

August 1967

A Difference in Paychecks

The Changing Public Debt

Business Review

Federal Reserve Bank of Philadelphia



A Difference in Paychecks

. . . Paychecks of workers in the Philadelphia Federal Reserve District are in part a matter of geography.

The Changing Public Debt

. . . Significant shifts in the structure and ownership of Federal and state and local government debt have implications for the liquidity of financial institutions and for monetary policy.

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Last month we pointed out large disparities among metropolitan areas within the Third Federal Reserve District in employment growth and unemployment.¹ The differences do not stop there, for there is also . . .

A DIFFERENCE IN PAYCHECKS

by Richard W. Epps

Curiously, as new plants are being established in some areas of the Third District workers are moving out. These contrasting trends both result from approximately the same causes. People move out because there are too many workers for available jobs and pay is low. Businessmen need workers to produce their products, and the less they have to pay to get workers the better off they are. A pool of unoccupied workers and low pay, then, is attractive to them.

But the businessman is interested in a particular measure of wages when he compares areas—just how much he will have to pay per hour for a worker in a particular occupation. Even after adjusting raw wages to represent similar occupation and work-week composition—looking at wages as a manufacturer would view them in deciding where to locate—we find substantial differences among areas. Moreover, in large part these contrasts are growing, with the rich getting richer and the less-well-off getting comparatively worse off.

The wage record

The metropolitan areas² in the Third District fall

¹See "From Surplus to Shortage," Business Review, July, 1967.

²There are 13 areas in the Third Federal Reserve District defined as Standard Metropolitan Statistical Areas by the U.S. Bureau of the Budget, Office of Statistical Standards. The number of these areas included in various portions of this analysis varies from 10 to 12, depending upon availability of the required data.

into three distinct groups, as shown in Chart 1. Wilmington, Trenton, Philadelphia, and Allentown-Bethlehem-Easton lead with fairly high wages.³ The average worker in Wilmington, the top district area, gets about \$150 a week. At the other end of the scale are three fairly low-wage areas: Altoona, Scranton, and Wilkes-Barre-Hazleton—with workers in the Wilkes-Barre-Hazleton area averaging only about \$80 a week. The spread between the highest- and lowest-wage areas is over 80 per cent.

Between the two extremes are five more areas averaging between \$1 and \$2 of each other: Johnstown, Reading, Lancaster, York, and Harrisburg.

Inside the averages

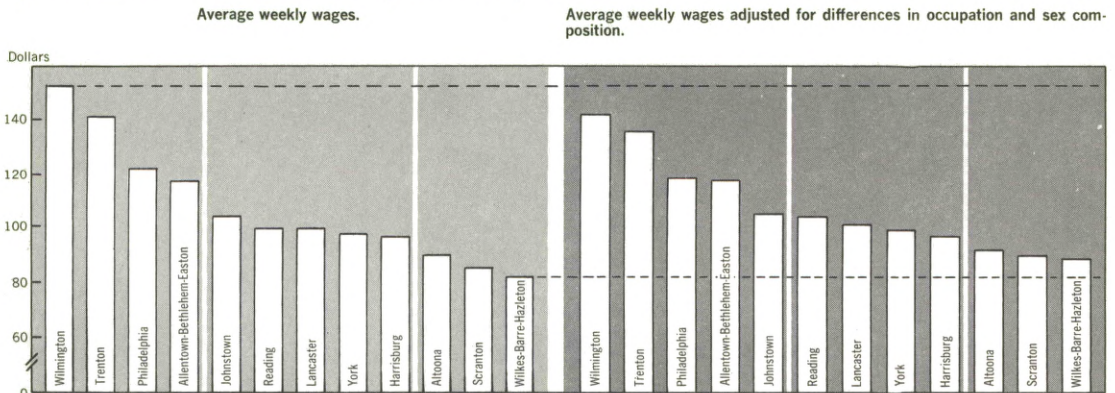
So much for average pay checks. What happens when we adjust these wages for differences in types of workers?⁴ Wilmington, for example, has a large number of engineers and male workers; Scranton and Wilkes-Barre-Hazleton have more unskilled employees and a larger share of female

³A detailed wage analysis for Philadelphia is reported in the February, 1967, Business Review in an article entitled "Inside Philadelphia Workers' Pay Envelopes."

⁴The wages were adjusted by (1) estimating the wage advantage or disadvantage which results from each area's occupation-sex composition, and (2) removing this advantage or disadvantage from the average wage of the area. The advantage-disadvantage is based on the wage that would be expected if all local employees received the average national wage of their occupation-sex classification. These data are only available for 1960; thus the adjustments should be regarded as approximations.

CHART 1 DIVERSITY IN WEEKLY WAGES

Wide variations among the raw average wages in metropolitan areas of the District (the bars on the left) are reduced somewhat by an adjustment for variations in the occupation-sex composition of each local workforce.



Sources: Estimates based on data from (a) U.S. Dept. of Commerce, Bureau of the Census, *County Business Patterns*; (b) U.S. Dept. of Commerce Office of Bus. Econ., *Survey of Current Business*; (c) U.S. Dept. of Commerce, Bureau of the Census, *1960 Census of Population*; (d) U.S. Dept. of Labor, Bureau of Labor Statistics, *Employment and Earnings Statistics for States and Areas*.

workers. These differences in types of workers partially explain the wage contrast.

Chart 1 shows the actual wage for each area and the wage level adjusted for occupation and sex composition. Generally, the higher-pay areas also have the kinds of workers that would normally command higher wages anywhere. But they still pay more than the sex-occupation composition would suggest. The opposite is true in the low-pay areas. They have more of the types of workers who usually command a low wage, and pay even lower wages than such sex-occupation compositions would suggest.

The same worker filling the same type of job with the same duties, in other words, would command more pay in Wilmington than he would, say, in Scranton. After accounting for the occupation and sex structure, the 80 per cent variation in average wage is reduced but not eliminated. This first adjustment of the raw wages, then, still leaves big differences among areas.

A second way of adjusting is to take account of the length of the work-week. Considering manufacturing only and forgetting about all other industries in each area, we notice some rather large discrepancies in length of the work-week. Chart 2 shows the effect of this further adjustment.⁵ Differences, once again, are diminished, but considerable variation remains.

Beneath the differences

We started out with a difference of better than 80 per cent between the average pay check in the highest- and the lowest-wage area. Now, after adjusting for types of workers and length of work-week the difference is more like 15 per cent. Again, this figure is important. It is \$12 a week, or \$624 a year—enough to buy a small foreign car every three years, or to pay one semester's college tuition every year.

⁵The wage level for the sex-occupation-hours composition was determined by weighting the wage levels, which were already adjusted for occupation-sex composition, by the length of the work-week in each area.

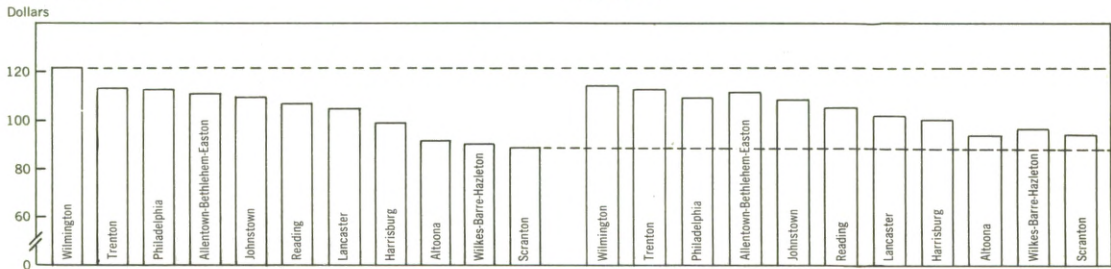
CHART 2

HOURS MAKE UP MORE OF THE WAGE DIFFERENCE

Variation in the length of the workweek makes up much of the difference in wages among areas (considering only wages of manufacturing workers). Wages adjusted only for occupation and sex composition of the labor force (shown by the bars on the left) have more variation than do wages adjusted for occupation, sex, and workweek composition (shown by the bars on the right).

Wages of manufacturing workers adjusted for occupation and sex composition of the labor force.

Wages of manufacturing workers adjusted for occupation, sex, and workweek composition.



Sources: Data are from *Employment and Earnings Statistics for States and Areas*, U.S. Dept. of Commerce; *1960 Census of Population*, U.S. Dept. of Commerce.

What we have done thus far is to reduce the percentage variation so that we are looking at the difference in pay which a businessman might expect to find in locating in one area or another and in offering the same types of jobs in each area. A second question arises—one that is important to those having a long-term interest in an area. What causes the differences in pay, and what may be done about them? There are several answers. Two are of principal importance: high- and low-paying industries and productivity. Let's take these one at a time.

Mix of industries

The balance among industries that normally pay high or low wages can affect an area's average pay check. For example, one of the principal reasons Wilmington achieves such a high ranking is that much of its employment is concentrated in the chemicals industry—an industry which typically pays high wages. Each area's industrial composition is unique, meaning something different for the average wage and, in part, explaining the inter-area pay differences. Wilmington's industrial structure gives it the largest edge;

Scranton comes out the lowest.

Chart 3 compares, for manufacturing, the average weekly wage of each area adjusted for sex composition, occupation structure, and length of work-week (as seen in Chart 2) to the average weekly wage appropriate for the *industrial* mix of each area. The industrial mix turns out to be a particularly important element for the extreme areas. The low wages in Scranton and Wilkes-Barre-Hazleton are the product of a heavy concentration in low-wage industries which manufacture nondurable goods, particularly apparel, and an under-concentration in high-wage industries which manufacture durable goods such as primary metals. At the other extreme, Wilmington's high wages are a result of the chemicals complex, and Allentown-Bethlehem-Easton's of a large share of metals manufacturers.

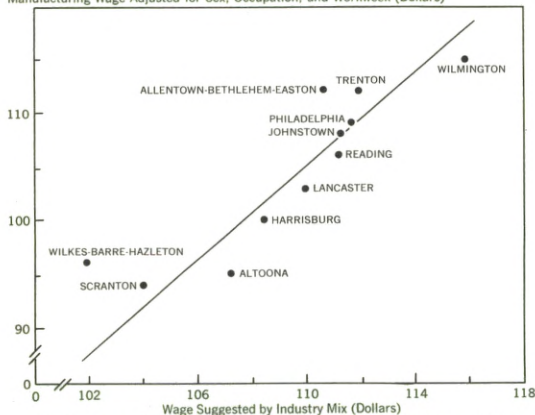
What makes a high-wage industry?

One of the main items in an industry's wage-setting process is the amount an industry can afford to pay its workers. This is largely a result of productivity. If productivity is high, such that the industry can make a substantial profit,

CHART 3 THE INDUSTRY MIX IS IMPORTANT IN DETERMINING WAGES

The wage level suggested by the balance among industries that typically pay high wages and those that usually pay low wages (charted on the horizontal axis), has much to do with the wage variation that remains after adjusting for sex, occupation, and workweek differences (registered on the vertical axis).

Manufacturing Wage Adjusted for Sex, Occupation, and Workweek (Dollars)



Sources: Data are from *Employment and Earnings Statistics for States and Areas*, U.S. Dept. of Commerce; *1960 Census of Population*, U.S. Dept. of Commerce.

workers can be paid a fairly high wage. On the other hand, if product per worker is low, a high wage would be difficult to pay even by the most altruistic owners.

In the chemicals industry, where production methods are highly automated and a vast complex of equipment is used, product per worker is high. In the apparel industry the amount of equipment is relatively limited; it takes a lot of labor to turn out the products, and productivity and wages are low.

Thus, Wilmington has the highest productivity per worker; Scranton and Wilkes-Barre-Hazleton tie for last among the areas. But productivity suggested by the industry composition does not agree completely with actual productivity.⁶ (See

⁶Productivity suggested by the industrial composition is what each area's productivity would be if all of the local industries operated at the productivity rates of their national counterparts.

Chart 4.) In Wilmington, productivity is above what the industry composition suggests. As one goes down the scale, the actual productivity turns out, in every other area, to be less than would be suggested by industry composition. This means that manufacturing in Scranton, for instance, not only has low-productivity and the associated low wage which results from its disadvantageous mix of industries, but has additionally low productivity which puts a further dent in incomes.

The lower-wage areas have at least a twofold problem. First, they have *industrial structures* which, under normal circumstances, mean low productivity and consequent low wages. Second, they have *other factors* (one of which is analyzed below) producing lower productivity and wages than can be traced simply to their industry mix.

Anatomy of productivity

Output of workers is, in large part, a result of the tools they are given to work with. In the examples of the chemicals and apparel industries, differences in the amount of equipment used are important in determining the different production levels per worker.

Hence, areas with low productivity have relatively low levels of investment in factories and machinery. Chart 5 points this out. Productivity and investment figures decline together.

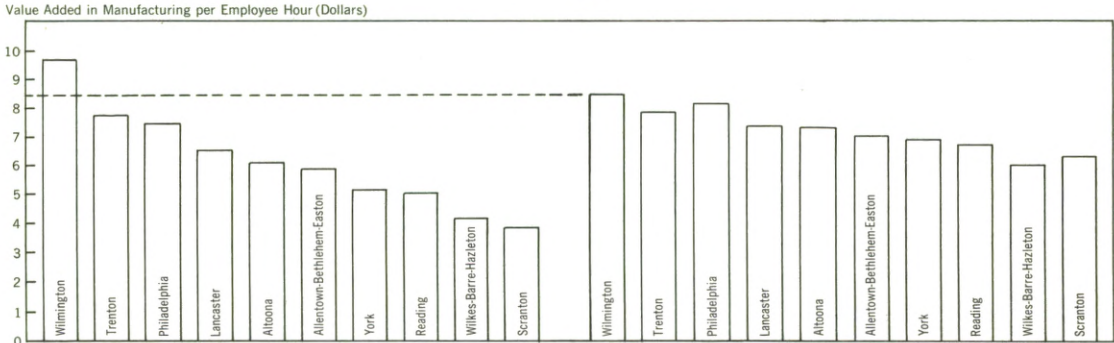
Capital investment, in turn, is partly the result of the wage level, because the industrialist has two factors to use in production—labor and capital. If labor is cheap and capital (machinery) is fairly expensive, the industrialist will use more labor and less capital. If labor is expensive, he will be more lavish with capital than labor, always seeking the cheapest combination. Inasmuch as wages have been low for some time in many areas of the Third District, this partly explains the low level of investment. Of course,

CHART 4 WORKER PRODUCTIVITY IS LOW

For all areas except Wilmington, productivity, shown by the bars at the left, is below the rate suggested by the local types of industries, recorded by the bars on the right. This means that industries in these areas are generally operating at lower productivity levels than their counterparts elsewhere.

Actual productivity rates.

Productivity rates appropriate for the mix of high-and low-productivity industries.



Sources: Five year averages based on the *Census of Manufacturers*, and the *Annual Survey of Manufacturers (1958-1963)*.

other elements are important in determining the levels of capital investment. For example, the range of technology available for any particular production process may be limited. Men's shirts must be sewed individually, by one person using one sewing machine. The industrialist may not have many alternatives in the way he combines capital and labor. Still, in almost every industry there is some range of choice, with the wage level being a factor in selecting the process to use.⁷

The connection between investment and wages completes a circle. Low wages often lead to low

⁷Lack of capital investment, independent of the wage level, might result from:

(a) Poor or uncertain prospects for growth of an area or of firms in the area limiting the willingness of lending institutions to extend credit and of enterprises to go into debt.

(b) Capital in place may be particularly old and of a lower-than-normal efficiency. This might be especially the case in lagging areas where the rate of renewal of capital is probably low.

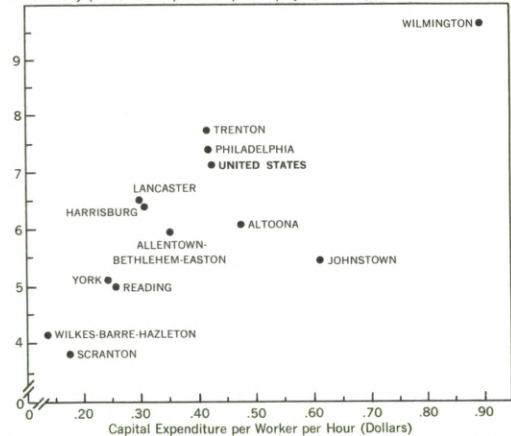
(c) There may be an overly large number of small-sized firms which cannot make use of the more capital-intensive, large-scale, production techniques.

(d) Management may not be familiar with the newer, more capital-intensive production technology.

CHART 5 LOW WORKER PRODUCTIVITY RESULTS PARTLY FROM LOW CAPITAL INVESTMENT

The vertical axis represents productivity, and the horizontal axis represents capital investment. There is a strong tendency for productivity to increase with increasing capital investment.

Productivity (Value Added per Hour per Employee; Dollars)



Source: Five year average figures from *The Census of Manufacturing*, and the *Annual Survey of Manufacturing (1958-1963)*.

capital investment; low capital investment leads to low productivity; and low productivity makes it necessary for an industrialist to pay low wages. The circularity of the problem is a major complexity because it poses both the question of *where* and *how* to break in.

Wage trends

Adding to the problems of low wages and low productivity are the directions in which the wages have been moving. Generally, the high-wage areas have experienced faster increases in wages than have the low-wage areas, thus expanding the spread among areas.

Chart 6 points out this record. Of the low-wage-paying areas, one — Altoona — has broken out to perform strongly, achieving fourth position among the areas for which records are available. But the other two low-wage areas — Scranton and Wilkes-Barre-Hazleton — remain at the bottom of the list. Trenton, Allentown-Bethlehem-Easton, and Reading — along with Altoona — fill out the upper third of the list.

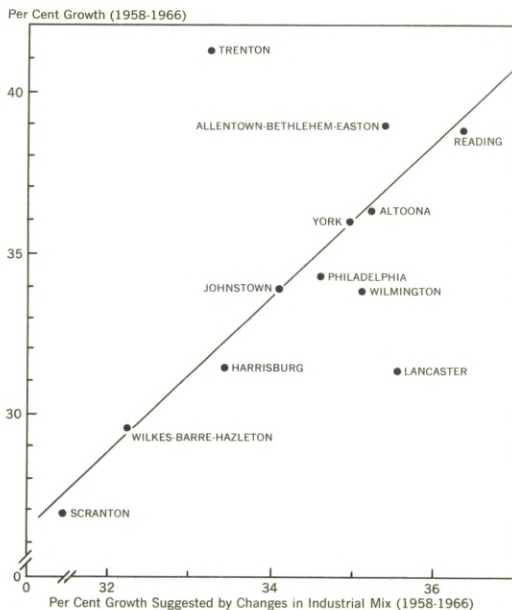
All the elements underlying differences in wage levels among areas are also involved in wage changes. But, except for the industry-mix factor, effects have been small or changes have not been measured. Chart 6 shows wage changes that would have been suggested by changes in the mix together with actual changes in wages. The two are very close, indicating the importance of industry mix.

There are four components involved in the change of industry mix: two deal with *wage-level* changes; one deals with alterations in the proportion of *employment* in each industry; and one incidental factor deals with the *interaction* of wage and employment changes. By far the most important factor has been the first—the amount of wage increase common to all industries. This

CHART 6

WAGE DIVERSITY MAY BE INCREASING

Generally, the low-wage areas have experienced the slowest increases in wages and the high-wage areas the fastest. The vertical axis records the per cent growth of the wage level in each from 1958 to 1966. The horizontal axis records the rate of growth suggested by changes in the mix of high- and low-wage industries. Two patterns are present. First, the low-wage areas are generally the slower growing. Second, much of the wage growth is explained by the change in industry mix.



Sources: Estimates based on data from U.S. Dept. of Commerce, Bureau of the Census, *County Business Patterns*; U.S. Dept. of Commerce, Office of Bus. Econ., *Survey of Current Business*; U.S. Dept. of Labor, Bureau of Labor Statistics, *Employment and Earnings Statistics for States and Areas*.

affects all areas in the same way, however. The other three factors produce differences among areas. Which of the other three is most important varies from area to area. For Reading the shift of employment—the employment component—has been the major factor. In particular, the decline of employment in textiles—a low-wage industry — and the expansion of employment in machinery and electrical equipment manufacturing (both high-wage industries) are the

TABLE 1
CHANGES IN INDUSTRY MIX

The changes in wage level suggested by each area's industry mix, which have had a large impact on wage growth (see Chart 6), resulted mostly from two factors. The first is the shift in balance of employment between high- and low-wage level industries. The second is distribution of employment between industries that experienced fast and slow wage growth. The table lists how each area stood on these factors and which of the two was the more important in the 1958-1966 period (as indicated in the footnote).

Results of the industry mix were best in the areas in the upper left-hand box, having both a shift to high-wage industries and concentrations of industries receiving the fastest wage growth. Those in the lower right-hand box fared the worst, experiencing a net shift to low-wage industries and having concentrations of businesses that received the lowest wage growth. Trenton was an exception. According to the industry-mix changes it should have had very little wage-level growth. In fact, for reasons not examined in this article, it had the fastest wage growth of all the areas.

Shift of employment between industries paying high and low wages	Distribution of employment between fast and slow wage-growth industries	
	Concentration in fast wage-growth industries	Concentration in slow wage-growth industries
Shift to high-wage industries	Reading ¹ Allentown-Bethlehem-Easton ² York ² Philadelphia ¹	Lancaster ¹ Wilkes-Barre-Hazleton ²
Shift to low-wage industries	Wilmington ² Altoona ² Johnstown ²	Harrisburg ¹ Scranton ² Trenton ¹

¹Employment shift.

²Wage growth.

major reasons for the wage-growth lead. In contrast, the strong wage expansion in Wilmington has been mainly a reflection of above-average wage gains in the chemicals industry—the second wage component—not of a shift in employment from one industry to another. Table 1 lists each area's standing on these two factors, and indicates which has been the more important.

Fortunes on balance

Wage differences among metropolitan areas are greatly reduced when adjusted for types of workers and length of the work-week. But differences still exist and may be increasing. There

are reasons for optimism, however. First, Altoona, one of the low-wage areas, has experienced rapid wage growth. Second, recent signs in Wilkes-Barre-Hazleton, another of the low-wage areas, indicate the beginnings of a turnaround. In the past few years substantial employment gains in this area have occurred in some of the high-wage, durable-goods manufacturing industries. Third, low-wage areas have some of the normal economic processes going in their favor. Low wages often attract employers. If rapid rises in employment should thus occur, employment markets will become tight, leading to some increases in wages.

THE CHANGING PUBLIC DEBT

by William F. Staats

Two decades ago, states and local governments owed about 57¢ out of every \$10 of public debt outstanding. The Federal Government owed the remaining \$9.43. Now, the proportions are \$2.40 and \$7.60, respectively. At the same time, ownership of the debt has been changing; a much smaller proportion of Federal debt and a larger proportion of state and local government debt now are held by private investors.

What do these changes suggest for the quality of investment portfolios of financial institutions? For markets for public debt? For monetary policy?

Shifts in public debt

Total public debt-outstanding has increased 58 per cent since 1946. But Federal Government debt outstanding has risen only 27 per cent while state and local government debt has soared about 572 per cent.¹ In the process, state and local obligations have increased from about 6 per cent of total public debt to over 24 per cent, as shown in Chart 1.

In addition, significant changes have occurred in the ownership of both Federal and local governmental obligations. Obligations of the Federal Government have shifted from "private owners" to "public owners."² As shown in Chart 2, the proportion of Federal Government debt

¹Agency issues are not considered part of Federal debt because they are not all fully guaranteed by the U.S. Government. In many cases they do represent "public" debt; however, in other cases they only represent ownership in a pool of private debt held by the agencies.

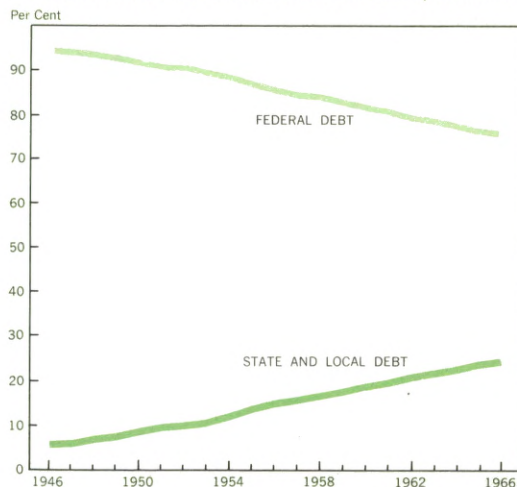
²"Private owners" includes individuals, most privately owned or operated financial institutions, and nonfinancial corporations. "Public owners" are United States Government agencies and trust funds, Federal Reserve Banks, and state and local governmental entities.

held by public owners jumped from just over 23 per cent in 1946 to 41 per cent in 1966. The amount of Federal debt owned by the private sector has dropped by about \$23 billion to less than three-fifths of the total outstanding. Holdings by financial institutions fell \$40 billion from 43 per cent to 22 per cent of the total outstanding.³ Commercial banks alone have accounted for 44 per cent of the decline in holdings of financial institutions.

In marked contrast with Federal debt, the proportion of state and local obligations held by the private sectors has increased from about 82 per

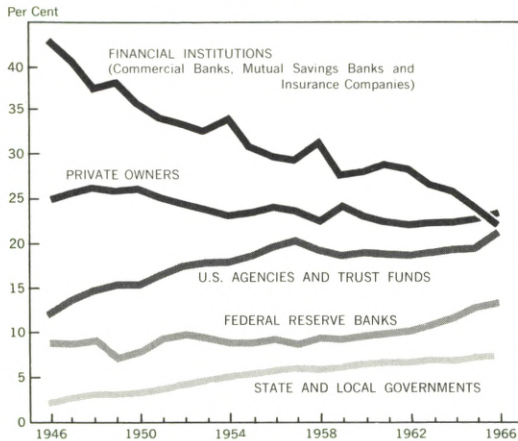
³Includes commercial banks, mutual savings banks, and insurance companies.

CHART 1
STATE AND LOCAL AND FEDERAL DEBT AS PERCENTAGE OF TOTAL PUBLIC DEBT, 1946-66



Source: Annual Report of the Secretary of the Treasury, 1964-65. Information for 1966 secured from Treasury Department.

CHART 2
OWNERSHIP DISTRIBUTION OF FEDERAL
GOVERNMENT DEBT



Source: Annual Report of the Secretary of the Treasury, 1964-65. Information for 1966 secured from Treasury Department.

cent to just under 95 per cent. Moreover, that owned by financial institutions has jumped from 31 per cent to over 52 per cent.

Individual investors have held a fairly stable proportion of Federal as well as state and local government debt so that most of the shifts in ownership of public debt can be attributed to financial institutions—particularly to commercial banks. Their reallocation of resources formerly held in United States Government securities has been prompted primarily by profit considerations. Caught in a web of rising costs and with loan demand lagging inflows of deposits, commercial bankers have sought to place funds in higher-yielding investments. After-tax yield differentials have caused the shift out of Federal debt obligations and into state and local government securities.⁴

⁴See "The Move to Municipals," *Federal Reserve Bank of Philadelphia, Business Review, September 1966*, and "Commercial Banks and the Municipal Bond Market," *Federal Reserve Bank of Philadelphia, Business Review, February 1967* for discussions of the dimensions and implications of bank investment in state and local government bonds.

Governmental agencies have expanded holdings of Federal securities for various reasons. First, growth of Government trust funds such as the Federal Old Age and Survivors Insurance Fund (Social Security) whose assets are invested in Federal Government securities results in expanded Federal ownership of its own debt. Second, the Federal Reserve System's holdings of United States Government securities has grown as the Fed has relied primarily on open market operations to provide the economy with money and credit. And third, state and local governments—particularly through their pension funds—have sharply increased their investments in Federal debt.

In summary, the shift in ownership of Federal debt has resulted from both a decreased demand from the private sector—particularly from financial institutions—and an increased demand from governmental entities and agencies.

Implications for financial institutions

Investors have a wide array of investment alternatives from which to choose and a variety of needs to be satisfied. Basically, the needs of a depository financial institution are two—earnings and liquidity. The financial manager's job is made difficult by the unfortunate fact that those assets which earn most are least liquid—that is, they are least readily converted into cash quickly without loss. And conversely, those investments with greatest liquidity earn least. So, the problem of investment management is to construct a portfolio which balances earnings against liquidity. To accomplish this, the financial manager must include several types of investments in his portfolio, each type contributing in different measure to earnings and liquidity.

Now, what is the effect of substituting state and local government securities for Federal Gov-

ernment securities in the portfolios of financial institutions? The answer lies in the relative earnings-liquidity mix of the two types of securities.

As for earnings, municipal securities carry higher after-tax yields than Federal Government securities of comparable maturity. The question of liquidity is less clear.

There are two elements of liquidity — a price element and a time element. The time element can be labeled marketability and defined as the convertibility of assets into cash immediately (with no regard for price). Marketability is a necessary but not sufficient condition to liquidity. Thus, an asset may be highly marketable and yet illiquid if it can be sold quickly but only at a loss.

United States Government securities and most municipal bonds can be converted into cash quickly.⁵ And, except under extreme conditions such as occurred during some days in 1966, existing marketing channels and institutions are able to accommodate trading in both types of obligations. For a large volume of issues there is no perceptible difference in marketability between state and local debt and Federal securities.

But because of interest-rate variability, fixed-income securities may have to be sold at a loss. There may be a difference in the price stability of each type of security. While statistical evidence is difficult to secure, municipal bonds appear to have relatively larger price fluctuations than United States Government securities. For example, in two of the three recent periods of restrictive monetary policy, yields on municipals rose faster than yields on Government securities of roughly similar maturities. Chart 3 shows that

⁵*Of course, there are some municipal bonds which appeal to investors only in a limited geographical area. Securities such as these may be difficult to sell in the secondary market.*

only in the 1959-1960 period did the differential between municipal yields and those on Federal bonds fail to decrease. In other recent periods of generally rising interest rates, the differential narrowed as prices of state and local obligations fell faster than prices of Federal securities. Thus, although Federal debt and most state and local obligations have about the same marketability, the latter tend to be somewhat less liquid than Federal securities.

If we adopt the accountants' "going concern" concept and assume that financial institutions are not going out of business, the shift from Federal debt to state and local debt does not necessarily result in weakened institutions. Over time, greater earnings of a portfolio heavily weighted with municipal bonds may result in a larger, more diversified portfolio and, therefore, a more viable institution.⁶ But at any point in time, such a portfolio probably would be less liquid than one heavily weighted with United States Government securities.

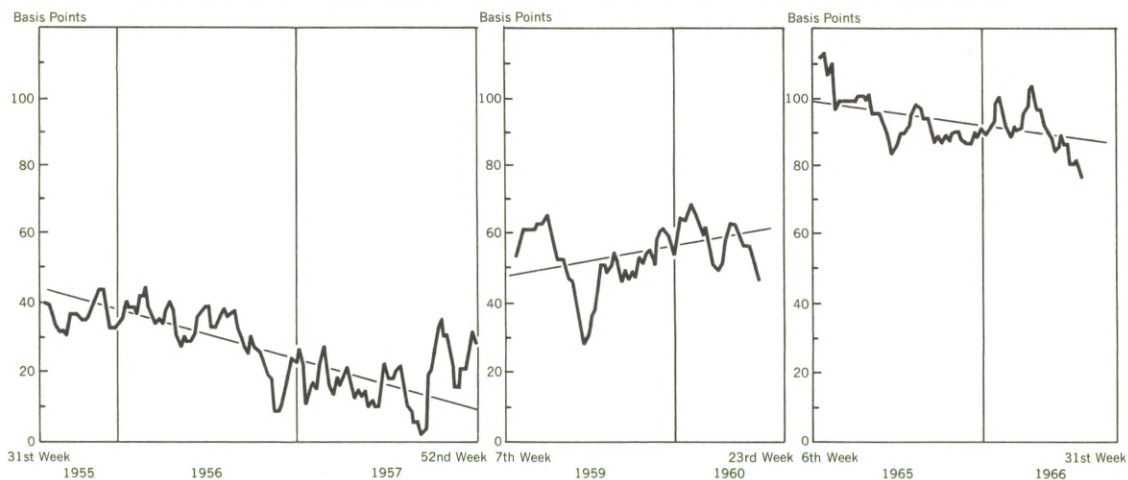
Thus, some concern over asset values was evident in 1966 when market prices of municipal securities plummeted to the lowest levels in four or five decades. Although prices of other fixed-income securities also dropped sharply last year, greater relative losses were chalked up in state and local government bonds largely because of heavy liquidations by large commercial banks.

The possible adverse liquidity effect upon financial institutions of the switch from Federal debt to state and local obligations may be eliminated or at least substantially reduced by improvements in the secondary market for municipal bonds. Many improvements have been made in this market — and probably more are yet to come. In time, perhaps, fluctuations in municipal

⁶*In certain instances, gains in current earnings may be partially or wholly offset by somewhat higher capital losses which may be sustained on the sale of municipal bonds during periods of lofty interest rates.*

CHART 3

YIELD DIFFERENTIAL BETWEEN LONG-TERM UNITED STATES GOVERNMENT SECURITIES AND LONG-TERM MUNICIPAL SECURITIES FOR SELECTED PERIODS OF RESTRICTIVE MONETARY POLICY



Source: *Federal Reserve Bulletin* and *The Weekly Bond Buyer*.

bond prices may be moderated so that liquidity characteristics of state and local government securities will more closely match those of United States Government securities.

Implications for monetary policy

A second implication for the future of these shifts of public debt is that the market for United States Government securities may become “thinner” and price fluctuations may tend to increase. Here’s why. One of the major criteria of a good securities market is that there should be a free interplay between the largest possible number of buyers and sellers so as to assure price continuity from one trade to the next.⁷ As the volume of Federal Government securities in the private sector drops, the number of buyers and sellers shrinks and the market becomes thinner. As a

result, prices may swing more widely.

How would a thinner Government securities market affect monetary policy? The principal tool of counter-cyclical monetary policy is the Federal Reserve’s open market operations—the purchase and sale of Federal Government debt. When the Federal Reserve buys Governments in the market, their prices tend to be pushed up, resulting in lower interest rates. Then, these changes are communicated to prices and interest rates in other markets. When securities are sold, the directions of change are reversed.

A thin Government securities market would intensify the potential impact of open market operations on interest-rate levels. So, the Federal Reserve System probably could achieve a desired interest-rate effect with a smaller volume of transactions.

But the rate effect is only one of the results of open market transactions — the other being the bank-reserve or money-supply effect. Thus, sup-

⁷Irwin Friend, et al., *The Over-the-Counter Securities Markets* (New York: McGraw-Hill Book Company, Inc., 1958), pp. 3-4.

pose the Fed decides that economic conditions warrant an increase of commercial bank reserves through open market operations. A thin Government securities market would make it more difficult to accomplish the desired increase in reserves without wide price and, consequently, interest-rate fluctuations.

In such a case, consideration could be given, assuming appropriate legislative changes, to open market operations involving other types of securities. Theoretically, the Federal Reserve could conduct open market transactions in municipal securities. But there are practical and operational difficulties (not to mention social and political implications) involved in such a policy. For example, municipal bonds are extremely heterogeneous—they are issued by thousands of government entities in the United States ranging from the City of New York to the Ysleta (Texas) Independent School District and from the State of Montana to the Running Springs Ranch Protection District in California. At the present time there are perhaps more than 100,000 different issues outstanding with more than 6,000 being added annually. The problems of selecting and trading issues would be much more formidable should the Federal Reserve have to rely upon municipal securities in open market operations instead of upon United States Government obligations.⁸

Perhaps a more likely result of a continued shrinkage in the supply of Federal Government

⁸*There are, of course, other alternatives to open market operations in municipals. An alternative sometimes mentioned calls for the Federal Reserve System to conduct a type of open market operations in Federal Funds.*

securities would be for the Fed to conduct open market operations in certain debt issues of Federal Government agencies.

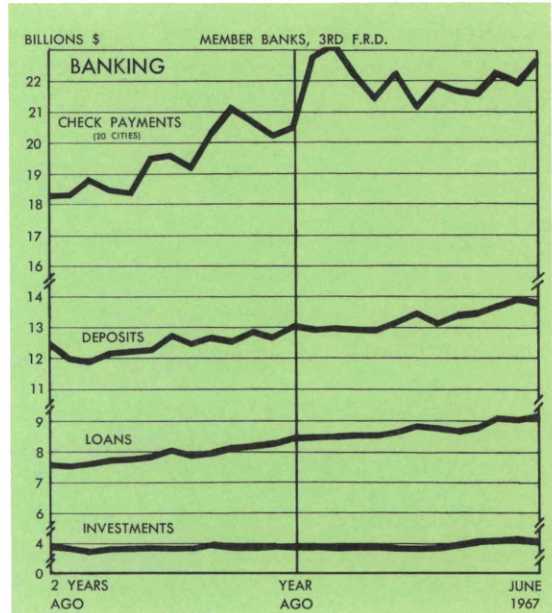
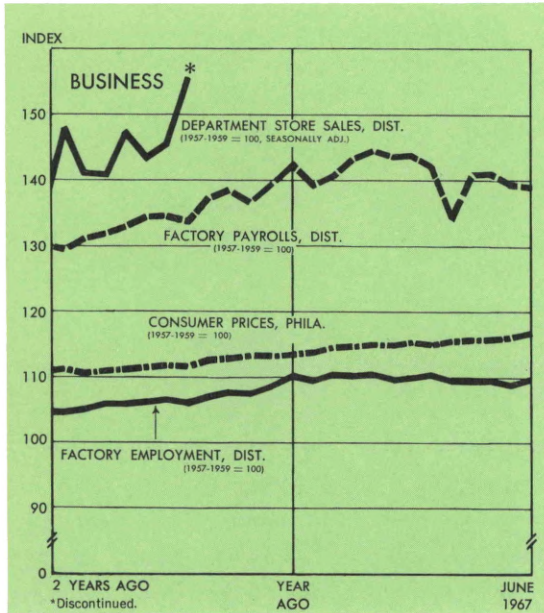
Conclusions

The aforementioned implications assume a continuation of shifts in composition and ownership of the debt in the same direction as during the past two decades. This assumption seems warranted. The demands on state and local governments for roads, schools, hospitals, and other services will continue to increase. And although Federal Government debt also will be increasing in the years ahead, it seems likely not to expand so fast (barring, of course, all-out war) as other public debt. So the probability is a further shift in the composition of public debt away from Federal to state and local government debt.

Moreover, it seems likely that the direction of change in ownership will continue. Public agencies will have to increase their holdings of Government securities to meet needs of trust funds and to expand bank reserves and the money supply. Some of these needs will be met by new issues of Federal debt, but some will also be drawn from debt now held by financial institutions. The shift of Federal debt from private hands (largely financial institutions) to public hands may well continue.

While there is no immediate cause for concern over the slow thinning of the market for Government securities, both public officials and financial managers in planning for the future may be expected to keep closer tab on the shift of Federal debt out of portfolios of financial institutions.

FOR THE RECORD . . .



SUMMARY	Third Federal Reserve District			United States		
	Per cent change			Per cent change		
	June 1967 from		6 mos. 1967 from year ago	June 1967 from		6 mos. 1967 from year ago
	mo. ago	year ago		mo. ago	year ago	
MANUFACTURING						
Production .....			.....	+ 1	- 1	+ 2
Electric power consumed	- 1	0	+ 3	.....	.....	.....
Man-hours, total*	0	- 6	- 3	.....	.....	.....
Employment, total	0	0	+ 1	.....	.....	.....
Wage income*	0	- 2	+ 1	.....	.....	.....
CONSTRUCTION**	+34	+64	+ 8	+ 6	+12	- 5
COAL PRODUCTION	- 1	- 5	0	- 3	- 2	+ 7
BANKING						
(All member banks)						
Deposits	- 1	+ 6	+ 7	0	+ 6	+ 6
Loans	+ 1	+ 7	+ 9	+ 2	+ 4	+ 6
Investments	- 1	+ 5	+ 3	- 1	+10	+ 7
U.S. Govt. securities	- 3	- 4	- 5	- 3	+ 4	+ 1
Other	0	+16	+13	+ 2	+17	+13
Check payments***	+ 3†	+ 9†	+ 8†	+ 5	+12	+11
PRICES						
Wholesale .....	.....	.....	.....	0	+ 1	0
Consumer	+ 1‡	+ 3‡	+ 3‡	0	+ 3	+ 3

*Production workers only
 **Value of contracts
 ***Adjusted for seasonal variation

†15 SMSA's
 ‡Philadelphia

LOCAL CHANGES	Manufacturing				Banking			
	Employment		Payrolls		Check Payments**		Total Deposits***	
	Per cent change June 1967 from		Per cent change June 1967 from		Per cent change June 1967 from		Per cent change June 1967 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
Standard Metropolitan Statistical Areas*								
Wilmington	+ 1	+ 3	0	+ 2	+ 7	- 1	+ 4	0
Atlantic City .....	.....	.....	.....	.....	- 1	+ 2	+ 1	+ 7
Trenton	+ 2	- 2	+ 1	- 3	-10	- 4	0	+13
Altoona	+ 1	0	- 1	0	- 7	+ 5	0	+ 8
Harrisburg	0	+ 1	0	+ 6	+ 6	+15	0	+10
Johnstown	+ 1	- 4	0	- 2	- 4	- 2	0	+ 4
Lancaster	- 6	- 8	- 8	-11	+ 6	+ 2	- 1	+ 6
Lehigh Valley ..	0	- 3	- 1	- 4	- 1	+ 3	0	+ 5
Philadelphia	+ 1	- 1	0	- 1	+ 4	+13	- 2	+ 8
Reading	+ 1	- 3	- 2	- 4	+11	+15	- 1	-39
Scranton	+ 3	+ 2	+ 1	+ 8	+ 2	+ 8	0	+ 8
Wilkes-Barre	+ 1	- 2	- 2	+ 2	- 5	+ 7	0	+ 8
York	+ 1	0	+ 1	+ 4	- 1	+ 2	- 1	+ 4

*Not restricted to corporate limits of cities but covers areas of one or more counties.
 **All commercial banks. Adjusted for seasonal variation.
 ***Member banks only. Last Wednesday of the month.