Accounting of Interest and Discount on Notes (second article)

John Bauer

The Accounting of Interest and Discount on Notes

By John Bauer

Assistant Professor of Economics, Cornell University

Second Article

In the preceding article, the cycle of the interest account was completed, the various items having been followed through a regular financial period. We now turn to a critical examination of the account itself.

Theoretically the nature of the different entries in the interest account can be explained from first to last according to correct principles. We are concerned throughout with asset and liability values and their changes, and not with earnings and costs, as is usually assumed. But it is nearly impossible for a beginning student to follow the abstruse and complicated relationships without confusion. Even a person understanding the account pretty thoroughly is likely to fall into momentary confusion in explaining a particular entry. As a matter of fact, the great majority of writers are either altogether wrong in their explanation of the entries, or they make no pretense of explanation, satisfying themselves with mere rules.

From a practical standpoint we may make the following principal criticisms against the Interest account:

(1) It does not give sufficient information about the business. It is not enough for the manager to know what were the net interest gains above costs, or net costs above gains, for a period. He should know separably what were the gains and what the costs. The two have no dependence upon each other; the gains come from notes receivable and the costs from notes payable—why should the two be balanced against each other? Certainly, to find the standing of the business you would not balance notes payable against notes receivable. Is it any more desirable to balance the returns realized from the one against the costs of the other?

As a matter of fact, the manager of the business should know in detail the facts relating to earnings and those relating to costs. He should know not only the complete interest earnings, but also those from the different classes of notes, *e. g.*, mortgage or unsecured, interest bearing or non-interest bearing. Likewise he should know not only the total interest costs, but also those from different classes of obligations. Obviously these facts cannot be secured from the Interest account as it stands, except through a great deal of separate analysis and calculation. An account should show clearly and directly its share of the facts and results of the business. The Interest account falls far short of this standard.

(2) It has no statistical value. For statistical purposes, the items of the account should be homogeneous; the debits should represent one certain kind of transactions, and the credits a certain kind; then the sum of the debits for the period should represent something distinctive, likewise the sum of the credits; the debits and credits should be definitely related and their balance should show a precise fact or result of the business. Look at the Interest account: the entries are mixed and confused; they have no clear relations to each other; the sum of debits signifies nothing, nor does the sum of credits. Statistically the account is worth exactly nothing, and it is the statistical end of accounting that is becoming more and more important to proper control of the business.

(3) When the third class of entries during the period is omitted, which is usually the case both as the account is taught by most texts and as it is employed by most business concerns, even the net results are vitiated. The net earnings or net costs may be over or under stated. Perhaps two illustrations will suffice to bring out this point clearly.

Suppose during the month a note of $1,000 is acquired with interest accrued $30; Notes Receivable is debited $1,000, but the interest accrued, $30, which should be debited to Interest, is neglected. Now, at the end of the month in calculating the interest accrued on notes receivable, $32 is included for the note in question, allowing an extra accrual of $2 for the time the note was held by the business. The $32 appears then as a credit in red ink, and, since it has no offsetting debit anywhere, obviously the effect is to show earnings of $32 for the month—a gross and indefensible misstatement. If, however, the $30 interest accrued had been properly debited when the note was first acquired, this would appear as an offset to the $32 red ink credit at the end of the month, and there would appear then only $2 earning for the period on the note in question—which would be proper. The $30 interest accrued when the note was acquired could in no sense be regarded as earnings of the business. It was an asset, and if it was not debited then as it should have been, and was included in the inventory of assets at the end of the period, it resulted in showing unwarranted gains—which, if taken out of the business, would constitute withdrawal of capital and not profits.

Again, suppose there was acquired during the period a non-interest bearing note of $1,000 with sixty days to maturity. Notes Receivable is debited $1,000, but the discount of $10, which should be credited to Interest to show the real value of the note, is neglected. But, at the end of the period a calculation of the discount due on all notes receivable is entered as a red ink debit to Interest. Now, in reference to the one note in question there is a discount of $8; since there is no offsetting credit, the showing is a cost of $8—which is absurd. Notes receivable should produce earnings, not costs. If, however, the $10 discount due when the note was acquired had been properly credited, then with the $8 discount due at the end of the month debited, this showing would be correct, namely earnings of $2 for the period on the note in question.

Likewise, if the interest accrued or discount due on notes payable is disregarded when notes are assumed by the firm during the period, the results are wrong. In the first case, the interest costs are grossly overstated, and in the second earnings are shown instead of costs—which is ridiculous.

To be sure, in a business where few notes are handled, these inaccuracies are not a matter of great importance, and perhaps, since their effect is in opposite directions, they largely counterbalance each other. The latter proposition is likely to apply particularly to a business handling large amounts of all kinds of notes. Still, they are inaccuracies, and in so far as they are allowed they prevent the manager from knowing as definitely as he should where the business stands and what it is doing.

Properly to meet the criticisms that have been made, the general Interest account should be broken up into six individual accounts. Four of these are directly connected with Notes Receivable and Notes Payable and constitute subsidiary asset and liability accounts, and two are pure proprietorship accounts, which finally are closed into Loss and Gain.

The individual accounts are (1) Interest Accrued on Notes Receivable, (2) Discount on Notes Receivable, (3) Interest Accrued on Notes Payable, (4) Discount on Notes Payable, (5) Interest Earnings, (6) Interest Costs.

(1) Interest Accrued on Notes Receivable has to do with interest bearing notes owned by the business. The face value of these notes is recorded in Notes Receivable account and the values above face should appear in Interest Accrued on Notes Receivable. The form of the account and the various entries are as follows:

INTEREST ACCRUED ON NOTES RECEIVABLE

Dr.	Cr.
1. At the beginning of the period: interest accrued on notes receivable.	1. During the period: interest payments on notes receivable.
2. During the period: interest accrued on new notes receivable acquired by the business.	
3. At the close of the period: interest accrued during the period on all notes owned by the business during that time. (The corresponding credit goes to Interest Earning.)	

This is a pure asset account. At the beginning of the period there is debited the total interest accrued at that time, an asset of the business. In all subsequent entries, the debits are increases and the credits decreases in this form of assets. There are two kinds of increases and one kind of decrease. The increases are due (1) to any interest accrued on new notes receivable acquired by the business,* and (2) to interest accruals due to passage of time.† Any decrease is due to interest payments received.‡ At the close of the period, the balance of the account

* Suppose a $1,000 note with $30 interest accrued is acquired; Notes Receivable is debited $1,000, and Interest Accrued on Notes Receivable, $30; both debits represent increases in asset value.

† Interest accrues day by day, *i. e.*, the value of any note owned grows daily larger, and so might be debited daily. But that would be rather impracticable, and to save time the accruals for the entire period are debited in one entry at the close of the period.

‡ Suppose $100 cash for interest due is received, at the moment payment is received the value of interest accrued suddenly decreases by $100 and cash obviously increases. Consequently Interest Accrued on Notes Receivable is credited and Cash is debited. There is merely an exchange of asset values.

is an asset, showing the value of interest accrued at that time on all notes owned by the business.‖

We have seen that the interest accruals for the period are debited in one entry at the close of the period—representing asset increases for the time covered. Now, what should be the corresponding credit? Since there is no corresponding decrease in any other form of assets, obviously there is a pure gain and the credit is an increase in proprietorship. Suppose, we provide an Interest Earnings account. Then from the asset standpoint, the increase in value is debited to Interest Accrued on Notes Receivable, as has been explained, and from the proprietorship standpoint, it is credited to Interest Earnings. This account will be considered separately later in the discussion.¶

(2) The second account to be considered is Discount on Notes Receivable. It has to do with non-interest bearing notes owned by the business and like the foregoing account is subsidiary to Notes Receivable. Remember that non-interest bearing notes owned by the business are debited to Notes Receivable at their face value, which represents a future, not real, value. The difference between face and real value is recorded in Discount on Notes Receivable. The form of the account and the entries are as follows:

DISCOUNT ON NOTES RECEIVABLE

Dr.	Cr.
1. During the period: discounts allowed on notes receivable when prepaid. 2. At the close of the period: all decreases in discounts on notes held during the period due to the passage of time. (The corresponding credit goes to Interest Earnings.)	1. At the beginning of the period: discount due on notes receivable. 2. During the period: discount due on new notes receivable acquired by the business.

In theory this must be considered a negative asset account, but it is one of a rather peculiar nature. Usually negative asset accounts deal with liabilities, but this merely represents

‖ This becomes the first entry of the next period. If the interest accruals were debited day by day as they take place, then a balance of the account could be taken at any moment and it would show the total value of interest then accrued on all notes receivable. Ideally it should be possible to take such a balance any day, but practically it is enough if it is taken at the end of every week or month.

¶ If accruals were recorded day by day as they take place, from the asset standpoint they would be debited daily to Interest Accrued on Notes Receivable, and from the proprietorship standpoint credited daily to Interest Earnings.

an offset against overvalued positive assets carried in Notes Receivable. At the beginning of the period we have credited the discount due on all non-interest bearing notes owned by the business at that time. This credit combined with the face value debited to Notes Receivable gives the real value of the notes. Then all increases in discount due are credits and all decreases are debits. Since with the passage of time the value of the notes becomes greater and greater and the offsetting discount therefore smaller and smaller, there can be only one kind of increase, namely, through the acquisition of new non-interest bearing notes by the business.* But, there are two kinds of decreases in *discount,* (1) those due to the prepayment of notes,† and (2) decreases due to the passage of time, *i. e.,* the notes increase in value day by day as they approach maturity and the offsetting discount value correspondingly grows smaller.‡ The balance of the account at the close of the period shows the discounts then due on all notes owned by the business.

We have seen that the decrease in discount due to the passage of time is debited. What is the corresponding credit? From another view, this decrease is really an increase in notes receivable values. Since with this increase there is no corresponding decrease in some other form of assets, the corresponding credit must be an increase in proprietorship; it is a gain realized from the notes through the passage of time. This should be credited to Interest Earnings account.||

(3) The next account that we have to consider is Interest Accrued on Notes Payable. It has to do with interest bearing notes owned by the business. It is in nature just the reverse

* Suppose a $1,000 note due in 60 days is acquired, Notes Receivable is debited $1,000, and Discount on Notes Receivable credited $10, the two combined giving the real value of the note.

† Someone pays you a $1,000 note with still 60 days to maturity; you credit Notes Receivable $1,000, debit Cash $990, and debit Discount on Notes Receivable $10, the latter being a sudden decrease in this form of negative assets. The payment cancelled not only $1,000 in Notes Receivable but also $10 offsetting value in Discount on Notes Receivable.

‡ These decreases in discount might be debited daily as they take place, but practically it is sufficient if they are entered in a lump sum at the close of the period.

|| Interest is the increase of value due to the passage of time; it is value created by time. An interest-bearing note, if its rate is equal to the market rate, is worth exactly its face at the moment of issue, and then becomes more and more valuable as time passes and interest accrues. A non-interest bearing note at the moment of issue is worth a sum which with regular interest (approximately) to maturity is then equal to the face value. In either case, the value of the note increases as time goes on. From the note standpoint, the increase in either case is an asset and is debited; from proprietorship standpoint it is a gain and is credited. The nature of the gain is exactly the same in either case, and should be so shown in the accounts. The gains should be credited to the Interest Earning account.

of Interest Accrued on Notes Receivable discussed above. It is connected with Notes Payable just as the other is connected with Notes Receivable. The form and entries of the account follow:

INTEREST ACCRUED ON NOTES PAYABLE

Dr.	Cr.
1. During the period: interest payments made on notes.	1. At the beginning of the period: interest accrued on notes payable. 2. During the period: any interest accrued on new notes payable assumed by the business. 3. At the close of the period: interest accrued during the period on all notes owed by the business during that time. (The corresponding debit goes to Interest Costs.)

This is a pure negative asset or liability account. It records a debt owed by the business. At the beginning of the period, it has credited the total interest accrued on notes payable at that time. The face of the notes credited to Notes Payable, plus the interest accrued credited here, gives the real value of the notes owed by the business. All subsequent credits to the account are increases in interest accrued against the business, increases in liability; all the debits are decreases.

On account of previous discussions it is not worth while to analyze the individual items. At the close of the period, after all entries have been made, the balance of the account is the amount of interest then accrued against the business, or, if the accruals are credited daily as they take place, such a balance could be taken at any moment.

Observe the third credit entry, the interest accrued during the period on notes owed by the business during that time. This is an increase in liability due to the passage of time. Since there is no corresponding increase in assets, the corresponding debit must be a decrease in proprietorship. This is a cost incurred from the notes through the passage of time and should be debited to Interest Costs.

(4) The fourth account is Discounts on Notes Payable. Again in view of previous discussions it is not worth while to analyze the account extensively. It is subsidiary to Notes Pay-

able and has to do with non-interest bearing notes owed by the business. It is the reverse of Discount on Notes Receivable. The form and entries are as follows:

DISCOUNT ON NOTES PAYABLE

Dr.	Cr.
1. At the beginning of the period: discount due on notes payable.	1. During the period: discounts received on notes payable when prepaid.
2. During the period: discount on new notes payable assumed by the business.	2. At the end of the period: all decreases in discounts on notes receivable owed during the period, due to the passage of time. (The corresponding debit goes to Interest Costs.)

At the beginning of the period, the debit entry is a present offset against the future values credited to Notes Payable. At the end of the period, after all entries have been made the balance is the offset which then stands against Notes Payable. Again, if the decreases in the discount were debited as they take place, such a balance could be taken at any time. But, again, periodical balances are sufficient.

With the lapse of time, the notes approach nearer to maturity, their value increases, and the discount therefore decreases. This is a credit entry which resolves itself into an increase in liability. Since there is no corresponding increase in positive assets, the corresponding debit must be a decrease in proprietorship; it is a cost of the business and should be debited to Interest Costs.*

(5) The next two accounts are altogether different in nature from any of the foregoing. They are fundamentally proprietorship instead of asset accounts. So far, except incidentally, the increases in value due to the passage of time have been regarded primarily from the standpoint of the notes, and not from their effect upon proprietorship. Now we shall regard them, not as additions to note values owned or owed, but as earnings or costs of the business. The increases are the same as before but are viewed from a different standpoint. Consequently where before we had a debit, we now have a credit, and *vice versa.*

The first of the two accounts is Interest Earnings. The form and entries are as follows:

* Just as all notes receivable earn interest for the business, so all notes payable, with or without interest, earn interest against the business.

INTEREST EARNINGS

Dr.	Cr.
	At the close of the period: 1. Interest accrued during the period on all notes receivable owned by the business during that time. (Corresponding debit appears in Interest Accrued on Notes Receivable.) 2. Decreases in discounts due on notes receivable held during the period, the decreases being due to the approaching maturity of the notes. (The corresponding debit goes to Discount on Notes Receivable.)

This is a pure account, recording increases in proprietorship, and only those due to the working of time. We enter here interest earnings and nothing else. However, we record real earnings, not apparent; we include those from non-interest bearing notes receivable as well as from the interest bearing, and only the earnings that belong to the period. Necessarily the entries are all credits and are made at the close of the period, at the moment when the adjustments are made in the subsidiary notes accounts discussed above.*

This account might well serve to bring together all interest earnings for the period, however realized. Thus it might include not only the items recorded above but also interest earnings of bonds, mortgage notes, and personal accounts. In this way it would be of considerable statistical value, showing clearly the interest earning from various sources from period to period.

Obviously the account contains credit entries only. When all interest earnings are recorded for the period, they are summarized and are then transferred and credited to Loss or Gain, General Income, Surplus, or some subsidiary proprietorship account.

(6) The last account to be considered is Interest Costs. Its form and entries are as follows:

* However, the entries may be made daily as the earnings are actually realized, although this would be a waste of time in practice.

INTEREST COSTS

Dr.	Cr.
At the close of the period: 1. Interest accrued during the period on all interest bearing notes owed by the business during that time. (The corresponding credit appears in Interest Accrued on Notes Payable.) 2. Decreases in discounts due on notes owed during the period, the decreases being due to the approaching maturity of the notes. (The corresponding credit appears in Discount on Notes Payable.)	

We need not discuss this account extensively. It is a pure account, dealing with decreases in proprietorship and those only that are due to the working of time. It records the interest costs exactly as the previous account records the earnings, and its purpose and serviceability are the same. It contains debit entries only, which, when summarized, are transferred to Loss and Gain or other proprietorship accounts.

So much, then, for the rather tedious analysis and presentation of the principles of interest accounting. It would seem that the analysis here presented is superior in every way to the general Interest account as taught and practised. The advantages may be briefly summarized as follows: (1) The nature of the accounts is more easily perceived and readily explained; there is less danger of theoretical confusion. (2) Each account shows clearly a definite set of facts; there is not a jumble of unrelated items; clear statistical records are kept, and the costs and earnings are definitely shown for the convenience of the business.

There is but one objection—more work is required than with the old Interest account. However, the additional work is amply justified by the clearer and more definite results. With a concern which handles a large number of notes the additional work is almost negligible. Perhaps where very few notes are handled the old accounts may well be continued. Otherwise such a course is not in accord with good modern theory or practice of accounting.