

STATISTICS OF CANADIAN BUSINESS

Steps Have Been Taken to Analyse Figures in Canada—
Value to Business and Financial Institutions

THE examination of current business conditions through the use of certain fundamental statistics is a study of great value to business institutions which have to determine their policy on the best information available. The first step is the selection and correction of the figures; the next is combination and analysis. Some efforts of this kind have already been made in Great Britain and the United States. The work just commenced at Harvard University by Prof. W. M. Persons, was recently outlined in *The Monetary Times*. Babson's Business Barometer and the Brookmire Economic Service have been in existence for some time and were in fact pioneers in the field on this continent.

In Canada a work of this kind is being planned by the Dominion Bureau of Statistics. Last summer a preliminary survey of available indexes of business conditions was undertaken for the bureau by Prof. H. Michell, of Queen's University.

The investigation was concerned primarily with an examination of the movements of Canadian data for certain of the well-known items which have usually been selected as indexes of business conditions. The field of choice was necessarily somewhat limited, due to the fact that even for certain of these series, data were not available for the entire period since 1905, which has been chosen for the purpose in hand; also, the fact that certain data, such as copper and pig-iron production, do not possess significance for Canadian economic life in any measure comparable with their importance in the United States.

Of the 16 series examined the following nine were tentatively accepted as affording satisfactory indexes, no attempt being made to combine the series mentioned: Stock prices, commercial failures, immigration, imports in Canada, railroad gross earnings, savings deposits, bank clearings, building permits, wholesale prices. The period examined is of sufficient length to illustrate each of the phases of the business cycle, though especial interest of course attaches to conditions since the outbreak of the war in 1914.

Sensitive Indices

Special attention has been directed in the study to the sensitiveness of the various series, and their consequent ability to afford an early indication of changes in general business conditions. From this point of view, a series obtained from quotations for 10 standard Canadian stocks, representative of various important industries* likewise a series of statistics of business failures, appear to have ranked highest. The decline of the former commenced in September, 1912, the rise of the latter shortly thereafter, while the reverse movements commenced in May and April, 1915, respectively. Similar conditions obtained in 1907, highest and lowest points for the stock prices series being in February and November, respectively, while for failures the increase commenced in October, 1906, and continued until August, 1908, the greatest rate of increase being in the latter months of 1907. Bank clearings have also shown a considerable degree of sensitiveness, commencing to fall soon after the opening of 1913, and to rise again in May, 1915. The same is true of building permits in the four western provinces. Such operations are evidently more speculative in nature, and more sensitive to change, both actual and anticipated, in general conditions, in the western than in the eastern provinces. The decline in the former commenced in October, 1913, exactly one year before the eastern figures, and the checking of the decline in 1915 is remarked in the western figures several months prior to the eastern. Moreover, western building, which, prior to 1913

was considerably in excess of eastern, fell, until in 1915, it was practically negligible in amount, while figures of eastern building still continued around the \$25,000,000 mark.

East and West

This marked divergence between eastern and western figures opens up an interesting and important field of investigation, and if a comprehensive series could be constructed for the agricultural west as opposed to the industrial east, valuable results might be arrived at. Unfortunately, this is not possible, but several highly significant series of statistical tables are available, notably in bank clearings. Here the same phenomenon as was seen in building permits presents itself, the western figures showing more sensitiveness than the eastern. Thus in January, 1919, while the eastern clearings still show a fair degree of buoyancy, the western figures are beginning to drop, notably for the Winnipeg clearing house. Steps are being taken to push this investigation further by taking the figures for the two representative houses in east and west, Montreal and Winnipeg, as far back as possible by months, commencing with January, 1894. Gross earnings of the three large Canadian railroad systems reached their high level in June, 1913, and continued to decline until April, 1915. While imports commenced to decline in September, 1907, reaching their low level the middle of the following year, and the fall in 1913 in March, the rise commenced again in March, 1915, prior to the increase in certain of the other items noted above. Although figures of imports, in the opinion of the author of the report, in general may be accepted as affording an indication of business conditions within a country superior to that afforded by figures of exports, it is conceded that it appears open to doubt whether this still obtains with the change which has taken place since 1915 in the relative values of imports and exports. Prior to 1914 the latter figures were comparatively inelastic, but the phenomenal rise since that time, as well as the fall since September, 1917, have been far greater than in the case of imports. Export figures, however, are subject to a much wider margin of error, and conclusions based upon them must therefore be accepted with extreme caution. Figures of immigration and of savings are also found to fluctuate in conformity with business conditions, though in the case of the latter variation is relatively slight, and appears practically only in the rate of growth. The other series examined were rejected as less satisfactory for the purpose in hand, and mention of them is omitted here.

It is interesting to note that, while the above series moved in considerable harmony with each other up to approximately last year, of late there has been considerable diversity exhibited, certain of the series continuing upward, while others, accorded equal recognition as guides to general business conditions, have moved in the reverse direction. In other words, in passing from the phases which may conveniently be termed historical to a consideration of the present situation, the difficulties multiply and the part played by judgment increases greatly. This, of course, is no more true of Canadian than of American experience. Our series have shown similar diversities in direction of movement. On the whole, it appears that Canadian parallels American experience somewhat closely. In the case of certain of the data, the correspondence is seen also in the seasonal variations. To mention but a single instance, the similarity is especially pronounced for exports, both countries having a heavy movement of agricultural products toward the close of the year, though in the case of Canada there is also a rush to get grain to the seaboard in advance of the closing of navigation for the winter.

The investigation is still under way, and the foregoing results are merely tentative. A detailed mathematical analysis of the data is now being made, more particularly for the purpose of measuring the divergence of the yearly and monthly figures from the normal secular trend, and a full and detailed report on the subject will be published in due course by the Dominion Bureau of Statistics at Ottawa.

*One steel, one milling, and one textile company are represented, the remainder being banking, transportation and public utility enterprises.