

10.—Weighted Index Numbers of Security Prices, 1924-1925—concluded.

(1913=100).

C.—BONDS, 1924.

Items.	Number of Bonds included	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Bonds.....	18	104.5	103.7	103.6	103.7	103.7	103.9	104.2	104.7	104.9	104.2	105.1	105.0

C.—BONDS, 1925.

Bonds.....	18	105.2	105.2	105.5	105.3	105.8	106.2	106.3	106.3	105.7	105.5	106.0	106.3
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2. Monthly and Weekly Index Numbers of Prices, Sales and Values of Best Selling Securities.

Weighted index numbers of security prices, sales and values have been constructed by the Bureau by months for the year 1925 and by weeks during 1926. The index numbers were computed from data pertaining to the 25 best selling industrial and public utility common stocks on the Montreal and Toronto exchanges. The base is January 1925, that is, prices, sales and values in that month are represented by 100 and subsequent movements are shown as percentages of increase or decrease.

These index numbers are constructed according to the same method as that used by Professor Irving Fisher for his index numbers of New York Stock Exchange prices. The mathematical formula used is that known as the "ideal" and is expressed in the following mathematical forms:—

$$\sqrt{\frac{P_1 Q_0}{P_0 Q_0}} \times \frac{P_1 Q_1}{P_0 Q_1} = \text{the formula for prices}$$

$$\sqrt{\frac{Q_1 P_0}{Q_0 P_0}} \times \frac{Q_1 P_1}{Q_0 P_1} = \text{the formula for sales}$$

These index numbers are constructed quite differently from those shown in Table 10 and are meant to supplement them. These are computed from prices and sales of the twenty-five best sellers. The list of stocks from which the index is computed, therefore, changes from week to week according to market movements, but the index is so constructed as to show whether the movement of the most active stocks on the market is up or down in relation to both prices and sales. In the first place an index is computed for each week on the basis of the week preceding, then this weekly index is linked up to all that have gone before by simple multiplication. Thus a series of weekly index numbers is available which can be compared with each other and also with the base month January 1925. The monthly index numbers are constructed on identical principles. They are not a simple average of the weeks but are a comparison of the twenty-five best sellers during one month on the basis of the preceding month and the resulting index numbers for each month are linked to all that have gone before by simple multiplication, as in the case of the weekly index numbers.

This index focuses attention upon the most active stocks being traded on the exchanges. Since the constituents of such a list must be constantly changing owing