

# NEW ENGLAND BUSINESS REVIEW

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## Where Did Those Savings Deposits Go?

Savings banks have been hit by deposit outflows in recent months. Rising rates of interest paid by strong borrowers such as Government and businesses have attracted primarily large rate-sensitive investment deposits.

## Industrial Training and the Business Cycle

Company training of workers tends to increase faster than overall employment during a business expansion. New England manufacturers have recently been training more workers for shorter periods to cope with their labor supply problems.

FEDERAL RESERVE BANK OF BOSTON



# NEW ENGLAND BUSINESS REVIEW

## Where Did Those Savings Deposits Go?

**M**UTUAL SAVINGS BANKS have been in the news in recent months, which is surprising. They are noted as stable institutions, mainly serving the small saver and home purchaser, and seldom involved in changes or incidents which warrant special notice. But in the current year, in the months of January, April, and July, they suffered the greatest deposit withdrawals since banking crisis days.

Two developments have occurred which have pushed savings banks into the limelight. First, money has become the tightest it has been since the 1920's, pushing interest rates up as competition for loanable funds has increased. Second, in recent years, many savings banks, especially the larger ones, have started to compete for larger, "investment money" deposits

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as contrasted with the traditional, small savings deposits. These larger deposits are especially vulnerable to shifting as interest rates rise.

### Traditional Savings Banking

Savings banks were first organized in this country 150 years ago to foster habits of thrift among wage earners. They were concentrated in the industrial Northeastern states and were very successful in helping people accumulate liquid savings. In 1900, for example, time and savings deposits in New England averaged close to \$200 per capita as compared to about \$30 in the remainder of the Nation.

Savings banks, being nonprofit institutions, were usually organized by wealthier professional people and businessmen of the community as a public service. Savings funds were invested with the goal of safety rather than yield. Although mortgage loans were made in the early years with savings bank deposits, the chief investment outlets were public and private bonds and commercial bank stock. "Legal Lists" of approved securities for savings banks were issued by state authorities to insure prudent investing.

During the housing boom of the 1920's savings banks invested more heavily in mortgage loans so that by 1930 that ratio of such loans to deposits in the Nation's mutual savings banks was just above 60 percent. In the succeeding depression and war, mortgage activity declined. By 1945 the ratio of mortgage loans to deposits was down below 30 percent.

### Postwar Changes

At the end of World War II, thrift institutions were in a rather peculiar situation. Money was plentiful, interest rates were low, and government bonds were the chief investment outlet. Even though savers could earn a better rate by buying savings bonds than by using thrift institutions, savings accounts grew primarily because they were convenient.

As time went on, however, the postwar housing construction boom unfolded. Prospective home buyers were anxious to borrow on mortgages, and rates on mortgages, while low, were attractive compared to rates on government or corporate bonds. Thrift institutions had a great opportunity to use the abundant volume of savings for the growing demand for mortgage funds.

Savings and loan associations led the way in attracting savings and lending them to home buyers. They paid top rates for savings accounts and were fairly liberal on mortgage lending terms. They grew very rapidly, averaging a growth rate of almost 15 percent per year between 1946 and 1960.

Mutual savings banks were more conservative and did not compete as aggressively for savings. Their rates paid on savings were generally a little below the rate paid by local savings and loan associations and often  $\frac{1}{2}$  per-

centage point or more below savings and loan rates in western states. They did grow, however, but at a much slower rate than savings and loan associations, averaging an increase of about 5 percent per year on deposits between 1946 and 1960. This did not even equal the growth rate of gross national product, which averaged 6 percent over this period.

### Change in Character of the Thrift Market

After 1960 a boom of unparalleled proportions began in all thrift institutions — savings banks, savings and loan associations, and commercial bank savings departments. Consumers more than doubled the amount of funds they put each year into time and savings accounts of these institutions from 1961 to 1965 as compared to the preceding 5 years. The surprising feature about the expansion in this type of savings is that overall consumer savings rose very little over this period. The chief asset of thrift institutions, mortgage loans, also expanded at a much faster rate after 1960 than in the 1955–60 period. This mortgage loan growth also had a surprising feature, namely that the apparent need for such loans, as measured by total residential construction expenditures, rose comparatively little.

Shown in the accompanying table are average annual flows of funds to various uses which demonstrate the shift in the character of the thrift business after 1960. Flows of money into time and savings deposits and accounts expanded much faster than did growth in total personal saving. This discrepancy was not explained by shifts of savings out of bonds and stock, nor out of demand deposits. What happened?

We cannot determine from aggregate funds



why such flows occur or which flow causes other flows. But such flows can give us some clues. There is a suspicious association between the unusually rapid growth of mortgages and the increase in savings accounts which deserves close scrutiny. From the accounting or balance sheet viewpoint, growth in the liability side of the balance sheet must, of course, be matched by growth in assets and vice versa. But which came first?

Theoretically, either the savings account growth or the mortgage loan growth could have been the basic cause and the other a result. Funds could have started flowing into thrift accounts first and then been used by financial institutions for mortgages. Or the demand for

mortgages could have risen, leading the thrift institutions to start working more aggressively to get savings accounts. Probably the latter explanation is the more reasonable; thrift institutions must have a profitable outlet for funds before they actively seek them.

But a decision on which came first may not be necessary; what is important is that the mortgage loan growth could not have occurred if thrift institutions had not been receiving the additional funds. Furthermore, unless the additional funds were being generated from some source, they could not have been available for deposit into the thrift institutions. What might be the source of the additional savings account funds?

### CHANGES IN SELECTED FUNDS FLOWS, 1956-60 to 1961-65

	1956-60 (Annual averages in \$ billions)	1961-65 (Annual averages in \$ billions)
Net flow of consumers funds to savings accounts . . . . .	12	23
Personal saving . . . . .	20	23
(ratio to disposable income) . . . . .	(6.1%)	(5.6%)
Total mortgage loan extensions (excluding refundings) . . . .	26	40
Residential construction expenditures . . . . .	22	26
Consumer net investment in corporate and tax-exempt bonds	2	1
Consumer net investment in stocks . . . . .	1	-1
Increases in consumer holdings of demand deposits and currency . . . . .	1	6

Source: Federal Reserve Flow of Funds data. Total mortgage loan extensions estimated at net increase in mortgage loans plus amount necessary to offset assumed 5 percent annual regular repayment rate of outstandings (refinancing excluded).

New savings were not the source of these savings account funds, as noted earlier. What other sources might there be? A discussion of the various possible origins of these additional deposits would take us into an involved consideration of textbook theory of money flows, but we can shortcircuit this by listing some likely sources of new deposit funds: demand deposits and currency, other thrift institutions, the government or foreigners. Demand deposits and currency were not the source of the new savings funds because consumer holdings of these money categories also rose more from 1961–65 than in 1956–60, as shown in the table. Other thrift institutions are ruled out as sources because even if one gains funds at the expense of another, this does not give a net increase for all combined.

The government could indirectly supply the additional deposits by running a budget surplus and paying off its bonds. Then the paid-off bond-holders could deposit their funds in savings banks. The shortcoming of this explanation is that neither Federal, state nor local governments have been running surpluses in recent years. Quite the reverse, they have been net borrowers in substantial amounts. As for foreigners, there is no evidence that foreign consumers are placing any appreciable amount of money into our thrift institutions.

Some other source of the additional savings must be found. The most likely one seems to be the thrift institutions themselves. What must have been taking place is that the funds which thrift institutions lend to the public through mortgages have been returning to the thrift institutions to be relent again. There must exist a special circular flow from thrift institutions to borrowers who spend the money

and the recipients redéposit it. The problem is to determine what type of flow and expenditure circle there can be so that the funds return to thrift institutions rather than being spent for goods or services. In the latter case the funds would be in the general expenditure stream rather than in our special “financial circle.”

One way for keeping borrowed mortgage funds in the financial, or investment sphere rather than having them “leak out” into consumption of some sort is for the borrower to use his mortgage loan proceeds for a financial or investment use. Let us assume A gets a mortgage to buy a used house from B, and B uses the proceeds to buy stock or bonds from C. What will C do with the money? As a general rule, individuals do not sell stocks or bonds in order to cover living expenses, so C is likely to look around for another investment. He may consider a savings account at 4 to 5½ percent as a good investment for a time, or else he may deposit the funds in a savings account while he waits for a good “deal” to turn up. The net result is that B “disinvested” from a house, the funds involved were acquired via a mortgage loan from a thrift institution, and eventually these funds wound up in a thrift institution again. B could also have obtained a mortgage loan directly and used the funds to buy stocks or bonds from C. If C were to rebuy stocks and bonds immediately from D, D might then redeposit the funds.

### Investment Deposits

At some risk of over-simplification, we can visualize two types of deposits and accounts at thrift institutions. One is the traditional, small savings account which is accumulated gradually out of weekly or monthly income and eventually is withdrawn for some consumption or rainy-



day use. Such use returns the funds to the income stream from which some other recipient can, in turn, save a portion.

The other type of deposit is the investment, or “hot” money, deposit, which arises from transactions in the financial, or “portfolio management” sphere. Holders of investment deposits do not usually liquidate them for consumption purposes — they do not “spend capital” — so if they do use them, it is likely to be for an investment purpose, like the purchase of stocks and bonds. This keeps the investment deposit in the investment sphere. If some holder were to liquidate his investment deposit for consumption purposes, the funds would wind up in the income sphere.

An individual selling or mortgaging his home in order, say, to buy stock with the proceeds expects to profit from the transaction, of course. He can probably get a lower rate on a mortgage loan than in a straight personal loan. Furthermore, a stock collateral loan involves signing a statement indicating the purpose of the loan and some individuals may prefer not to declare their intentions.

The postwar trend of stock prices probably has led most prospective borrowers to believe that a profit on a mortgage-to-stock transaction was almost assured. Furthermore, the continual rise in the prices of most existing houses makes both the savings bank and the borrower feel quite secure in the safety of the mortgage.

Once an investment deposit is created by the extension of a mortgage loan on an existing home, it may be held in the form of a demand deposit. But evidently it is usually redeposited in a thrift institution.

These “investment,” “portfolio,” or “hot” money depositors differ from regular savers in several ways. In addition to individuals, they include a variety of organizations like churches, charities, credit unions and trustees. The amounts involved generally range from \$5–30 thousand although some savings banks accept even larger deposits. Regular savings deposits average around \$2,000 in size.

### Attracting Investment Deposits

Regular savings accounts are accumulated by regular, small deposits. Convenience and habit play a big part as to where the regular saver keeps his account. With investment money, convenience and habit are much less important, of course, since only one deposit of a large sum is usually made. This leaves the interest rate paid as the single most important factor in attracting investment money.

If a savings bank decides to begin competing for investment money, it must pay a fully competitive rate which means equalling the top rates paid on savings deposits in the community. These rates must be brought to the attention of investment money holders so financial newspapers and the financial pages of “sophisticated” dailies are used in advertising. By contrast, banks will use radio and subway advertising to attract regular savers and stress convenience and friendliness.

Since investment deposits are generally large, a savings bank can show rapid growth if it can compete successfully for them. If it does acquire investment deposits, its average deposit size rises rapidly. Among New England savings banks, most of those that grew fastest in the past 5 years also had the biggest increase in average deposit size. Evidently they were able to attract investment type of deposits.

## Deposit Withdrawals

While total deposit levels at savings banks have had a very steady growth trend, deposits are continually being withdrawn. This is normal and reflects the fact that the first and still primary purpose of these deposits is to serve as rainy-day reserves. Year in and year out, gross withdrawals average about 25 percent of total deposits each year, or about 2 percent per month. During interest payment months gross withdrawals are  $\frac{1}{4}$  to  $\frac{1}{2}$  percent larger and during other months about  $\frac{1}{4}$  percent less. In most months the inflow of deposits exceeds gross withdrawals so there is a net gain in the level of total deposits amounting to  $\frac{1}{2}$  percent or so.

Because April is a month when both interest payments are made and taxes are due, withdrawals are normally at their highest. April 1966 was worse than average, however, as the following comparison shows:

	Percent of total deposits	
	<i>April 1966</i>	<i>April Average 1958-65</i>
Inflows	$2\frac{1}{2}$	$2\frac{1}{2}$
Withdrawals	$3\frac{1}{4}$	$2\frac{3}{4}$
Net	$-3\frac{1}{4}$	$-1\frac{1}{4}$

Inflows in April 1966 were about normal, but withdrawals were about one-fifth greater than usual.

We would naturally suspect that investment deposits accounted for the greater April withdrawal rate. Several clues indicate that this was indeed the case. First, the withdrawn deposits were large because the average size of savings deposit on the books of savings banks declined as a result of the month's transactions.

For reporting savings banks in New England, the average deposit size declined slightly, by \$6, from \$2,494 to \$2,488. In the two preceding Aprils, the average size had risen by \$4 and \$6. Normally, interest credits serve to raise the average deposit size by about \$15 while partial withdrawals for rainy day purposes reduce it.

The reason for the withdrawals should also indicate the importance of investment deposits. The Bowery Savings Bank of New York City made a survey of all its April withdrawals exceeding \$500. The breakdown of the purposes was as follows:

1. Regular or normal withdrawals; total 46%
  - a. Income and other taxes . . . . . 12%
  - b. Home repair . . . . . 8
  - c. Vacation and travel . . . . . 4
  - d. Cars and major appliances . . . 3
  - e. Medical bills . . . . . 2
  - f. Other (Consumption, education, own business, loans, gifts etc.) 17
2. Investment withdrawals, total 54%
  - a. Transfer to another mutual thrift institution . . . . . 3%
  - b. Transfer to commercial bank time account (includes CD's) 19
  - c. Purchase of government or corporate bonds . . . . . 9
  - d. Purchase of mutual fund shares 3
  - e. Purchase of capital stock . . . . 19

There may be some dispute about classifying use of funds for own business as a regular use, on the one hand, and mutual fund purchases as an investment on the other. But neither of these uses was sizable.

According to this breakdown, investment accounted for fully half of the total. This seems

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a somewhat larger share than might have been expected since total withdrawals in April were only about a fifth larger than “normal.” It may be that some of the uses classified as investment are actually normal or regular, such as stock and bond purchases. Some regular savers may use savings banks to accumulate funds for purchasing securities.

Because investment deposits are likely to be withdrawn in large volume when there is an interest rate advantage in doing so, the actual magnitude of the withdrawals in April was not surprisingly large. And the withdrawals in July were even smaller. Evidently investment deposits thus far have tended to be more stable than might be expected.

### **Impact of Withdrawals**

While withdrawals can cause discomfort to those savings banks affected the most, the more important question is how they affect the economy in general. Regular, or rainy-day withdrawals have no special impact because they are handled in the normal course of events. Regular withdrawals are more than offset by regular deposits so all that happens is that a small change takes place in the ownership of these deposits.

Investment deposit withdrawals can be both larger and more unexpected than regular withdrawals and therefore their impact could be more severe. The actual effect of each investment withdrawal depends on what is done with the proceeds.

These withdrawn funds might take several routes. The simplest journey is a transfer from one thrift institution to another. This has no general impact on the economy — the losing

thrift institution is simply a little smaller and the gaining one a little larger.

The next simplest transaction for the withdrawn funds is for a stock or bond purchase from another individual. What does the seller do with the funds? What appears likely is that the seller thought it was a good time to sell his stocks or bonds and he decides to stay “on the sidelines” awhile to see what develops. He will probably put the funds temporarily into a liquid form, such as a savings deposit or account while he reconsiders the situation. For some period of time, at least, deposit ownership is simply transferred and has no impact on the economy. Equally simple is the case where the funds are used to buy a corporate bond from a savings bank. Assets (bonds) and deposits simply decline equally.

A more complicated situation arises if the withdrawn funds are used to buy *new* stocks or bonds. The corporation (or government) which sells the stock or bond probably uses the funds for construction or equipment, and thus the funds end up in the general expenditure and income stream; that is, they no longer are investment funds. These funds are lost from the financial sphere and with investment deposits down, the savings bank must cut back its volume of assets.

The adjustment that is made probably proceeds as follows. In the first instance, the loss of the deposit draws down the cash balances of the savings bank, forcing the savings bank to conserve its remaining balances. It slows down on new mortgages until regular deposit inflows build up its cash levels to a comfortable position again. The net result of the entire operation then is that a corporation gained funds for its



investment purposes at the expense of some prospective home or apartment house mortgagor.

If the withdrawn deposit was transferred to a commercial bank time deposit of some sort, the result will be much the same as the purchase of a new stock or bond. Commercial banks lend most of their funds to business borrowers, so here again a deposit transfer from a savings bank to a commercial bank channels money to a business and away from a prospective mortgagor.

Thus withdrawn investment deposits can take two main avenues. They can be used for other investment funds with a good chance of returning to some savings bank. Or they can leak out of the investment circuit and wind up in the general flow of expenditures and income. The first avenue leaves things pretty well unchanged, but the second allows businesses and governments to get money at the expense of the mortgage market.

Businesses and governments — especially the Federal Government — are the strongest borrowers in the credit markets so they will always get the funds they want if they are willing to pay the interest cost. Even if investment deposits were not available to shift out of savings banks, these borrowers could still get the funds they really want through other avenues. They could make the interest rate so attractive on their bonds that savings banks would earn a better net rate on them than on mortgages. (Mortgages require servicing at an added cost of about  $\frac{1}{2}$  percent, while bonds require no servicing.) Corporations and governments could also issue small size savings-type bonds directly to savers so that the savings banks would be left out of the action entirely.

It is more convenient and efficient for commercial banks to “collect” money for business and government borrowers than for them to do so directly, but if commercial banks were not allowed to do so, specialized “business savings and loan” institutions might well spring up which would collect the funds.

### The Future of Investment Deposits

The active or volatile deposits at savings banks have been investment-money deposits. Evidently an important source of these deposits has been the issuance of mortgage loans by thrift institutions on used houses. The redeposit of investment money in thrift institutions has enabled them to make more existing home mortgages, which create more investment deposits, and so forth.

Thus far in 1966, the mortgage and savings climate has again shown a marked shift. Growth in total savings deposits and shares has declined sharply. This slowdown has not been offset by faster growth of commercial bank time deposits whose growth has declined also. The total picture in all these types of deposits and shares, as compared to a year ago, can be seen in the following comparisons.

GROWTH IN TOTAL SAVINGS AND TIME ACCOUNTS		
First 7 Months (\$Billions)		
	1966	1965
Savings banks . . . . .	0.8	2.0
Savings and loans . . . . .	0.6	3.8
Commercial banks . . . . .	9.0	13.1
	<hr/> 10.4	<hr/> 18.9

Total savings and time accounts thus far in 1966 have grown only about half as fast as a year ago. This slowdown has occurred even though the economy, as measured by gross national product, is almost 8 percent larger, and

the funds have been bid for much more aggressively.

With the growth in savings accounts cut back, extensions of mortgage loans have likewise been curtailed somewhat and the thrift institutions indicate that in the future commitments will be cut back more sharply. If this materializes, it may result in even further declines in the growth of investment money deposits.

As mortgage interest rates rise to near-record heights, those prospective mortgagors that have the choice of postponing their mortgage financing will tend to do so. Such postponement is more likely to occur in the case of mortgages on existing homes for investment money purposes than on new home mortgages. The supply of regular savings will be available for new-home mortgages although competition will continue even for these funds by government and corporate borrowing.

Interest rates on both corporate and government bonds have risen substantially in 1966, attracting funds away from savings deposits and accounts. This shift is shown clearly by the flow of consumer funds in the first 2 quarters of 1966 as compared to the quarterly average for 1961-65, as follows:

	Jan.-June Average	
	1966	1961-65
	(Quarterly Average in \$ Billions)	
Net increase in savings deposits and accounts	4.6	5.6
Net purchases of corporate and tax-exempt bonds . . . . .	1.0	0.3
Net purchase of U.S. Government bonds . .	2.1	0.4
Net purchase of corporate stock . . . . .	0.4	-0.3

Consumers purchased a quarterly average of \$3.5 net billion of bonds and stocks in the first half of 1966 and deposited \$4.6 billion in savings accounts. From 1961 to 1965 they had bought a quarterly average of only \$0.4 billion net of bonds and stocks but deposited \$5.6 billion in savings accounts.

The saver can profit by switching from savings accounts to bonds and back again at appropriate times. When interest rates are rising, it is advantageous to sell bonds which are declining in price and place the funds in savings accounts which retain a fixed value. When interest rates are high and the possibility exists that they might decline in the future, the opposite shift is profitable since a capital gain on bonds occurs when rates fall.

As an example, a saver holding \$10,000 in 4½ percent high-grade corporate bonds could have sold them at par in the first quarter of 1965. By switching to a savings bank deposit, he would have lowered his earnings to about 4¼ percent. But in the first quarter of 1966 he could have bought bonds with a par value of \$11,000 with his \$10,000 deposit. If, in the next several years, interest rates were to decline to their average 1961-65 level, he could sell his \$11,000 par value bonds for about \$12,200.

In summary, the biggest impact on savings banks in the current tight-money situation stems from the aggressive borrowing demands of corporations and governments. Investment deposits of savings banks are more likely attracted to the corporate and government bond market than small savings deposits. Such a loss of deposits forces savings banks to halt their own acquisition of assets, especially mortgage loans, until the inflow of regular savings funds as well as repayments on outstanding mortgages helps fill the void.

# Industrial Training and the Business Cycle

**C**OMPANY-SPONSORED training of workers tends to increase at a faster rate than overall employment during a business expansion. Because many skills are in short supply, firms are faced with the need to train more workers in a shorter time period. Some training occurs in anticipation of further employment expansion; some in response to increased labor turnover, and some because of the introduction of new technology.

Training is undertaken by a company in order to obtain workers with the necessary skills for its production processes. Firms may increase their training efforts even though the overall employment level remains constant, or even declines. The introduction of new equipment into the firm may occasion training courses for the existing work-force to introduce the new technique. Likewise, a rise in worker turnover may require a firm to increase training even though total employment remains unchanged. The firm may have to give orientation and on-the-job training to the new workers replacing those leaving. Hence, changes in the level of company-sponsored training need not correspond with changes in the overall employment level.

**A technical supplement to this article is available on request from the Bank's Research Department.**

These conclusions are based on a comparison of the levels of training and employment in New England manufacturing in 1962 and 1965. Last year New England manufacturers were training 18 percent more of their workforce than in 1962, yet total manufacturing employment was up only 1 percent over this period. Not only did manufacturers train more workers, but they also shortened the duration of the training period between 1962 and 1965. In order to maintain their production schedules, New England manufacturers reduced the average length of training courses by a fifth.

These findings were the results of a recent survey by the Federal Reserve Bank of Boston of 191 New England manufacturing firms which had also participated in a Bank survey of training practices in 1962.<sup>1</sup> The firms were selected to represent the geographical, industrial, and size characteristics of all the region's manufacturers.

The survey was designed to measure the amount of training, both formal and informal, that is financed, at least in part, by the firm and that enhances the worker's ability to perform his job. It covered four broad types of training: orientation, apprenticeship, on-the-job training, and out-of-company training.

<sup>1</sup>"Industrial Investment in Manpower," *New England Business Review*, February, 1964.



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### Extent of Training Activity

One-fourth of the firms surveyed had no training activity in both 1962 and 1965. Another tenth of the sample had discontinued their training programs during the period, while an equal proportion had instituted training.

Of the firms conducting training, only one-half showed a change in training corresponding to the change in overall employment between 1962 and 1965.

Last year New England manufacturers were giving training to 24 percent of their employees, as compared to 20 percent in 1962. Over this period the type of training carried on by the region's manufacturers shifted considerably. As the accompanying table indicates, training on-the-job increased at about twice the rate of all types of training. Out-of-company training, on the other hand, declined by more than a fourth over the period. Four industries — fabricated metals, apparel, printing, and rubber — reduced their training activities by a fifth or more, generally with a reduction in all types

of training. Only one of these industries, apparel, had a reduction in total employment over the 1962-65 period.

Also the emphasis in type of worker trained over this period shifted somewhat. Training of both production workers and managerial-professional workers increased by a fifth. For clerical workers, on the other hand, training declined by a tenth, largely because of reduced activity in the nondurable goods group of industries. These industries reduced the orientation training of clerical workers by almost half, as well as giving less training outside the firm to this type of worker.

More than twice as many managerial and professional workers received on-the-job training in 1965 than in 1962. Out-of-company training of this class of worker, in contrast, declined by an eighth over the period.

### Duration of Training Programs

The average duration of training courses for all types of training declined from 38 weeks in

#### AVERAGE DURATION OF TRAINING

Program	Number of Weeks		Change in Duration, 1962-1965	
	1962	1965	Weeks	Percent
Orientation	4.9	6.5	+ 1.6	+33
On-the-job	27.4	17.2	-10.2	-37
Apprenticeship	126.1	98.9	-27.2	-28
Out-of-company	34.8	23.1	-11.7	-34
All Programs	38.2	30.3	- 7.9	-21

Source: Federal Reserve Bank of Boston Survey.

1962 to 30 weeks in 1965. Orientation training was the only type of training in which the duration of the course rose over the period, increasing by 1½ weeks. As the number of experienced workers seeking jobs has declined — national figures indicate that the unemployment rate for adult workers has reached quite low levels — firms have had to hire those with limited work experience. This type of worker requires a more extensive period of orientation.

The duration of on-the-job and out-of-company training programs were each reduced by a third, while the time of apprenticeship training declined by a fifth. The average apprenticeship course in 1962 ran for 2½ years, whereas in 1965 it lasted only 2 years. Firms indicate that it is difficult to recruit workers who must undergo long periods of apprenticeship to attain a journeyman's status and pay. Consequently, they have reduced the training period, believing that workers can become proficient in all but the most refined techniques in a shorter time period.

### Causes of Increased Training

The increase in the number trained and the change in the length of training programs stem from a number of causes.

#### *New Technology*

During the present economic expansion New England manufacturers have increased their output sharply without an appreciable increase in employment. Over the 1961-65 period, that is, since the start of the expansion, production rose almost a fifth, while manufacturing employment increased less than 2 percent. Some of this increase in output was obtained by increasing the length of the workweek for the existing labor force. Average weekly hours of production workers rose from 40 in 1961 to 41 in 1965. Another portion of the output increase reflects an increase in productivity brought about by a higher level of skills in the work force as a result of education and training. Still another factor adding to the productivity gain is the use of improved capital equipment. The Bank's surveys indicate that \$3.4 billion has

### TRAINING BY NEW ENGLAND MANUFACTURERS

Program	Number of Workers in Training (000)		Percent Change 1962-1965
	1962	1965	
Orientation	140	154	+10
On-the-job	119	164	+38
Apprenticeship	8	10	+25
Out-of-company	24	17	-29
Total	291	345	+18

Source: Federal Reserve Bank of Boston Survey.

been invested in new plants and equipment in New England during the current business rise. Much of this spending replaced obsolete equipment with machines embodying new technology.

To make full use of this new equipment and machinery, firms have had to provide training for their workers. In the printing industry, for example, periods of training of a week or two are given journeymen to acquaint them with newly introduced printing processes.

### *Labor Turnover*

Although total employment, as already noted, changed little over the 1962-65 period, worker turnover increased markedly. As the economy has expanded, New England manufacturers have reduced their layoffs of workers. From 1962 to 1965 the layoff rate declined by a fourth. However, with increased job opportunities available both within and outside of manufacturing, employees have quit jobs at a much faster rate. Quits were 17 per thousand manufacturing employees in 1962, while last year they were 21 per thousand workers. Consequently, manufacturers have had to seek new employees in increasing numbers. The rate of new hires advanced by a fourth from 1962 to 1965.

This turnover has necessitated an increase in training, particularly orientation and on-the-job, to maintain production schedules. It has also given an impetus to shortening training programs to better cope with labor shortages.

The problem of labor turnover is exemplified by the response of one small firm in the survey. Last year it was giving 15 weeks of on-the-job training to three of its production workers. All

three workers quit before the end of the training period.

### *Employment Expansion*

The increase in training from 1962 to 1965 may be in part a reflection of the employment increase that occurred in New England last year. Employment fell in 1963 and again in 1964 from the 1962 level. In 1965, however, employment increased 3.5 percent over 1964's level. This sharp increase may have induced manufacturers to increase training programs and to speed them up in the expectation that expansion would continue, as indeed it has, with employment so far this year up 5.5 percent over the same months last year.

Training gives workers new resources but some period of time is required before successful accomplishment. Training raises a person's *future* productivity. Therefore, some is carried on in anticipation of further output and employment expansion. This is particularly true of the longer training courses such as those for apprenticeship and supervisory-management personnel.

Some of the respondents did indicate that they had just recently introduced apprenticeship training, while others reported that they were considering instituting training programs.

To explain more fully the relationship of training to employment, further surveys will be needed — perhaps on a continuing annual basis. However, what the present survey indicates is that training and employment are less firmly connected than might be supposed. That is to say, company training is a continuing process to meet a number of labor supply problems.



# Here's New England -

MANUFACTURING INDEXES (seasonally adjusted) 1957-59 = 100	NEW ENGLAND			UNITED STATES		
	pJuly '66	June '66	July '65	July '66	June '66	July '65
All Manufacturing	149	147	133	160	159	146
Nonelectrical Machinery	168	162	147	184	180	162
Electrical Machinery	175	173	147	188	186	159
Transportation Equipment	192	176	144	165	167	150
<i>Textiles, Apparel, Leather</i>	116	115	109	144	144	135
Textiles	118	116	110	145	144	134
Apparel	116	116	116	n.a.	152	144
Leather	114	115	102	n.a.	114	108
Paper	141	139	130	156	154	142
	<u>Percent Change From:</u>			<u>Percent Change From:</u>		
<b>BANKING AND CREDIT</b>	July '66	June '66	July '65	July '66	June '66	July '65
Commercial and Industrial Loans (\$ millions) (Weekly Reporting Member Banks)	2,604	+ 3	+19	58,717	+ 3	+20
Deposits (\$ millions) (Weekly Reporting Member Banks)	6,959	+ 1	+ 9	180,227	+ 1	+ 7
Check Payments (\$ millions) (Selected Metropolitan Areas)*	234.9	+ 6	+21	3,508.5	+ 4	+16
Consumer Installment Credit Outstanding (index, seas. adj. 1957-59 = 100)	174.1	+ 1	+ 9	212.6	+ 1	+12
<b>DEPARTMENT STORE SALES</b> (index, seas. adj. 1957-59 = 100)	132	- 2	+ 2	n.a.	n.a.	n.a.
<b>EMPLOYMENT, PRICES, MAN-HOURS &amp; EARNINGS</b>						
Nonagricultural Employment (thousands)	4,230	0	+ 4	64,293	0	+ 6
Insured Unemployment (thousands) (excl. R.R. and temporary programs)	74	+21	-21	944	+16	-18
Consumer Prices (index, 1957-59 = 100)	115 (Mass.)	0	+ 2	113	0	+ 3
Production-Worker Man-Hours (index, 1957-59 = 100)	105.7	- 2	+ 8	116.4	- 2	+ 6
Weekly Earnings in Manufacturing (\$)	103.17 (Mass.)	- 2	+ 5	111.38	- 1	+ 4
<b>OTHER INDICATORS</b>						
Total Construction Contract Awards** (\$ thous.)	290,942	- 5	+13	4,919,627	- 2	+ 3
Residential	93,244	-22	-17	1,753,132	-11	-14
Nonresidential	126,105	- 2	+31	1,841,580	- 1	+10
Public Works and Utilities	71,593	+26	+44	1,324,915	+10	+26
Electrical Energy Production (4 weeks ending July 16, 1966) (index, seas. adj. 1957-59 = 100)	171	+ 4	+11	187	+ 6	+16
Business Failures (number)	63	+13	+58	1,017	- 6	- 5
New Business Incorporations (number)	996	- 5	- 6	15,336	-12	- 9
*Seasonally adjusted annual rates. **3-mos. moving averages — May, June, July.						
		p = preliminary		n.a. = not available		

