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Institutional Investors

and the *Stock Market*

WITH SCARCELY MORE than temporary interruptions, common stock prices have risen to a succession of new peaks since 1949. Annual averages of Moody's index of the prices of 125 industrial stocks show that the only reversal of direction in the 10-year period was in 1957 when the index declined to 143.65 from 149.41 in the preceding year. Wider movements would be evident on the basis of monthly comparisons.

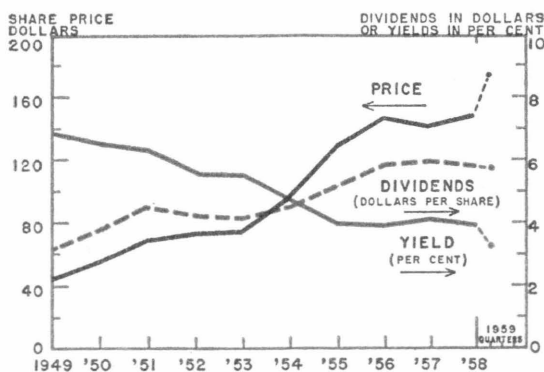
This broad movement of common stock prices has exhibited several striking characteristics. One has been the significant advance of prices occurring in the recession periods of 1953-54 and 1957-58, with stock prices anticipating the turns in business conditions well in advance of their realization. Moreover, the rise of prices has been predominantly a revaluation of yields rather than a reflection of growing earnings and dividends. For example, the yield on industrial stocks fell from 6.82 per cent in 1949 to 3.25 per cent in the first quarter of 1959, even though dividends rose from \$3.19 to \$5.71 per share. In the interval, earnings per share rose from \$6.60 to \$10.30. To state the matter differently, industrial stocks were selling at 7 times earnings in 1949 and at 17 times earnings early in 1959. From 1947 through 1958, industrial common stock prices had an upward trend of \$11.13 annually, earnings rose by 38 cents per year, and dividends by 29 cents per year, on the average; thus the rise in prices was about 29 times the annual increase in earnings and 38 times the increase in dividends. A similar relationship between the

rise of prices and dividends prevailed in the case of common stocks of public utilities.

It is evident from these data that, while support for rising stock prices was provided by rising earnings and dividends, most of the advance was the result of changing investment attitudes toward common stocks. This fact has become more striking since last autumn when the yield on common stocks fell below that on high-grade corporate bonds and it now is well below the return on Treasury securities also. Indeed, the decline in yields occurred in a period which was characterized by rising long-term interest rates.

These events have not passed unnoticed in the financial community where four major

Figure 1.
Common Stock Prices, Dividends, and Yields
Moody's 125 Industrials
1949-1959



NOTE: Data are annual averages for 1949-58; first quarter average for 1959.

SOURCE: Survey of Current Business.

factors usually are advanced as the forces underlying the rise in stock prices. One of these is the expectation of inflation which has raised the popularity of stocks as a hedge. A second is the widespread anticipation of continued and perhaps accelerated economic growth in the coming decade and the opportunities for profit which will be opened thereby. The third is the belief that the risk factor previously associated with common stocks should be reduced, owing to the mildness of postwar recessions. The fourth is the rapid growth of institutional investment in equities during the past decade and the prospects of continuing interest in expanding these holdings. The increase of institutional investments in common stocks is, of course, partly a reflection of the first three, but it is also a product of both an increased volume of saving and new institutional flows of investment funds.

The extent of institutional influences on rising equity prices has been the subject of differing views. Those who consider their influence to be substantial point especially to the large and growing share of net annual purchases of stocks which are accounted for by the institutions. Spokesmen for the institutions themselves, calling attention to the relatively small proportion of total outstanding stocks held by them and the even smaller proportion of total market transactions which they account for on the exchange, tend to minimize the influence of the institutions on stock prices.

This study reviews the growth of institutional investment in corporate stocks since the war for the purpose of setting forth the magnitude of institutional activity and some of the problems involved in the interpretation of available data.

The Institutional Investors

The institutional investors whose purchases of corporate stocks are of some importance include insurance companies, self-admin-

istered corporate pension plans, investment companies, mutual savings banks, college and university endowments, charitable foundations, and other nonprofit organizations. Bank-administered personal trusts also are generally placed in this group, but their influence is ignored in this study because of the lack of data concerning their activities. An indication of the relative importance of the several types of institutional investors in terms of their holdings of stocks listed on the New York Stock Exchange is contained in Table 1.

The investment objectives of these institutions vary widely and the extent of their participation in the stock market depends both on the nature of their commitments and the permissiveness of applicable legal requirements. In general, institutions with fixed monetary obligations find equities ineligible

Table 1.
Institutions' Estimated Holdings of New York Stock Exchange Listed Stocks

Type of Institution	Year End		Per Cent Change
	1949	1958	
	(In billions)		
Insurance companies			
Life	\$ 1.1	\$ 2.6	+136.4
Nonlife	1.7	5.7	+235.3
Investment companies			
Open-end	1.4	10.2	+628.6
Closed-end	1.6	4.4	+175.0
Nonprofit institutions			
College and university endowments	1.1	3.4	+209.1
Foundations	1.1	3.8	+245.5
Other	1.0	4.0	+300.0
Noninsured corporate pension funds	0.5	9.1	+1,720.0
Common trust funds	—	1.4	
Mutual savings banks	—	0.3	
Total	\$ 9.5	\$ 45.0	+373.7
Market value of all NYSE listed stocks	\$76.3	\$276.7	+262.6
Estimated per cent held by all institutions	12.4	16.3	
Estimated per cent held by investment companies and noninsured corporate pension funds	4.6	8.6	

NOTE: Details may not add to totals due to rounding.
SOURCE: New York Stock Exchange, *Fact Book*, 1959, p. 25.

for a prominent place in the investment portfolio. Included in this category are mutual savings banks and life insurance companies. Investment policies of mutual funds and closed-end investment trusts vary considerably from one to the other, according to their particular objectives (balanced funds, growth funds, science funds, etc.), but they all invest heavily in stocks. While the future commitments of corporate pension funds are somewhat akin to those of life insurance companies, the fact that the sponsoring company usually acts as guarantor of the fund's obligations permits wide discretion in the selection of investment media. Pension funds are not regulated by law. Although safety of principal generally is considered of primary importance in the investment policy of endowment funds, high-quality corporate stocks have been regarded by the managers of these funds with increasing favor in recent years.

In spite of the differences noted above, institutional investors do have certain characteristics in common. Most of them are long-term holders, buying on the basis of major developments in the fortunes of individual industries and companies, not for profits on short-run price fluctuations. Typically, these investors have not been under pressure to sell in a falling market. They have tended to concentrate on seasoned issues ("blue chip" stocks) and their buying is likely to be continuous rather than sporadic in nature, although they may withhold purchases at times in anticipation of more favorable prices.

The self-administered corporate pension plans and the mutual funds are the fastest growing of the institutional investor group, and they now account for the bulk of institutional buying. Insurance companies and the nonprofit institutions hold relatively large dollar amounts of stocks, but in terms of annual net purchases they are relatively unimportant.

Investment Companies

The growth of investment company assets during the past decade has been extremely rapid, and since 80 to 90 per cent of their assets are invested in equities, these companies have accounted for an increasingly significant share of the total annual net purchases of stock in the market. The open-end companies (mutual funds) have become quite popular and their growth has far overshadowed the older closed-end institutions.

Total assets of the investment companies have grown from some \$3.4 billion in 1950 to over \$15 billion at the end of 1958, and the number of shareholders has increased more than threefold. While a large part of this dollar gain resulted from the appreciation of portfolio securities, an increasingly large stream of new money has flowed into the investment companies. Net sales of new shares (sales less redemptions) increased from \$600 million in 1952 to \$1.5 billion in 1958. Net purchases of preferred and common stock by investment companies in 1958 totaled \$1.1 billion—more than double the 1955 figure of \$500 million and five times the \$230 million purchased in 1951.

Corporate Pension Funds

Another rapidly growing institutional source of equity funds during the postwar period has been the self-administered corporate pension plans. Total assets of these funds have risen from \$5.2 billion in 1950 to \$22.1 billion (book value) at the end of 1958. Annual net receipts have consistently increased in absolute terms, but, as the base has expanded, the rate of growth has declined somewhat from the peak reached in the early 1950's. During 1958, when the recession caused some firms to cut back on the funding of past service liabilities, some \$2.8 billion was added to pension fund assets—an amount equal to the total value of assets in 1945—for a gain of 14.4 per cent.

The increase in assets has been marked by

important changes in the distribution of assets, in favor of a more prominent role for equity investments. Between 1951 and 1958, the proportion of assets represented by common stocks increased from 11.8 per cent to 27.3 per cent. In order to effect this increase in the representation of equities in pension fund portfolios, increasingly large proportions of pension fund receipts have been channeled into the stock market. In 1951, only 21.8 per cent of net receipts was invested in common stocks, whereas in 1958 the proportion was approximately 43 per cent.

Pension funds at the end of 1958 held \$6.7 billion of preferred and common stock at book value and \$10.2 billion at market value. Approximately 94 per cent of the stock is common stock. In 1958, pension funds' net purchases of stock were \$1.2 billion, representing 48 per cent of total annual net purchases in the market—more than any other institutional investor group.

Other Institutional Investors

Corporate stocks have never held an important place in the investment portfolios of life insurance companies. At the end of 1957, equities amounted to only about 3.3 per cent of total assets. Although they have enjoyed increased authority to hold equities in recent years, life insurance companies have shown little interest in attaining legal maximums, and have been adding stocks at the rate of only \$100 million or so annually. Their total holdings at the end of 1957 were \$3.4 billion.

Fire, marine, and casualty insurance firms, traditionally heavy investors in equities, have been adding stock at the rate of only about \$200 million annually. Their holdings of New York Stock Exchange listed stocks at the end of 1958 totaled \$5.7 billion, compared with \$2.6 billion for life insurance companies.

Nonprofit institutions, such as college and university endowments and foundations, hold a relatively large block of stocks (\$11.2 bil-

lion of NYSE listed stocks at the end of 1958) and there is some evidence of a tendency on the part of this group to invest a larger proportion of their funds in equities. Their annual net purchases, however, are small relative to total institutional purchases. Mutual savings banks have added \$100 million of new stocks to their portfolios annually during the past several years—again a relatively small proportion of total institutional activity.

The Supply of Stocks

During the postwar period, internal sources have supplied well over half the new money required by United States corporations, and of the externally raised funds, over two thirds have been obtained through debt financing. Between 1946 and 1957, only about 7 per cent of new corporate funds was provided through stock flotations.

Annual net additions to outstanding stock (including conversion of debt to equity securities but excluding investment company shares) have been somewhat erratic during the 1950's. Net additions amounted to \$2.4 billion in 1951 and 1952 and then fell to \$2 billion in 1953 and 1954. The volume rose to a peak of \$2.7 billion in 1956 and 1957 and then declined to \$2.5 billion in 1958.

Some Measures of Institutional Influence

Institutional Ownership of Stocks. The extent to which institutional investors have absorbed the supply of outstanding stocks is one measure of their influence in the market. A New York Stock Exchange study of share ownership, details of which are shown in Table I, indicates that at the end of 1958 selected institutional investor holdings of stocks listed on the Exchange totaled \$45 billion (market value)—equal to 16.3 per cent of all listed stocks. This figure represents a gain of 1 percentage point over 1956 holdings, and is nearly 4 percentage points above the 1949 figure of 12.4 per cent. The pension plans

Table 2.
Net Purchases of Common and Preferred Stock — By Investor Class

Net Purchases By	1951	1952	1953	1954	1955	1956	1957	1958
	In billions of dollars							
Corporate pension funds	.3	.5	.5	.6	.7	.8	1.0	1.2
Investment companies	.2	.5	.3	.4	.5	.6	.8	1.1
Other institutions and foreign	.6	.5	.7	.9	.5	.6	.5	.2
Total institutions	1.0	1.4	1.5	1.8	1.7	2.0	2.4	2.6
Domestic individuals*	1.3	1.0	.5	.2	.4	.6	.4	-.1
Total net additions to stock outstanding**	2.4	2.4	2.0	2.0	2.1	2.7	2.7	2.5
	Per cent of total net purchases							
Corporate pension funds	13	21	25	30	33	30	37	48
Investment companies	8	21	15	20	24	22	30	44
Other institutions and foreign	25	17	35	40	24	26	19	12
Total institutions	46	58	75	90	81	78	85	104
Domestic individuals*	54	42	25	10	19	22	15	-4
Total net additions to stock outstanding**	100	100	100	100	100	100	100	100

*Includes personal trust funds and nonprofit institutions. Estimates of individual purchases vary somewhat according to source.

**Excludes investment company shares but includes conversions of debt into equity securities.

NOTE: Details may not add to totals due to rounding.

SOURCES: 1951-54 data: Vito Natrella, "Implications of Pension Fund Accumulations," *American Statistical Association Proceedings*, 1957, p. 149, and Securities and Exchange Commission Statistical Series Release No. 1543, July 15, 1958; 1955-58 data: SEC Statistical Series Release No. 1614, June 30, 1959.

and mutual funds are responsible for all of the increase which has taken place in the institutions' share of total holdings since 1949.

Annual Volume of Stock Purchases. Since substantial institutional investment in equities is a relatively new and rapidly growing phenomenon, a more realistic appraisal of its significance in the market is likely to result from an analysis of the annual net purchases by institutional investors than from the statement of aggregate shareholdings.

Table 2 shows the net amount of new funds invested in common and preferred stocks by the various institutional investors and by individuals, both in dollar amounts and as ratios to the total net additions to equities, during the years 1951 through 1958. These same data are presented graphically in Figure 2.

Total net purchases by the institutional investor group increased steadily from \$1 billion in 1951 to \$2.6 billion in 1958, with all of the gain being accounted for by the pension funds and investment companies. Pension

funds increased their annual net purchases of stock from \$350 million in 1951 to \$1.2 billion in 1958, while the volume of net purchases by investment companies increased from \$230 million to \$1.1 billion during the same period. The growth in investment company purchases was especially rapid during 1957 and 1958. The insurance companies, mutual savings banks, and other institutional investors maintained a relatively steady flow of new funds into the market during this period at a combined average annual rate of about \$600 million.

The stock purchases of institutional investors, in terms of their influence on the market, take on greatly added significance when compared with the net purchases of individuals during the period under scrutiny. This comparison is made in Table 2 and Figure 2. The data are adjusted to exclude investment company shares in the total additions to stock outstanding (it is assumed for purposes of this comparison that all investment company

shares have been bought by noninstitutional investors). The proportion of total net purchases accounted for by the institutions increased greatly between 1951 and 1958. From 46 per cent of total net purchases in 1951, the institutional share climbed rapidly in the ensuing 3 years and reached 90 per cent in 1954. Over the period 1955-57, the expansion of stock outstanding matched the rise in institutional purchases and their share ranged from 78 to 85 per cent of the total. But during 1958, the institutional group purchased stock in an amount equal to 104 per cent of the value of net additions to stock, thereby absorbing some \$100 million of shares previously held by individuals.

Concentration of Purchases. Since the institutions do not spread their purchases over the entire list of issues, the volume of their purchases tells only part of the story of their impact on the market. Their influence on the price of particular stocks, which become "in-

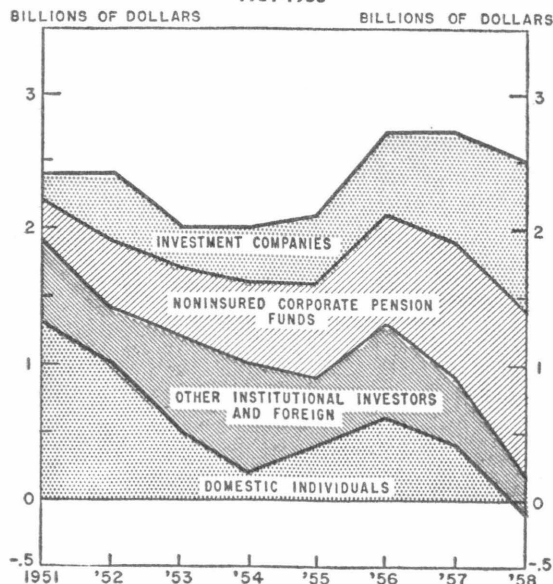
stitutional favorites," may be much greater than the volume of their net purchases would suggest for the market as a whole.

In 1955, New York banks reported that of 1,024 pension trusts held by them, 206 common stocks accounted for 92.4 per cent of the total value of common stocks held by these trusts. Since there are over 1,000 different issues listed on the New York Stock Exchange alone, it would appear that there was a high degree of concentration on a relatively small number of issues.

Information developed during 1956 for a Senate committee hearing on the stock market showed that institutional investors concentrated rather heavily on only 25 favorite stocks. During a 34-month period, mutual funds included in the sample directed 15 per cent of their total purchases to these issues, while 24 per cent of pension fund purchases were so directed. Altogether, some 210 institutional investors (representing 40 per cent of the "universe") centered 18 per cent of their buying on these 25 stocks.

Figure 2.

Net Purchases of Common and Preferred Stock By Investor Class 1951-1958



Substitution of Institutional for Individual Stock Purchases

One important facet of the problem of assessing the influence of institutional investors on the stock market is that of determining the extent to which new funds have been brought into the market via these channels. Or, stated differently, to what extent have institutional investments merely substituted for individual investments? The subject is important because if it can be shown that funds flowing into equities through institutional channels would have gone into the market under any circumstances, then the influence of the institutions would be much less than the volume of their net purchases might suggest.

In the case of pension funds, it is probable that the bulk of the receipts used to purchase stocks represents a new and previously un-

tapped source of equity funds. It is not known how the funds which comprise pension plan receipts would be distributed if the plans did not exist. They might be distributed in the form of higher wages, higher profits, lower prices, taxes, or any combination of these alternatives. Depending on the propensity to consume and a host of other factors, some of these funds undoubtedly would be saved, and a part of these savings would probably find their way into the stock market. The proportion, however, could hardly be large.

The manner in which mutual fund shares are marketed, being more or less outside the normal channels of security distribution, suggests that some of these shares are sold to relatively inexperienced investors who might not be disposed to venture into the market directly. Certainly a new source of equity funds has been tapped in this area.

On the other hand, it appears likely that a fairly significant proportion of the funds now being used to purchase investment company shares would be invested directly in the stock market if the intermediary did not exist—that considerable substitution of institutional for individual investment does occur in this area. In the first place, a mutual fund investment is, in most cases, an indirect investment in corporate stock. Many mutual fund shareholders would want to make this type of investment even in the absence of the management and diversification functions performed by the fund. Secondly, a large majority of mutual fund shareholders presently hold corporate stocks directly, in addition to their mutual fund shares. A study by the National Association of Investment Companies revealed that 77.5 per cent of regular account holders and 69.3 per cent of accumulation plan holders owned at least some corporate shares directly. Many mutual fund shareholders, therefore, are not only familiar with the market but have had experience in it on their own. The data in Table 2 do not contradict this interpreta-

tion, for when investment company and direct individual purchases are combined, it is apparent that total individual purchases have not increased.

Concluding Comment

It is apparent that the growth of institutions having an interest in the acquisition of corporate stocks has been an influence of increasing importance in the market for equities. This has been especially true of pension funds whose investment preferences have shifted toward equities as they have grown in size. But it is not possible to quantify their importance and to determine that some percentage of the rise in stock prices has been the result of their activities. However, for the investor, this is probably not the central question which is raised by the growth of these funds. For him, the question is whether increased institutional participation in the stock market has increased his chances of gains and reduced his chances of losses. The time span of institutional investments is considered by some to exert a stabilizing force on short-run stock price movements; others consider that accelerating institutional growth places a floor under the prices of stocks since these funds have been buyers on balance each year in the past decade; still others appear to consider that the growth of these institutions gives assurance of a continuing rise in stock prices.

Although all of these possibilities may, in retrospect, prove to be valid, it is essential to recall that the success of common stock investment, both by individuals and institutions, over the years since 1950 owes more to the willingness of investors to accept reduced yields and less to the rise of earnings and dividends. For such gains to be repeated, it will be necessary for yields to continue to fall, for profits and dividends to grow more rapidly than in the past, or for some combination of these two to occur.

Structural Dimensions of the

Employment Lag in Manufacturing

ONE OF THE MOST striking features of the first year of economic recovery was the rapidity with which manufacturing output rose in relation to the rather modest gain in the number of factory employees. Between April 1958 and the spring of 1959, production climbed rapidly—about 20 per cent—to form a rather sharp “V-shaped” pattern, while employment rose only 6 per cent. The diverging paths of those two measures of economic activity reflect, to a large extent, productivity gains and changes in the length of the workweek. However, this article is not intended to treat such factors extensively; rather its primary purpose is to focus attention on the industrial structure of the lag in employment. Subsequent to a brief review of major developments in output and employment since mid-1957, the impact of changes in the various industries on the lag in manufacturing employment is evaluated. The complexity of that problem necessitates a careful examination of the concept of a lag itself, as well as a view of the structure of the lag from more than one perspective. Finally, some similarities between developments in the three postwar cycles are pointed out.

For this analysis, the seasonally adjusted total employment data for major manufacturing industry groups and the Federal Reserve Board's index of industrial production, also seasonally adjusted, are used. To provide common dates for comparing changes in employment and output during the two earlier postwar cycles, the National Bureau of Economic Research chronology of turning points in general business is employed. For the last cycle the dates selected are July 1957 (tentatively

identified by the National Bureau as the upper turning point) and April 1958. While these dates do not coincide in all cases with peaks and troughs of activity in the various manufacturing industries, they are representative of turning points in the aggregates.

Developments Since 1957

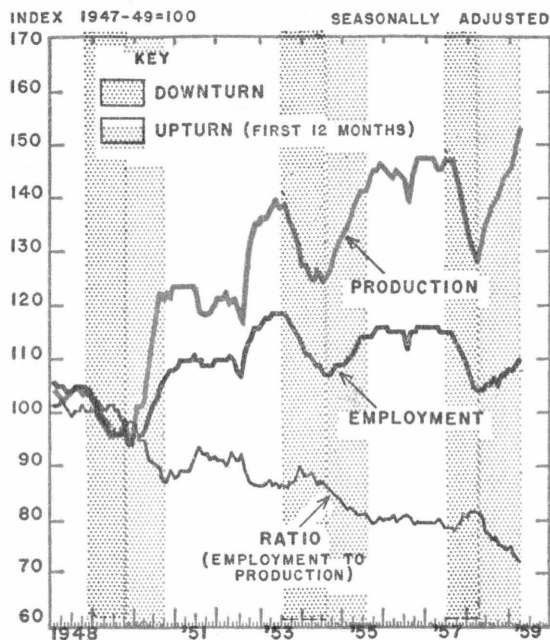
Before attempting to assess the part played by the various manufacturing industries with regard to the employment-output lag during the recent upturn, it should be helpful to summarize developments in both series since mid-1957. For this discussion it seems reasonable to employ the conventional framework of dividing manufacturing activity into durables and nondurables industry groups since, for the most part, the impact of cyclical fluctuations fits this division well. It does not follow, however, that the lag in employment has been confined to either group.

Employment

About half of the 1.6 million decline in total factory employment between July 1957 and April 1958 occurred in three durable goods industries—transportation equipment, primary metals, and nonelectrical machinery. If two other major durables industries—fabricated metals and electrical machinery—are included, about two thirds of the decline can be accounted for. Thus, the recession's impact on employment was centered largely in five durable goods activities.

Due partly to the impetus of the rush to rebuild inventories in anticipation of a steel strike and partly to considerable recovery in a number of metal-using industries, primary

Postwar Patterns in Manufacturing Output and Employment



SOURCE: U. S. Department of Labor and Board of Governors of the Federal Reserve System.

metals employment bounced back sharply. By April 1959, it had recovered to within 5 per cent of the July 1957 level. Employment in electrical machinery and fabricated metals also had regained over half the recession's loss by April 1959. On the other hand, employment in nonelectrical machinery had recovered only 28 per cent of its loss during the first year of recovery and transportation equipment less than half.

With the peak-to-trough drop in total nondurables employment hardly any larger than the loss in transportation equipment alone, the decline in that sector was relatively modest. Although at the beginning of the recession nondurables accounted for over two fifths of total factory jobs, only about one fifth of the subsequent decline occurred in that sector. About half the number of work-

ers affected were in the textiles and apparel industries. In the first 12 months of recovery, more than half the loss in soft goods had been recouped and employment was less than 2 per cent below the July 1957 mark. For the most part, April 1959 levels of employment among nondurables were near mid-1957 estimates, but only the printing and publishing and apparel industries posted gains.

Production

Manufacturing output, as measured by the Federal Reserve Board's seasonally adjusted index of industrial production, declined about 13 per cent during the July 1957- April 1958 downturn. As in employment, losses were heavily concentrated in a few durable goods industries. Output of primary metals, for example, dropped 36 per cent in the 9-month period. Substantial relative declines also occurred in electrical machinery, nonelectrical machinery, transportation equipment, and fabricated metals. Taking into account the importance of the various industries in the total index of manufacturing output, as well as the relative changes, the drop in primary metals still had the greatest impact, with transportation equipment and nonelectrical machinery ranking next. These three industries accounted for over 50 per cent of the decline in the index of manufacturing production in the downswing. Including substantial losses in electrical machinery and fabricated metals, the five major durable goods industries, as a group, accounted for nearly three fourths of the total drop in factory output in the July 1957- April 1958 period.

During the first year of recovery, durables more than regained their mid-1957 production rate but only by a small margin. Rising output in primary metals was the most important factor, accounting for nearly one fifth of the recovery in total production. It is of interest to note that the primary metals industry contributed the same proportion to the rise in the index of manufacturing production during

the upturn as it contributed to the decline of the index in the recession, while the machinery industries supplied only about half as large a share in the upturn as in the downturn. The durables sector, as a whole, was responsible for only about 66 per cent of the increase in total output compared with an 84 per cent share in the decline. It may be noted, however, that sharp gains in durables output tend to continue subsequent to the first year of recovery.

With nondurables responsible for the remaining 16 per cent of the drop in factory output, the entire sector played a less important part in the recession's production decline than did either primary metals or transportation equipment. Among the nondurables industries, production declines were largest in textiles, chemicals, apparel, petroleum and coal, and rubber.

During the upturn, nondurables accounted for more than one third of the gain in the total index, even though that sector experienced only a slight dip in output during the recession. All nondurables industries have shown an improvement in production levels but, taking into account the relative importance of the various industries, the rise in chemicals, textiles, and apparel output has contributed most to the gain in total soft goods production.

The Lag in Employment

After the preceding review of some of the more salient developments in employment and output among manufacturing industries since mid-1957, it seems evident that cyclical patterns in a few industry groups dictated to a large extent the variations in total output and employment. For the most part, those industries in which the most significant output changes occurred also experienced important fluctuations in employment. Although all industries experienced increases in output relative to employment, the size of the differences varied markedly between industries. This was

typical even for those in which the cyclical impact was relatively light. In addition, the varying size of major manufacturing industry groups substantially affected their impact on total factory employment. From the maze of structural changes within manufacturing have emerged the divergent patterns of total output and employment. While there are a number of ways in which the cyclical change in the output-employment relationship can be examined, there appears to be no single approach which is entirely satisfactory in bringing together all aspects of the problem. For this reason it is necessary to analyze the data in more than one way.

One dimension of the lag may be illustrated by the fact that production rose much more rapidly than employment in the first

Table 1.

Relative Increase in Output Due to a Lengthened Workweek and Increased Productivity

	April 1958- April 1959	Aug. 1954- Aug. 1955	Oct. 1949- Oct. 1950
	(Per Cent)		
Total manufacturing	12.6	6.9	12.0
Durables	15.1	7.5	16.3
Nondurables	10.5	6.2	8.0

RANKING OF INDUSTRIES (Based on Per Cent Increase)			
Primary metals	1	1	1
Rubber products	2*	2	2
Textile mill products	3	4	16
Tobacco manufactures	4	19	18
Lumber and wood	5	9	15
Nonelectrical machinery	6	11	6
Furniture and fixtures	7	12	17
Paper and allied products	8	10	14
Products of petroleum and coal	9	6	3
Stone, clay, and glass	10	8	5
Chemicals	11	7	7
Fabricated metals	12	14	10
Leather and leather products	13	16	11
Electrical machinery	14	18	8
Apparel and other finished textiles	15	13	12
Transportation equipment	16	5	4
Instruments	17	3	9
Printing and publishing	18	15	13
Food and kindred products	19	17	19

*March 1959 data used because of a strike in the rubber industry.

year of upturn—a divergence which was permitted by gains in productivity and an extension of the workweek. That is, the greater the gains in productivity and the larger the increase in the workweek the less employment needed to expand to achieve a given increase in output. For manufacturing as a whole, the relative increase in productivity and hours worked combined was 12.6 per cent during the April 1958-April 1959 period. Durable goods industries, as a group, experienced a somewhat greater gain than the all-industries average — and thereby contributed substantially to the magnitude of the lag—while the nondurables group fell below the average, as is shown in Table 1. Yet, among the individual industries it is interesting to note that, while primary metals dominate the list, several soft goods industries rank high in the relative increase in output achieved by a longer workweek and advancing productivity. Accordingly, those nondurables helped significantly in the creation of the lag, as measured in this manner.

While the preceding discussion sheds considerable light on the manner in which the various industries contributed to the lag, it does not consider the fact that some industries comprise larger shares of total output and employment than others. Thus, it explains only one dimension of the comparative contribution of each industry to the total lag in employment. This shortcoming is illustrated by the fact that, while relative increases in output permitted by a lengthened workweek and enhanced productivity were similar in both nonelectrical machinery and furniture and fixtures, the former, by virtue of its greater size, undoubtedly had more to do with the actual number of jobs lost due to the changing relationship between output and employment.

Another way of defining the employment lag is in terms of the difference between the actual employment gain and that which would

Table 2.
Industrial Distribution of the
Employment Lag

Based on the Difference Between Actual
and Apparent Employment Requirements

	April 1958- April 1959	Aug. 1954- Aug. 1955	Oct. 1949- Oct. 1950
	(Per Cent)		
Total manufacturing	100.0	100.0	100.0
Durables	65.4	64.0	74.5
Nondurables	34.6	36.0	25.5
Primary metals	26.6	18.6	29.4
Nonelectrical machinery	9.7	8.0	10.9
Textile mill products	9.0	10.9	2.9
Transportation equipment	6.9	17.4	11.3
Fabricated metals	5.8	3.1	6.5
Electrical machinery	5.1	1.4	6.7
Apparel and other finished textiles	5.0	5.2	4.9
Chemicals	4.5	5.8	5.2
Lumber and wood	4.2	5.1	2.5
Paper and allied products	3.4	3.7	1.8
Food and kindred products	3.3	2.0	0.4
Stone, clay, and glass	3.2	3.8	4.4
Rubber products	3.2*	3.9	2.7
Printing and publishing	2.4	1.8	2.8
Furniture and fixtures	2.3	1.8	0.7
Leather and leather products	1.8	0.6	2.2
Instruments	1.6	4.8	2.0
Products of petroleum and coal	1.4	2.1	2.3
Tobacco manufactures	0.6	**	0.1

* March 1959 data used because of a strike in the rubber industry.
** Employment increase exceeded that of production.

have occurred if production and jobs in each industry had increased proportionately, i.e., the difference between the observed and the apparent employment requirements. In other words, it is assumed that, in the absence of productivity gains and of increases in the length of the workweek between April 1958 and April 1959, output and employment would have increased by the same relative amount—nearly 20 per cent. This approach allows the total lag, as well as its industrial distribution, to be defined in terms of an actual number of workers rather than, as in the previous approach, in terms of a productivity-workweek factor. The industrial distribution of the lag, in turn, can be expressed as a per cent of the total accounted for by each industry as shown in Table 2.

Again, viewed in this light, a large portion of the employment lag has been centered in the durable goods industries. This results from their generally large relative increase in production in the upturn, coupled with the fact that several of the major durables are quite important in the total structure of manufacturing employment. Thus the difference between actual and apparent employment requirements in those industries was quite large. Primary metals alone accounted for about a fourth of the employment lag in the April 1958-April 1959 period, measured in this way, and that group combined with nonelectrical machinery, transportation equipment, and fabricated metals comprised about half of the total lag. Altogether, the durables industries were responsible for nearly two thirds of the lag in manufacturing employment during the first year of recovery.

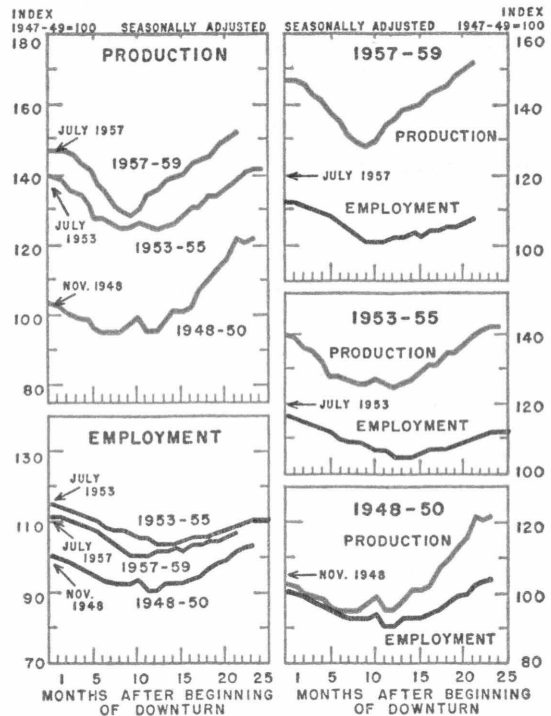
While neither of the above approaches serves to bring together all aspects of the problem, each contributes to the understanding of the changing relationships between output and employment. The lag itself is a complex phenomenon and different concepts of its nature lead to different views of each industry's role. However, within the limits imposed by the data¹, it appears that the various manufacturing industries can be grouped according to their influence on the lag in total factory employment, once the concept of a lag is clearly defined.

The Three Postwar Cycles Compared

Now that the patterns of manufacturing employment and production in the recent recession have been developed in some detail,

¹ While the comparison of total employment and total output is perhaps little affected, the fact that monthly indexes of production in a number of industries are derived from man-hours data necessitates some caution in analyzing the two series together for relatively short periods of time.

Cyclical Developments in Production and Employment



SOURCE: U. S. Department of Labor and Board of Governors of the Federal Reserve System.

calling attention to the manner in which the industrial structure has been involved, it is of interest to compare the recent course of events with that of the two earlier postwar recessions. Each business cycle is, of course, unique in many respects, e.g., each starts from a different level of activity with a varying composite of economic factors. Moreover, events such as the Korean War and labor disputes have influenced activity patterns considerably. Nevertheless, many similarities between the postwar cycles are evident, both as to the behavior of particular industries and as to the changing relationship between output and employment.

For example, between mid-1957 and April 1958 both employment and output followed

courses rather similar to those in the two earlier cycles. However, a comparison of the cyclical patterns of these two series—with employment gains consistently lagging behind the rise in output during the upturn—points up the cumulative effect which lies behind the widening gap between the physical volume of output and the number of workers required to produce it.

Further indications of similar patterns in the three recessions are evident in the behavior of the broad industry groupings of durables and nondurables. Employment and

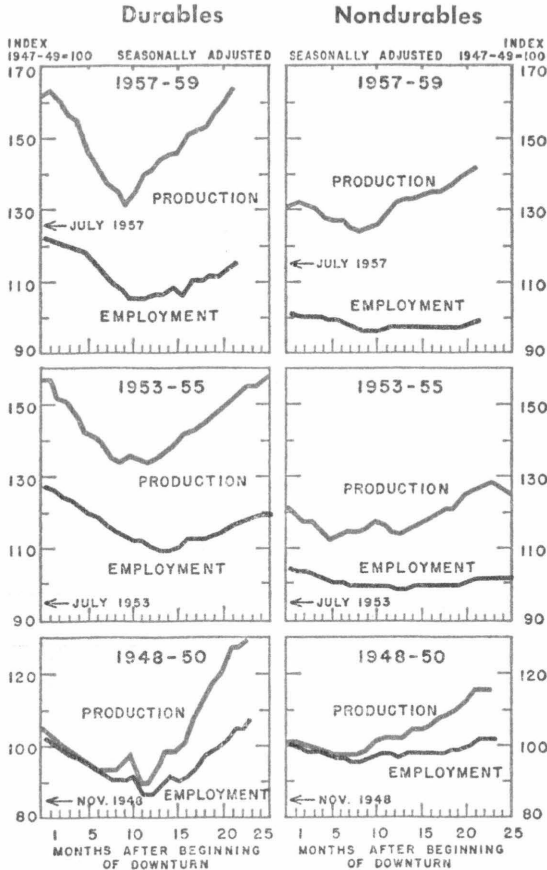
output in each sector followed roughly the same paths in each cycle, with durables consistently experiencing the sharpest fluctuation. The employment lag, however, clearly arises out of the relative movements in output and employment in both sectors.

Beyond similarities in the aggregates, there is some evidence of consistent behavior of particular industries during cyclical fluctuations. By using the same techniques employed in the analysis of the 1958-59 lag, the structure of recent changes in the output-employment relationship can be compared with that in earlier cycles.

Viewing the employment lag in terms of the magnitude of productivity and workweek adjustments, a number of the industries may be seen occupying similar positions in the industry rankings of each cycle (See Table 1). For example, the primary metals and rubber products industries ranked first and second in all three cycles and were thereby important elements in the employment lag, while the food and printing and publishing industries consistently ranked quite low. At the same time, however, other industries experienced substantial differences in the degree to which increased productivity and a lengthened workweek substituted for employment gains in the various cycles. In the 1949-50 upturn, the influence of the initial stages of the Korean War on such industries as instruments, electrical machinery, and transportation equipment also may be noted as affecting the ranking of the industries in terms of this measure.

A considerable degree of consistency also appears in the industrial distribution of the absolute lag in employment (See Table 2). The top one third of the industries, which contributed nearly two thirds of the total lag in employment in 1958-59, accounted for about the same proportion in 1949-50 and in 1954-55. Of course these same industries did not rank in the same order in each case, but the influence of the group is unmistakable.

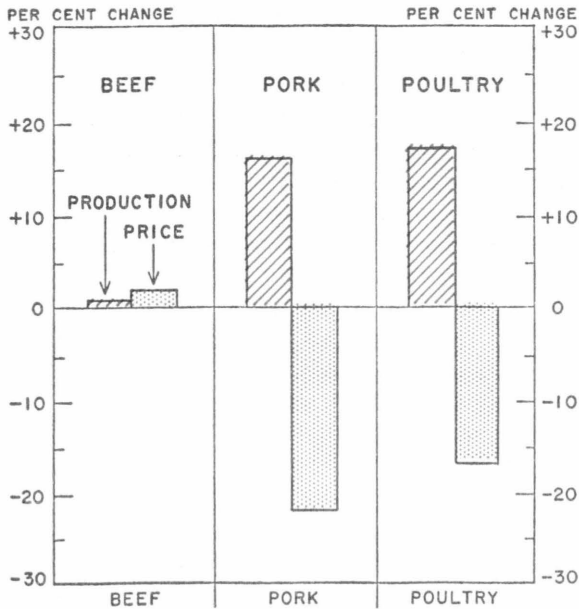
A Comparison of Durables - Nondurables Patterns



SOURCE: U. S. Department of Labor and Board of Governors of the Federal Reserve System.

Change in Meat Production and Livestock Prices

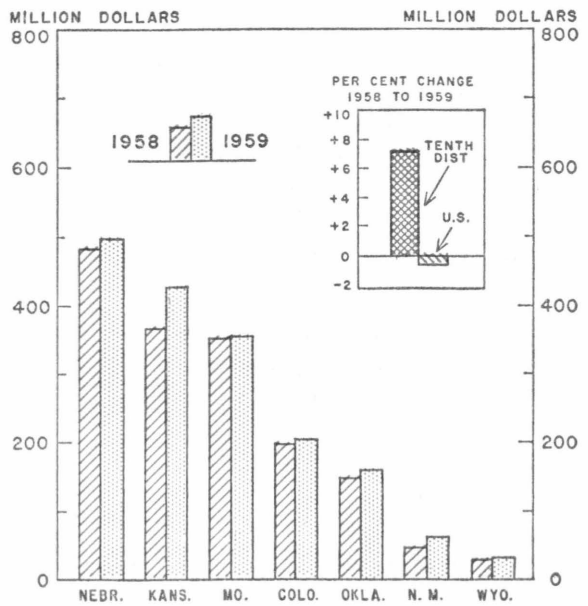
First 5 Months of 1959 as a Per Cent of First 5 Months of 1958



NOTE: Prices are for steers, barrows, and gilts at Chicago and farm prices for commercial broilers.

Cash Receipts from Farm Marketings

First 5 Months of 1958 and 1959



BANKING IN THE TENTH DISTRICT

District and States	Loans				Deposit			
	Reserve City Member Banks		Country Member Banks		Reserve City Member Banks		Country Member Banks	
	May 1959	June 1958	May 1959	June 1958	May 1959	June 1958	May 1959	June 1958
Tenth F. R. Dist.	+3	+12	+2	+15	+3	-1	+1	+7
Colorado	+2	+23	+3	+16	+1	+5	†	+7
Kansas	+6	+9	+3	+17	+1	-2	+1	+8
Missouri*	+3	+7	+2	+18	+4	-5	+1	+6
Nebraska	+1	+20	+2	+10	+1	+1	-2	+4
New Mexico*	**	**	+1	+16	**	**	+1	+12
Oklahoma*	+5	+5	+1	+17	+5	-2	+4	+9
Wyoming	**	**	+2	+12	**	**	-2	+5

* Tenth District portion only. ** No reserve cities in this state.
† Less than 0.5 per cent.

PRICE INDEXES, UNITED STATES

Index	June 1959	May 1959	June 1958
Consumer Price Index (1947-49=100)	124.5	124.0	123.7
Wholesale Price Index (1947-49=100)	119.6	119.9r	119.2
Prices Rec'd by Farmers (1910-14=100)	242	245	250 r
Prices Paid by Farmers (1910-14=100)	298	299	294 r

r Revised.

TENTH DISTRICT BUSINESS INDICATORS

District and Principal Metropolitan Areas	Value of Check Payments		Value of Department Store Sales	
	Percentage change — 1959 from 1958			
	June	Year to date	June	Year to date
Tenth F. R. Dist.	+12	+11	+13	+9
Denver	+16	+12	+14	+10
Wichita	+6	+6	+2	+2
Kansas City	+10	+13	+13	+11
Omaha	+10	+13	+17	+7
Oklahoma City	+13	+10	+14	+10
Tulsa	+13	+7	+13	+10