened for recording the investments from the Staff Benefit Fund.

- (6) Expenditure on all imported railway stores is now being adjusted in India through the remittance accounts, instead of in England under the final head, "67-A and B—Construction of State Railways" and the cost of such stores has accordingly been met from the "Indian Grant".

- (7) For recording expenditure on account of dearness allowance paid to staff, suitable detailed and sub-detailed heads of account have been opened under revenue abstracts A to H.

INSTITUTE NEWS.

After an interval of almost four years the Conference of the Institute was held on Friday, 12th January, 1945, with Sir Cameron Badenoch as President. After a group photograph, the proceedings commenced with the sixteenth Annual General Meeting at 4.15 p.m. in the meeting room of the East Indian Railway. Before proceeding to the main business items, the following resolution referring to the late Rao Bahadur M. Ramachandra Iyer, Fellow, was moved from the Chair.

"That the members of the Institute of Railway Accountants and Auditors, having learnt of the untimely death of Rao Bahadur M. Ramachandra Iyer, Chief Auditor, (retired) South Indian Railway, on 14th November, 1944, hereby express their sense of deep sorrow at the loss of so worthy a Fellow of the Institute; and that a copy of this resolution be forwarded to his family as an expression of their most sincere and heartfelt sympathy in their bereavement."

The resolution was adopted by all, standing. The following resolutions were passed unanimously:

1. That the Annual Report of the Council for 1943 as certified by Messrs. S. R. Batliboi and Co., Honorary Auditors, be adopted.
2. That the Council for 1945 be re-elected as recommended by the Council.
3. That Messrs. S. R. Batliboi and Co., Honorary Auditors of the Institute be thanked for their honorary services during the past year and be elected Honorary Auditors of the Institute for the ensuing year.
4. That Rai Bahadur N. C. Ghosh, O.B.E., General Manager, East Indian Railway, be elected as Honorary Member of the Institute.

The Secretary then reported the change made by the Council in the By-law No. 10 which as amended runs as follows:—

"A Fellow, Member, Associate Member or Associate, who had notified the Secretary that he has retired from service may on payment of Rs. 10 per annum in advance be permitted to retain his connection with the Institute and to receive his copies of the publications.

A Fellow, Member, Associate Member or Associate, who shall have given due notice to the Secretary in writing on transfer from Railway to non-Railway Departments of the Government of India shall be entitled during such period of transferred service, for a period of not less than six months, to retain his connection with the Institute and to receive his copies of the publications in consideration of the payment of Rs. 10 per annum; provided that the reduced subscription under this By-law shall be payable in advance as in the case of ordinary annual subscriptions."

On the conclusion of the Annual General Meeting, members and guests had tea at the Royal Exchange Place Restaurant, after which at 5.15 p.m. the Conference opened in the Committee Room of the Bengal Chamber of Commerce, Royal Exchange Building with an address by Sir Cameron Badenoch, President of the Institute.

13 DEC 1945

The Conference reassembled for the second session on Saturday, January 13th at the East Indian Railway Meeting Room. Mr. V. Woods, Deputy General Manager, Bengal and Assam Railway, delivered a lecture on "Food Supply Organization on Railways". An interesting discussion followed in which a number of members participated. The next paper read was by Mr. M. Vaman Rao, Deputy Chief Auditor, Jodhpur Railway on "Forecasting of Sleeper Renewals". Mr. I. G. Plettell, read his paper on Provident Fund Accounts. Mr. B. G. Balakrishnan, followed next with his paper on "Grainshop Accounting and Finance". In the afternoon session, Mr. Balakrishnan read a second paper on "Road-Rail Competition".

An attractive feature of the Conference on the second day was the exhibition of accounting machines by Messrs. Felt and Tarrant. The Conference concluded in the afternoon with votes of thanks to the General Managers of the Bengal Nagpur and East Indian Railways for their co-operation and assistance in connection with the holding of the Conference at Calcutta; to the General Managers of other railway administrations for the facilities afforded to members attending the Conference; to the Committee of the Bengal Chamber of Commerce for the accommodation provided for the opening session and Messrs. Felt and Tarrant for their contribution to the exhibition. In the afternoon members proceeded on a visit to the works of Messrs. James Glendye and Company, Railway Ticket Printers, 6 Chowringhee, Calcutta. One of the Directors of the Company and the Manager took the members round all sections and entertained them with tea and light refreshments. The visit was acknowledged as providing a most enjoyable and instructive experience. Sardar Bahadur Santokh Singh, one of the party proposed vote of thanks to the Company which was carried with acclamation.

NEW PRESIDENT.

Sir Cameron Badenoch vacated the office of the President on April 1st on the eve of his retirement from India. The Council unanimously elected Mr. D. Colin Campbell, Director of Railway Accounts, Railway Board, PRESIDENT for the current session.

NEW MEMBERS.

The following gentlemen have been elected to the class of membership indicated below:

Fellow:

Mr. C. Bhaskaraiya, Chief Auditor, N. W. Railway, Lahore (by transfer from Membership to Fellowship).

Member:

Captain T. P. Choudhury, Accounts Officer, B. N. Railway (by transfer from Associate Membership).

Associate Member:

Mr. Kanai Lal Chatterji, Travelling Inspector of Accounts, B. N. Railway.

Mr. Girwar Prosad Gupta, Assistant Superintendent, Establishment Audit, Jodhpur Railway, Jodhpur.

Mr. A. H. Kerr, Inspector of Accounts, B. N. Railway (by transfer from Student to Associate Member.)

Mr. M. S. Martin, Chief Inspector of Accounts, B. N. Railway.

Mr. Himangshu Sekhar Mukherji, Superintendent, Counting Section, B. N. Railway.

Mr. Kamakhya Charan Pal, Junior Accountant, Traffic Accounts, B. N. Railway.

Rai Sahib Nilkrishna Sircar, Senior Accountant, B. N. Railway.

Member:

Mr. P. C. Mukherji, Assistant Audit Officer, Office of the Chief Auditor, East Indian Railway (for transfer from Associate Member to Member.)

Associate Member:

Mr. Bidyut Ranjan Chatterji, Travelling Inspector of Accounts, B. N. Railway (for transfer from Student to Associate Member.)

Mr. Peter Spencer, Travelling Inspector of Accounts, B. N. Railway.

Mr. R. Muthuraman, Senior Accountant, Traffic Accounts, South Indian Railway.

OBITUARY.

KALYANA CHENNAKESAVA SRINIVASAN, 1896-1945.

The unexpected demise of K. C. Srinivasan, Chief Accounts Officer, B.B. & C.I. Railway on 26th April, 1945, at Bombay at the age of 49, is keenly felt by a wide circle of his friends.

Kalyana Chennakesava Srinivasan was born on 26th April, 1896, as the only son of his parents. His educational career in Madras was full of promise. After taking the M.A. Degree from the Presidency College, Madras, in Chemistry, he joined the service of the Madras Government in 1918 as Chemist in the Leather Trades Institute and a year later served as Assistant Chemist in the Department of Industries, Madras. After passing the I.A. & A. S. examination, he started his career in the Indian Audit Department as probationer attached to the Office of the Accountant-General, Madras, on 24th March, 1921. In November of the same year he was attached to the office of the Government Examiner of Accounts, M. & S. M. Railway, his first official contact with railway accounts which was to become his main field of work. Srinivasan's interest in chemistry appears to have survived his new interests and for a short while he held charge of the office of Consulting Chemist of the Government of Madras. In the

next three years, he was Assistant Auditor, E.B. Railway. Besides the normal duties of Auditor, he received training in commercial and workshop accounts, and procedure.

When the Railway Rates Advisory Committee was set up in 1926, he was appointed its first Secretary. This afforded him an opportunity to study the subject of railway rates, and the results of his study are borne out by his major work on the *Law and Theory of Railway Freight Rates in India*. During the next five years he served the Audit Department in various capacities, as a Divisional Audit Officer, Karachi, Government Examiner of Accounts, B. N. Railway, Deputy Chief Auditor, G. I. P. Railway and Government Examiner, B. B. & C. I. Railway.

From 1933 onwards Srinivasan was increasingly associated with Railway Accounts. His services were utilised in connection with special investigations as officer on special duty or in some other capacity. He carried out the Internal Job Analysis of the E. I. Railway Accounts Department. At this time the lack of a proper code was keenly felt. The earlier codes had long gone out of date and new orders, changes, modifications, etc., led to so much difficulty that even the Public Accounts Committee demanded early action on this by the Railway Board. Srinivasan's detailed knowledge and experience were harnessed to this task. The expedition with which successive codes were brought out as provisional issues is a fair measure of the enthusiasm and hard work that he always brought to his work. Early in 1939, he was confirmed as Deputy Chief Accounts Officer, in which capacity, after serving for a brief period on the E.B., he proceeded to the G.I.P. Railway. On the retirement of Mr. R.W.F. Butterfield, he was appointed Chief Accounts Officer, B.B. & C.I. Railway, a post he held till his death. During the war the Department of Director General, Munitions Production, made a call on his special knowledge in connection with some accounts work in 1940.

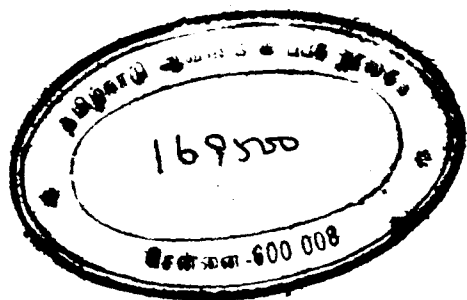
Srinivasan will be remembered by the members of the Institute as its first Organising Secretary. The foundation of the Institute in October, 1927 owed much to the valuable work done by him. He not only persuaded the members of the service of the need for an organization of this kind, he also shouldered the preparatory work prior to its foundation. Although he had to resign his Secretaryship within seven months of its foundation he had placed the affairs of the Institute on such sound basis that it was able to carry on ever since. During this short interval he helped to bring out the *Indian and Eastern Railways*, the first official organ of the Institute and the contributions which he made in successive issues on railway accounts are a tribute not only to his knowledge but to his desire to render the task of learning the subject of railway accounts easier to the new entrant in railway services.

It is very difficult to sum up within the limits of a brief notice so full and fruitful a life. Whatever the work Srinivasan undertook he tried to leave some record of what he understood and how he felt

things might be improved. His published literary contributions alone amount to an impressive record. They cover an unusual range: manufacture of glue for use in aeroplane propellers ; utilisation of wattle bark for tanning extracts ; Departmental Scientific Bulletins for which the Lord Curzon and Sir William Wedderburn research prizes were awarded by the Madras University ; "Indian Cattle and vital statistics" (1921), for which the Publicity Bureau prize was awarded; Research in Leather Chemistry; *Improvements in the Accounts and Audit Organization Railway Workshops and Railway Stores* (1924, 1925); *Some suggestions for improvement and control of railway expenditure in India* (1930-31), these two obtaining him the second and first prizes respectively offered by the I.R.C.A.; *Laws and Theory of Railway Freight Rates in India*; and *Report on the Construction of Locomotives in India in State Railway workshops*, (Joint author).

To these are to be added numerous contributions on topics of current railway interest in different Journals. Srinivasan has a pleasant and readable style and his discussion of any problem always stimulated further interest. This is particularly true of his main work on the *Laws and Theory of Freight Rates*. Soon after its publication an attempt was made to revise the Indian Railways Act, and the material contained in this book influenced considerably the views presented by many of the Chambers of Commerce in India. The comparative treatment of the rating systems of Great Britain, the United States and India in that work afforded for the first time a scale for the proper assessment of the practices followed in this country. Srinivasan's faith in progress and the possibility of improving conditions was reflected in all his writings. A wider circle than his friends and acquaintances may well regret the premature end of so remarkable a record and so full a life.

L.A.N.



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