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RESEARCH REPORTS

COMING EFFECTS OF CURRENT EVENTS

Probable Magnitude of Present Recession

It is difficult to pick up a financial paper or magazine these days without being confronted with some one's analysis of how severe the present "readjustment" of general business activity is to be. Many of these forecasts are based on a more or less judicious appraisal of various "key" factors. Few are based on any systematic relationship of current developments with those that have occurred during previous business cycles.¹ An attempt by the Institute to make such a systematic relationship has resulted in some revealing but highly tentative and somewhat inconclusive findings.

As most readers know, a considerable amount of work has been done in studying the timing of various statistical series of economic activity. This study has resulted in the selection (by the National Bureau of Economic Research) of 21 statistical indicators, some of which generally have led, coincided with, or lagged changes in general business activity.² By observing these indicators closely, an individual may obtain one of the earliest possible indications that a cyclical change in business activity either has occurred or is about to occur. (At present, these indicators reveal rather clearly that a downturn in general business activity began earlier this year.)

However, although relatively consistent timing relationships have been established between the leading indicators and general business activity, there has been no attempt that we know of to relate changes in the leading indicators directly to the subsequent magnitude or duration of changes in general business activity.

In order to investigate the possible relationships, attention was directed to the behavior of the eight leading indicators from the time they reached their specific peaks until the time a peak was reached in general business activity. In other words, such characteristics as the magnitudes and durations of the decreases in the leading indicators prior to the time at which general business

¹At this stage in the study of forecasting business changes, one method can hardly be said to be superior to the other. Any individual attempting to make such forecasts would do well to consider both what he considers to be "key" factors and any systematic relationships that can be developed.

²*Research Reports*, Special Bulletin, August 24, 1953, "Statistical Indicators of Business-Cycle Changes." The most recent changes in these indicators are reported each month in the *Research Reports Monthly Bulletin*.

activity reached a peak and turned downward might be related to the severity or duration of the subsequent recession. Of the several possible relationships between the changes in the leading indicators and the magnitude and duration of the subsequent recessions, two were chosen for our initial investigation. The seven business-cycle recessions from 1919 to date were investigated.³

First, we calculated the average monthly rate of change in the leading indicators during the crucial period (the period between the leading indicators reaching a peak and general business activity reaching a peak). The seven recessions were then ranked in the order of the rate of fall of the *leading* indicators as follows (from most severe rate of fall to least severe): (1) 1937, (2) 1920, (3) 1923, (4) 1929, (5) 1945, (6) 1926, and (7) 1948; the first two were of about the same magnitude; and the next two were of about the same magnitude, half-way between the first two and the last three, which also were of relatively the same magnitude.

Second, we calculated the average number of months' lead of the leading indicators prior to each recession. The seven recessions were then ranked in the order of the durations of the average lead periods (from shortest to longest) as follows: (1) 1920, (2) 1937, (3) 1923, (4) 1929, (5) 1926, (6) 1948, and (7) 1945. The grouping here was similar to that above; 1920 and 1937 about the same, 1923 and 1929 similar but substantially more severe than 1926, 1948, and 1945, which also were about the same.

As most of our readers presumably know, the 1920-21 and the 1937-38 recessions were severe, albeit of relatively short duration. The 1926, 1945, and 1948 recessions were relatively mild and were of brief duration. The 1923-24 and the 1929-32 recessions were by no means similar; the former was intermediate in severity and duration, but the latter was one of the most severe as well as one of the longest on record.

Why the 1929 recession fell in the middle group is not clear from our analysis as yet. This exception should serve as a warning against the use of this forecasting device alone. Nevertheless, the record with respect to the other six recessions is of interest. Moreover, any such statistical analysis as this should be used in conjunction with other known developments in the economy. For example, such unusual speculative sprees as those in the commodity markets in 1920 and in

³Readers should realize that seven recessions probably are not a large enough statistical sample from which to draw anything but tentative conclusions.

the stock market in 1929 should be considered if an overall perspective of future possibilities is to be obtained.⁴

The ranking of the present recession among the seven that have occurred since 1919 is complicated by the difficulty at this early stage of precisely dating the recent specific peaks reached by the leading indicators as well as fixing a date when general business activity turned down. We have investigated three possibilities: first, that peaks were reached by the leading indicators early in 1951 and that the peak of general business activity was reached in September 1953; second, that leading-indicator peaks were reached in late 1952 and a general-business peak in September 1953; and, third, that leading-indicator peaks were reached in late 1952 and a general-business peak in June 1953.

The selection of these different dates results in ranking the present recession somewhere in the range from the mildest on record to somewhat more severe than those during 1926, 1945, and 1948 but substantially less severe than that during 1923.

Conclusions

Our study of the relationships of changes in the leading indicators to subsequent changes in general business activity is in a preliminary stage. Any conclusions, in the sense of warranted assertions, would be unjustified. Nevertheless, some tentative conjectures, largely in the realm of guesswork, seem possible. Our most important conclusion may best be stated negatively. There is nothing yet found in the behavior to date of the leading indicators that is incompatible with either a mild or a severe recession. But, to the extent that the analysis thus far has any significance, our best guess (and we use "guess" deliberately) is that the recession apparently under way will not be one of the most severe on record.

SUPPLY

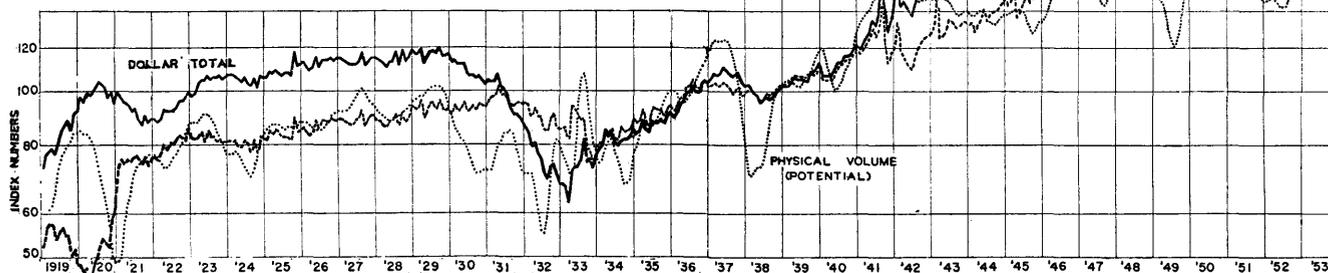
Industrial Production

Steel-ingot production, scheduled at 86.8 percent of capacity for the week ended December 5, 1953, was equal to that in the preceding week but was 10 percent less than production in the corresponding week last year.

	1929	1932	1937	1938	1952	1953
Percent of Capacity†	67	16	31	61	105	87p
Weekly Cap. (Million Tons)	1.38	1.52	1.51	1.54	2.08	2.25
Production (Million Tons)	.92	.24	.47	.94	2.18	1.96

Automobile and truck production in the United States and Canada during the week ended November 28, 1953, was estimated at 73,245 vehicles, compared with a revised total of 108,729 vehicles during the previous week.

⁴The 1929 exception at this stage of the inquiry simply poses another problem. Further investigation may uncover a reason for the 1929 exception. For example, the behavior of the coincident and lagging indicators during the period prior to the peak in general business activity may have been so different in 1929 as to warn of the magnitude of the impending collapse. This and other possibilities are being investigated.



	1929	1932	1937	1938	1952	1953
Vehicles (000 omitted)†	28*	11*	59*	85*	120*	73*p

Electric-power production in the week ended November 28, 1953, decreased to 8,138,165,000 kilowatt-hours from 8,416,116,000 kilowatt-hours in the previous week.

	1929	1932	1937	1938	1952	1953
Billion Kilowatt-Hours†	1.72*	1.48*	2.11*	2.25*	7.70*	8.14*

Lumber production in the week ended November 21, 1953, increased. *The New York Times* seasonally adjusted index was 4 points above that for the preceding week but was 8 points below that for the corresponding week last year.

	1929	1932	1937	1938	1952	1953
<i>The New York Times</i> Index	124	33	65	98	134	126

†Latest weekly data; corresponding weeks of earlier years
p=preliminary; *holiday

DEMAND

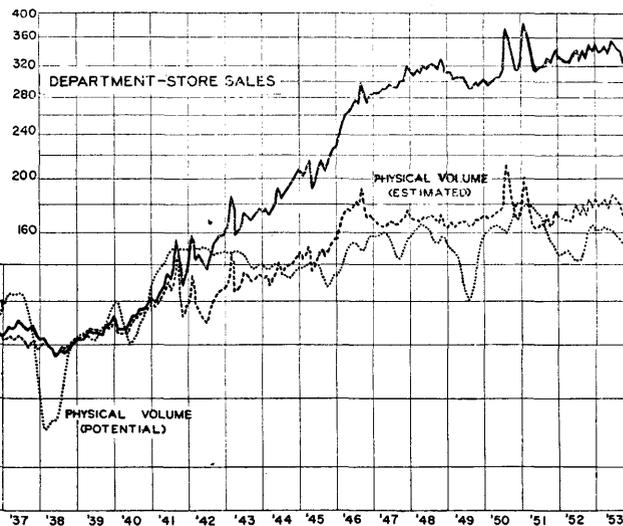
Department-Store Sales

Our preliminary estimate of the seasonally adjusted index of department-store sales (based on dollar value) increased 2 percent during November. (Revised data reveal that a 4-percent decrease occurred during October.) Estimated November sales were 1 percent more than those a year earlier and were 4 percent less than sales during May, when a 1953 peak was reached.

The index of prices of goods sold in department stores increased 1 percent from August through October to the highest level thus far this year. However, the October index of prices was slightly below that for October last year. Price changes during 1953 have been slight, and the index has fluctuated within a range of 1 percent.

Because of the slight changes in the index of prices of goods sold in department stores, the changes in the index of the physical volume of department-store sales (which is calculated by dividing the dollar-value index of sales by the index of prices) have not differed to any great extent during 1953 from the changes of the index of sales based on the dollar volume. Thus, the two indices shown on the chart have paralleled each other during recent months.

The October data for the potential volume of department-store sales (which are based on the production of goods ordinarily sold in department stores) were not available when the accompanying chart was prepared. The September data reveal a decrease of 2 percent from the August level and a 5-percent decrease from the March



level, when a 1953 high was reached. According to preliminary estimates, some further decrease occurred during October. The trend of the series since November 1952 has been downward.

The average level of department-store sales during the 5 months since last June has been 2 percent less than the average level during the first half of 1953. This decrease has accompanied the slight decline in general business activity that has occurred during the second half of the year. In spite of the decrease, the sales during the second half of the year have been relatively large, about equal to those during the corresponding period last year.

According to a *Journal of Commerce* survey, about 60 percent of the department-store executives interviewed expect that Christmas sales this year will exceed those of last year; some merchants predict an increase of from 5 to 10 percent. We consider this forecast overoptimistic. In view of the fact that last year's December sales were at a relatively high level, a 5- to 10-percent increase in December sales this year compared with those of last December would raise the index of sales 8 to 13 percent, respectively, from its present level. Such a level would approximate the alltime high reached during the second scare-buying wave of January 1951.

In order to help readers interpret more accurately the week-to-week reports that appear in various newspapers and in these bulletins, we have calculated that if the seasonally adjusted index of sales for December is to be maintained at the November level, the weekly sales for December 1953 should average 3 percent less than the weekly sales figures for December 1952.

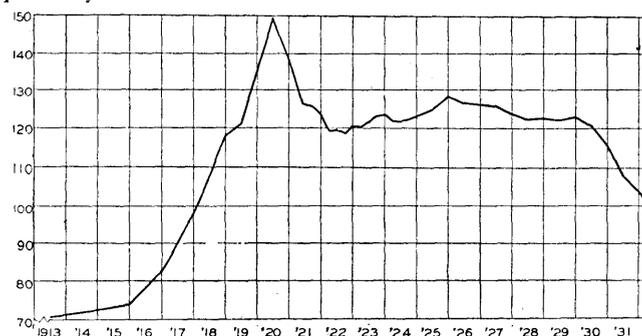
Thus far, the general curtailment of business activity has not been substantial. A similar development has occurred in the trend of department-store sales. Moreover, we find little reason to expect any immediate and drastic curtailment of general business activity or an accompanying sharp decrease in department-store sales. However, we do expect the present downward trend of sales to continue during early 1954 at least.

Latest Weekly Data

Department-store sales for the week ended November 28, 1953, were estimated to be 6 percent more than sales in the preceding week and 1 percent more than sales in the corresponding week last year.

Mail-Order and Chain-Store Retail Sales

Sales in the Nation's leading mail-order and chain-store companies during October were 3 percent less than sales in the corresponding month last year. The mail-order companies reported the largest percentage decrease, followed by the apparel stores. The data compiled by *The New York Times* are summarized below.



Percentage Change in Retail Sales for October 1953 vs. October 1952

Mail Order	-10
Grocery	+3
Variety	+1
General Merchandise	-1
Apparel	-8
Automotive-Variety	-5
Drug	0
Men's wear	-1
Shoe	+4

Note: The classes are given in the order of magnitude of dollar sales.

PRICES

Consumers' Prices

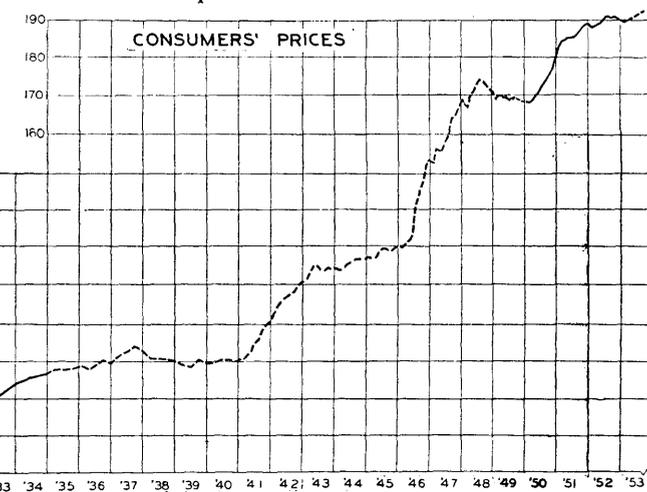
The consumers' price index published by the Bureau of Labor Statistics rose slightly during the month ended October 15 to an alltime high. The October figure was 1 percent above that of a year earlier and was 13 percent above the level of June 1950, when the Korean War started. The October index was 1 percent above the 1953 low reached in February. Food prices, which fell slightly during the month, were more than offset by increased prices for other goods and services.

The lower food prices were attributable primarily to lower prices for meats, poultry, and fish, which more than counterbalanced slight price rises in the other food sub-groups.

Further increases in rents were primarily responsible for the rise in housing costs. Clothing prices increased only slightly. Higher admission charges at movie theatres were responsible for a slight increase of reading and recreation costs. Medical-care costs continued the gradual upward trend that started more than a year ago. Apparel prices were virtually unchanged.

The October increase of the consumers' price index was the eighth consecutive monthly increase, and a new high has been reached each month. However, the monthly changes have been minor and the index has remained virtually unchanged during 1953. Since the 1953 low reached during February, the increase has been less than 2 percent. To the extent that special sales are not reflected in the index, even the 2-percent increase may be exaggerated.

A comparison of the trends of retail food prices with wholesale food prices since the start of the Korean War



is of interest. The percentage increase in the index of retail food prices from the start of the Korean War to its Korean War peak was about 1 percent less than the increase of wholesale processed-food prices during the same period. A peak in retail food prices was not reached until August 1952, although the peak in wholesale food prices occurred as early as March 1951. Since March 1951, wholesale prices have decreased 5 percent, but since August 1952, retail food prices have decreased only 2 percent. According to the October *Monthly Review* of the Federal Reserve Bank of New York, the failure of food prices to decrease as much at retail as at wholesale was attributable in part to offsetting increases in distribution costs, including higher wages and freight rates.

The Bureau of Labor Statistics has indicated that it expects the consumer-price index to remain generally stable during the next few months, with continuing increases for rents and services being largely offset by price reductions in consumer goods.

Conclusions

Any major change of the consumer-price index within the next few months appears to be improbable. However, the downward trend of general business activity that apparently began a few months ago probably will exert some pressure on consumer prices. Consequently, a decrease of the consumers' price index during the next several months seems somewhat more probable than a leveling-off.

Commodities at Wholesale

(August 1939=100)	1952		1953	
	Dec. 3	Nov. 25	Dec. 2	
Spot-Market Prices (22 basic raw materials)	280	270	273	
Commodity Futures Prices (Dow-Jones Daily Index)	362	336	342	

BUSINESS

Employment and Unemployment

Although some signs of a downturn in business activity have appeared, the changes in the three employment series since our last article (September 21, 1953) have not been substantial. Employment decreased for 3 months but is still at a near-record level; unemployment remained near the lowest level since 1945. Perhaps the greatest change has been in average hours worked per week, which decreased to the lowest level since July 1952.⁵

Average hours worked per week in manufacturing industries, adjusted for seasonal variations, reached a post-World War II high during December 1952.

⁵The series of seasonally adjusted average hours worked per week is one of the National Bureau's leading statistical indicators of cyclical changes of business activity; the series has led cyclical peaks by 3.8 months and has led cyclical troughs by 2.6 months. Seasonal changes are relatively minor, and no adjustment has been made on the accompanying chart. The series of seasonally adjusted employment in nonagricultural establishments is one of the National Bureau's roughly coincident indicators of cyclical changes of business activity; the series usually has coincided with cyclical peaks but has led cyclical troughs by an average of 3.3 months. The inverted seasonally adjusted series of unemployment is another roughly coincident indicator; no specific average lead or lag has been calculated as yet. (This series is not inverted on the chart.)



Through September 1953, the series had decreased nearly 5 percent. The decrease in the average workweek in durable-goods industries was somewhat greater than that in the nondurable-goods industries. During October (the latest month for which data are available) average hours worked per week increased slightly to 40.3 hours, but the October figure was 3 percent below that of the corresponding month a year earlier.

According to our preliminary estimate, the Federal Reserve Board's seasonally adjusted series of employment in nonagricultural establishments decreased slightly during October. Since the alltime high reached in July, the series has decreased 1 percent to 49,000,000 workers. The October figure was slightly less than 1 percent above that of the corresponding month a year ago.

Most of the decrease in employment from July through September occurred in the manufacturing industries, where the decrease exceeded 2 percent. Only slight fluctuations in employment occurred in other types of work. Although seasonally adjusted data for production workers within the manufacturing industries are not available, the nonadjusted data indicate that the decrease occurred in the durable-goods industries, primarily in the automobile industry.

The seasonally adjusted series of unemployment, which reached a low for the year in August, recovered to the July level by increasing 6 percent during September and 1 percent during October. The October figure was 10 percent lower than that of the corresponding month a year earlier and was the lowest October figure since the end of World War II. The present level of unemployment still appears to be close to the minimum compatible with peacetime employment conditions. Less than 2 percent of the civilian labor force are without jobs.

The number of man-days lost as a result of labor-management disputes during the first 9 months of 1953 totaled 19,950,000, compared with 54,520,000 man-days lost during the entire year of 1952, when the steel strike occurred.

Conclusions

The series of average hours worked per week, which is a leading statistical indicator of business-cycle changes, reached a peak in December 1952, and since then its trend has been generally downward. The inverted series of unemployment and the series of employment in nonagricultural establishments, both coincident indicators, appear to have reached peaks in August and July, respectively. The trends of these three series tend to confirm our belief that a peak of general business activity was reached a short time ago. A continuation of the downward trend of these three series seems probable in the near future.