

FEDERAL RESERVE BANK OF BOSTON



Annual Report

1957

Manufacturing and New England's Progress

To the member banks of the Federal Reserve

I take pleasure in sending you the 1957 annual report of the Federal Reserve Bank of Boston.

You will observe that once again we have followed our recent practice of devoting much of the report to examining a significant phase of New England's economic life.

This year we are summarizing new studies made in the field of manufacturing, now, as for generations, the region's largest single source of income. These studies reveal that New England faces a number of issues which may vitally affect its manufacturing future, and we are venturing suggestions as to how some of these issues may be resolved.

It is our conviction that the facts reported in these pages deserve the early and close attention not only of New England business leaders but of our community and state government officials as well.

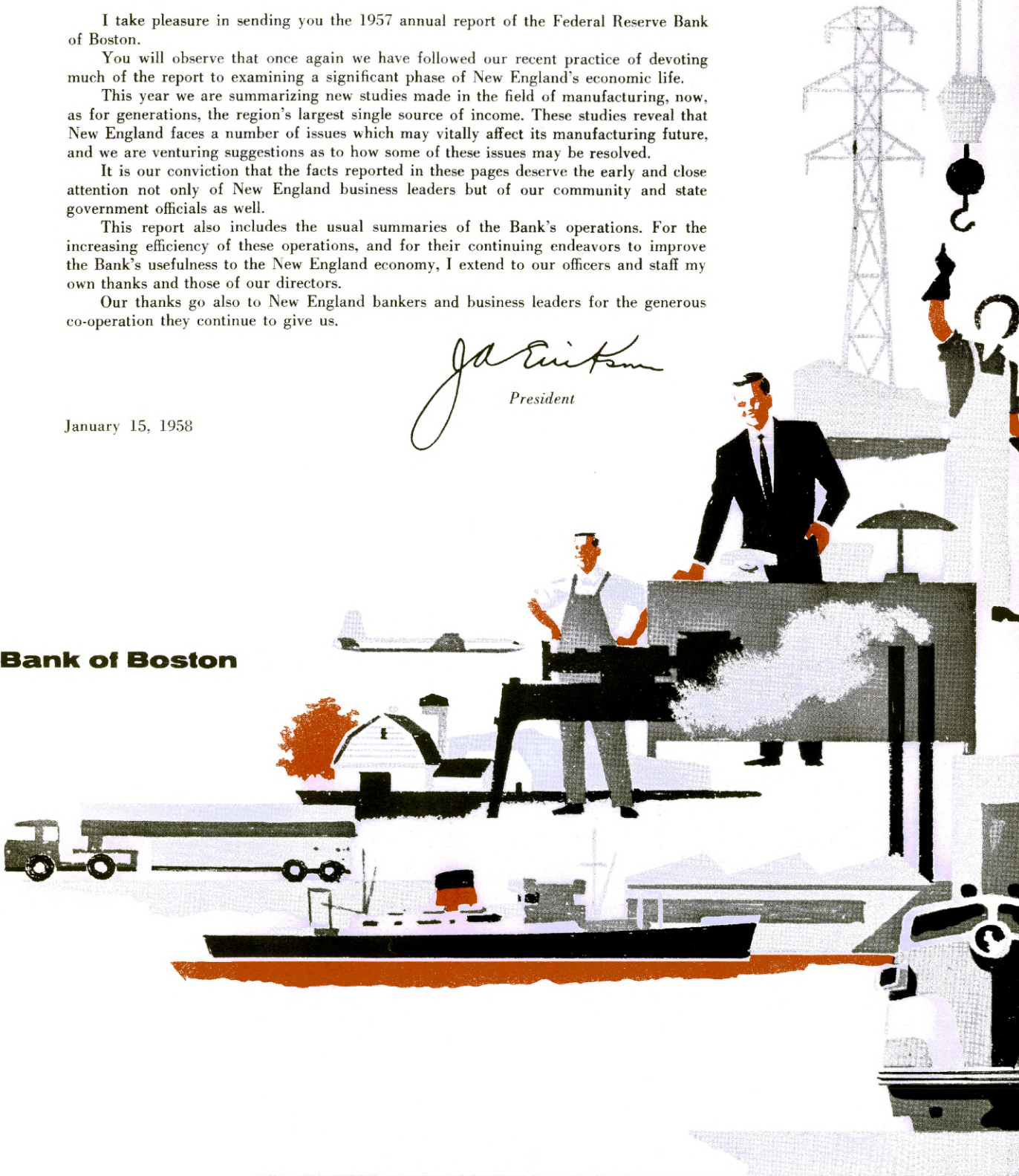
This report also includes the usual summaries of the Bank's operations. For the increasing efficiency of these operations, and for their continuing endeavors to improve the Bank's usefulness to the New England economy, I extend to our officers and staff my own thanks and those of our directors.

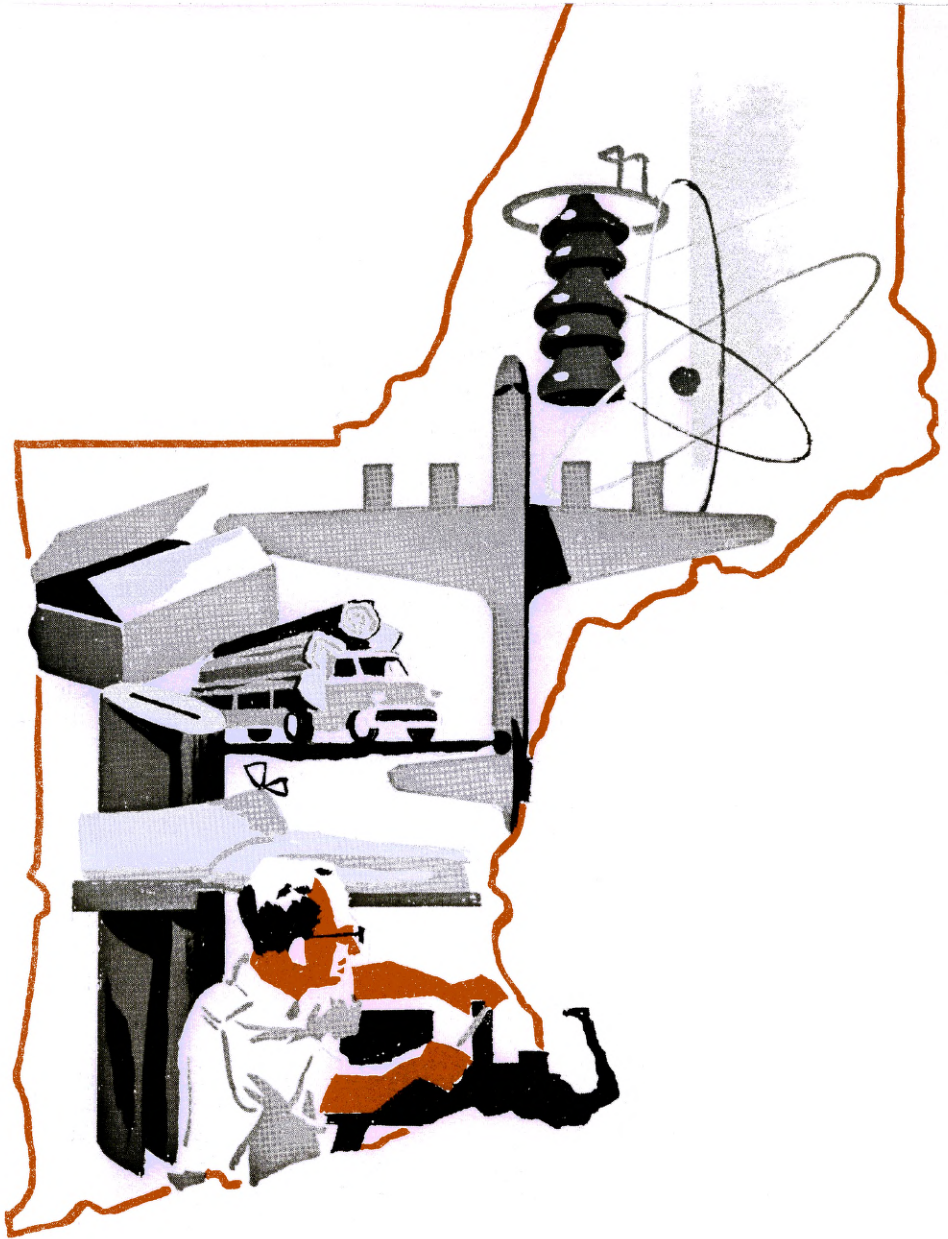
Our thanks go also to New England bankers and business leaders for the generous co-operation they continue to give us.

John E. Eitzen
President

January 15, 1958

Bank of Boston





Manufacturing and New England's Progress

The decade following World War II brought with it conflicting forces which have augmented and accelerated fundamental changes that have long been working within the New England economy. Both employment and income have expanded significantly since 1947. Within the over-all employment gain, however, there have been disturbing displacements in the relative importance of various types of employment. These in turn have altered long-established patterns of business cycles — both in frequency and degree of swings — and consequently are affecting the basic stability of the region's still-rising income.

Total employment in New England has increased by approximately 310,000 since 1947. Over the same period, however, the number of manufacturing jobs has declined by some 57,000. Moreover, this decline came during a decade of rapid growth in manufacturing output in both the region and the nation. Such an apparent contradiction is explained by the fact that productivity — that is, output per worker — has been expanding in the manufacturing industries.

The records posted by its manufacturing industries continue to be the most critical and valuable measures of New England's economic prosperity. While such service industries as finance, education, insurance and the vacation travel business notably aid New England in paying for its imported fuels, foodstuffs and industrial raw materials, the region's basic income still comes from manufacturing. And it is manufacturing which enables most of the service industries to maintain their strength and growth because many of their major markets lie within New England.

Manufacturing is the principal source of income for each of the New England states, and it provides 40 per cent of all the region's income payments as compared with only 32 per cent for the nation. It is their broad and intensive development of manufacturing that has enabled successive generations of New Englanders to provide for themselves an income level consistently and significantly above the United States average — 13 per cent higher in 1956, for example. In consequence, it is New England manufacturing which, directly and indirectly, provides the bulk of the municipal and state revenues which support public services; and it is manufacturing which makes possible our high standard of living and cultural development and underwrites advances in the arts and sciences.

The forces of inflation which have been pushing both the regional and national economies for three years have now abated. At the beginning of 1958, rising unemployment and business slowdowns have set the stage for a reappraisal of the current strength of New England manufacturing. Have the changes which occurred in the region's economy over the last decade strengthened or weakened its competitive strength? How have manufacturing employment patterns changed, particularly in the 18 metropolitan areas which account for so much of New England's industrial activity? What are the effects of these changes in terms of products, employment and income stability? What measures might best be taken to turn desirable industrial possibilities into probabilities? Who should take them? And how?

The following pages attempt preliminary answers to these questions.

Postwar Manufacturing Trends

New England's manufacturing activities are best measured by three yardsticks. The one most frequently used compares relative rates of growth or decline in employment. A second measure is the trends of productivity as revealed by the values created in manufacturing. A third gauge is the record of cyclical stability or variability.

New England shared in the national postwar boom, but the region's economy, like that of the nation, was hit hard by the 1947-1949 recession. At that time there was considerable excess capacity in the textile industry. In spite of the surplus of spindles and the fact that consumer spending on clothing has increased only slightly over the last decade, construction of new textile mills has continued in the South. The hard core of New England's industrial problem is its long-term and still continuing difficulty of adjusting to textile employment losses.

A few statistics on employment changes make clear the basic transformation which has taken place in New England manufacturing over the 1947-1957 period. Excepting the textile industry, as many New England industries reduced their employment as increased it, and the gainers and losers were about equally divided between manufacturers of durable and nondurable goods. In the 11 New England industries in which employment declined, 196,000 jobs were lost; 56,000 of these were in industries other than textiles. At the same time, 10 other New England industries added 139,000 new jobs. Thus, again excepting textiles, employment gains outweighed employment losses.

New England's largest manufacturing employment increases since 1947 have been the 65,000 new jobs in the transportation equipment field, primarily in Connecticut's aircraft industries, and the 31,000 new jobs in electronics and other electrical equipment, the latter mainly in Massachusetts.

In general, however, the employment record of New England manufacturers during the past 10 years compares unfavorably with that of their competitors. Regional factory jobs have declined by 3.7 per cent while those in the nation expanded by 10.3 per cent. And even if contractions in the textile industry are excluded from both regional and national totals, New England still shows a manufacturing employment increase of only 6.7 per cent as against the nation's gain of 13.6 per cent.

Six New England industry groups turned in performance records which exceeded their national competition. Of those six, transportation equipment, furniture, apparel and the miscellaneous group actually expanded employment. Two others, shoes and leather and lumber, curtailed employment less than did their United States counterparts.

It is axiomatic that growth rates in highly developed industrial areas seldom match those of less intensively developed regions. But it is sobering to reflect that New England manufacturers in nine different industrial categories reduced employment during this 10-year period while their competitors in the country as a whole were scoring gains. Altogether, these nine industries account for 52.6 per cent of the region's manufacturing employment.

The yardstick of employment changes provides evidence that manufacturing in New England is already under severe pressure from competitors in other regions — pressure which may be expected to increase in the future.

Productivity

Productivity — the measure of efficiency in turning out manufactured goods — is another gauge of industrial strength. Direct measures of productivity for New England manufacturing do not exist. But indirect evidence may be drawn from statistics on “value added by manufacture,” which is a measure of net product values (after deducting cost of materials) created during the manufacturing process.

Almost without exception, New England’s major industry groups have a lower net value of product per man-hour than the United States average.

In the nondurable goods category, the five industries with the largest employment in New England — textiles, leather and leather products, miscellaneous, apparel and paper — are the five with the lowest net product per man-hour. In the over-all nondurable goods producing group, net product per man-hour averages 24 per cent less in New England than in the United States.

New England manufacturers of durable goods do considerably better than do nondurables producers, but they still fall 10 per cent short of matching the national average.

For the 1947-1954 period New England manufacturers as a whole also showed a 10 per cent slower rate of improvement in net product per man-hour than did the nation.

New England cannot and need not entirely eliminate these differentials in net product values. They result in part from the higher costs of transporting raw materials into and shipping manufactured goods out of the region, and also from the higher fuel and power costs which New England manufacturers must bear — the latter again partially traceable to the expense of bringing fuels into an area without native oil and coal deposits. These costs, which are not included in net product value, must be borne

TABLE I
TRENDS IN MANUFACTURING EMPLOYMENT
United States and New England—1947 to 1957
(in thousands)

Industry	United States		New England	
	1957	% change from 1947	1957	% change from 1947
All Manufacturing.....	16,867.0	+ 10.3	1,470.9	- 3.7
Durable Goods.....	9,879.0	+ 24.9	745.9	+ 9.5
Ordnance.....	128.0	+381.2	13.7	- 8.7
Lumber & Wood Prod.....	689.0	- 19.4	39.8	- 17.6
Furniture & Fixtures.....	373.0	+ 9.7	20.9	+ 18.1
Stone, Clay & Glass.....	550.0	+ 8.9	23.4	+ 8.3
Primary Metals.....	1,323.0	+ 7.5	55.4	- 14.1
Fabricated Metals.....	1,126.0	+ 15.3	100.9	- 9.7
Machinery.....	1,722.0	+ 12.6	186.0	- 6.5
Electrical Machinery.....	1,229.0	+ 33.9	138.7	+ 28.4
Transportation Equip.....	1,916.0	+ 50.3	119.5	+118.5
Instruments.....	340.0	+ 28.3	47.6	+ 17.0
Nondurable Goods.....	6,988.0	+ 1.0	725.0	- 14.3
Food Products.....	1,516.0	+ 1.7	67.5	- 5.5
Tobacco.....	91.0	- 22.9	0.7	- 53.3
Textiles.....	1,008.0	- 24.5	149.4	- 48.4
Apparel.....	1,202.0	+ 6.2	86.5	+ 11.5
Paper & Products.....	575.0	+ 23.7	75.0	+ 4.5
Printing, Publishing.....	859.0	+ 20.8	63.1	+ 14.5
Chemicals & Products.....	836.0	+ 20.5	33.4	+ 17.6
Petroleum & Coal.....	258.0	+ 7.9	3.1	- 22.5
Rubber Products.....	265.0	+ 1.9	43.0	- 9.1
Leather & Products.....	378.0	- 7.6	109.4	- 3.0
Miscellaneous.....	483.0	+ 3.7	93.9	+ 7.4

Source: Computed from Bureau of Labor Statistics data.

TABLE II
EMPLOYMENT VARIABILITY OF
MAJOR INDUSTRIES
United States and New England — 1947-1956

Industries	Average Annual Percent Change*	
	United States	New England
Manufacturing Employment		
Total	5.2	6.6
Durables	8.1	8.2
Nondurables	4.0	6.0
<i>Durables</i>		
Ordnance	50.1	16.3
Lumber & Wood Products ..	9.8	11.7
Furniture & Fixtures	9.2	7.7
Stone, Clay & Glass	6.4	9.1
Primary Metals	8.1	9.7
Fabricated Metals	8.8	8.9
Machinery	8.6	10.8
Electrical Machinery	10.9	11.4
Transportation Equipment ..	12.6	13.3
Instruments	8.4	9.9
<i>Nondurables</i>		
Food Products	3.1	3.8
Tobacco	5.8	—
Textiles	8.0	13.9
Apparel	5.3	5.6
Paper & Products	4.8	5.1
Printing, Publishing	0.9	2.1
Chemicals & Products	4.6	4.5
Petroleum & Coal	3.3	—
Rubber Products	10.2	11.0
Leather & Products	6.9	7.8
Miscellaneous	9.6	8.3

* Cumulative year-to-year per cent changes in indices averaged for the ten-year period 1947-1956. Indices adjusted to eliminate long-run trends and seasonal influences.

by New England producers. Therefore their other costs of production must be held below those of their competitors elsewhere if they are to compete price-wise. This is one of the pressures that keep New England wage levels below the national average in most industries.

Although New England will never be able to concentrate its employment in those industries in which net product per man-hour is highest, it must work unceasingly to increase productivity as rapidly as it is increased elsewhere.

Industrial Stability

A third measure of New England's manufacturing performance is the cyclical stability or instability of its industries as compared with their national counterparts. During the period 1919-1939, New England manufacturing employment tended to be more stable than that of the United States. After allowance for differences in long-term trends, it was found that a 10 per cent change either up or down in the nation's factory employment was usually accompanied by a

corresponding change of 8.4 per cent for New England. This greater stability was attributed to the predominance in the region of such nondurable goods manufacturing as textiles, both cotton and wool, and shoes and leather.

Since 1939, however, New England has steadily increased its durable goods manufacturing, with an apparent reduction in the stability of its factory employment. In the 1947-1949 recession, after adjustment for seasonal and long-term trends, total manufacturing employment in the nation showed a drop of about 13 per cent, while the drop in New England was 14.5 per cent. The 26 per cent decline in New England's durable goods employment was about one-quarter greater than the corresponding United States slump. New England's nondurable goods decline of 8.7 per cent was one-sixth greater than that of the nation.

Business Cycles in New England

In the 1953-1954 recession, employment in New England industries fluctuated about the same as that of their national counterparts, except for textiles, which dropped nearly twice as much in the region as in the nation. The inability of the textile contraction seriously to affect the region's over-all performance, however, reflects the diminishing importance of that industry in New England manufacturing and suggests that the economy may now have a greater strength and resilience than during the earlier postwar period.

In considering the greater degree of stability shown by New England in 1953-1954 as against the record for 1947-1949, it must be remembered that the later recession was amplified by the post-Korean reduction in defense expenditures. Since New England was then concentrating heavily on aircraft parts and electronics production, fields in which cutbacks were less than in other military goods, it suffered somewhat less in the 1953-1954 recession than did the nation as a whole.

As it devotes an increasing share of its manufacturing effort to durable goods production, New England is, of course, moving into an area in which employment is traditionally less stable. In the relatively limited recessions since World War II, the nation's durable goods makers have reduced employment about two and one-half times as much as have nondurable goods producers.

It is also true that the two industries which recently have grown most rapidly in New England, electrical machinery and transportation equipment, are those in which employment has fluctuated most widely.

The heart of New England's economic activity is her 18 largest cities and their suburban communities. These metropolitan areas contain two-thirds of the region's population, about three-fourths of the employment and manufacturing activity, and even larger proportions of financial and commercial activity.

No other multistate region of the country has a comparable concentration of economic activities in its cities. With only two per cent of the nation's land area and six per cent of the population, New England has eight per cent of the country's urban population. Obviously the economic prosperity of the region as a whole has its well-springs in the vigor and progress of these 18 cities.

Table III, on page 8, compares the degree and duration of business contractions in 1947-1949 and 1953-1954 for New England's largest cities. After adjustment for long-term trends and seasonal influences, it is apparent that the experiences of these metropolitan areas differ considerably. During the 1947-1949 recession, for example, Lawrence, Massachusetts, experienced a 47 per cent decline in manufacturing employment within a period of 13 months. Boston, by way of contrast, had a 14 per cent contraction stretched over a period of 35 months.

Two aspects of the recession experiences of New England's largest cities deserve special attention. First, during each of the recent recessions the community hardest hit was one showing a heavy concentration in textiles. In 1947-1949, it was Lawrence. In 1953-1954, it was New Bedford, Massachusetts. Even after trend adjustment, the

New England textile contraction in 1954 was 19 per cent, as against a national contraction in textiles of 10 per cent. Second, in each recession period three of the five metropolitan areas hardest hit were in Connecticut and were heavily dependent on hard-goods industries. Furthermore, the employment declines posted in the hard-goods cities tended to be longer lasting than in cities with concentrations of nondurables.

It would be unwise to place long-run significance on the stability fluctuations registered only during these two recessions. The basic causes of the recessions were different and the effects of the recessions differed according to the kinds of industries which predominated in the various cities. In spite of these differences, however, it should be pointed out that those five cities with the sharpest job declines in the 1947-1949 period were also in the top six in declines during 1953-1954.

Diversification as a Stabilizing Factor

Because the high and low points of different industrial groups occur at different times, employment will be more stable in communities with diversified industries than in those dependent on only one or a few industries. Table IV shows the timing of recent New England manufacturing employment cycles for each of the principal industrial groups. While durable and nondurable goods, as groups, usually show only a few months' difference between their employment peaks and valleys, the table shows there are wide differences among the peaks and valleys of individual industries. For example,

the employment low point came as early as February of 1954 in the textile industry, and as late as July of 1955 in transportation equipment.

Since no two cycles are alike, the relative degree and timing of the decline and recovery of individual industries will be different. The 1947-1949 decline in employment would have been approximately 50 per cent greater in both New England and the rest of the nation if all industries had simultaneously experienced their high and

TABLE III
BUSINESS CYCLE CONTRACTIONS IN
NEW ENGLAND'S LARGEST CITIES

City	1947-1949		1953-1954	
	Decline* (%)	Duration (mos.)	Decline* (%)	Duration (mos.)
Boston	13.83	35	12.24	21
Brockton	15.53	31	9.28	13
Fall River	13.14	19	18.87	22
Lawrence	47.24	13	21.30	13
Lowell	25.80	28	16.08	18
New Bedford	26.12	13	26.32	14
Pittsfield, Mass.	12.35	22	16.27	35
Springfield-Holyoke ...	20.96	30	13.47	18
Worcester	22.03	31	15.55	21
Bridgeport	39.83	35	19.03	19
Hartford	25.25	33	10.91	17
New Britain-Bristol	32.14	26	22.08	17
New Haven	16.45	28	15.36	25
Stamford-Norwalk	21.51	30	20.14	13
Waterbury	30.72	28	18.97	12
Providence	14.15	11	15.69	12
Manchester, N. H.	18.20	15	9.07	14

* Amplitude of decline is measured as per cent drop from peak to trough in employment indices after adjustment to eliminate long-run trends and seasonal influences.

TABLE IV
TIMING OF NEW ENGLAND MANUFACTURING EMPLOYMENT CYCLES
1947-1956

Adjusted for Trends and Seasonal Variations

	1947-48 peak	1949-50 trough	1950-51 peak	1951-52 trough	1953 peak	1954 trough	1955-56 peak
New England Manufacturing Employment Total	3/47	7/49	4/51	11/51	5/53	1/55	6/56
Nondurables	1/48	5/49	4/51	3/52	5/53	9/54	5/56
Durables	2/47	8/49	*	*	7/53	1/55	*
Standard Industrial Classification							
20 Food Products	8/47	3/50	*	*	5/54	6/55	*
22 Textiles	5/48	4/49	4/51	6/52	7/53	2/54	5/56
23 Apparel	12/47	1/49	2/51	4/52	6/53	6/54	12/55
26 Paper & Products	1/47	7/49	3/51	7/52	7/53	3/55	8/56
27 Printing, Publishing	3/48	11/49	12/51	11/52	11/53	1/55	6/56
28 Chemicals & Products	1/47	8/49	7/51	*	*	2/54	12/55
30 Rubber Products	3/47	2/50	5/51	1/52	6/53	8/54	4/56
31 Leather & Products	11/47	11/49	9/50	9/51	5/53	9/54	11/55
39 Miscellaneous	1/48	7/49	3/51	10/51	8/53	12/56	*
19 Ordnance	8/48	2/50	*	*	8/53	*	12/56
24 Lumber & Wood Products	3/47	7/49	3/51	*	*	12/54	9/56
25 Furniture & Fixtures	1/48	12/48	9/50	5/52	10/52	12/54	9/56
32 Stone, Clay & Glass	2/47	7/49	5/51	9/52	7/53	11/54	*
33 Primary Metals	4/47	7/49	8/51	5/52	8/53	1/55	4/56
34 Fabricated Metals	3/47	6/49	8/51	5/52	8/53	7/54	8/56
35 Machinery	4/47	12/49	7/51	*	*	12/54	10/56
36 Electrical Machinery	2/47	8/49	*	*	4/53	4/55	5/56
37 Transportation Equipment	2/47	12/49	*	*	6/53	7/55	*
38 Instruments	2/48	12/49	*	*	6/53	10/54	1/56

* No discernible peak or trough.

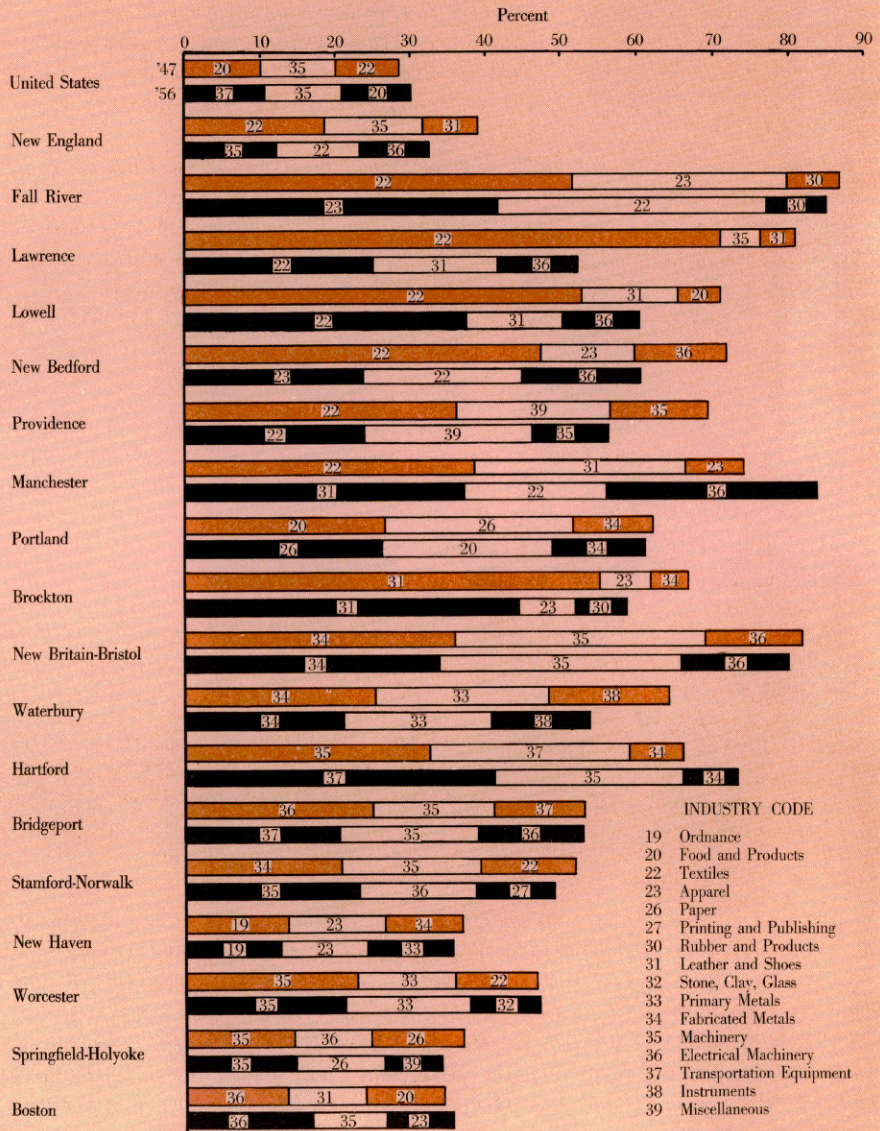
low points. Obviously the individual community will fortify itself against future recessions insofar as it spreads its employment into several kinds of manufacturing activities and with different firms within single industry groups.

The chart on page 10 shows that in 1947 there were seven New England cities dependent on either the textile or shoe industries for more than one-third of their total factory employment. Nine years later that dependence had dropped to less than one-third in only three of the seven cities — Lawrence and New Bedford in Massachusetts and Providence, Rhode Island. In all three the better balance had come through the loss of textile plants.

For New England as a whole, diversification lowered dependence on the three top industries from 39 per cent in 1947 to 33 per cent in 1956. Of the region's major cities, only Boston and Springfield-Holyoke in Massachusetts, and New Haven and Stamford-Norwalk in Connecticut, came close to matching this 1956 average of diversification. The predominantly soft-goods areas ranged from a low of 53 per cent dependence on three industries in Lawrence to a high of 85 per cent dependence in Fall River, Massachusetts. The Springfield-Holyoke area, with a 35 per cent three-industry concentration, held low position among the hard-goods cities, and the New Britain-Bristol, Connecticut, area was in top place with dependence of 81 per cent.

Of the hard-goods cities, the Waterbury, Connecticut, metropolitan area regis-

EMPLOYMENT CONCENTRATION IN NEW ENGLAND CITIES
Employment in the Three Most Important Industries as a Percent
of Total Manufacturing Employment, 1947 and 1956



tered the most significant improvement in diversification. On the other hand, Hartford, Connecticut, still further concentrated its manufacturing employment in the fields of transportation equipment, machinery and fabricated metals.

Available statistics do not provide a clear-cut finding that those cities which were well diversified industrially in 1947 showed greater-than-average employment stability over the decade which followed. Yet there are some grounds for believing this could be demonstrated if it were possible to isolate and measure all the ramifications of the textile contraction.

A recently made city-by-city study supports this general view. A correlation of 1947 industry concentrations with employment declines in two subsequent recessions indicates that communities with narrow industrial bases experienced greater-than-average employment fluctuations. The study also indicates that cities with improved stability records may attribute part of their gain to increased diversification.

Yesterday and Tomorrow

It is clear that many of the sobering situations and trends described in the preceding pages have grown out of the rigors attending the long, slow decline of New England's once vast textile industry. The causes of the decline are numerous and complex, have been endlessly studied and debated, and need not be reviewed here. It is sufficient to note that since 1919 New England has lost some 300,000 textile jobs.

Because this has been an economic misfortune practically without parallel in the country's history, there has been no sizable body of experience upon which the region could draw for help in its struggle for industrial readjustment. In consequence, New Englanders have carried on unprecedented programs of economic research and have devised new and sometimes unique instruments for industrial development.

Some measure of the success New England has achieved in meeting this challenge has been recorded in earlier annual reports of this Bank. They have pointed out that since 1920 New England has not only increased its population by more than 2,000,000 but has also expanded its per capita income by 89 per cent, even after price level adjustment. And at the peak in 1957, there were more New Englanders at work — earning more, spending more and saving more — than ever before.

As earlier pages have indicated, serious problems still persist in the field of manufacturing. But it is also true that the changed and still changing structure of New England industry virtually rules out another disaster of the magnitude of that of the past. And obviously there is a fundamental strength and resiliency in any people who can successfully weather the extinction of 300,000 jobs in a single industry.

However perplexing the problems of today may seem, they do not match those of the recent past. Moreover, today's problems are better defined and more widely understood than were those of yesterday, and there is a large and ever-growing body of New Englanders able and willing to lend a hand in solving them.



Reinforcements for Manufacturing

The nature, size and strength of tomorrow's industrial New England will be determined largely by the decisions and actions of three different groups working toward three different objectives. No one of these forces is concerned with the manufacturing progress of the region as a whole. Yet insofar as all three groups think clearly, decide wisely and act courageously, so far will industrial New England succeed in meeting the steadily rising competition of other manufacturing areas.

The largest of these groups is composed of the directors and managers of the thousands of manufacturing establishments now operating in New England. Their objective is to elicit the best possible performances from their individual firms.

The second group is made up of the leaders of hundreds of New England communities. One of their principal responsibilities is to discern and evaluate the contributions of manufacturing to local welfare and progress and to marshal community opinion and resources in ways which will facilitate sound manufacturing growth.

The third group consists of the legislators and administrators of the New England state governments. In the economic field, their aim is the enactment and administration of state laws and regulations which will stimulate, or at least not hamper, the industries which provide the basic payrolls for their people.

The fortunes of these three groups are inseparably interwoven. The prosperity of the manufacturer is directly influenced by the treatment accorded him by his community and state. The progress of most New England communities is linked to the profitable operation of their industrial plants through employment, wages and taxes, and to the state government through the business climate which it creates. The welfare of the state is the sum of the welfare of its communities, and the ever-broadening services provided by the state government depend, directly and indirectly, upon revenues derived mainly from manufacturing enterprises and the service industries which they support.

The obvious interdependence of these groups, and their pre-eminent influence over the future of New England manufacturing, places a high premium on their mutual understanding, respect and willingness to work together. Some of their individual needs and opportunities, their relationships with each other, and some suggestions as to how their present positions may be improved are sketched out below.

Improving Today's Industrial Performance

The most important single factor in building New England's industrial future is improving the over-all performance of present-day manufacturers. Their continued profitable operation, their flexibility in adjusting to new needs and opportunities, their development and exploitation of new products and production methods provide the broad, firm foundation for tomorrow's entire economic structure.

This viewpoint has been succinctly expressed by the Committee of New England in its massive report on *The Economic State of New England*. The Committee's conclusions seem even more pertinent and valid today than when first propounded.



“The attitudes of management constitute one of the most important keys to New England’s future. . . . The principal focus of their attention must be on making their own businesses run better by adapting policies, techniques and operations to changing conditions and by developing and keeping a forward-looking attitude. . . . ‘Research-mindedness’ in the broadest sense on the part of management is vital if New England is to maintain and to improve its industrial position. . . . Any New England management that is uncertain whether it is doing the best job possible, or that has not given itself a thorough objective examination in recent years, would do well to adopt a research viewpoint and have its operation appraised to determine whether it is abreast of its competition.”

One of the methods now increasingly employed to revitalize older industries is product diversification. This technique has proved particularly helpful to firms facing fluctuating or declining markets because broadening the product base stabilizes operations by reducing the impact of seasonal variations or a depression in a single branch of manufacture. And firms in fields where the profit margin

is low are frequently able to improve their financial positions by expanding operations into production areas where the margin is higher.

In appraising the opportunities in product diversification, the New England manufacturer must consider such matters as his firm’s management competence, present and potential demand, present and probable competition, the availability and competitive costs of raw and semifinished materials, skilled labor, power, transportation facilities and taxes.

Experience and analysis have shown that the best opportunities for diversification by New England manufacturers are likely to be found in products which satisfy one or more of the following requirements: (1) need for skilled labor, (2) high value added, (3) unique product, (4) need for management ingenuity and patience, (5) small bulk and high value, (6) a raw material base in New England, in eastern Canada or overseas, (7) orientation to a local market, (8) easily available facilities for basic or engineering research. There are doubtless other requirements which might be offered, but this list suggests how the research for industrial opportunities in new products or in product diversification might be conducted in New England.

World trade is another area in which New England manufacturers may logically seek to improve their sources of materials and develop new markets. Some of the world’s most rapidly growing markets are presently found in previously underdeveloped foreign countries which are now showing marked economic and social

progress. The newly formed World Trade Center in New England, with headquarters in Boston, provides a channel through which manufacturers may establish contacts in their efforts to expand their foreign sales or purchases. Such foreign trade objectives would capitalize on New England's seaboard location and its ability to manufacture complex products of high quality and value which should find ready markets in foreign countries. The New England manufacturer who investigates the opportunities in foreign trade may well be insuring his future prosperity.

These days it is not sufficient for New England manufacturers simply to operate their enterprises with vision and a high degree of management competence. By putting their leadership talents at the service of community and state, they will demonstrate industry's increasing consciousness of its social responsibilities, contribute valuable executive experience, and help win for business appropriate recognition of its paramount importance to the progress and prosperity of the New England people.

The Community Takes the Initiative

Many decisions which will affect the further growth of New England manufacturing are made at the community level, sometimes as a by-product of other action apparently unrelated to manufacturing growth. For example, a community which constructs water and sewerage facilities too limited in capacity to serve large-scale manufacturing requirements, automatically sets up a growth barrier which must later be removed if the community is to expand its manufacturing activities.

Wishful thinking has never stimulated a community's economic growth. The most successful records of industrial expansion have been posted by those cities and towns which have created and supported a continuing organization that has economic development as its principal objective. Whether it be a municipal commission, an adjunct of the community's planning body or a privately supported agency, an economic development group has long since proved itself indispensable. Such a group enables a community to get its diverse and sometimes conflicting problems of economic growth into sharp focus, to weigh one problem against another, to organize constructive programs and to enlist those best qualified to help expedite their execution.

The ingredients of a community development program usually include studying the community's past business performance and analyzing trends, inventorying physical and human resources, working for the establishment and enforcement of effective zoning and building laws, and seeking out and selling industrial prospects. Sometimes the development group assists in bringing about new plant construction and in creating industrial parks. A frequent by-product of such a program is a lift in community morale and an improvement of the local economic climate.



Diversification as a Community Stabilizer

As has been indicated, many New England communities are open to industrial adversity because of too great a reliance on a single kind of industry or on too limited a number of manufacturing establishments. One solution of this problem is to increase industrial diversification and thus help stabilize factory employment.

As far back as 1951, the seven-man Committee on the New England Economy recommended to the President's Council of Economic Advisers: "In communities where one-third or more of industrial employment is dependent upon the shoe or textile industry, local groups should take steps immediately to broaden their industrial bases by encouragement of diversification among other equally suitable products."

Diversification has a twofold meaning — first, it implies variety in the kinds of industrial activity which provide a community's livelihood; and second, it implies having several firms within each industrial category. Diversification usually results in having industries which sell to differing groups of customers or meet differing needs, thus increasing the probabilities that local industries will not simultaneously experience either their boom or slack periods.

In seeking to diversify their industrial structures, communities need to weigh carefully the potentials of the various kinds of manufacturing activity. The industries now growing most rapidly in New England show a greater susceptibility to cyclical fluctuation but are also those which usually provide higher average annual earnings. Industries with good growth prospects are also characterized by a higher level of investment and of productivity techniques.

Community Transportation Problems

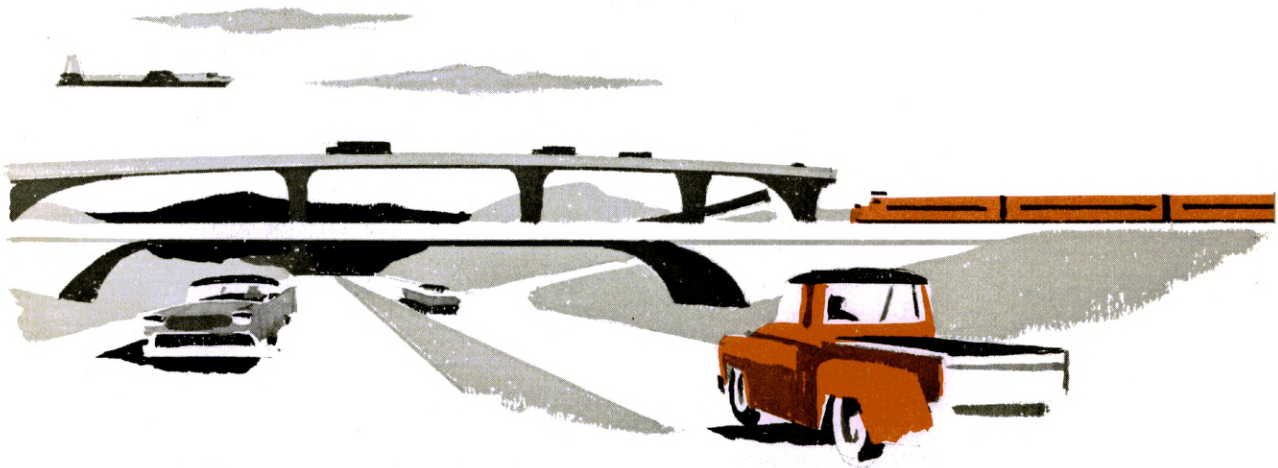
New England manufacturers are critically dependent upon the efficiency and low cost of the transportation services available to them. They are concerned not only with the speed and cost of the inward movement of raw materials and the outward movement of finished products, but also with the safe and expeditious movement of their workers to and from the plant. Actions taken by communities and states with respect to changes in the patterns and costs of transportation services can significantly influence the attitudes of present manufacturing industries and the decisions of firms seeking new locations.

An outstanding characteristic of past community action on transportation matters should be noted. Most transportation agencies have been and must continue to be regulated. But thus far, the various methods of transportation have been regulated individually with little or no regard to their changing competitive relationships and the changing needs of the community itself.

In its recent report, the New England Governors' Committee on Public Transportation emphasized: "Competition in transportation has reached the stage at which any large expenditure of public funds to improve and to expand a particular form of

transport almost inevitably works to the disadvantage of one or more competing transport forms. . . . Any public expenditure to assist a particular form of transport should be undertaken only with the clearest possible appraisal of the function which that transport can be expected to perform, having particular regard for its relation to and reliance upon other forms of transport. Public policy must take all competing forms of transport into account. Emphasis upon a particular form in disregard of such inter-relationships may produce unintended and undesirable results.”

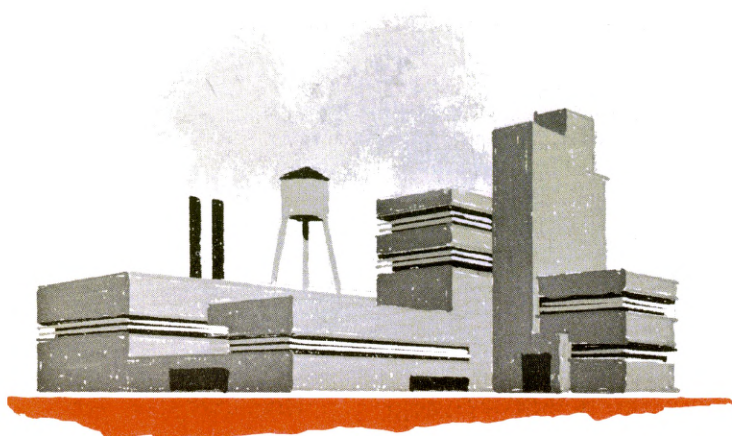
Many New England communities are considering extensive expenditures for new or rehabilitated highways as part of the evolving national highway program. At the same time, they face difficult problems in connection with maintaining any form of mass transportation in their communities. In weighing new transportation proposals and expenditures, communities need to consider the probable impact of their decisions



on the location and growth of manufacturing activity. And such consideration certainly should take account of the views of industry by inviting its active participation in transit matters.

Progress and Assessment Practices

A community's property assessment practices, and their relation to the public services provided, usually indicate its attitude toward manufacturing and manufacturing growth. Unfortunately, the record shows that in their efforts to cope with constantly rising budgets, some communities seem to regard their manufacturing firms primarily as opportunities for exploitation. Such practices are public confessions of failure to understand manufacturing's contributions to community welfare and progress, and can



seriously hamper community growth. Most manufacturers neither expect nor request special privilege. But they may logically demand fairness in assessment practice.

Intra-Urban Planning

In addition to specialized work in economic development, there are other fields of community and state action which may have profound effects on industrial life. One of these is planning to meet the problems created by metropolitan growth.

A recent study of these problems pointed out: "Population growth will go right on; the drift from the soil to the city will go right on; the economic advantage of industrialism will not abate; there will be more not fewer automobiles, trucks and planes . . . thus, the great, sprawling regions, the metropolitan complexes will go right on growing and all the problems will be bigger, and worse and more demanding, all except one, and this is recognition . . . recognition that there is a problem, that the problem is serious and growing and that something effective must be done about it and fast."

This statement is applicable not only to New England's larger urban areas but to smaller ones as well. The creation of new mechanisms for metropolitan area planning and operation is one of our most critical social and political needs. During the last few years, Connecticut has pioneered in this field by passing legislation which authorizes and encourages cities and towns in the larger metropolitan areas to form metropolitan planning authorities. The Hartford, New Haven, Waterbury and Bridgeport areas have already made tentative plans to take advantage of the new legislation. The hope is that the new planning agencies will enable the cities and towns to work co-operatively in developing plans for roads, zoning regulations and other matters.

It is clearly the responsibility of state legislatures to create these agencies for studying, defining and solving the socio-economic problems that spill over political boundaries and embrace numerous heterogeneous and sovereign cities and towns. Failure to do so will tend to stultify the orderly expansion of industry.

Urban Renewal as an Industrial Stimulant

New England's cities were built in an era when the horse provided the principal means of transportation and when the falling waters of rivers and streams were industry's prime sources of power. As a result, the region has a legacy of congested

cities hemmed in by rivers, and with narrow streets, obsolete factories and factory housing.

Urban problems affect the daily lives of almost all New Englanders and nearly 60 per cent of them live in densely populated urbanized areas. These communities must be renovated to meet the needs created by higher incomes, increasing leisure, mass use of the automobile and the diffusion of industry throughout various sections of each metropolitan area.

During the last seven years the federal government has sponsored an urban renewal program for cities throughout the nation. This program involves land assembly by condemnation, destruction of all inadequate or decrepit buildings and the resale of redeveloped sites to private builders or public housing authorities. Two-thirds of the net cost of these projects is paid for by the federal government.

This federal program is ideally suited to the needs of older industrial communities. For this reason, it seems fair to assume that New England's cities, which contain about eight per cent of the nation's urbanized population, should receive a substantially higher proportion of federal funds. Of the \$1 billion which the federal government has spent, committed or reserved for urban renewal work throughout the nation up to January 1, 1958, \$124 million or 12.4 per cent had been used or earmarked for projects in New England. Based on this crude measure, the region's municipal leaders would seem to have been alert to their opportunities. However, the record is not consistent for all six New England states.

Connecticut, with only 1.8 per cent of the nation's urbanized population, has obtained almost six per cent of the federal funds. On the other hand, Massachusetts has received a smaller percentage of federal funds than its proportion of urbanized population would warrant. In addition, numerous old mill cities throughout the region which have extremely serious problems have so far given but little thought to developing renewal programs. Clearly there is opportunity here for imaginative and persuasive leadership.

As these communities are redeveloped — their physical appearance and facilities improved and their "atmospheres" cleared — they become increasingly attractive sites for new industries.

Industrial Development as a State Responsibility

The manufacturing changes constantly taking place in the New England states are sometimes provoked and frequently conditioned by the policies and activities of the state government. State regulations regarding employment, compensation, transportation, taxation and numerous other matters directly affect manufacturing operations either beneficially or adversely. In their total effect they create the state's business climate, a psychological intangible, to be sure, but one important to the state's reputation, particularly as it relates to efforts to secure new industries and branch plants.

A state department of commerce or development commission is another important element in furthering manufacturing expansion. Such an agency includes in its work, on a state-wide basis, tasks similar to those described above in the discussion of community development groups. Many of its operations are carried on with the close co-operation of community counterparts throughout the state. In addition, an agency of this kind is able to counsel both legislative and administrative branches of the government on economic development measures and actions. It is important that such departments be staffed with professionals of the highest quality.

An obvious example of successful legislative action has been the creation of the six New England state development credit corporations through special acts of the legislatures. In their brief period of organization, these corporations have collected capital stock subscriptions amounting to \$1.3 million, enlisted membership pledges to loan \$16.4 million, and have already extended nonbankable loans to small and growing businesses for a cumulative total of \$14.2 million.

Development credit corporations provide a method by which the region's conventional financial institutions are able to turn some of their funds to long-term credit which will stimulate additional employment and income in the several states. The stockholders who contribute funds and the member financial institutions who provide loan funds at less than the going rate, are thus contributing to the public interest. It is unfortunate that many New England financial institutions have not yet recognized their stake in the general welfare and pledged their support to their state development credit corporations. Only 55 per cent of the potential commercial bank members in the five New England corporations with an active operating experience have pledged their support. In most states, participation by savings banks and insurance companies has been similarly inadequate. It is also true that in some states nonfinancial business firms which had been expected to subscribe to credit corporation stock have not yet given the corporations their support.

The New England states pioneered in devising credit corporations and provided a pattern for stimulating economic development which is being widely copied across the country. This new form of agency deserves and needs greater support here in its New England birthplace than it has yet been given.

Taxation and Manufacturing Growth

In their power to establish the taxation structure of the state, legislators exercise one of the most powerful instruments affecting economic development. The problems of state and municipal finance in New England are not intrinsically greater than in the other 42 states, but resolutions of the problems are more urgently required. The manufacturing economy of New England is already laboring under the competitive disadvantages of a lack of native available raw materials and of high fuel, power and transportation costs. It cannot afford the additional man-made handicap of tax and

spending programs that penalize manufacturing activity. Fiscal policies that retard economic growth will create yet more severe fiscal problems.

Communities in several of the New England states depend excessively on property taxation because they lack an alternative source of finance to support community activities. It is imperative that legislators in New England carefully review the structure of their taxing and spending decisions, with particular attention to the impact those decisions have on stimulating or retarding the state's economic growth.

In Summary

The foregoing pages have outlined changes which have taken place in New England manufacturing over the last decade, indicated trends and examined the nature and relationships of the forces which will largely shape the region's industrial future. They have also offered some suggestions which may help New England to strengthen its manufacturing structure and improve its performance.

The suggestions are addressed to New England's industrial managements, particularly to those in manufacturing and banking, to its community leaders and to the legislators and administrative officers of its six state governments. It is their thousands of decisions and actions, taken as a whole, which will pretty much determine whether, and how far, New England will forge ahead in days to come. These decisions will be the wiser and more likely to succeed to the extent that each group understands, appreciates and co-operates with the other two. In our highly organized, competitive society, no one of these three elements can stand alone. Together they support each other and sustain the New England economy.

The facts on New England manufacturing which are summarized in this report have been treated extensively in recent issues of the *New England Business Review*, published monthly by the Federal Reserve Bank of Boston. Copies of the *Business Review* may be had without charge by writing to the Public Information Department of the Bank.

The material on regional manufacturing employment cycles was prepared by Professor Frank W. Gery, Chairman of the Economics Department of Eastern Nazarene College, and is related to his doctoral thesis presented at Boston University and in completion of a research grant from the Federal Reserve Bank of Boston.

Comparative Statement of Condition

ASSETS	<i>December 31, 1957</i>	<i>December 31, 1956</i>
Gold Certificates	\$1,066,638,442.49	\$ 928,799,005.90
Federal Reserve Notes of Other Federal Reserve		
Banks	31,700,555.00	29,465,410.00
Other Cash	19,863,025.35	22,291,083.32
Loans and Advances	740,000.00	1,800,000.00
Industrial Loans	326,600.00	312,000.00
U. S. Government Securities	1,293,773,000.00	1,352,693,000.00
Uncollected Cash Items	467,095,945.20	525,926,663.26
Bank Premises	5,010,066.81	5,361,085.39
Other Assets	11,930,139.70	13,445,702.06
TOTAL ASSETS	\$2,897,077,774.55	\$2,880,093,949.93
LIABILITIES		
Federal Reserve Notes	\$1,638,156,245.00	\$1,623,169,295.00
Deposits:		
Member Bank Reserve Accounts	777,422,475.18	778,900,207.77
U. S. Treasurer-Collected Funds	38,076,894.10	33,984,008.24
Foreign	19,778,000.00	17,464,000.00
Other	3,105,923.41	6,196,648.22
TOTAL DEPOSITS	\$ 838,383,292.69	\$ 836,544,864.23
Deferred Availability Cash Items	344,346,515.88	348,117,468.44
Other Liabilities	548,904.03	661,566.66
TOTAL LIABILITIES	\$2,821,434,957.60	\$2,808,493,194.33
CAPITAL ACCOUNTS		
Capital Paid In	\$ 17,741,650.00	\$ 16,801,450.00
Surplus (Section 7)	47,012,676.68	43,947,826.20
Surplus (Section 13b)	3,010,527.20	3,010,527.20
Reserves for Contingencies	7,877,963.07	7,840,952.20
TOTAL CAPITAL ACCOUNTS	\$ 75,642,816.95	\$ 71,600,755.60
TOTAL LIABILITIES AND		
CAPITAL ACCOUNTS	\$2,897,077,774.55	\$2,880,093,949.93

Comparative Statement of Earnings and Expenses

Current Earnings:	1957	1956
Advances to Member Banks	\$ 1,199,518.16	\$ 784,141.84
Foreign Loans on Gold	29,288.87	4,145.09
Industrial Loans	14,770.09	9,769.81
U. S. Government Securities — System Account	40,016,933.52	31,363,787.40
All Other	17,981.60	16,991.63
Total Current Earnings	<u>\$41,278,492.24</u>	<u>\$32,178,835.77</u>
Net Expenses	9,123,662.95	8,368,632.39
Current Net Earnings	<u>\$32,154,829.29</u>	<u>\$23,810,203.38</u>
Additions to Current Net Earnings:		
Profit on Sales of U. S. Government Securities (net) .	\$ 9,847.62	\$ 16,547.55
Reimbursement for Fiscal Agency Expenses Incurred in Prior Years	94,314.23	
All Other	981.82	5,350.38
Total Additions	<u>\$ 105,143.67</u>	<u>\$ 21,897.93</u>
Deductions from Current Net Earnings:		
Reserves for Contingencies	\$ 37,010.87	\$ 37,017.07
Retirement System (Adjustment for Revised Benefits)	543,884.00	
All Other	1,307.28	1,830.92
Total Deductions	<u>\$ 582,202.15</u>	<u>\$ 38,847.99</u>
Net Deductions	<u>\$ 477,058.48</u>	<u>\$ 16,950.06</u>
Net Earnings Before Payments to U. S. Treasury	<u>\$31,677,770.81</u>	<u>\$23,793,253.32</u>
Paid U. S. Treasury (Interest on Federal Reserve Notes)	\$27,583,697.46	\$20,531,028.23
Dividends Paid	1,029,222.87	981,028.17
Transferred to Surplus (Section 7)	3,064,850.48	2,281,196.92
	<u>\$31,677,770.81</u>	<u>\$23,793,253.32</u>

Summary of Principal Changes

The *Total Assets* of the bank were \$2.9 billion at the end of 1957, an increase of \$17 million. The principal changes were an increase of \$138 million in *Gold Certificate* holdings, a decrease of \$59 million in our holdings of *U.S. Government Securities*, a decrease in *Uncollected Cash Items* of \$59 million, and an increase of \$15 million in *Federal Reserve Notes*.

Gold Certificates increased principally because Treasury transfers to this district more than offset losses to other districts in private, commercial and financial transactions.

Loans and Advances were approximately \$1 million lower than at the year end of 1956. Advances averaged about \$39 million on a daily basis during the year. The *Industrial Loans* figure includes \$42,000 three months overdue which was carried in *Other Assets*.

U.S. Government Securities, representing our allocation of System Open Market Account, decreased \$59 million. This reflected the continuation of the System's restrictive credit policy which prevailed until November.

Check clearing activities again set new records. *Uncollected Cash Items* on the asset side and *Deferred Availability Cash Items* on the liability side were both lower, despite the increase in the over-all volume of checks handled. Improvements in operations, in part the result of the establishment of our twilight check collection force in January 1957, helped to reduce float.

The principal change in liabilities arose from an increase of about \$15 million in *Federal Reserve Notes* in circulation. This increase, when coupled with the larger holdings of notes of other Federal Reserve Banks, reflected greater use of currency in this district and the net transfer of notes from this bank to other districts.

Member Bank Reserve Accounts decreased \$1.5 million, while the *U.S. Treasurer's Account* was \$4 million higher.

Capital Paid In increased by almost \$1 million and a little more than \$3 million was added to surplus.

Net Earnings of \$31.7 million were almost \$7.9 million higher than in 1956. The increase was due largely to higher average yield on the holdings of *U.S. Securities*.

Net Expenses were \$755 thousand greater than last year.

After dividend payment to member banks of \$1,029,000, 90 per cent or \$27.6 million of the *Net Earnings* was transferred to the U.S. Treasurer in payment of interest charges on Federal Reserve Notes levied under Section 16 of the Federal Reserve Act.

The bank's ratio of *Gold Certificate* reserves to deposits and of Federal Reserve Note liability combined rose to 43 per cent, principally as a result of the gain in *Gold Certificates*. At the end of 1956 the ratio stood at 37.7 per cent.

Volume Figures for Years 1956 and 1957

Transaction	<i>Daily Average Volume in Pieces or Units</i>		<i>Annual Total Volume in Dollars</i>	
	1957	1956	1957	1956
Check Collections	1,143,971	1,104,500	\$70,609,468,038	\$67,582,937,064
Coin Counted and Wrapped ..	3,847,012	3,697,588	90,567,700	85,723,150
Currency Sorted and Counted	1,096,337	1,057,922	1,767,568,525	1,726,561,866
Noncash Collections:				
Notes, Drafts and Coupons (except U. S. Government)	4,119	4,039	391,136,601	352,700,143
Safekeeping of Securities:				
Pieces Received and Delivered	1,344	1,252	9,077,872,000	14,772,199,000
Coupons Detached	1,652	1,575	29,461,705	32,860,139
Transfers of Funds	349	321	51,376,020,560	48,377,150,966
Issues, Redemptions and Exchanges:				
U. S. Securities (Direct Obligations)	1,036	768	12,181,737,973	11,049,837,447
U. S. Savings Bonds	42,165	41,198	933,485,382	856,557,601
U. S. Government Coupons Paid (Direct Obligations) ...	1,901	1,818	110,416,090	111,369,731
Federal Taxes: Depository Receipts and Direct Remittances	2,762	2,747	1,637,016,471	1,495,292,882
Currency Verified and Destroyed	268,629	258,984	95,268,000	91,270,000

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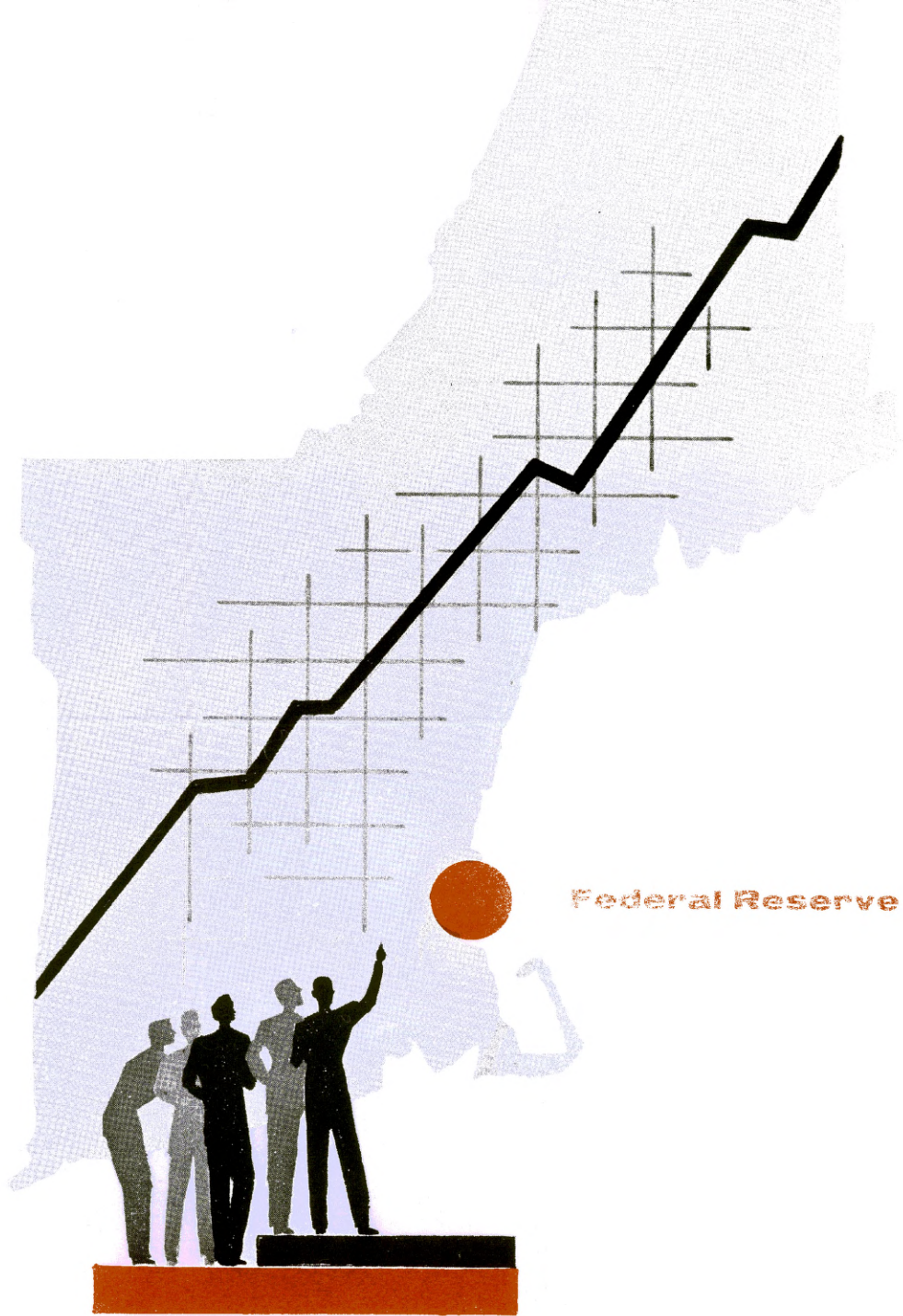
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Bank of Boston 1957

