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AMORTIZATION OF PREMIUMS AND ACCUMULATION OF DISCOUNTS ON TRUST INVESTMENTS

It is proposed in this thesis to discuss the duty of trustees as to the amortization of premiums on bonds and similar obligations purchased or received by trustees at prices or values greater than par, and as to the accumulation of discounts on such obligations purchased or received by trustees at prices or values less than par; and, incidentally, to discuss other questions that seem affected by the fact that there are premiums or discounts on bond investments held in trust estates. We urge, as a matter of right and justice between life tenants and remaindermen interested, that it is the duty of trustees to amortize premiums and also to accumulate discounts on bond investments. Where good bonds are received or purchased by trustees at par value, no adjustments are necessary, as such securities will, of course, be carried in the accounts of the trustees at their face value until maturity, when they are collected at their par value. But when investment bonds are received or purchased by a trustee above or below par, the securities cannot properly be carried at par value; instead, they should be carried at the values at which they were received or purchased by the trustee, the premiums or discounts to be adjusted from interest period to interest period, during the life of the respective bonds, so that such respective bonds will stand in the accounts of the trustee at maturity at par—being the amounts at which they are paid when due.

1. We have had quite a number of discussions and letter communications with trust company officers regarding adjustments of premiums and discounts on bonds held by their respective companies as trustee. In such discussions and communications, it has been urged that such adjustments should not be made, because increase or decrease in market values of a bond may take place during the holding thereof by the trustee, and the values as adjusted from time to time would not represent the market value of the investment. Consideration of fluctuations in market value of bonds has no bearing on the duty of a trustee to adjust premiums and discounts on such investments. To clear the way for the correct consideration of the questions under review, we remind the reader that a trustee is not permitted to buy and sell securities on speculation; that fluctuations in market value of securities in the hands of a trustee are merely changes in the value of the assets of the estate by appreciation or depreciation, and, as such, affect only the principal of the estate; that such changes in market value are to be wholly disregarded in any accounting between life tenants and remaindermen. See cases cited;¹ also see late case *in re Gartenlaub*.²

2. Bonds in an estate have two values: (a) the book value of the bonds to the estate and (b) the market value independent of the book value. At times and from time to time these values may be the same. A trustee is not permitted in his accounts to follow the market value up and down, occasioned by the rise and fall of the market value of money for investment purposes and reflected in the changes in market values of bonds, nor to adjust particular bonds to such changes. As was said by the New York Court of Appeals in 1907, *in re Stevens*:³ "All large investors in bonds purchase bonds on the basis of the interest the bonds actually return (on their

1. 26 R. C. L. 1376; 17 R. C. L. 630.

2. 198 Pac. 209 (Cal.).

3. 187 N. Y. 471.

cost to the investor) not the amount they nominally return. Changes in market value of bonds have no bearing on the income basis of bonds held by a trustee. Notwithstanding such changes, he continues to hold bonds at their book value in the estate.”

3. In the investment of trust funds, it is the duty of the trustee to invest so as to have the fund earn a fair rate of income on legal and other properly authorized investments, considering the prevailing rate of income on such securities. The market rate for money, prevailing at the time of the respective investments, determines the price of bonds. In the purchase of bonds above or below par, the income basis of the investment is determined by the use of tables known as bond tables. Such tables take into consideration the premium paid or the discount allowed on the investment. The tables are constructed upon the principle that the premium paid on the bonds purchased above par will be written off periodically during the life of the bond and charged against the collections on the interest coupons attached to the bond, a proportionate adjustment of the premium being made at the time of the collection of the respective interest coupons; and, as to bonds purchased below par, that the discount will be written up periodically during the life of the bond and credited as an earning on the bond, in addition to the amounts collected on interest coupons attached, a proportionate adjustment of the discount being made at the time of maturity of the respective interest coupons. When a trustee purchases a bond above or below par, according to the values given in a bond table, it is upon the basis that such premium and discount adjustments will periodically be made. Unless such regular adjustments are contemplated by the trustee, in the case of a premium bond, he is unfair to the remaindermen, and, in the case of a discount bond, he is unfair to the life tenant. The trustee necessarily becomes personally liable to the life tenant or the remainderman for the amount so involved.

4. As a good bond matures it is paid off at par, whether the trustee purchased the bond at a premium or at a discount. In the case of a 6% bond, having 10 years to run, for principal sum of \$1,000, purchased by a trustee at a cost of \$1,100, it is apparent that the premium of \$100 must be accounted for. During the life of the bond the trustee will each year collect \$60 face amount of interest coupons attached to the bond and in the ten years will collect coupons amounting to total of \$600. According to the principle of the bond table, if the \$100 premium be written off as a charge against the interest coupons collected, there will remain as income on the bond the sum of \$500, and the bond apparently has earned net 5%. As such adjustments are charged against income on the bond, they are credited to principal of the estate. When such adjustments are completed, principal will have received credit for \$100, and, upon the collection of the \$1,000 principal of the bond, the principal of the estate will be restored the amount originally invested. On the other hand, if the trustee makes no adjustment of the premium as indicated, he pays to the life tenant the \$600 face value of coupons collected, and at maturity of the bond collects and credits to principal of the estate only the \$1,000 principal of the bond, the principal of the estate will be illegally impaired by the amount of \$100 premium, and the trustee will be held liable to the remainderman therefor. Also, in the latter case, while the bond apparently was purchased as a 5% investment, the trustee will have paid the life tenant more than 5%, to-wit: approximately 5.45%, on the \$1,100 cost of the bond, representing in part illegal payments out of principal of the estate, instead of out of income, for which the trustee will be held liable to the remainderman, as in case of any other improper payment out of principal of the estate. The foregoing explanation is based upon the level basis plan of amortization and is not exact. The exact earning of the bond mentioned is on basis of approximately 4.60%, payable semi-annually. See schedule hereinafter made as to a premium bond.

5. In the case of a 4% bond, having 10 years to run, for principal sum of \$1,000, purchased by a trustee at cost of \$900, it is apparent that the discount of \$100 must be accounted for. During the life of the bond the trustee will each year collect \$40 face amount of interest coupons attached to the bond and in the ten years will collect coupons for the total of \$400. If the \$100 accruing discount be written up as an earning on the bond and with the \$400 collections on coupons be credited to income of the estate, the income account of the estate will show total of \$500, and the bond apparently has earned net 5%. As such adjustments are credited to income of the estate, they are charged to principal of the estate. When such adjustments are completed, the principal of the estate will have been charged \$100. Upon collection of the \$1,000 principal of the bond, the amount will be credited to principal of the estate. Principal having been charged the \$100 discount as aforesaid, there will remain in principal of the estate \$900, and the principal of the estate will show restored the amount originally invested. On the other hand, if the trustee makes no adjustment of the discount as indicated, he pays to the life tenant only the \$400 face amount of coupons collected, and, at maturity of the bond, collects and credits to principal of the estate the \$1,000 principal of the bond, the principal of the estate will have been illegally increased by the amount of \$100 discount, and the trustee will be held liable to the life tenant therefor; also, while the bond apparently was purchased as a 5% investment, the trustee will have paid the life tenant less than 5%, to-wit: approximately 4.44%, on the \$900 original cost of the bond, representing less than proper payments out of income of the estate, and improperly increasing the principal of the estate, for which the trustee will be liable to the life tenant, as in any other improper withholding of income of the estate.

The foregoing explanation is based upon the level basis plan of accumulating the discount and is not exact. The exact

earning of the bond mentioned is on basis of approximately 5.30%, payable semi-annually. See schedule hereinafter made as to a discount bond.

6. To verify the fact that the market rate for money is the prevailing factor in fixing the market value of bonds, we call to the attention of the reader that, at the close of the calendar year 1920, United States Third Liberty Loan 4 $\frac{1}{4}$ % bonds were selling at price of approximately \$85.60 per \$100 par value, and other United States bonds in proportion. No one then doubted the merit of any United States bonds as an investment. The purchase of United States bonds at the time was on the basis of their large return, and not merely their contract rate of interest. Other unquestioned bonds were then selling on a basis so as to net even greater return. The purchase of Third Liberty bonds as of March 15, 1921, having seven and one-half years to run, at say 90.28, was on the basis of a return of 5 $\frac{7}{8}$ % on the investment. Large amounts of trust funds at the time were invested in the various issues of United States bonds. The prompt payment of the interest coupons attached to the bonds, and the final payment of the bonds themselves, could not be doubted by any one. Such investments were made according to values shown in bond tables and thus upon the basis that the trustees would from year to year adjust the accruing discount as part of the earning of the investment. Upon what theory can such trustees now fail to adjust the accruing discount from year to year, as a portion of the earnings of such bonds? The life tenant is entitled to 5.88% per annum on the investment in question. If instead the trustee merely pays the life tenant the collections on interest coupons attached, or \$4.25 per year per \$100 bond, the trustee is paying the life tenant at the rate of approximately 4.7% on the original cost of the investment. The difference between the 5.88% and 4.7% is 1.18% per year per \$100 bond, or \$1,180 per year per \$100,000 bonds. By not accruing the discount from year to year, the life tenant is

denied a large proportion of the actual earning of the bonds. Such act is gross injustice to the life tenant. In the example given, the wrong is apparent, since trustees must not show partiality between life tenant and remainderman. The wrong cannot be justified in the case just cited, nor can it be justified in any other case of a bond purchased by a trustee at a discount.

7. Bond tables are constructed upon the principle that the investor shall receive compound interest on his investment, compounded on the income basis of the investment. It makes considerable difference whether interest be compounded annually, semi-annually, quarter-yearly, etc. Most bonds bear interest payable annually or semi-annually. To value a bond bearing interest payable annually, a bond table based on annual interest payments should be used, and, to value a bond bearing interest payable semi-annually, a bond table based on semi-annual interest payments. To illustrate, in the case of a bond having five years to run, bearing interest at the rate of 6% per annum, payable annually, the increase will be at the ratio of 1.06 for five periods, and in case of a bond having five years to run, bearing interest at the rate of 6% per annum, payable semi-annually, the increase will be at the ratio of 1.03 for ten periods. In valuing a bond, the use of the proper bond table is very important.

8. Amounts reserved from time to time by amortization of premiums on bonds are treated as credits on principal and, as such, cease to bear interest from dates of credit. The same principle applies as if at the respective times small partial payments were actually made in money by the debtor on principal of his indebtedness, however small such payments from time to time may be. However, a few bond tables are calculated on the basis that the credits by amortization of principal are to be considered immediately re-invested at the income basis of the bond, no matter what the market rate for money

at the time may be. As we view the problem, the latter method is not correct. A trustee would not be expected to re-invest small partial payments of a debt or small amounts represented by amortization adjustments, as re-investments of such small amounts practically cannot be made.

9. Depreciation of premium value and appreciation of discount value are elements in the valuation of bonds, necessarily to be taken into consideration at the time of purchase. Such depreciation and appreciation of bonds is not accidental, but is inherent in each investment at the time made. Expected depreciation or appreciation, by way of amortization of premiums and accumulation of discounts on bonds, affect only the income of an estate. Any increase or decrease of the value of such bonds, independent of amortization of premiums and accumulation of discounts, affect only the principal. Such is the philosophy underlying investments in bonds at a premium or at a discount. As herein shown, amortization of premiums is not to be considered technical depreciation of property, nor is accumulating discount to be considered technical appreciation of property nor as unearned increment thereon.

10. We have considered the suggestion often made as to a bond purchased by a trustee below par, that adjustment of discount should not be made until the bond matures and is collected, because it might happen that default be made in the payments due on the bonds before maturity, and, if default occurs, that the market value of the bond will be reduced to less than the original cost thereof to the estate, and certainly to less than the book value thereof in the accounts of the trustee, if the accruing discount be written up from time to time. Such suggestion is mere evasion of the responsibility of the trustee with respect to the investment. Fear of possible default has no bearing on the duty of the trustee to accumulate discounts, prior to actual default on the bond. When

default occurs on any bond, whether purchased by an estate above or below par, and if default continues until proceeds of the bond are realized upon under foreclosure by legal proceedings or otherwise, then is the time, under the law of fiduciary accounting, to make proportionate credits to income and to capital for the proceeds realized on the bond. The plea of possible default on an investment, and consequent delay in making proper credits to income, applies alike to all investments, as well as to bonds purchased at a discount. The idea of withholding income on bonds until they respectively are fully realized upon, principal and interest, is not fair to the beneficiaries of an estate and would subvert the very purpose of a trust created for the protection of dependent and other beneficiaries.

11. As has been explained, purchases of bonds made according to values given in a bond table, whether above or below par, are made upon the principle that the investment is to yield the effective rate of interest shown in the table, and not the nominal or contract rate of interest shown in the bond. Since it appears that premiums paid on bonds invested in by a trustee must be amortized, it surely follows that any discounts allowed on bonds purchased by the trustee must be accumulated, although there are as yet no decisions of the courts directly passing on the duty of trustees to accumulate discounts. It certainly is not equitable for a trustee to make a purchase of discount bonds, on the basis that the trustee will accumulate the discount, and, after the purchase, refuse or neglect to do so. Under the circumstances, the trustee cannot justify failure to adjust discounts, any more than he can justify omission to amortize premiums.

However, we know of various trust companies that as trustees adjust premiums on bonds purchased above par, while they fail to adjust discounts on bonds purchased below par. The respective trust companies willfully at fault incur serious liability to the beneficiaries of trust estates in their

charge, as, of course, do individual trustees who similarly ignore their duty as trustees.

12. In the purchase of bonds for investment, trustees have the liberty to purchase bonds quoted at a premium or bonds quoted at a discount. In the case of bonds bought at a premium, the income earned and to be paid to the life tenant is less than the amounts of the coupons collected from time to time, so that the trustee is in funds to the full amount of the payments to be made to the life tenant, and the trustee has no responsibility to provide funds for such payments. In the case of bonds bought at a discount, the income earned and to be paid to the life tenant is more than the amounts collected on the maturing coupons, and full payments of income to the life tenant cannot be made, unless the estate has other funds available for such purpose. If there are no funds, other than the collections on the coupons, then the trustee must provide the additional funds. This may be done from time to time by the sale of assets in the estate, sufficient in amount to provide the funds required. In the average estate, having miscellaneous investments, some at a premium and some at a discount, and perhaps a small amount of uninvested cash, sales of securities are seldom necessary to meet accruing discount. However, when necessary, the trustee should not hesitate to make sales required to provide funds from time to time to make proper payments to the life tenant.

13. Occasionally we hear of the practice of a few trustees that at time of purchase write off premiums paid on bond investments. Such an investment is made upon the basis that the premium be written off gradually during the life of the investment. To write off the premium at once will have the effect of depriving the life tenant of a considerable amount of income in the present that is not deductible for years to come. Also, if the life tenant should die during the life of the investment, the life tenant will have been charged with premium adjustments that ought not to have been made until after his

enjoyment of the income shall cease. The practice of so writing off the premium immediately is unfair to the life tenant and must be condemned. The trustee should be held liable for any loss so caused the life tenant.

14. Occasionally we hear of the practice of a few trustees that at time of purchase write up the discount on bond investments. Such an investment is made upon the basis that the discount be written up gradually during the life of the investment. To write up the discount at once will have the effect of giving the life tenant credit for a considerable amount of income in the present that will not be earned for years to come. Also, if the life tenant should die during the life of the investment, the life tenant will have received credit for discount adjustments that ought not to be made until after his enjoyment of the income shall cease. The practice of so writing up the discount is unfair to the remainderman and must be condemned. The trustee should be held liable for any loss so caused the remainderman.

15. Instead of making adjustments of premiums and discounts on the exact or scientific basis plan herein explained, trustees frequently make such adjustments on the level basis plan. That is, during each interest period the adjustment is made on a proportionate basis, instead of the exact basis. In either case the bonds will stand at par at maturity. The length of time a bond has to run has a direct bearing on the adjustment of the premium or discount involved. The longer the bond has to run, the smaller per interest period is the amount of each adjustment. In the case of a bond for \$100 having ten years to run, purchased at a premium or discount of \$10, 1/10, or \$1, is charged or credited each year, while in the case of a similar bond, having 100 years to run, 1/100, or 10 cents, is charged or credited each year. In the case of a perpetual bond there need be no adjustment, under either the scientific or level basis plan. Thus it is seen that the date of

maturity of a bond materially affects its income basis. It is more convenient to use the level basis plan of adjusting premiums and discounts and that plan is in common use. As adjustments by the level basis plan in the usual case give approximately equitable results, we submit to the practice without serious objection, although the level basis plan is not exact.

16. While trustees may not carry trust investments at changing market values, trust companies, banks and insurance companies of various States by statute, and in other States by rule of public officials, may do so; but, instead of carrying their own bonds at fluctuating market values, they are given the privilege of carrying their own investment bonds at cost, subject to regular adjustments of premiums and discounts. By carrying bonds at market value, such corporate investors unconsciously adjust their bonds to par at maturity. As bonds near maturity, the market reflects the fact. On the date of maturity bonds are merely worth par, no matter what premium or discount was originally paid or allowed thereon. All corporate and individual investors, though not required by statute, should carry their bonds on the plan herein advocated, to show the true earning thereon.

17. Ordinarily trustees are not expected to make investments at compound interest. Trustees are expected to collect income on investments as the income becomes due, deduct proper expenses of the trust, and pay the net income to the respective beneficiaries. Certainly trustees ordinarily do not retain income for the purpose of re-investment. In trusts where income accumulates, amounts available for investment from time to time are required to be invested, and to that extent trust funds are compounded. Ordinarily each individual investment is made upon the basis of simple interest and not compound interest. Bond tables show the value of bonds and similar obligations only upon the basis of allowing

compound interest on the respective amounts, while invested in the respective bonds, at the effective rate of income, interest ceasing on credits diminishing the investment from time to time and interest accruing on charges increasing the investment from time to time. The custom of selling bonds according to values shown in bond tables is universal, and purchases can be made on no other basis. When trustees make bond investments, they necessarily make them upon the basis of compound interest. Therefore, we conclude that bond investments by trustees must be made on the basis of compound interest, as is usual with all other investors.

18. It frequently happens that bonds held by an estate are sold before maturity, at prices other than their book values as established by amortization of premiums or accumulation of discounts. The question arises in such case, what proportion of the proceeds of the sale should be treated as increase or decrease of corpus of the trust and what proportion should be credited to income. So much of the proceeds as represents accrued income on the bond at its investment basis should be credited to income of the estate; so much as represents the book value of the investment at the time of sale should be credited to corpus, as in return of that much capital; and so much as represents any excess over the book value, or under the book value, should be credited to corpus or charged to corpus, as technical depreciation or technical appreciation of property, caused by market conditions outside of the investment and not inherent in the investment at the time it was made. Fluctuations in market value do not affect the income basis of an investment while in the hands of a trustee, and therefore do not affect premiums or discounts on such investments.

19. When a bond is purchased on an interest maturity date, no question of accrued interest is involved; but, whenever a bond is purchased between interest maturity dates,

interest accrued from date of payment of last matured interest coupon to date of purchase of the investment must be considered. In the case of a bond bearing 6% interest, payable annually January 1st, purchased by a trustee July 1st, at the time of purchase six months interest will have been earned on the bond. Since the seller of the bond parts with the next maturing and all subsequent coupons on the bond, he requires that the interest accrued on the bond for the fractional period be paid to him at the time of the sale. On the following January 1st the trustee collects the then maturing coupon, representing interest for one year. As the trustee held the bond as an investment only for six months, he is entitled only to six months interest earned in that year. Having advanced six months interest at the time of purchase, as a charge against the first maturing coupon, he will have net the amount the bond earned while held by him as an investment, and the matter stands properly settled.

It is usual to adjust interest accrued on bonds as above indicated. Thus the question of income on the amount of accrued interest advanced is waived by both the seller and buyer of bonds. The result is that the purchaser of a bond advances the amount of accrued interest, without expectation of receiving interest on the amount advanced, from the date of purchase of the bond to the date of payment of the first maturing interest coupon. In the exceptional case, where interest is also to be earned on the accrued interest advanced, it will be necessary to calculate the present worth, at the time of purchase, at the income basis of the purchase, on the amount of the accrued interest. This may readily be calculated by various methods or by referring to a true discount table for fractional interest periods.

20. In the purchase of bonds, trustees should be careful to examine into the question of whether or not the respective bonds may be called before maturity. Since the length of time the bond is to run materially affects the income basis of the

bond, and as the income yield is calculated on the theory that the bond will run to maturity, call and payment before maturity will cause confusion.

Suppose a premium bond, having ten years to run at time of purchase, be called at par in five years. At the end of five years, on the level basis plan of amortization, half of the premium will have been written off, and, if the bond be called and paid at par, the other half of the premium will have to be charged off as a loss to corpus of the estate and then fall on the remainderman instead of the life tenant.

On the other hand, a discount bond, having ten years to run at time of purchase, may be called at par at the end of five years. At the end of five years, on the level basis plan of accumulation of discounts, half of the discount will have been written up, and, if the bond be called and paid at par, the other half of the discount will have to be credited as a profit to corpus of the estate and inure to the benefit of the remainderman, instead of the life tenant. Of course, the possibility of calling discount bonds at par is always very remote.

As to bonds purchased at a premium, to avoid loss, it is a safe, practical rule for the investor to adjust premiums as if the call date were in fact the maturity date of the bonds, on the assumption that the bonds may be called as soon as permissible. As to bonds purchased at a discount, to avoid credit for an uncertain profit, it is the rule to adjust discounts to the actual maturity date of the bonds and as if they were not subject to call. In general, we do not approve any investments for trust estates, when such investments are subject to call before maturity.

21. It is the rule that profits other than income earning on investments should go to the credit of principal of a trust estate, being considered as in the nature of a profit by appreciation. This certainly is true in the case of a bond not redeemable before maturity and purchased by a trustee at a

price and subsequently sold at a higher price. In the event a bond is issued to mature at a fixed period, with a provision that the obligor may call such bond before maturity at some fixed bonus above par, on purchase by a trustee of such a bond the trustee cannot presume that the bond will be called before it is payable and he must make the investment on the basis that the bond will remain outstanding until it matures. If the bond is purchased at a premium, the principles for amortization of the premium should be applied, and from interest period to interest period the cost of the bond in the account of the trustee should be adjusted accordingly, until redemption of the bond according to provisions for its call before maturity. If the call is upon an interest payment date, the proceeds of the last coupon collected are adjusted on the usual amortization basis of the bond, and the proceeds of collection of the principal of the bond with call bonus thereon are credited to principal of the trust estate. If such proceeds with bonus are more than the then amortized cost of the bond, as carried in the account of the trustee, a profit by appreciation to the principal of the trust estate is the result, or, if less than such cost, a loss by depreciation is the result. If the call is made between interest periods, the proceeds of the interest accrued from the last matured interest coupon should necessarily be adjusted on the amortization basis for the fractional period.

22. Bond tables are constructed upon the theory that the investor in bonds on a given income basis shall receive the stated income during the life of the investment. The values given in a bond table represent the present worth, on the stated income basis, at compound discount, of the future payments of interest and principal on the respective bonds, interest to cease on the amounts of the various payments from time to time made on the bond. On the aforesaid theory, the investor will receive the agreed rate of income, while his funds are invested in the respective bonds. Credit is given and

deducted from the book value of premium bonds from time to time, for amounts received on matured interest coupons attached to premium bonds in excess of the exact amount of the earning of the investment in the bond; and charge is made and added to book value of the investment from time to time, as interest coupons attached to discount bonds mature and become payable, as face of the coupons do not represent the exact amount of the earning of the investment in the bond.

We illustrate the process of amortizing premium on a premium bond, having three years to run, bearing interest at 6% per annum, payable semi-annually, purchased on interest payment date, so as to require no adjustment of accrued interest, and purchased on 5% income basis, to-wit:

Bond table shows such bond for \$100 will cost	\$ 102.75	
At the end of six months we collect first interest coupon of....	\$ 3.00	
Interest at 5% per annum on \$102.75 for half year amounts to	<u>2.57</u>	
We reduce book value of bond by difference applied on		
principal .....	.43	<u>.43</u>
New book value entitled to interest		102.32
At end of twelve months we collect second interest coupon of	3.00	
Interest at 5% per annum on \$102.32 for half year amounts to	<u>2.56</u>	
We reduce book value of bond by difference to be applied on		
principal . . . . .	.44	<u>.44</u>
New book value entitled to interest		101.88
At end of 18 months we collect third interest coupon of.....	\$ 3.00	
Interest at 5% per annum on \$101.88 for half year amounts to	<u>2.55</u>	
We reduce book value of bond by difference to be applied on		
principal . . . . .	.45	<u>.45</u>
New book value entitled to interest		101.43
At the end of 24 months we collect fourth interest coupon of	\$ 3.00	
Interest at 5% per annum on \$101.43 for half year amounts to	<u>2.54</u>	
We reduce book value of bond by difference to be applied on		
principal . . . . .	.46	<u>.46</u>
New book value entitled to interest		100.97
At end of 30 months we collect fifth interest coupon of	\$ 3.00	
Interest at 5% per annum on \$100.97 for half year amounts to	<u>2.52</u>	
We reduce book value of bond by difference to be applied on		
principal . . . . .	.48	<u>.48</u>
New book value entitled to interest		100.49
At end of 36 months we collect sixth interest coupon of	\$ 3.00	
Interest at 5% per annum on \$100.49 for half year amounts to	<u>2.51</u>	
We reduce book value of bond by difference to be applied on		
principal . . . . .	.49	<u>.49</u>
Bond at maturity will thus stand at par, the amount at which it		
is to be paid		\$ 100.00

It will be noted, as the premium is written off the amount of interest earned semi-annually is reduced in proportion.

We illustrate the process of accumulating the discount on a discount bond, having three years to run, bearing interest at 4% per annum, payable semi-annually, purchased on interest payment date, so as to require no adjustment of accrued interest, and purchased on 5% income basis, to-wit:

Bond table shows such bond for \$100 will cost	\$ 97.25
Interest at 5% per annum on \$97.25 for half year amounts to....	\$2.43
At end of six months we collect first interest coupon of.....	2.00
As amount of interest coupon is less than income basis of bond,	
we add difference to book value of bond .....	.43 .43
New book value of bond entitled to interest	97.68
Interest at 5% per annum on \$97.68 for half year amounts to..	\$2.44
At end of 12 months we collect second interest coupon of	2.00
As amount of interest coupon is less than income basis of bond,	
we add difference to book value of bond .....	.44 .44
New book value of bond entitled to interest	98.12
Interest at 5% per annum on \$98.12 for half year amounts to..	\$2.45
At end of 18 months we collect third interest coupon of	2.00
As amount of interest coupon is less than income basis of bond,	
we add difference to book value of bond .....	.45 .45
New book value of bond entitled to interest	98.57
Interest at 5% per annum on \$98.57 for half year amounts to ..	\$2.46
At end of 24 months we collect fourth interest coupon of	2.00
As amount of interest coupon is less than income basis of bond,	
we add difference to book value of bond .....	.46 .46
New book value of bond entitled to interest	99.03
Interest at 5% per annum on \$99.03 for half year amounts to ..	\$2.48
At end of 30 months we collect fifth interest coupon of	2.00
As amount of interest coupon is less than income basis of bond,	
we add difference to book value of bond .....	.48 .48
New book value of bond entitled to interest	99.51
Interest at 5% per annum on \$99.51 for half year amounts to ..	\$2.49
At end of 36 months we collect sixth interest coupon of	2.00
As amount of interest coupon is less than income basis of bond,	
we add difference to book value of bond .....	.49 .49
Bond at maturity will thus stand at par, the amount at which	
it is to be paid	\$100.00

It will be noted, as the discount is written up the amount of interest earned semi-annually is increased in proportion.

23. To illustrate the level basis plan of amortization of premium on bonds, we shall make the entries necessary on that plan to write off the premium of \$2.75 paid on the above mentioned bond for \$100, bearing interest at 6% per annum, payable semi-annually, having three years to run, purchased on 5% income basis. The premium is to be adjusted over six interest periods. The process is as follows:

Purchase price of \$100 bond	\$102.75	
At the end of six months collect first interest coupon due....	\$3.00	
Deduct 1/6 of \$2.75 premium paid .....	.46	.46
Credit income	2.54	
New principal carried forward		102.29
At end of 12 months collect second interest coupon due	\$3.00	
Deduct 1/6 of \$2.75 premium paid .....	.46	.46
Credit income	\$2.54	
New principal carried forward		101.83
At end of 18 months collect third interest coupon due	\$3.00	
Deduct 1/6 of \$2.75 premium paid .....	.46	.46
Credit income	\$2.54	
New principal carried forward		101.37
At end of 24 months collect fourth interest coupon due	\$3.00	
Deduct 1/6 of \$2.75 premium paid .....	.46	.46
Credit income	\$2.54	
New principal carried forward		100.91
At end of 30 months collect fifth interest coupon due	\$3.00	
Deduct 1/6 of \$2.75 premium paid .....	.46	.46
Credit income	\$2.54	
New principal carried forward		100.45
At end of 36 months collect sixth interest coupon due	\$3.00	
Deduct 1/6 of \$2.75 premium paid .....	.45	.45
Credit income	\$2.55	
At maturity bond stands at par value, the amount to be collected thereon		\$100.00

The reader is requested to compare the foregoing figures with the scientific adjustments of premium shown above in Paragraph 22. He will note that in the early interest periods, on the scientific plan the income credits are larger than in the later periods, for the reason that in the early periods the exact investment is shown to be larger than in the later periods. Of course, in either case the total adjustments are equal.

To illustrate the level basis plan of accumulation of discount on bonds, we shall make the entries necessary on that plan to write up the discount of \$2.76 allowed on the above mentioned bond for \$100, bearing interest at 4% per annum, payable semi-annually, having three years to run, purchased on 5% income basis. The discount is to be adjusted over six interest periods. The process is as follows:

Purchase price of \$100 bond	\$ 97.24
At end of six months collect first interest coupon due and credit income	\$2.00
Credit income with accrued discount, 1/6 of \$2.76.....	.46
As accrued discount is not paid in cash, add to amount of investment .. .....	.46
New principal carried forward	97.70
At end of 12 months collect second interest coupon due and credit income	\$2.00
Credit income with accrued discount, 1/6 of \$2.76.....	.46
As accrued discount is not paid in cash, add to amount of investment .. .....	.46
New principal carried forward	98.16
At end of 18 months collect third interest coupon due and credit income	\$2.00
Credit income with accrued discount, 1/6 of \$2.76.....	.46
As accrued discount is not paid in cash, add to amount of investment .. .....	.46
New principal carried forward	98.62
At the end of 24 months collect fourth interest coupon due and credit income	\$2.00
Credit income with accrued discount, 1/6 of \$2.76.....	.46
As accrued discount is not paid in cash, add to amount of investment .. .....	.46
New principal carried forward	99.08
At end of 30 months collect fifth interest coupon due and credit income	\$2.00
Credit income with accrued discount, 1/6 of \$2.76.....	.46
As accrued discount is not paid in cash, add to amount of investment .. .....	.46
New principal carried forward	99.54
At end of 36 months collect sixth interest coupon due and credit income	\$2.00
Credit income with accrued discount, 1/6 of \$2.76 .....	.46
As accrued discount is not paid in cash, add to amount of investment .. .....	.46
At maturity bond stands at par value, the amount to be col- lected thereon	\$100.00

The reader is requested to compare the foregoing figures with the scientific adjustments of discount shown above in Paragraph 22. He will note that in the early interest periods on the scientific plan the income credits are smaller than in the later periods, for the reason that the exact investment in the early periods is shown to be smaller than in the later periods. Of course, in either case the total adjustments are equal.

24. Bond tables are readily calculated by the use of logarithms, by one experienced in their use. By the employment of algebraic processes, combined with the use of logarithms, the present worth of any number of coupon payments can be found by one calculation, and the present worth of the principal of the bond is easily ascertained. The sum of the two present worths represents the value of the bond as given in a bond table. It is generally assumed that such values cannot be calculated by arithmetical methods. Such is not the case. There are various methods by which the calculation may be made. As we believe illustrations may help the reader to an understanding of factors involved in bond values, we shall make the calculation as to two bonds for \$100 each, each having three years to run, one bearing 6% per annum interest, payable semi-annually, purchased at a premium, and the other bearing 4% per annum interest, payable semi-annually, purchased at a discount, both on a 5% basis. Probably as convenient a method as any will be by the use of reciprocals of the ratios of increase. To obtain the reciprocal of a number, we divide unity (one) by the number. As the basis of both investments is to be 5% per annum, payable semi-annually, the ratio of increase per period of six months is 1.025. The reciprocal of 1.025 is found by dividing unity by 1.025, thus 1 divided by 1.025 equals .9756. \$0.9756 placed at interest at rate of 5% per annum in six months will equal \$1.00.

In the case of 6% bond, the interest coupons are for \$3 each. To find the present worth of the respective coupons at compound discount, at the rate of 5% per annum, compounded semi-annually, the assumed income basis of the bond, we proceed as follows:

\$3 due in 6 months equals $3.00 \times .9756$, equals	\$2.93
\$3 due in 12 months equals $2.93 \times .9756$, equals	2.86
\$3 due in 18 months equals $2.86 \times .9756$, equals	2.78
\$3 due in 24 months equals $2.78 \times .9756$, equals	2.71
\$3 due in 30 months equals $2.71 \times .9756$, equals	2.65
\$3 due in 36 months equals $2.65 \times .9756$ equals	2.59
We find present worth of the six coupons equals	\$16.52
Since present worth of \$3 due in 36 months equals \$2.59, present worth of \$1 due in 36 months equals one-third of \$2.59; one-third of \$2.59 equals .86 cents. If present worth of \$1 due in 36 months equals \$.86 cents, present worth of \$100 due in 36 months equals	86.23
We find that present worth of the 6% bond on 5% basis equals the value shown in bond table	\$102.75

In the case of the 4% bond, the interest coupons are for \$2 each. To find the present worth of the respective coupons at compound discount, at the rate of 5% per annum, compounded semi-annually, the assumed basis of the bond, we proceed as follows:

\$2 due in 6 months equals $2.00 \times .9756$, equals	\$1.95
\$2 due in 12 months equals $1.95 \times .9756$, equals	1.90
\$2 due in 18 months equals $1.90 \times .9756$, equals	1.86
\$2 due in 24 months equals $1.86 \times .9756$, equals	1.81
\$2 due in 30 months equals $1.81 \times .9756$, equals	1.77
\$2 due in 36 months equals $1.77 \times .9756$, equals	1.72
We find present worth of the six coupons equals	\$11.01
Present worth of \$100 due in 36 months as found above, equals.....	86.23
We find present worth of the 4% bond on 5% basis equals value shown in bond table	\$97.24

25. We may obtain the same results readily by the algebraic method of making the two necessary calculations, to-wit:

For the premium bond, find present worth of an annuity of \$3, due semi-annually for six periods, at 5% per annum discount, computed semi-annually	\$16.52
Find present worth of \$100, due in three years, at 5% per annum discount, computed semi-annually	86.23
The sum of the two present worths is the investment value of the premium bond	102.75

For the discount bond, find present worth of an annuity of \$2, due semi-annually for six periods, at 5% per annum discount, computed semi-annually	\$ 11.02
Find present worth of the principal of \$100, due in three years, at 5% per annum discount, computed semi-annually	86.23
The sum of the two present worths is the investment value of the discount bond	<u>\$ 97.25</u>

The longer a bond has to run, the less is the present worth of the principal of the bond and the more the present worth of the interest coupons attached. More coupons are attached to a long bond than to any shorter time bond.

The principal of a bond for \$1000, due in 118 half years (59 full years), at 6% per annum discount, computed semi-annually, has present worth value of	\$ 30.55
Being an amount almost as small as the face value of the \$30 interest coupons attached. An annuity of \$30, payable semi-annually, at 6% per annum discount, computed semi-annually, representing payments corresponding to the interest coupons on the bond, has present worth of	969.45
	<u>\$1000.00</u>

The last mentioned amount is the value of such bond on a 6% semi-annual basis, as shown in tables of bond values. The result is self-proving, as, on basis of its contract rate of interest, the value of any bond must be equal to par.

26. As shown by above calculations \$102.75 is the present worth on a 5% basis of a bond for \$100, due in three years, bearing interest at 6% per annum, payable semi-annually. As stated, such value is determined upon the principle that the investor is to receive interest at the rate of 5% per annum upon the respective amounts he has invested in the bond during each interest period. To illustrate the fact stated, to establish the correctness of the calculation of the value of the bond mentioned, and to demonstrate that bond values may not only be calculated arithmetically, but may be checked arithmetically, we give the following proof:

Bond will mature 36 months after purchase; principal will then become due\$100.00
 Also sixth semi-annual interest coupon 3.00
 Total due at maturity\$103.00

To ascertain present worth of last mentioned amount 30 months after purchase, we multiply \$103.00 by .9756, the reciprocal of the ratio of increase on basis of 5% per annum, payable semi-annually; result obtained is 100.49

We add face value of fifth interest coupon due 30 months after purchase 3.00
 And find total value on aforesaid basis of bond and matured coupon 30 months after purchase to be\$103.49

To ascertain present worth of last mentioned amount 24 months after purchase, we multiply \$103.49 by .9756 and we have\$100.96

We add face value of fourth interest coupon due 24 months after purchase 3.00
 And find total value on aforesaid basis of bond and matured coupon 24 months after purchase to be\$103.96

To ascertain present worth of last mentioned amount 18 months after purchase, we multiply \$103.96 by .9756 and we have\$101.43

We add face value of third interest coupon due 18 months after purchase 3.00
 And find total value on aforesaid basis of bond and matured coupon 18 months after purchase to be\$104.43

To ascertain present worth of last mentioned amount 12 months after purchase, we multiply \$104.43 by .9756 and we have\$101.88

We add face value of second interest coupon due 12 months after purchase 3.00
 And find total value on aforesaid basis of bond and matured coupon 12 months after purchase to be\$104.88

To ascertain present worth of last mentioned amount six months after purchase, we multiply \$104.88 by .9756 and we have\$102.32

We add face value of first interest coupon due six months after purchase 3.00
 And find total value on aforesaid basis of bond and matured coupon six months after purchase to be\$105.32

To ascertain present worth of last mentioned amount at date of purchase, we multiply \$105.32 by .9756 and we have\$102.75

The amount last mentioned is the same as the original cost of aforesaid 6% bond on a 5% basis, and thus proves the correctness of the bond value as above calculated by arithmetical and algebraic methods and as shown in table of bond values.

27. The question of amortization of premiums paid on bonds purchased by trustees has been before the courts of various States numbers of times. All courts primarily endeavor to give effect to the clear intent, as to amortization, of the person creating the trust, as expressed in the instrument or will.⁴

In California, court held that premium paid for securities purchased by a trustee under a will should be charged against the income of the estate and the principal must be maintained intact from loss, in the absence of a clear intent under the will to the contrary.⁵

In Connecticut, court held that trustee ought to withhold from the life tenant annually such part of the income as by proper investment would create a fund equal to the premium paid.⁶

In an early Massachusetts case, the loss of premium value of bonds bequeathed in trust was placed on the remainderman; and loss of premiums paid by the trustee on bonds purchased by him after the death of the testator was also placed on the remainderman.⁷ In a later case in Massachusetts, the court held that, on collection of interest on bonds purchased at a premium, the trustee should deduct a sufficient sum from the income of the life tenant to make good to the remainderman the amount of premium paid.⁸ In a still later case in Massachusetts, the court placed the loss of premium on the remainderman, apparently receding from the second case and going back to the ruling of the first case.⁹ In the last case the court did not attempt to reconcile the two prior cases.

In New York prior to 1907, the court held that the loss of premium on bonds purchased by trustees should fall on the

4. *Kemp v. Macready*, 150 N. Y. S. 618; *Am. S. & T. Co. v. Payne*, 33 D. C. App. 178; *Shaw v. Cordis*, 143 Mass. 443; *Pell v. Mercer*, 14 R. I. 412.

5. *In re Gartenlaub*, 198 Pac. 209.

6. *Curtis v. Osborn*, 79 Conn. 555.

7. *Hemenway v. H.*, 134 Mass. 446.

8. *New Eng. Trust Co. v. Eaton*, 140 Mass. 532.

9. *Shaw v. Cordis*, 143 Mass. 443.

remainderman. In 1907 the court realized that its decisions placing the loss of premium on the remainderman were not well founded and the court reversed its various former rulings. In 1907 the court said: "All large investors in bonds purchase bonds on the basis of the interest the bonds actually return, not the amount they nominally return. * * * * The life tenant should neither be credited with the appreciation nor charged with the loss in the mere market value of the bond. * * * * There is by mere lapse of time an inherent and intrinsic change in the value of the security itself as it approaches maturity. It is this, and this only, with which the life tenant is to be charged."¹⁰ The last and recent case holds, when a trustee purchases bonds at a premium, it is his duty to protect the corpus of the trust estate, by setting aside from income from the bonds amounts sufficient to amortize premiums paid.¹¹

The courts of New Jersey require trustees to amortize premiums paid on bonds purchased by them.¹²

In Wisconsin, the court held, where a trustee invested trust funds in bonds at a premium, he should restore to corpus of the estate, from the interest on the investment, the amount of premiums paid.¹³

There are cases in Pennsylvania holding that loss of premiums paid by a trustee, on investments in bonds, should be charged to principal of the estate, and should not be amortized against the income.¹⁴ That decision is not mature. We believe, on a review of the question, in light of the overwhelming series of cases since decided in other States, that the Pennsylvania court will follow the action of the New York court and reverse the ill-considered Pennsylvania cases.

There is a case in Kentucky, *Hite v. Hite*, wherein the court does not consider premiums paid by trustees.

10. *In re Stevens*, 187 N. Y. 471 and cases affirming *Stevens* case.

11. *Furniss v. Cruickshank*, 230 N. Y. 495.

12. *Ballantine v. Young*, N. J. Eq. 613.

13. *In re Allis*, 123 Wis. 223.

14. *Penn-Gaskell's Est.*, 208 Pa. 346.

28. Under trust company laws of Missouri,¹⁵ trust company laws of New York,¹⁶ and bank laws of Missouri,¹⁷ and bank laws of New York,¹⁸ it is provided, with respect to investments by such institutions of their own funds in bonds, that bonds and other interest bearing corporate securities, purchased by a trust company or bank, shall be entered on its books at the actual cost thereof, and, for the purpose of calculating undivided profits applicable to payment of dividends, such securities shall not be estimated at a valuation exceeding their cost as determined by amortization, that is, by deducting from the cost of any such security, in excess of the amount payable thereon at maturity, a sufficient sum to bring it to par at maturity, or adding to the cost of any such security, purchased at less than the amount payable thereon at maturity, a sufficient sum to bring it to par at maturity.

Under Missouri insurance company laws,¹⁹ New York insurance company laws,²⁰ Massachusetts insurance company laws,²¹ and Pennsylvania insurance company laws,²² it is provided, with respect to investments by such institutions of their own funds in bonds, that all bonds and other evidences of debt, having a fixed term and rate, held by any insurance company, may be valued as follows: * * * if purchased above or below par, on the basis of the purchase price, adjusted so as to bring the value to par at maturity and so as to yield in the meantime the effective rate of interest at which the purchase was made.

Under the various statutes mentioned, permission is given the respective corporations to carry their investment bonds at market value. As has hereinbefore been noted, trustees are not permitted to carry their bond investments at market value,

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15. R. S. Stat. 1921, Sec. 11809, Par. 2.
 16. N. Y. Acts 1914, P. 1352-3.
 17. R. S. Stat. 1921, Sec. 11742, Par. 2.
 18. N. Y. Acts 1914, p. 1297.
 19. Mo. Acts 1921, p. 408.
 20. N. Y. Acts 1913, p. 1302, Sec. 18.
 21. Mass Acts 1914, p. 448.
 22. Pa. Acts 1920, Sec. 12250.

but must carry such investments at properly adjusted cost to the estate. On the principle expressly established by the statutes mentioned, and in other States where such principles are recognized, since trustees may not carry such investments at market value, such investments must be carried at original cost, with regular adjustments of premiums and discounts. While the principles of the express statutes mentioned may not be said to apply directly to funds held by trust companies and banks as trustees, such principles are certainly clear and persuasive as to trust funds, and such principles should no longer be ignored by trustees or by the courts; especially when consideration is given to the philosophy underlying the amortization of premiums and accumulation of discounts on bonds held by trustees.

Under trust company and banking laws of Ohio,²³ it is provided, with respect to investments by such institutions of their own funds in bonds, that all bonds having a fixed maturity shall be charged and entered upon the books of the corporation at their cost to the corporation, and, when a premium is paid therefor, an annual amortization charge shall be made thereon, so as to bring the cost of same to the face value of said bonds at maturity. We criticise the act as incomplete, as no provision is made with respect to bonds purchased below par. We express the opinion that the authors of the law knew of the omission, that the authors did not understand the principles underlying valuations in bond tables, else they would not have allowed the omission.

Under section of the savings bank laws of New York,²⁴ as to payment of earnings on savings deposits, in the calculation of profits of savings banks, it is required, in a manner approved by the superintendent of banks, that such banks must provide for the amortization or gradual extinction of premiums and discounts on all securities owned by such banks,

23. Ohio Acts 1921, Sec. 710.

24. N. Y. Consol. Laws, 1909, Sec. 153, p. 417.

so as to bring the securities to par at maturity. Such banks must not carry bonds at market value from time to time, but are required regularly to adjust both premiums and discounts. That law meets with our full approval, as it is fundamentally correct. It is superior to the optional laws above mentioned, permitting corporations to carry their investment bonds either on the basis of adjusting premiums and discounts regularly or at market value from time to time. New York savings bank investments are strictly controlled by statute. Investments of trustees are also closely controlled. We think of investments of trustees and of savings banks as in the same general classes. If the law distinctly requires such adjustments in the one case, surely, on a test of the question, the law will require it in the other case. On that principle, we feel trustees should not lightly ignore their duty to adjust premiums and discounts on trust investments.

29. We have seen several opinions of counsel on the question of whether trustees should amortize premiums and accumulate discounts on bonds invested in by the trustees. Counsel rule that premiums should be adjusted and cite various decisions of the courts on the point. Counsel rule that trustees need not accumulate discount, basing their ruling upon the mistaken idea that accumulation of discounts is unearned increment and thus increase of capital. Counsel cite cases supporting the principle that appreciation of trust assets is not income of the estate, but belongs to corpus. A careful examination of the cases discloses the fact that not one case is in point. The cases relate to appreciation in value of assets because of uncontrollable influences outside of the investment, and not inherent in the investment when made, such as appreciation of land over appraised or cost price, appreciation of bonds sold for a price in excess of the original principal and premium paid, and appreciation of shares of stock over the original cost. It is apparent from the cases cited that the courts did not have in view the question of accumulating dis-

counts on bonds purchased below par, but only the question of appreciation of trust assets independent of the question of accruing discount. We shall mention the facts involved in the various cases cited or referred to, and shall indicate the decision of the court in the respective cases. We take the cases in order of their publication, to-wit:

In re Pollock (1877).²⁵ Executor invested funds in United States securities; they increased in value; executor credited increase in value to life tenant. Court held, he overlooked the legal rights of the remaindermen, and that the remaindermen were entitled to the increased value of the securities over the premium originally paid.

Townsend v. Trust Co. (1877).²⁶ Trustee invested funds in United States securities; at maturity, sold bonds at a profit over the purchase price; presumably the higher premium was attributable to a conversion privilege. The court asked, if the principal fund has been enhanced in value, and a sale of the securities produces a larger fund than originally invested therein, can the surplus received by the trustee be regarded as income? The court answered, that the increased amount at which the securities were sold was an enhancement of the value of the securities themselves, and thus an increase of the capital of the trust fund.

Whitney v. Phoenix (1880).²⁷ Court ruled, where a fund is invested in stock, the profit realized upon a sale of the stock does not belong to the life tenant, but must be added to the principal.

Outcalt v. Appleby (1882).²⁸ Court ruled, increase in value of unproductive property, while awaiting satisfactory sale, is part of corpus of the estate and not income.

In re Hubley (1884).²⁹ Proceeds of sale of land was invested in city bonds, and later the bonds sold at a premium.

25. 3 Redf. Surr. Rep. 114.

26. 3 Redf. Surr. Rep. 220.

27. 4 Redf. Surr. Rep. 180.

28. 36 N. J. Eq. 73.

29. 16 Phila. 327.

The court ruled, value of land held in trust has always been regarded as an accretion to the principal, and therefore belonging to the remainderman, just as a depreciation would fall on him and not upon the tenant for life.

Van Vleck v. Lounsbury (1885).³⁰ Executor foreclosed mortgage on real estate; later sold real estate at an advance; interest received on mortgage was paid life tenant; net rents from real estate was also paid life tenant; life tenant claimed as profit the proceeds of sale of real estate in excess of mortgage debt and costs. Court held, enhanced value was increase of principal; that case would be the same as though the mortgage had not been foreclosed, but had been sold for the enhanced price, and that the proceeds would properly be part of the principal of the estate and not part of the income.

In re Gerry (1886).³¹ Sale of securities by a trustee after death of life tenant resulted in a surplus of nearly \$23,000 over the amount of the original investment, and this sum was claimed respectively by representatives of life tenant and by the remainderman. Court held, if the will had required the trustees to invest in real estate, the rents and income of which were made payable to the life tenant, with remainder over, it cannot be questioned but that any increase of the value of the land from natural causes would have been an accretion to the capital and inure to the benefit of the remainderman, and we can see no difference in principle between this case and the one supposed.

In re Lawrence (1889).³² Profits on sale of securities belonging to a trust fund should not be credited to income and allowed as such to the life beneficiary, but should be added to the principal and go with it to the parties entitled to the corpus.

In re Vedder (1891).³³ Executors sold assets for \$10,200

30. 41 N. Y. 568.

31. 103 N. Y. 445.

32. 26 N. Y. St. 238.

33. 15 N. Y. Supp. 798.

more than inventoried price; profit claimed by life tenant. Court held, increase belongs to capital of trust fund.

Duclos v. Benner (1891).³⁴ Trust fund was invested in government bonds; bonds subsequently sold at a profit. Court held, widow as life tenant not entitled to such profit, but profit belongs to fund as part thereof. The decision reversed prior decision, granting widow the profit, reported in case in footnote.³⁵

Cross v. L. I. L. & Trust Co. (1894).³⁶ Securities were sold by trustee and premium of \$29,500 received. Life tenant claimed the premium. Court ruled, fund in question represents increase in value of the securities, and is therefore not profit in the ordinary acceptance of that term; it is an accretion or increase from natural causes and belongs to capital.

In re Boyers (1896).³⁷ Where a fund is given to a trustee to invest and pay the income to a person for life, and after the death of such person to pay the principal to another, any increase in the value of the securities in which the fund is invested accrues to the remaindermen.

In re N. Y. L. I. & Trust Co. (1898).³⁸ Loss or gain in the value of securities purchased by a trustee should go to the diminution or accretion of the capital, and not the income, unless a contrary intention must be implied from the trust instrument. Court refused to approve amortization of premiums in that case. Later case, *in re Stevens*, requires amortization of premiums.

In re Graham (1900).³⁹ Where a trustee invests moneys of the trust estate in bonds and subsequently sells the bonds at an advance and invests the proceeds in other securities, the profit on the bonds sold is part of the principal of the estate.

34. 17 N. Y. Supp. 168.

35. 5 N. Y. Supp. 733.

36. 27 N. Y. Supp. 494.

37. 174 Pa. St. 16.

38. 53 N. Y. Supp. 382.

39. 198 Pa. St. 216.

Whittingham v. Trust Co. (1902).⁴⁰ A premium realized from the sale of bonds constitutes part of the corpus of the trust fund, and as such was not subject to appropriation by the life tenant as the owner of the income.

Smith v. Hooper (1902).⁴¹ Trustees purchased real estate; later sold real estate for large amount in excess of cost; profit claimed by life tenant. Court held, the increase is not income, but a profit received from sale of property in which the fund was invested, and consequently forms part of the corpus of the trust fund.

Neel's Estate (1904).⁴² Trustees of estate, to protect interest of estate in partnership, at receiver's sale of partnership real estate bought a number of pieces of land; subsequently sold land at a profit of \$10,500; trustees credited profit to corpus; profit claimed by life tenant. Court ruled, the gain arising out of the transaction should be treated as corpus.

Devenney v. Devenney (1906).⁴³ Trustees purchased securities at a premium; later sold securities at a higher premium; profit claimed by life tenant. Court held, the increase in the value of the corpus held by the trustees from natural causes is principal and not interest; the loss or gain in the value of securities purchased by a trustee should go to the diminution or accretion, as the case may be, of the capital and not to the income, unless the contrary intention must be inferred from the trust instrument.

Boardman v. Mansfield (1907).⁴⁴ A life tenant should neither be credited with an appreciation, nor charged with a loss, in the mere market value of investment securities.

In re Stevens, (1907).⁴⁵ *All large investors in bonds PURCHASE BONDS ON THE BASIS OF THE INTEREST THE BONDS ACTUALLY*

40. Ky. L. R. 2444.

41. 95 Md. 196.

42. 207 Pa. 446.

43. 74 O. S. 96.

44. 79 Conn. 634.

45. 187 N. Y. 471.

RETURN, not the amount they nominally return. Nor is the premium paid on the bond an outlay for the security of the principal. It is urged that there is often a speculative change in the market value of a bond and the bond may be worth more at the termination of a trust than at the time of its purchase. This has no bearing on the case. The life tenant should neither be credited with an appreciation nor charged with a loss in the mere market value of the bond. But apart from any speculative change in the market value, there is from lapse of time an inherent and intrinsic change in the value of the security itself as it approaches maturity. It is this, and this only, with which the life tenant is to be charged.

Coleman v. Grimes (1908).⁴⁶ Testator devised home to daughter for life, with power to convey and invest proceeds in another; daughter exchanged home for farm; sold farm for profit of \$2,250; daughter claimed profit. Court ruled, entire fund should be paid into court and retained, until daughter selects another home in which to invest fund; that increase cannot be separated from the principal of the fund; if, by judicious investment, the property in which the fund is invested enhances the value, the increase attaches to, and becomes part of, the principal funds.

Am. S. & Trust Co. v. Payne (1909).⁴⁷ In satisfaction of a legacy, trustee received bonds having premium value; should premiums be written off against income of life tenant; trustee made amortization deductions of premiums. On the assumed intention of the testator, court directed trustee to pay full proceeds of coupons to life tenant, less trustee's commissions; also full interest on future investments.

Letcher v. Bank (1909).⁴⁸ Where the income of certain property is to be paid to one person for life, with remainder to another, the life tenant is not entitled to the increase of the fund by reason of fortunate investment of the trustees.

46. 33 Ky. L. R. 455.

47. 33 D. C. App. 178.

48. 134 Ky. 24.

30. Although we cannot quote any decision of court on the precise question, whether a trustee must accumulate the discount on bonds purchased below par, we may quote from a legal writer of large experience and high professional standing, to-wit: "An interesting question arises as to the right as between life tenant and remainderman to an increase in the value of bonds bought at a discount, due to approaching maturity. While there is as yet no judicial authority on the question, it seems clear that an increase due to approaching maturity is not within the meaning of the cases holding that increases in the value of bonds belong to remaindermen; but such an increase should go to the life tenant, in analogy to the rule held by the majority of the courts that premiums paid for bonds should be charged against the income."⁴⁹

Until the recent great rise in market rate for money, good investment bonds have been realizing premiums. During the past several years immense sums have been invested in government, state and other high-grade bonds at a discount, and the question of the duty of trustees to accumulate discounts on such bonds has become acute. No doubt the question will receive judicial consideration before long.

See passing remark by court in *Hite v. Hite*,⁵⁰ indicating that no attention need be given by trustees to either premiums or discounts on investment bonds. It is apparent, the court did not give serious attention to the adjustment of either premiums or discounts, and the remark, therefore, has little weight.

Under a bequest of specific bonds the face value of the bonds is determined by the testator as the principal of the estate to be held in trust for the remainderman, notwithstanding the market value is above par or below par, and the life tenant is generally entitled to the income on the face value of

49. 13 A. L. R. 1916. See note to case.

50. 93 Ky. 257.

the specific bonds, at the contract rate of interest thereon.⁵¹ In case of a residuary bequest, if the residue should consist entirely or in part of bonds held by the testator and having a market value above or below par, on receipt of such bonds by the trustee for a life tenant and remainderman, the question at once arises whether the life tenant should receive interest at the contract rate on such bonds, or should the trustee in his accounts enter bonds included in the residuary bequest at their market value and consider such value as the cost to the trust estate of such bonds, and on the basis of such value amortize part of the proceeds of the interest coupons thereon as collected from time to time or accumulate the discount? In our opinion such amortization or accumulation should be made. In the distribution of the bonds to the trustee they are necessarily distributed by the executor at their market value and received by the trustee at such value, instead of their par value. In case of the specific bequest of bonds, the testator is conclusively presumed to have fixed the amount and kind of securities upon which the life tenant is to receive the interest as income.⁵² In case of a residuary bequest, the rule is that the life tenant, from date of death of testator, is entitled to the net income on the clear residue when ascertained.⁵³ To determine the value of the clear residue of the estate, any bonds and shares must be taken at their market value at the date of death of the testator. A share of stock having a market value of \$200 per share would not be taken at its par value of \$100, unless specifically so directed. No more should a bond be taken at par, if its market value is above or below par, unless specifically so directed. If the residue of an estate consist entirely of cash and is bequeathed to a trustee, and if soon after the date of death the cash is paid over to the trustee for investment and is invested in

51. *Robertson v. DeBrulator*, 188 N. Y. 301; *In re Thomas*, 179 N. Y. S. 559.

52. Same as footnote 51.

53. *Laurence v. S. Co.*, 56 Conn. 423.

bonds at a premium or discount, it is clear that the principles of amortization and accumulation should be applied for the protection of the remainderman and life tenant. It seems to us to follow, if the residue consists of bonds invested in by the testator, that the bonds should be received at their cash value, unless there is an express direction of the testator to the contrary. Suppose, pursuant to authority, a trustee one day after the receipt of bonds under a residuary bequest sell such bonds at their market value, the sale being presumed to be on an interest payment date of the bonds so no question of accrued interest is to be considered, would not the trustee credit the proceeds of sale to the principal of the trust estate and hold the amount in principal for the remainderman? There would be no question as to his duty in so doing.⁵⁴

Any investment of the trust funds thereafter would be upon the basis of the principal so fixed. Should not the principal of the trust estate be fixed at the same amount, in a case where there is no sale of the bonds, as well as in a case where a sale is made? We answer, yes; that as a matter of principle the law should not leave the fixing of the amount of the principal of an estate to the chance of a sale of bonds by the trustee; that impartiality between the remainderman and life tenant requires the bonds to be taken at their cash or market value at the death of the testator, in the absence of an express direction of the testator to the contrary; since the bonds are to be taken at such value, that impartiality between the remainderman and life tenant requires amortization of the premium and accumulation of the discount, so that the life tenant will receive all of the net income on the value of the bonds at the taking effect of the bequest, but no more or less, and the remainderman, on the termination of the life estate, receive the full value of the estate bequeathed, but no more or less. In such case, any profit by appreciation or loss by depreciation, in the event of a sale of the bonds by the trustee

54. *Scovel v. Roosevelt, supra; In re Cutler*, 52 N. Y. Supp 842.

at a price other than their amortized or accumulated value, should be credited to or charged against the remainderman, and by the trustee entered in the principal of the trust estate, as is required in case of bonds purchased by the trustee.

The following reported cases are opposed to our views above mentioned; they are based on the presumption, if bonds pass to a trustee as part of the residue of an estate, that it must have been the unexpressed intention of the testator for the bonds to be received by the trustee at their par value, independent of their actual value at death of the testator, and whether above or below par, to-wit: Conn. Trust Co. Appeal,⁵⁵ Higgins v. Beck,⁵⁶ Whitridge v. Williams,⁵⁷ Shaw v. Cordis,⁵⁸ Ballantine v. Young.⁵⁹ However, see *in re* Wells,⁶⁰ where court indicates there is no logical difference in treatment between bonds bequeathed to a trustee and bonds purchased by a trustee. Why should bonds be taken at their par value, and not their market value, when other securities, passing under a residuary bequest, are taken at their market value?

FREDERICK VIERLING.

St. Louis, November 1922.

55. 80 Conn. 540.
56. 116 Me. 127.
57. 71 Md. 105.
58. 143 Mass. 443.
59. 74 N. J. Eq. 572.
60. 156 Wis. 294.