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Treatment of Sinking Funds

By Charles S. Ludlam, C. P. A.

A sinking fund is usually a fund instituted and invested in such a manner that its gradual accumulations will enable it to meet and wipe out a debt at maturity, and it may be said that all sinking funds, even where they do not relate to the discharge of debt obligations, are based in principle on the proposition of gradual provision and accumulation. Of the many sinking funds instituted and operated in this country perhaps it would not be a far cry to say that the most important are those of the large life insurance companies, usually measured by the item of "insurance reserves" on the liability side of their balance sheets, to the extent of which investments shown on the asset side are in reality sinking funds created for the liquidation of the obligations of the companies upon the maturity of their policies.

While to the student of insurance the theories on which insurance premiums are assessed and the correlated sinking funds to meet maturing policies are built up are of great interest, the subject is of too technical a nature to be dealt with in the scope of this paper. Broadly speaking the company (if a life company) on a basis of the life expectancy of its policy holder, according to which it determines the amount to be received in premiums, seeks to so invest its premiums as to meet the obligation at maturity and to provide for its running expenses and profits. As illustrating in non-technical language the principles to be considered the following may be interesting:

If a man invests $100 at the rate of 5% per annum he should receive as interest or dividend $5 each year. If he puts this

money aside he will have $200 at the end of twenty years. If, however, at the end of the first year he receives his interest of $5 and invests it immediately his interest at the end of the second year would be $5.25, and if that also was invested at once his invested capital at the end of the second year would be $110.25. If he continues this process he will have $265.33 at the end of twenty years. If he received his interest twice each year and similarly invested it at once he would have $268.51 at the end of twenty years. If he received his interest four times a year and invested it at once he would have $270.15 at the end of twenty years; if he received his interest one hundred times a year and could invest it at once he would have $271.76; if he received his interest every second and invested it at once he would have $271.828. If the interest could be conceived as being received infinitely often, and instantly invested, we would arrive at a sum representing the investment at the end of twenty years which cannot be expressed exactly in figures no matter to how many decimals we carry it, but which would run: $271.-8281828, etc., which with the decimal point thrown forward two places mathematicians designate by the Greek letter epsilon. Of course in actual practice the matter cannot be carried to such a fine point, but due consideration has to be given to the amount of the obligation to be met at the expiration of an expected time and to the rates at which the premiums received can be safely and promptly invested. If the rate at which money can be safely invested falls below the 5% used in this illustration theoretically the premium rate would be adjusted accordingly; but in practice companies allow a margin wide enough in this respect to enable them to maintain uniform premium rates. It may be mentioned in passing that the principal difference between these insurance companies and the insurance feature of many so-called mutual benefit associations consists in the fact that the former are operated on the sinking fund basis and the latter are not.

But aside from the matter of insurance sinking funds there is, perhaps, a still broader field opened for discussion in the many conditions existing and the opinions expressed regarding the sinking fund mortgage which, when it is of large amount, is usually issued to the public in fractional parts, generally of the denomination of $1,000 each, called bonds. The sinking fund bond is of infinite variety. Nearly every man (or corpora-

tion) issuing an obligation that he expects or hopes to be able to liquidate gradually has ideas as to just how such liquidation should be provided for in the terms of the mortgage. The banker called on to sell the bond also always has his ideas as to how the sinking fund provisions should be elaborated or "decorated," so that the highest price may be realized for the security and the rate of interest which he has to offer. And then the lawyer who draws the "deed of trust!" Was there ever a lawyer who didn't have his own ideas as to corporate financing and who didn't as a rule succeed in incorporating some of those ideas into every legal document drawn by him? Hence, as stated, there are many varieties of "sinking fund" bonds; but, speaking generally it may be said that a mortgage on property with sinking fund provisions is security given for a debt under conditions which obligate the mortgagor to gradually reduce or provide for the specific indebtedness covered by the sinking fund mortgage, by making partial payments thereon or on account thereof from time to time prior to the final maturity of the entire obligation.

It will thus be seen that a sinking fund for retiring mortgage bonds, while having the same main purpose as a sinking fund of an insurance company, (the extinguishment of a debt), differs therefrom in that in the former case partial payments can be made from time to time by the purchase or call of the bonds; whereas in the latter case provision has to be made for the full amount of the obligation maturing at an expected date, and accordingly in the former case the matter of investment of interest accretions becomes comparatively of less importance. The mortgage usually provides for these payments to be made to a third party designated as the sinking fund trustee and who may be said to act in that capacity as the joint agent of the mortgagor and the mortgagee. The sinking fund trustee may or may not be the general trustee of the mortgage, although generally one party is selected to act in both capacities.

The man who buys a lot for $1,000, paying $10 down and entering into a contract to pay $10 a month, together with interest, on the unpaid balance for the ensuing ninety-nine months, has adopted the primitive features of the modern sinking fund mortgage, save for one more or less minor detail, namely, a trustee to collect the installments and pay them to the mortgagee; and even in such a case there may be a trustee, but,

the transaction being small and the mortgagee available, the mortgagor usually makes the payments of $10 a month, and interest, direct to the mortgagee instead of through the intermediary of a trustee. Where the mortgage is of large amount and is split up into many parts (bonds) held by many individuals it is impossible or impracticable, for many reasons, for the mortgagor to pay such installments direct to the mortgagee, (the bond owners), and it is equally impossible or impracticable for the mortgagee to collect such installments, hence the introduction of the trustee to handle or invest the installments as the mutual joint agent of the mortgagor and the mortgagee.

To the sinking fund trustee, under a sinking fund mortgage, the mortgagor from time to time, as may be provided by the terms of the mortgage, makes his partial payments, and the payments so received are usually applied by the trustee, under the provision of the mortgage, in one of three ways: (1) Invested in such income-producing securities as the mortgage provisions may permit, and permitted to accumulate until the date on which the entire obligation becomes due, when the funds are used for the purpose for which created; or, (2) and more frequently, to buy in the open market bonds of the mortgagor of the issue for which the trustee is acting, at a price not in excess of a fixed maximum provided by the terms of the mortgage; or (3) to buy direct from the owners bonds of the mortgagor, of the issue referred to, at a fixed price. Under the last mentioned conditions the specific bonds to be purchased are usually determined by drawing or by lot. The bonds so purchased may be cancelled or may be held in the sinking fund and continue to draw interest until the final cancellation of the entire debt according to the terms of the mortgage.

The accounting requirements of the trustee are simple, his transactions being of a cash nature. Eliminating the question of the expenses incurred by the trustee, which in turn are usually re-collectible from the mortgagor, and also the question of the trustee's fees for services, (also usually paid by the mortgagor), a trustee's accounts are practically those of a banker with a depositor. The mortgagor's account, or the "sinking fund account," is credited with deposits (installment payments made by the mortgagor under the terms of the mortgage) and interest collected, and debited with securities purchased, including bonds

of the mortgagor redeemed. It is appreciated that income accruing from funds and investments in the trustee's hands might, with propriety and a high regard for accounting technicalities, be taken into his accounts as it accrues, but as a matter of fact this is seldom done, and it is not really important as there is no question of principle involved in this instance. Subsidiary records should be kept by the trustee showing in detail (bond numbers, descriptions, etc.) the securities held in the trust, including bonds of the mortgagor purchased and held uncancelled in the sinking fund and also bonds of the mortgagor redeemed and cancelled. The trustee must of course know that payments made by the mortgagor comply with the provisions of the mortgage, but this is more a matter of administration than of accounting.

The accounting requirements of the mortgagor are more voluminous than are those of the trustee, but these will be found almost equally simple if the following features are kept in mind:

1—The trustee of the sinking fund, from the point of view now before us, is in effect merely the agent of the mortgagor.

2—Any expense incurred by the trustee under the trust is an expense of the mortgagor.

3—Any payment made by the mortgagor to the trustee, under the provisions of the mortgage, applicable to the retirement of the debt of the mortgagor, is merely a transfer by the mortgagor from one depositary to another depositary.

4—Any investment made by the trustee of the funds in his hands is an investment of the mortgagor.

5—Any income accruing on funds or securities in the hands of the trustee, under the trust, is income of the mortgagor, and should be taken into the accounts of the mortgagor as it accrues.

6—Any bonds of the mortgagor, redeemed and cancelled through the operations of the trustee, reduce the indebtedness of the mortgagor by the amount of the par value thereof.

7—Any bonds of this issue of the mortgagor purchased by the trustee and held as investments of the sinking fund, (although for purposes of ledger record, any bonds so held may be carried in a separate account and not charged directly against the liability account until the bonds are cancelled), reduce the

outstanding indebtedness of the mortgagor by the amount of the par value thereof.

8—Any premium paid by the trustee in the purchase of bonds of the mortgagor for redemption is an expense or loss of the mortgagor.

9—Any discount below par at which the trustee may buy bonds of the mortgagor for redemption is a gain or profit to the mortgagor.

It is appreciated that some of our legal friends will claim that bonds of a mortgagor, of the issue covered by a sinking fund purchased by the sinking fund trustee and not retired and canceled, will not reduce the obligation of the mortgagor and that such bonds should be treated as a part of the sinking fund and shown on the balance sheet of a corporation as an asset, and that contra thereto the full amount of the bonds, both outstanding and in the sinking fund, should be shown as a liability. It is admitted that there are some legal reasons for this, the chief of which is perhaps the question of the legal practice in regard to the burden of proof, but it seems to me that questions of this nature would arise only in cases of receivership or liquidation and would have to be dealt with only under court orders, consequently they would not apply to the ordinary accounting of a going concern.

Further, while accountants must be mindful of any and all legal obligations and of any legal situation affecting the accounts of clients, it will be apparent at once to anyone who gives the matter thought that as an actual fact an individual cannot owe money to himself. It would not be logical in its final premise for an individual to undertake to swell both his assets and liabilities by issuing notes to himself, and consequently it is illogical for an individual to show on the one hand as an asset bonds of his own issue which are held by his own trustee for his account, and on the other side of his balance sheet as a liability the identical obligations.

Now, if the nine premises previously mentioned are the salient features of a sinking fund operated through a trustee, it would appear that payments thereto on account of principal made by the mortgagor have no effect on the income of the mortgagor; nevertheless, a few years ago an industrial company was the subject of considerable criticism for the reason that its report

did not show as charges against the income of the company the payments which it was obliged to make to a sinking fund under the provisions of a deed of trust securing its first-mortgage bonds.

As illustrating the different points of view which may be held as to what effect sinking fund requirements and transactions have on the operation of a company it is interesting to outline and analyze these criticisms. It should be said that the company referred to had some long-term notes outstanding which were of course subordinate in lien to the mortgage. The final results of the company's operations showed a deficit after charging against its income the interest on both bonds and notes outstanding. It was claimed that not only the sinking fund should be deducted from the income of the company but that such deduction should be made prior to charging against the income the interest on the notes, on the ground that such an arrangement of the income account would show that the bonds, both as to interest and sinking fund, were amply protected although the interest on the notes was not being earned. The arguments advanced were:

(1) That according to the terms of the mortgage the bonds had a prior lien on the property and income, and that default such as the non-payment of interest, sinking fund, etc., might bring about the foreclosure and sale of the property, in which case the proceeds would be applied to the bonds before taking care of the notes.

(2) That the mortgage antedated the creation of the indenture under which the notes were issued—the notes therefore necessarily recognized the prior obligations of the company.

(3) That in some previous years the company had clearly established the priority of the sinking fund requirements by meeting the same although it had deferred payment of the interest on the notes.

(4) That it was not sufficient to assert that there was no obligation to pay the sinking fund from income, because the position of the company practically required that it be paid from income; also, that it might be urged with equal force that there was no necessity of paying interest on the notes from income inasmuch as the indenture did not specifically include such provision.

None of the foregoing positions seems to me to be well taken. A bond is in effect merely a secured note or bill payable,

the payment of which is usually fixed for some time in the future. The payment of a loan, whether it be thirty days or thirty years after date, has no relation to the operating or income results of the property so far as the principal of the loan is concerned. In order, however, that the points raised in the criticism referred to may be considered categorically, let us assume:

First: That the bonds referred to are dated January 1, 1900, and are due January 1, 1935.

Second: That the mortgage securing these bonds provides for the gradual liquidation or increased protection of the obligation by annual payments to a sinking fund beginning January 1, 1905, and that the trustee is authorized to use such sinking fund in purchasing the bonds at a price not exceeding $1,100 per bond and accrued interest; or, in the absence of ability to so purchase, to invest the sinking fund in securities pending the ultimate liquidation of the debt under the terms and conditions of the indenture.

Third: That subject to the various terms and conditions the trustee is to hold all the money investments comprising the sinking fund in trust for the benefit of the mortgagor, its successors or assigns.

Based on the foregoing premises, two things at once become apparent:

(*a*) The payments made to the sinking fund trustee are:

(1) For the purpose of advancing the liquidation of the company's debt by purchasing its bonds (secured notes) at not exceeding a certain price; or,

(2) In case they cannot be purchased, to add to the security underlying the mortgage by the acquisition of desirable investment securities which would be subject to the lien of the mortgage.

(*b*) That the trustee of the sinking fund, from the viewpoint of the mortgagor, is merely the agent of the company appointed for the protection of its bondholders to pay off certain of its liabilities or to invest certain of its funds.

Therefore, if and when the payments to the trustee are used by him for the retirement of bonds, the amount of the bonds so retired properly is chargeable to the account on the company's books representing such debt; if and when the money

paid to the trustee is invested by him in other securities, the company through its agent, the trustee, has made an investment (that is to say, in either case the cash in the company's treasury was reduced by the amount of the payment made to the trustee and the cash in the hands of the trustee temporarily correspondingly increased), then the cash in the hands of the trustee was reduced and at the same time the company's debt reduced or its investments increased. It is apparent that a change in certain of the company's assets or liabilities, *viz.*, a decrease in its cash and a corresponding decrease in its bonded debt or increase in its investments, would not at all affect the statement as to income of the period in which such a transfer happened to be made, much less to the extent of the transfer so made.

There was no provision in the mortgage referred to that the principal of the bonds should be paid out of the income of the company, and it is evident that no such idea was entertained by the directors and stockholders of the company who authorized the mortgage, for the reason that the mortgage was a lien on the property itself and not on its income; that is, it was intended that the property itself should secure the bonds and not the income from the property, as the income was not in any way "tied up" or mortgaged and the property was so "tied up" or mortgaged until the bonds were all paid off. There was nothing in the trust indenture for instance that would prohibit the company from issuing income bonds.

There is no doubt that if the company were in liquidation the holders of the first mortgage bonds would have a prior claim on the assets, but this point has no relation to the question of how the payment of the outstanding liabilities of a going concern should be handled in its accounts. It might as well be claimed that the interest on the bonds should be deducted direct from the gross earnings in the company's income statement and prior to the deduction of the operating expenses as that the sinking fund requirements should be deducted prior to the interest on the outstanding notes, inasmuch as the mortgage obligations were incurred prior to that of the operating expenses, as well as prior to the note interest. In other words it is not a question of where such a charge should be shown in the income account but rather whether or not it should be shown at all.

The fact that in previous years the company paid its sink-

ing fund requirements when it deferred interest on its notes seems to have no relation to the question. Whether the company pays one creditor and defers payment to another creditor would not affect its income account. It must be understood that there is a difference between the incurring and the payment of a liability for an expense. Interest on the notes referred to was charged properly against the income account of the company as it accrued, and the mere question of whether an accrued expense was paid or was not paid would not affect its position in the income account.

The suggestion that owing to the financial condition of the company it was practically necessary that its sinking fund requirements be paid from income, and that it might be urged with equal force that there was no necessity for paying the interest on the notes from income inasmuch as the indenture did not specifically include such a provision, is interesting; but, without regard to the question of whether or not the company had any resources other than its earning capacity from which to pay its obligations, its income account for any year would not be affected by the use of its income for the payment of its debts; that is to say its income account should reflect the result of its operations unaffected by any realizations or liquidations in respect of its capital accounts other than losses or gains therefrom. The payments to the sinking fund, required under the provisions of the first mortgage deed of trust could with entire propriety be made from money borrowed by the company, and indeed in actual practice these are frequently so made. But in any event it must certainly be appreciated that there is a great difference between interest accruing on an outstanding obligation and the payment of the obligation itself. One is an income, the other a capital account.

Such sinking fund payments are in effect merely payments on secured note obligations, but if under any circumstances they could be considered as proper charges against the income account then payments made of any other notes must by the same reasoning be proper charges against the income account; and accordingly, looking at the other side of the account, any receipts from notes issued must be proper credits to the income account. In other words, to any one who so reasons the idea of an income statement must be that of a statement of cash

receipts and disbursements rather than a statement of earnings accrued and expenses incurred.

Under the rules of the Public Service commission of New York the company referred to was required to provide for the depreciation of its property by monthly charges against its income account, and the amounts represented by these charges were in turn credited to proper reserves and so carried in the accounts of the company. The company would undoubtedly have had a right to use any of the resources represented by these reserves, and not required from year to year, in replacing its property, in meeting its sinking fund payments, or to use any other funds available.

As a believer in publicity and in full information being given to the public as to the financial conditions and requirements of all companies, as well as their operating results, I am in favor of appending to the income statement of any company under obligation to make periodical payments to a sinking fund the amount of such requirements during the period covered by the income statement in order that those interested may have a means of knowing, in a general way, what the fixed requirements of the company are as compared with its operating resources for meeting such requirements. While a statement of the operating results is one thing and a statement of its financial condition or requirements another, and although references from one statement to the other statement may with advantage be presented by the accountant, he should never lose sight of the actual conditions and reasons which would determine the classification of any specific item in the proper one of these two statements.

It has been suggested that in the case of some sinking fund bonds, particularly those of coal companies, the sinking fund provisions are intended to provide for the depreciation of the property and, in that sense, to become a charge against the income account. There is no one who believes more sincerely than I in proper charges being made against the operations of any company for depreciation in its property or other asset accounts which may accrue from period to period; but the questions of sinking fund payments for the retirement of debt obligations and of provisions for depreciation have no more relation in principle one to the other than the payment of any other liability has to

maintenance charges. Sinking funds created solely to provide means of restoring waste or wasting capital would of course present an entirely different accounting question from that presented by sinking funds created for the liquidation of debt obligations.

Municipal obligations in the shape of bonds are issued as a rule with sinking fund provisions under which it is expected that the obligations will be ultimately retired. These sinking fund payments are made or provided for by a specific item of assessment included in the general tax levy. In municipal statements the taxes assessed or the taxes collected, including the special item for sinking fund purposes, are generally treated as revenues or income, and as a contra account there is usually included in these statements a corresponding charge covering the sinking fund disbursements. The principles underlying payment of debt obligations through the medium of partial payments are not, however, in any way affected by the fact that the debt is owed by a municipality instead of by an individual or a corporation.