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The Retail Method of Inventories*

By J. P. Friedman

The "retail method of inventories" is the name applied to the type of perpetual-inventory records which is maintained in trading businesses on the basis of retail rather than cost price. Inventories at retail are used most commonly in organizations handling a multiplicity of items to which the ordinary method of maintaining a separate card for each item can not be applied because of the relatively small value of each item, the large number of transactions and the consequent prohibitive cost. Department stores have been the leaders in the development of the system of inventories at retail, although many other retail businesses, including chain stores, also use it to a considerable extent. In some of the departments of the modern department store in which expensive articles are sold, such as fur coats and furniture, detailed perpetual-inventory records by pieces often supplement the retail inventory records, but these are not carried out as fully as the accountant would wish: as a rule no attempt is made to tie them up with controlling accounts in the general ledger—they are approximate piece records only.

At an annual convention of the Controllers' Congress of the National Retail Dry Goods Association about eight years ago, the chairman requested a showing of hands by representatives of such stores as had adopted the retail method of inventories. The percentage was found to be comparatively low. At the convention of the organization held in St. Louis about three years ago, the same request showed that approximately two thirds of the stores represented had adopted the retail method, and probably the percentage today is considerably higher. This progress shows the marked appreciation by the retailers of the country of the advantages of using the retail method of inventories.

In discussing the subject, it might be best to give an explanation of inventories at retail, to outline the more important advantages and to describe some of the arguments which have been used against their introduction.

EXPLANATION OF THE RETAIL METHOD OF INVENTORIES

A great many people have approached the subject of retail method of inventories in the spirit of fear—as if it were a very

* Address delivered at a meeting of the St. Louis chapter of the Missouri Society of Certified Public Accountants.

difficult matter to comprehend. Quite the contrary is true: it is very simple and can be grasped readily.

The general aim is to know at all times the value of the inventory on hand at retail and the percentages of marking, mark-down, shortage and gross profit. Reports of these figures may be prepared weekly, semi-monthly, monthly or at any other regular or irregular interval. Retail prices are used throughout, cost being introduced only for the purpose of determining profits, as explained later. Separate figures on individual sheets are maintained for each department.

Explained in general terms, the retail inventory is based on the formula that the inventory at the beginning of the period at retail, plus the purchases for the period at retail—these adjusted by mark-ups, mark-downs and stock shortages—less the sales for the period at retail, gives the book inventory at the end of the period at retail.

The information necessary to compile the departmental figures is derived from the following sources:

> *Opening inventory.* From the physical inventory taken at the beginning of the period priced at retail and reduced to "value" by the departmental percentages of marking.
>
> *Purchases.* Upon their receipt from vendors, the invoices are sent to the checking and marking department, where the buyers receive those applicable to their departments, examine the merchandise and note on the invoices the retail prices per unit. From these notations, the markers prepare the price tags. The invoices are thereafter extended at retail, and are entered into the departmental purchase record both at cost and at retail, the total of the retail column being carried forward to the departmental inventory record.
>
> *Price-revisions.* When the selling price of any article is to be changed, the buyer prepares a form showing the old price and the revised price per unit, the difference representing the amount of the revision per unit, which when multiplied by the number of units gives the amount of the revision. Separate totals are prepared for mark-ups and mark-downs.
>
> *Sales.* This total is obtained, of course, from the daily audit of sales checks and other sales debits and credits.
>
> *Closing inventory.* From the physical inventory taken at the end of the period and priced at retail.

The difference between the closing physical and book inventories will be the amount of the shortage or overage at retail. It has been found that after a few years the net amount of the shortages tends to become stable at a fixed percentage of the sales; this makes it possible to provide for the shortages periodically. In the departmental inventory form a column is introduced for the monthly estimate of this shortage, so that at the end of the year the book inventory will agree approximately with the physical one. A separate shortage rate, of course, is used for each department.

The closing inventory at retail may be reduced to "value" (i. e. cost or market, whichever is lower) by deducting from the retail value the average percentage of marking. This percentage is arrived at by subtracting from the total of the inventory and purchases at retail the total of the inventory and purchases at cost, and dividing the remainder by the inventory plus the purchases at retail.

From the point of view of the balance-sheet the correctness of the valuation of the inventory will depend, in the main, upon the correctness of the percentage of marking, since that is the percentage which is used to reduce inventory from retail to balance-sheet value. It might not be amiss, therefore, to lay particular stress on the method of arriving at that percentage and upon the common errors which have been found in the past.

It has just been stated that the percentage of markings is arrived at by subtracting from the total of the inventory and purchases at retail the total of the inventory and purchases at cost, and dividing the remainder by the inventory plus purchases at retail. For example, assuming for a given department an inventory of $11,000 at cost and $16,000 at retail and purchases of $39,000 at cost and $64,000 at retail, there would be a total inventory and purchases of $50,000 at cost and $80,000 at retail, representing a percentage of markings of 37½ per cent. (30/80ths). This is the percentage difference between the retail and cost price on the basis of the retail price and is the percentage of gross profits which the department would earn if it sold all the goods at the prices originally marked and if there were no theft, breakage and shrinkage. But it is well known that department stores do not succeed in disposing of all their merchandise at the prices originally marked; that there is theft, breakage and shrinkage, and that, consequently, the percentage of gross profit is considerably lower than the percentage of original marking. Mark-downs alone, according to published figures, average about 7 per cent. for department stores, so it is apparent that the gross-profit percentage is considerably lower than the percentage of original markings. Nevertheless, it is the percentage of original markings which is deducted from a department's inventory at retail to reduce it to "value". The higher percentage, of course, is the correct one, since it will be necessary to take mark-downs and to suffer theft, breakage and shrinkage of the goods remaining on hand, and provisions therefor must be made in arriving at the inventory values.

The situation might be explained in another way. It might be entirely satisfactory to arrive at the balance-sheet value of the inventory by using the percentage of gross profit if the ultimate net selling price of the inventory could be determined. But since the present price marked on the inventory is not the ultimate net selling price, and since such price can not be determined, the retail price at present marked on the merchandise is used and this is reduced by the percentage of original marking which admittedly is higher than the percentage of gross profit but provides approximately the same margin as in the past for expected mark-downs, theft and shrinkage.

Mark-downs are not brought into account in arriving at the average percentage of marking—they are not allowed to reduce the original percentage determined at the time the goods were first marked. The reason for this may be shown by the following illustration: If an article were purchased for $100 and marked by the buyer to sell for $150, the average percentage of marking would be 33⅓ per cent. If this article remained unsold and were inventoried at the end of the period, a deduction of this 33⅓ per cent. from $150 would result in a return to the cost of $100. Let it be assumed, now, that the buyer subsequently decided to mark the price of the article down to $140 and that the article still remained on hand at inventory time. If a new percentage were to be arrived at, it would be 28$\frac{4}{7}$ per cent. (40/140ths) which, when deducted from the $140 retail price, would bring the "value" back to the original cost of $100. If, however, the 33⅓ per cent. were left unaffected by the mark-down and that percentage were deducted from the new price of $140 this would result in a "value" of $93.34. It will thus be seen that changing the percentage does not reduce the retail price below cost, while deducting the original percentage does. But since it was necessary to reduce the sales price, the assumption is that the value has decreased below the cost of $100. Since inventories should be valued at cost or market, whichever is lower, in order under the retail method to bring the "value" of marked-down goods below cost, the percentages are not reduced as a result of mark-downs. In this case 33⅓ per cent. would be deducted from the $140 and the "value" of $93.34 would be used.

On the other hand, in order not to bring the "value" above cost in cases in which there are mark-ups, mark-ups should be brought into account in determining the percentages of marking—they should increase these percentages. Using the same illustration, if a $100 article which had been marked to sell at $150 were increased in price to $160 and the original 33⅓ per cent. were deducted from the new retail price, it would result in an inventory value of $106.67, which would be $6.67 above cost. This would mean the taking of an unrealized profit. If, however, the amount of the mark-up were included in the figures from which the percentage is arrived at, a new percentage, 37½ per cent. (60/160ths) would result, and this, when deducted from the $160 selling price (if the goods remained on hand), would give a "value" of $100, which is cost.

In short, the "value" of the goods remaining on hand should not be included at a figure in excess of their cost, even if the retail prices have been increased, but in the case of mark-downs the "value" should be reduced below cost. Thus, under the retail method, by excluding mark-downs from the percentage of marking, and by including mark-ups in that percentage, inventories will be valued automatically at approximately cost or market, whichever is lower.

Care should be taken to distinguish between mark-ups and cancellations of mark-downs. When goods are marked down for a sale and the original retail price is subsequently restored on the unsold merchandise this increase is not a mark-up, but a cancellation of the original mark-down. It should be treated as such; otherwise the inventory figures at retail reduced to "value" will be overstated.

So far the discussion has dealt with the handling of inventories at retail in the office. The figures prepared by the office, however, can be correct only if the office is furnished with correct information by buyers and merchandising executives. In many instances, unfortunately, this is not the case. If a buyer indicates an expected retail selling price on the bill, which is not the same as that placed on the price tag attached to the merchandise, the accountant will arrive at an incorrect percentage of original marking and a resultant inventory at cost or market, whichever is lower, which is incorrect.

The measure of the correctness of the information furnished to the office, omitting for the moment the question of clerical errors made in the office, which might occur in any perpetual-inventory records, is the variation from the book figures found when a physical inventory is taken. In many of the stores that have adopted the retail inventory method shortages averaging 2 per cent., 3 per cent. and sometimes even 4 per cent. of the sales are shown at the end of the year. These percentages, of course, are excessive and arise from the fact that the installation has not been proper or has been only partly made, or that the system as outlined is not being followed in whole or in part. These high percentages also usually fluctuate so widely from season to season and from year to year that it is impossible to provide for them in the record with any measurable degree of certainty. Such results are misleading and in most cases worse than none.

Probably the most common reason for large shortages is the lack of a proper method for recording price revisions both up and down. In some stores buyers with the aid of their own departmental employees do the physical marking and are instructed to turn into the office a complete list of the changes. Most frequently these instructions are not followed. If the mark-downs within a given week are unusually heavy, it is quite likely that the buyers will turn in a record of only part of them, expecting, at best, to send in the remainder during a subsequent week when the mark-downs are not so heavy, and hoping in this way to average the total by the end of the season—which may or may not be accomplished. Or they may turn in no more than a part record, preferring to have a shortage appear at the end of the year rather than to disclose the amounts of the mark-downs currently. The only method that has been found successful in getting a complete record of mark-ups and mark-downs is to have price revisions made by a marking staff not under the supervision of the buyers: such a staff will revise prices only upon the written instructions of the buyers on regularly printed, serially numbered forms, to which the buyers have no access after they have turned them over to the marking department with their signatures. Immediately after the price changes have been made the forms are sent to the office for extension and recording.

Similarly, inventory shortages arise in a large measure through buyers' doing their own marking of original purchases and showing retail prices on the bills different from those marked on the goods. Very often, in such cases, the prices marked on the goods are higher than those shown on the bills, so that the buyers may have ample margin for taking mark-downs which need not be reported.

In a great many stores reserve merchandise is stocked without each article being priced, the price being kept in a book—which may or may not be accurate—or in the buyer's memory. This causes errors which may be avoided by marking all goods immediately upon receipt.

The physical layout of the receiving, checking and marking room very often is not such as to insure proper record of all transactions. The receiving and checking operations should be entirely separated from the marking operation, and all of these in turn should be separated by an enclosure from the departmental reserve stock rooms. Some stores have had the receiving, checking and marking for each department done within the departmental stock room. This invariably leads to error—to the mixing of stocks. The better method is the one outlined above—the separation of the receiving, checking and marking room from the departmental reserve stock room.

It will, of course, never be possible to do away with shortages entirely, since the theft element is present, but it is possible to minimize them, as attested by the results of several stores that operate this system properly. In these stores the shortages at retail range from ½ to 1½ per cent. of the sales. In some of them percentages have remained almost constant for a period of years and when the monthly provision is taken into account, the difference between the actual physical inventory and the book inventory at the end of the year is practically negligible. Such a store always knows the exact conditions in every department and is in a position to plan intelligently with all the facts before it. It has a tremendous advantage over a store that operates without the retail method.

The problems of retail inventories are complicated by the fact that department stores which are essentially trading businesses almost without exception do some manufacturing. Examples are the manufacture of awnings and upholstered furniture, the trimming of ladies' hats, the alteration of clothing, and the conduct of restaurants and soda fountains. It is almost needless to state that in such instances it is necessary to segregate material, labor and overhead costs and to consider them in arriving at departmental percentages of marking. As distinguished from the actual creation of goods for sale, there are other types of manufacturing such as, for example, the repolishing of furniture prior to delivery and the alteration of garments after sale, both of which are done without charge. The labor is expended upon goods already sold; it does not apply to those remaining on hand. For that reason this class of expenditure can not be taken into account in arriving at the percentage of marking, as that percentage is used only for the goods remaining in the inventory. Material, labor and overhead on goods actually manufactured for sale, on the other hand, should be included with purchases in arriving at the departmental percentages of marking, as such expenditures are similar in all respects to the purchase of merchandise in the manufactured state from outside vendors.

In considering these workroom operations, the problem is first to determine when to exclude materials, supplies, labor and overhead from operating expenses, and, if excluded, when to allow them to affect the departmental percentages of marking and when not. A committee of the Controllers' Congress of the National Retail Dry Goods Association was appointed for the purpose of revising the *Standard Methods of Accounting for Retail Stores* which was adopted some seven or eight years ago and has not proved entirely satisfactory. It was noticeable during the discussions of the committee that many of the members of even such a committee, who were expected to be above the average in their knowledge of retail practice, were handling the situation incorrectly. The reason is not difficult to determine. Manufacturing is a relatively small part of the operations of a department store and consequently it has received little attention. For individual departments, however, the workroom operations form quite an important part of the total business and for these departments failure to handle properly the operations of the workroom will result in errors of considerable size in arriving at inventory values.

The theory and method of arriving at the correct departmental percentage of marking with which to reduce the inventory at retail to "value" have now been discussed, as well as the physical handling of the merchandise. The percentages of shortages must be scrutinized and if they are in excess of reasonable percentages the departmental percentages of marking should be examined carefully and perhaps be adjusted before being used.

The problem of obsolete and unsalable merchandise presents itself in retail inventories as in other types of inventories. In the progressive department store, the accountant has available a great aid in season symbols which are now used almost universally. A letter of the alphabet is assigned to each half-year and this letter appears on the price tags of all merchandise purchased during the period. In taking a physical inventory, the items are classified by season symbols so that the accountant can judge for the store as a whole and for individual departments whether the percentage of old merchandise is excessive or not. Upon investigation he may find that merchandise of this class has been reduced considerably in retail selling price and consequently that it may not be necessary to make any further adjustment in view of the fact that the original percentage of marking has been deducted from the lower selling price. In most cases, however, he will probably find, if there is an excessive percentage of old merchandise, that the retail prices at which such merchandise has been included in the inventory are not low enough to permit its sale. In such instances the auditor will find it necessary, without changing the departmental perpetual-inventory record, to provide a reserve on the general ledger for obsolete and unsalable merchandise.

ADVANTAGES OF THE RETAIL METHOD OF INVENTORIES

The advantages of the retail method of inventories—advantages which are responsible for its introduction in such a large proportion of the department stores throughout the country—are many. There is the advantage which is common to every perpetual-inventory system—the ability to prepare accurate statements of operations monthly instead of at the end of the year only. Remembering that a department store is really an aggregate of sometimes as many as several hundred departments—each of them in a sense a separate business conducted by a separate buyer who is interested in the results of his own department only—it becomes all the more important to know definitely what the operating results show and to be able to take immediate steps to rectify any unfavorable developments which may appear.

A number of advantages which are peculiar to the department store may be summarized briefly.

(1) Not only is information for each department available as to sales and purchases periodically, but also as to the inventory, the mark-downs and the percentages of marking. Having this information, the executives are in a position to control their business as closely as they deem advisable. They may predetermine what the inventories should be at given dates, set the average percentages of original marking or set limits for mark-downs. The executives through their wide experience are in a better position than are the buyers to set these limits so that the buyers know just what is expected of them. By this method, the executives, in addition to their physical contact with the merchandising operations from day to day, are able to get a bird's-eye view of the results at the end of the week and to know whether results are coming up to predetermined standards and expectations. The reports have the effect of concentrating the policies in the hands of the executives while leaving the buyers just as free as before to work them out.

(2) Comparatives from season to season and from year to year are furnished by these reports—comparatives which were, under the old system, carried in the memories of the buyers and executives. These are an invaluable aid. The retail method thus substitutes orderly records for memory.

(3) If the store operates a merchandise budget—planned sales, inventories and purchases—the retail method is of great importance in giving, at frequent intervals, accurate data of the stocks on hand with which to gauge purchases. Without the retail method, the determination of the periodic inventories must be based on average percentages of gross profit for long periods. These percentages, while perhaps accurate for these entire periods, are totally inaccurate for part periods, particularly in "style" departments in which frequent sales are conducted, since in such cases the percentages of gross profit at the height of the season are considerably higher than the average, and the deduction from sales of the average percentages gives an inflated view of the inventory.

(4) Marking labor is reduced through obviating the necessity of marking the cost or cost reference, in code or otherwise, on each price ticket—the retail prices only need appear.

(5) The movement of merchandise from the receiving rooms to the sales floors and stock rooms is expedited, and price revisions are made faster, since a coördinate routine is established.

(6) Physical inventories are taken with a facility unapproachable under the old method, because only retail prices need be recorded and all merchandise is plainly marked with retail prices. There is no reference to records and invoices for costs and retail prices, even in cases of reserve stock or obsolete goods. The inventories may be taken and checked by clerks other than the departmental employees. The total retail value for each department is reduced to cost by the departmental percentage of marking and the resultant figure is more accurate than if an attempt were made to show the retail price and cost of each article individually. This is particularly true in a declining market, when the departmental percentage deducted from the total retail value will give a truer "value" than the sum of the buyer's guesses as to the individual items.

ARGUMENTS USED AGAINST THE INTRODUCTION OF THE RETAIL METHOD OF INVENTORIES

A great many department-store executives do not fully understand the retail inventory method; they do not realize the advantages that would accrue to them from its adoption. Aside from inertia, lack of appreciation of these advantages has been the greatest factor in deterring stores from adopting it.

Some executives are under the impression that under this method additional expense must be incurred in marking the goods. I believe that the contrary is true. While the size of the marking staff and possibly even of the receiving and checking staff will be increased somewhat, there will be a corresponding, if not greater, reduction in the time which the buyers and selling staff devote to the checking and marking of merchandise.

A complaint usually heard is that the retail method does not give accurate results in departments that handle several classes of goods, some of which are sold at high and others at low percentages of gross profit. If only one class of these goods is left in the inventory, it is claimed that by deducting the average percentage of marking from the total retail price the resultant inventory at "value" would be too high or too low. It should be borne in mind, however, that within a given department, with very few exceptions, the high and low percentage merchandises tend to form about the same proportions of both the inventory and the purchases, and that, therefore, the percentage of marking is weighted in the same manner as the inventory. Further, as to the individual departments, the inventories at the beginning and end of the period and from period to period contain high and low percentage merchandise in about equal proportions, so that the error, if any, affects the balance-sheet but not the departmental profits. From the balance-sheet point of view, on the other hand, overvaluations in some departments will tend to offset undervaluations in others, so that the inventory as a whole will probably be correct.

Other executives have stated that the percentage of marking arrived at from the retail inventory records are not accurate when tested against actual pricings of the individual items of the inventory. It will usually be found, however, if the pricing of the individual items has been properly done, that those that have made this test do not arrive at the percentage of marking properly; they usually include mark-downs and sometimes even the shortages in arriving at the percentages. The average percentage for a department for a period of years varies little, and a fair test will show that the cost method and retail method will give approximately the same results.

There is a feeling that the retail method gives misleading results because the buyers take mark-downs and do not report them. This is not the fault of the system but rather a fault in carrying it out. The buyers should not be allowed to take mark-downs themselves. They should merely fill out price-revision forms—which should be serially numbered—and turn them over to the marking staff, which, after making the changes requested, will send the forms to the office, immediately obviating the possibility of tampering with them.

Others have complained that when special sales are planned to be held several months after inventory date, the reduced "value" can not be taken up under the retail method since it is not wise to mark the retail prices down immediately. Under the old cost method they were able to leave the retail price unchanged but reduce the cost. It should be remembered, however, that while the reduction can not be put through until the goods are actually reduced, there is no inhibition against setting up an inventory reserve on the general ledger for mark-downs of this character. This does not interfere with the retail method of inventories.

Some stores have been eminently successful without the retail method and their owners state that they have made more money than others who have adopted it. The answer to this is that they have succeeded not because of the lack of it, but in spite of this lack. Their superior organization and general business ability, sometimes coupled with an advantageous location, would probably have brought them even further along had they had the retail method of inventories as an aid.

A prominent store owner who had been operating the retail method for a number of years said some time ago that with all the complexities of his business he could not keep in touch with it if he did not have the retail method of inventories. He would not, he stated, otherwise be able to go to sleep at night and know that things were going along properly, but would always be afraid of unpleasant surprises at inventory time.

The retail method was evolved as a result of the necessity of the department-store business. It has been a tremendous aid to executives. The coming years will see its almost universal adoption and perfection by department stores throughout the country.