

SEVERITY OF CYCLICAL MOVEMENTS

Apart from matters of cyclical timing, some proponents of the money supply school have also regarded the relationship between the severity of cyclical movements in money and the severity of associated cyclical movements in business as suggesting a predominant causal role for money. They argue, perhaps with some plausibility, that, if the behavior of money were the predominant determinant of business fluctuations, the relative sizes of cyclical movements in business and roughly contemporaneous cyclical movements in money should be highly correlated. For example, the severity of a cyclical decline in the rate of growth of the money supply should be closely related to the severity of the associated business recession or depression. The evidence for such a correlation, however, is actually rather mixed.

Cyclical contractions in the monetary growth rate can be measured by computing the decline in the rate of monetary growth from its peak value to its trough value.¹⁰ On the basis of these computations, monetary contractions can be ranked in order of severity. Similarly, the severity of business contractions can be ranked by choosing some index of business activity and computing its decline during each business contraction recognized and dated by the NBER. If the resulting rankings of monetary contractions are compared with the rankings of their associated business declines for eighteen nonwar business contractions from 1882 to 1961, the size of monetary and business contractions proves to be moderately highly correlated.¹¹ It turns out, however, that this correlation depends entirely on the experience of especially severe cyclical contractions. Among the eighteen business contractions experienced during the period, six are generally recognized as having been particularly deep. They include three pre-World War I episodes and the contractions of 1920-21, 1929-33, and 1937-38. In the latter three declines, the Federal Reserve Board's industrial production index fell by 32 per cent, 52 per cent, and 32 per cent, respectively, compared with a decline of only 18 per cent for the next largest contraction covered by the production index (1923-24).

¹⁰ Generally, three-month averages centered on the specific cycle turning point months have been used to reduce the weight given to especially sharp changes in the peak and trough months themselves.

¹¹ The Spearman rank correlation, for which satisfactory significance tests apparently do not exist when medium-sized samples ($10 < n < 20$) are involved, is .70. The Kendall rank correlation coefficient, adjusted for ties, is .53 and is significant at the 1 per cent level. Rankings of business contractions are based on the Moore index. See Friedman and Schwartz, *op. cit.*, Table 3, page 39.