

III.—INDEX NUMBERS OF SECURITY PRICES

Many important advances have recently been made in the direction of improving the technique of making index numbers of security prices. The chief of these are—First, the computation of index numbers to serve different purposes: Second, weighting of the index numbers so that they will accurately represent the market; an accurate index of market trends cannot be made on the basis of a simple average of market quotations or on any system which does not consider weighting: Third, using weighted average prices of individual securities rather than the average of high and low quotations or closing quotations. This last point is of considerable importance, because the average price at which a stock sells on a day's market frequently differs widely from the average of its high and low quotations or its closing price.

In the revised index numbers of security prices which have recently been issued by the Bureau full use of the improvements mentioned has been made and our index numbers are now in line with the most advanced technique pertaining to the making of such indexes. In the revision, the base of the calculations was also changed. The basic period is now the year 1926, that is, prices prevailing in that year are taken as 100 and subsequent price movements are expressed as a percentage. The year 1926 was chosen as the base, in conformity with the tendency which now prevails to substitute a post-war for a pre-war base. This year was also chosen in order to enable comparisons to be made between Professor Fisher's indexes for the New York market and the Canadian markets. Index numbers for both markets are constructed on principles which are practically identical.

Two series of index numbers are now published by the Bureau on a weekly basis, *viz.*, Traders' and Investors' indexes. As will be apparent, these measure movements of an entirely different character. The Traders' index is based upon the prices of the twenty-five best selling industrial and public utility common stocks sold on the Montreal and Toronto exchanges each week. This traders' index measures the trend of gains or losses for an "average" trader on the Montreal and Toronto stock exchanges, who buys and sells the leading common stocks in the same proportion as they are traded in the market as a whole, and who turns over his investments every week. The Investors' index, on the other hand, measures the trend of values for the investor who buys a list of stocks and holds them over a long period of time.

Investors' Index Numbers of Common Stocks, 1919 to 1928.—Monthly figures for the Investors' index number of common stocks, computed by the Dominion Bureau of Statistics on the basis 1926 = 100, have been carried back to 1919 and are published in the accompanying tables. The index falls into two parts, *viz.*, the period subsequent to 1926 and the earlier period. For the period 1919 to 1926 those stocks were used which were included in the index number previously issued on the 1913 base, *viz.*, 31 industrials, 10 public utilities and 9 banks, or 50 stocks in all. In the subsequent period the monthly index contains 112 stocks, including 80 industrials, 23 public utilities and 9 banks. Despite the difference in the number of stocks included, the trend of stock prices is adequately shown throughout the whole period. The larger number of stocks included in the revised index number, though adding little to the accuracy of the general index, gives more complete information regarding various groups of stocks traded on Canadian exchanges.

Banks are included in the monthly index numbers but not in the weekly, the trading in such securities not being, as a rule, sufficiently important to warrant their inclusion in a weekly index. In any case their inclusion does not affect the general index by more than a point or two.