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Inside Philadelphia Workers'
Pay Envelopes

Commercial Banks and the
Municipal Bond Market

Business Review

Federal Reserve Bank of Philadelphia



Inside Philadelphia Workers' Pay Envelopes

. . . *While under-sized, wage levels in Philadelphia tie other metropolitan areas on growth.*

Commercial Banks and the Municipal Bond Market

. . . *New note in banks' thinking about state and local issues may reverberate in market and monetary policy.*

Earlier studies of the Philadelphia Metropolitan Area have indicated that growth in employment has lagged substantially behind the nation.¹ This somewhat gloomy picture becomes considerably different when we look . . .

INSIDE PHILADELPHIA WORKERS' PAY ENVELOPES

by Richard W. Epps

High and growing employment is good for a metropolitan area as it is good for the nation. It tends to produce low and declining unemployment, expanding markets for local firms, and strong impetus to the wheels of change which may be directed to metropolitan development. The case for wages is not so clear, however. To employers, wages are a cost; to employees, wages are income. Thus, to a metropolitan area, low wages may be an attraction for industry; but high and rising wages mean high and rising incomes. Consequently, the wages story in Philadelphia² is both good and bad, depending on the point of view.

In fact, the wage record of Philadelphia offers something for every view. Wage levels are low compared to other large metropolitan areas, thus the area has advantages for employers (see Chart 1). However, wage growth has been as strong

in Philadelphia as in other major areas over the last decade and a half—a good record from the employee point of view (see Chart 2).

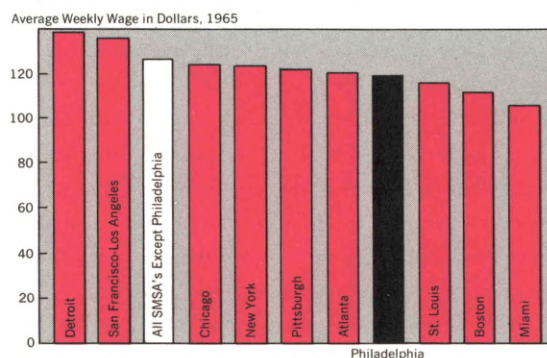
THE LEVEL OF WAGES

Why is the wage level low in Philadelphia? We are talking about an average wage level—a con-

CHART 1

A LOWER-THAN-AVERAGE WAGE IN THE PHILADELPHIA AREA

The wage level in the Philadelphia area ranks in the lower half of wage levels in eleven major metropolitan areas. Compared to the combined average, Philadelphia's wage level is about seven dollars low.



Source: Estimate 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 Labor, Bureau of Labor Statistics, Employment and Earnings Statistics for States and Areas, 1939-1965.

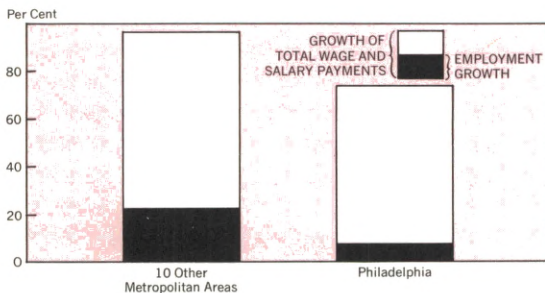
¹ See, for example, "Strategy for Industrial Development," Business Review, November 1966; "Philadelphia and Its Competitors," Federal Reserve Bank of Philadelphia Business Review, November 1965.

² This analysis covers the eight county metropolitan area of Philadelphia—Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties in Pennsylvania; Burlington, Camden, and Gloucester Counties in New Jersey. Metropolitan areas used for comparison with Philadelphia are: Detroit, San Francisco, Los Angeles, Chicago, New York, St. Louis, Boston, Pittsburgh, Atlanta, Miami.

CHART 2

GROWTH OF TOTAL WAGES AND SALARIES, 1952-1965—ANOTHER LAG, BUT LESS THAN IN EMPLOYMENT

Philadelphia growth looks better on total wage and salary payments than it does on employment. Moreover, the lag that is apparent in the change of total wage and salary payments is completely attributable to the employment lag. That is, the average wage increased in Philadelphia at about the same rate as in other areas, but the number of workers receiving the wage did not keep up.



Source: Estimate 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 Labor, Bureau of Labor Statistics, Employment and Earnings Statistics for States and Areas, 1939-1965.

glomeration including the wages of all workers in all industries in the metropolitan area (except agriculture). Thus, anything that any worker can do to raise his wages will affect the wage figure we are dealing with.

Consider a janitor working in a hotel. There are several things that he might do to change his wage. The easiest route would be to go to work as a janitor in another industry, say, a steel firm. He could expect a fair-sized gain from this move, for steel industries generally pay higher wages for a given job than service industries. If he were especially ambitious, he could learn the skills of a different occupation, say a lathe operator, and get the higher wage of that work. Finally, he could move to a different area, possibly Detroit, where wages are

higher for almost all occupations in all industries. If the janitor were female, she would have a natural disadvantage because females generally receive lower wages than males. All told, then, four major reasons can be singled out for the disparity between the general level of wages in the Philadelphia area and the level prevailing in other areas (see Chart 3).

1. The area has less than its share of high-wage industries (like manufacturers of durable goods).
2. Area workers concentrate less in high-wage occupations (such as the professions).
3. On the other hand, employment in Philadelphia includes a greater proportion of males than is the case in other areas. This helps

CHART 3

EMPLOYERS PAY LESS FOR LABOR IN THE PHILADELPHIA AREA

The Philadelphia area has less high-wage industry than other metropolitan areas (industry mix); and fewer of the area's employees are in high-paid occupations (occupation mix). Together, these put the area's wage level about 2% below that of other metropolitan places. Working about 1/2% in the opposite direction, Philadelphia has a higher proportion of male workers. The rest of the 6 1/2% spread between pay levels in Philadelphia and pay levels in other areas is the average amount less paid to a worker of a given occupation, industry, and sex in Philadelphia. That is, it is the average amount employers save by hiring Philadelphia workers.

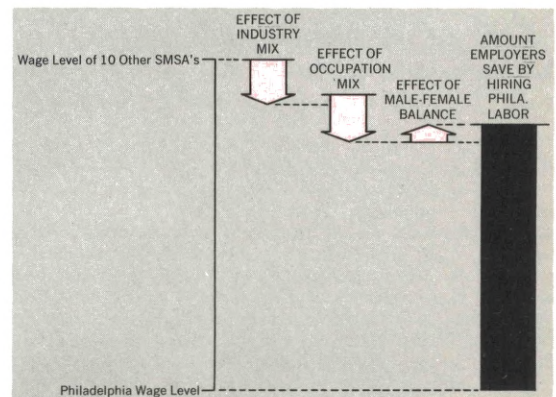
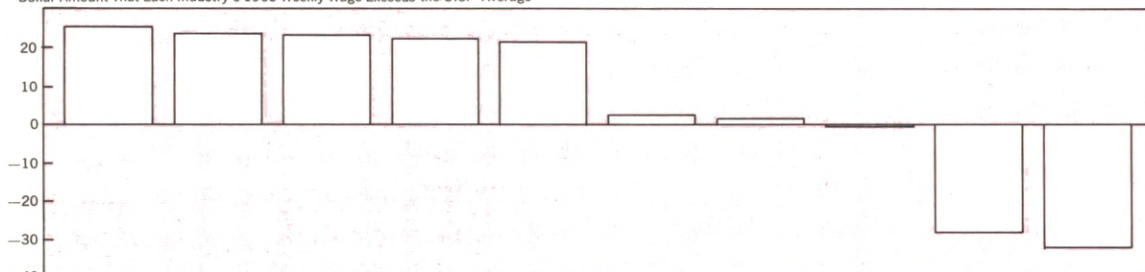


CHART 4

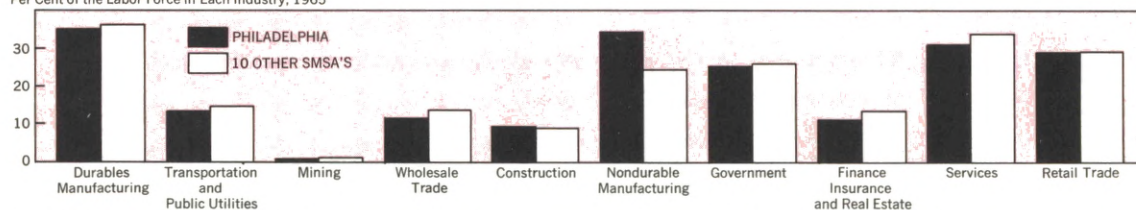
PHILADELPHIA EMPLOYMENT IS SLIGHTLY LESS CONCENTRATED IN HIGH-WAGE INDUSTRIES

The less-than-average concentration in durables manufacturing, transportation and public utilities, and wholesale trade puts the average wage in the Philadelphia area about 1% below that of other areas.

Dollar Amount That Each Industry's 1965 Weekly Wage Exceeds the U.S.* Average



Per Cent of the Labor Force in Each Industry, 1965



*U.S. wages are used for industry comparisons because of unavailability of reliable metropolitan area figures on an industry basis.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings Statistics for States and Areas, 1939-1965, and for the United States; U.S. Dept. of Commerce, Office of Bus. Economics, Survey of Current Business.

offset the effects of industry and occupation mixes on the wage level.

4. Finally, wages of a Philadelphia worker, of a given (1) industry, (2) occupation, and (3) sex, are generally lower than those in other areas studied.

Industry mix—toward the lean side

Philadelphia has a bit less than its share of high-wage industry, at least as compared to other major areas (see Chart 4). This caused the average weekly wage in 1965 in Philadelphia to be about 1% lower than that of other areas.

A relative lack of employment in wholesale trade, transport and public utilities, and durables manufacturing (especially transportation equip-

ment) accounts for most of the low-wage concentration. On the other hand, relatively less employment in such low-wage industries as services, and finance, insurance and real estate helps raise Philadelphia's average wage. The same is true of Philadelphia's greater-than-average concentration in certain high-wage industries, such as petroleum and chemicals. Overall, though, the *industrial* composition of employment produces a lower average wage than in most other major metropolitan areas.

Occupation mix—another slight minus

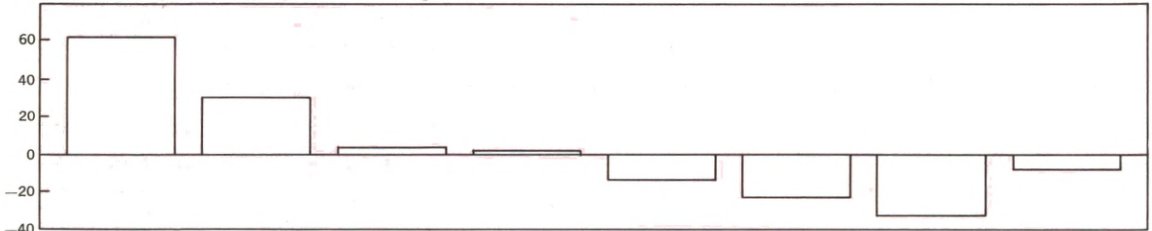
In 1960, Philadelphia employers hired relatively fewer high-skilled workers than did employers in other areas, as indicated in Chart 5. This placed

CHART 5

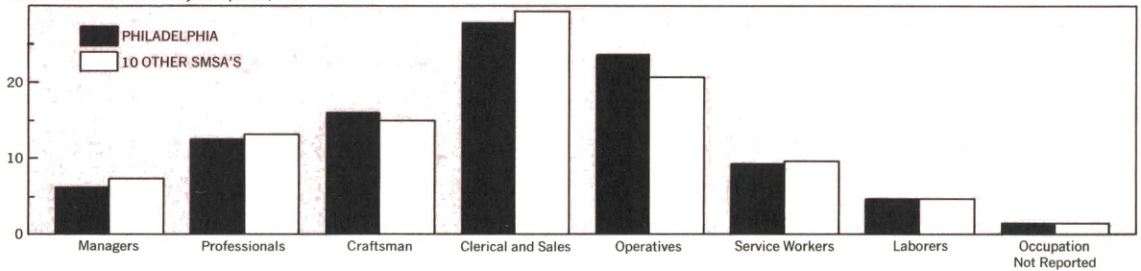
PHILADELPHIA WAGE EARNERS WERE LESS CONCENTRATED IN THE HIGH-WAGE OCCUPATIONS IN 1960

With the exception of craftsmen and service workers, employment in Philadelphia is under-concentrated in high-wage occupations, and over-concentrated in low-wage occupations.

Dollar Amount the Occupational Weekly Wage Exceeded the Average in 1960



Per Cent of the Labor Force by Occupation, 1960



Source: U.S. Department of Commerce, Bureau of the Census, 1960 Census of Population.

the average weekly wage in Philadelphia another 1% below average. Nineteen sixty is not 1965, and thus the wage figure from the earlier year may not be strictly accurate as a measure of the effect of occupation on wages in 1965. But, it is the best we have. It would suggest that the effect of occupational mix in Philadelphia is about as important as that of industry mix, and is in the same direction.

Employment in Philadelphia included decidedly fewer workers in such high-wage occupations as professionals, managers, and clerical workers than did other areas. This, combined with an extremely large number of operatives, pushed the wage figure down strongly. On the other hand, Philadelphia had a relatively large proportion of craftsmen, a higher-than-average wage group. The emphasis in Phila-

delphia on manufacturing appears to be the major explanation, but not the complete explanation. If area industries had the same sort of workers as their counterparts in other areas, Philadelphia would have more clerical workers, more craftsmen, but less operatives. Thus, compared to other areas, Philadelphia employers seem to settle for less-skilled workers—even within a given industry.

Sex mix—a bit less female

Females receive less pay than males, and Philadelphia employment is slightly less female than that of the other areas. This is especially noteworthy in view of the greater-than-average concentration of Philadelphia employment in such strongly female industries as textiles and apparel.

When full account is taken of these and other

industries, Philadelphia turns out to have even less female employment than expected. Thus, when the industry mix is taken into account, the figures indicate a wage level about $\frac{1}{2}\%$ above other areas as a result of less-than-expected female employment.

Totaling the mixes³

When the separate effects on the wage level of industry mix, occupational mix, and male-female balance are added up, the picture looks like this:

Effect of industry mix	— 1%
Effect of occupational mix	— 1
Effect of male-female mix	+ $\frac{1}{2}$
Effect of other factors	— 5
Total difference between wage level in Philadelphia and wage level in other areas	— $6\frac{1}{2}\%$

The unexplained 5%—by far the most important—is then the amount that Philadelphia employers save relative to what they would pay elsewhere.

Why the savings? Up to this point, we have been combining information on the *outcomes* of wage determination, i.e., the average wage levels of different occupations, industries, and sexes. The savings is what is left after allowing for these factors. Thus, to get at the question of this *net* difference it would be necessary to break open the mechanics of the process by which wage levels are determined—and through which differences occur. Although this is not attempted, a number of possibilities can be suggested.

1. Philadelphia may have a lower cost-of-living which would make the purchasing power of the lower Philadelphia wage comparable to that of a higher wage in other areas.

³ The figures on industry, occupation, and sex mix are not strictly comparable. Thus, the percentage effects must be regarded as approximations only.

2. Varying degrees of productivity of workers may make it financially easier or more difficult for employers to pay high wages.
3. Philadelphia has a higher unemployment rate, on the average, than other areas studied, which may allow employers to moderate their wage offers.
4. The less-than-average concentration of high-wage industry in the Philadelphia area may reduce the wage level all employers have to pay to gain a workforce (see technical note at the end of this article).
5. The degree of unionization in various areas may influence relative wage levels.

Some of these factors, the comparative cost-of-living, for example, cannot at present be measured reliably. Others would require intensive investigation to verify. Hopefully, further research will lead to definitive answers.

HOW PHILADELPHIA WAGES HAVE GROWN

Philadelphia wage levels have changed at about the same rate as those of other metropolitan areas. Between 1952 and 1965 they rose by 61% in Philadelphia compared with 60% in other areas. However, since employment growth has lagged, total payments of wages and salaries have lagged other areas in growth. The check-off of factors involved in the wage level *change* is:

1. Industry mix—Overall, the industry composition of employment has had practically no effect on increases in wage rates; Philadelphia had about the same wage rate difference from industry mix in 1952 as in 1965. Manufacturing moved toward such high-wage industries as chemicals, petroleum, metals, and printing in the 1952-1965 period, but the importance of manufacturing as a whole declined.

2. Occupational mix—Occupational changes from 1950 to 1960 (independent of industry changes) were about the same as those in other areas studied. Philadelphia employers tended to hire an increasing proportion of highly skilled workers, but so did employers in other areas.
3. Male-female shifts—Female employment expanded relatively less in Philadelphia than in other areas between 1950 and 1960. But after allowing for the change in the mix of industries, there was no significant difference between changes in Philadelphia and in other areas.
4. Other factors—Certainly, a number of other factors affected the change of wages. However, their effects balanced out to leave the increase in the Philadelphia wage level about the same as in other areas.

MEANING OF THE WAGE STORY

As pocket money has increased, consumers have wended their ways to different counters. They spend more on education, less on apparel; more on insurance, less on food. Partly as a result, manufacturing is decreasing proportionately as other sectors are increasing.

This change has had some ill effects upon the Philadelphia region, for manufacturing has long been its backbone. The sorts of manufacturing industries that have remained in Philadelphia after this shift, however, are the capital-intensive variety that hire skilled workers. Two major reasons for this shift are:

1. These industries are the fastest growing nationally; we would expect them to become important employers locally.
2. The wage level of Philadelphia tends to discourage local growth of labor-intensive industries, like textiles, that hire low-skill em-

ployees. While the area's wage level is below that of other metropolitan complexes, it is about 6 per cent *above* the national level. Industries like textiles that search for the lowest wages, *and* don't have to be around a large metropolis, see the area's wage rate as a disadvantage. In contrast, industries, like manufacturers of transportation equipment or drugs, that generally locate in metropolitan areas, view the Philadelphia rate as a real drawing card.

Attraction of these higher-productivity industries has a couple of advantages. First, they promise rapid expansion. Second, they often have high employment multipliers; that is, they support more employment in service and supplying industries for every employee they hire directly.⁴ Therefore, they tend to support more employment per new worker.

These industries are also creating a problem. Their demands are for skilled labor. This, plus the tendency for Philadelphia employers to hire more from the skilled occupations anyway, means a strongly growing demand for skilled labor in Philadelphia. The free labor supply—the unemployed—is largely unskilled, however. Consequently, there is a rapidly increasing need for training the unskilled.

Training programs would help satisfy the demands of new employers. Moreover, they would let workers qualify for better jobs and thus better wages. Finally, the wage gains derived from upgrading the labor force should not affect the wage attractiveness of Philadelphia for employers, since the gains would be a result of a reshuffling of occupational structure and not of a change in pay rates.

⁴ See "How Many Jobs Can One Job Make?" *Federal Reserve Bank of Philadelphia Business Review*, June 1966.

What will happen to the wage level? We have already noted the general decline of manufacturing both in Philadelphia and the nation. Manufacturing pays among the highest wages in the economy; its further decline in Philadelphia will act to retard the growth of wage levels. As Philadelphia producers continue their concentration in

high-productivity industries, however, enough industry-mix effect may occur to offset the downward pressure of the general decline of manufacturing. Workers will therefore probably find wage growth to be about as strong in Philadelphia as in other areas, and employers will continue to view the area's wage level favorably.

HIGH-WAGE FILTRATION EFFECT—A TECHNICAL NOTE

As areas get more high-wage industry, all employers, even those in typically low-wage industries, appear to increase the wage levels they pay (see Chart 6). The "high-wage industry concentration" measure (defined below) was computed in such a way that it should have had a direct 1-to-1 relation to actual wages paid. That is, when the "concentration" index increases by 1.0, actual wages should increase by one dollar. In fact, correlation of the index and actual wages showed that while the "concentration" led to an expected one dollar increase, in actuality a five dollar increase tended to occur.

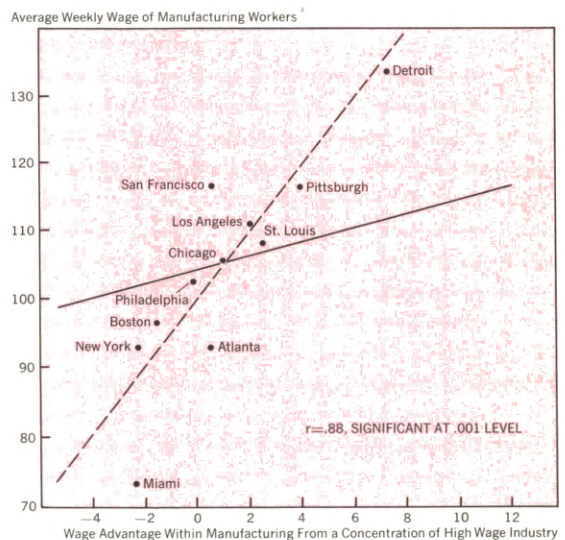
One possible interpretation of this is that high-wage scales filter out through the labor market to force low-wage paying industries to pay more wages. All industries in Philadelphia draw workers from the same labor pool (loosely defined)—they, in effect, compete with one another for workers. Thus, when a few of the employers raise their wage level, or when industries paying higher-than-average wages move into the labor market, other employers may raise their wages also. The competition may break down if unemployment is high, or if movement of workers among industries is restricted. Moreover, if high-wage industries use workers from a different occupationally or geographically defined labor force, the filtration effect will not occur, at least in the short run, because the low- and high-wage industries will not be competing against one another. Something like a wage filtration effect seems to occur generally, however, and acts to reduce the Philadelphia wage level at this time.

As noted in the text, at least in the near-term, a greater-than-normal shift to high-wage industries does not seem probable. Thus, the filtration effect will likely continue its present impact in Philadelphia. The sample used in this study is extremely

CHART 6

A CONCENTRATION OF HIGH-WAGE INDUSTRIES APPEARS TO LEAD TO ALL EMPLOYERS PAYING HIGHER WAGES.*

The solid line indicates the level of wages that should have prevailed in each area, based on the mix of high- and low-wage industries. Evidently, it does not describe the wage levels too well. The dashed line is the best statistical description of the wage levels. The fact that it is much steeper indicates that when a metropolis has a large proportion of high-wage industries, other lower-wage industries have to pay more for their workers—thus, raising the over-all average wage.



*A similar relationship was found in the wage-level change between 1954 and 1963. However, due to the small size of the sample, the finding must, at best, be regarded as a well defined hypothesis.

small, thus the finding must, at best, be regarded as a well defined hypothesis.

Interpretation of this finding rests largely on the form of the industry concentration measure. We develop this definition by a hypothetical example of a study of ten metropolitan areas. (The table below includes the data used in the computations for a hypothetical metropolitan area).

Industry	Percent distribution of employment in metropolitan areas 1 to 10	Percent distribution of employment in metropolitan area no. 1	Average wage— in metropolitan areas 1 to 10
A	30%	20%	\$110
B	40	40	100
C	30	40	90
	<u>100</u>	<u>100</u>	

The first column is the percentage distribution of employment of all ten areas. This is the basis of comparison for industrial structure. The second column records the industrial structure of the particular metropolitan area for which we are computing the index. Employment in this area is less

concentrated industry **A** and more concentrated in industry **C**. In reference to the third column, the 10-area average wage of each industry, we can see that **A** is a high-wage industry and **C** a low-wage industry; thus, the example metropolis is under-concentrated in high-wage industry. What should be the dollar wage impact of this under-concentration? To find this we first compute the average wage of the example area, using the all-area industry wages of column three. This is done by multiplying the percent of employment in each industry (in decimal form) by the average wage in each industry: average wage of example area = $.20 \times 110 + .40 \times 100 + .40 \times 90 = \98.00 . We compare this to the average wage of all areas = $.30 \times 110 + .40 \times 100 + .30 \times 90 = \100.00 , to get the concentration index = $\$98.00 - \$100.00 = -\$2.00$. This index measures what a particular area's relative wage level would be if the area differed only by its industrial structure from all 10 areas studied. Moreover, by using the 10-area average wages for each industry we have largely eliminated the various factors occurring in each labor market, leaving only the unique effect of each industry on its own wage level.

During most of 1966 heavy demand for funds coupled with a restrictive monetary policy resulted in rising interest rates. Along with other capital markets, the market for state and local government bonds was buffeted by demand and supply pressures. And in the case of municipals, the behavior of commercial banks played an especially important role. Here we take a look at the implications of the relationship between . . .

COMMERCIAL BANKS AND THE MUNICIPAL BOND MARKET

by William F. Staats

In the past ten months, yields on municipals have gone from 3.53 per cent to 4.24 per cent—the highest in over 30 years—and back down to 3.40 per cent.¹ The upward movement was not exactly unexpected in the period of heavy demands for funds; nevertheless, the dimensions of the rise and of the recent decline have been somewhat of a surprise. Although many forces have been at work, the contribution of investment policies of commercial banks perhaps has the most far-ranging implications—for banks, for the municipal bond market and for monetary policy.

Banks' behavior

Commercial banks' behavior has had a two-pronged effect on yields of tax-exempt bonds. First, banks substantially reduced acquisitions of new municipals in 1966. In contrast with 1965 when commercial banks bought about 75 per cent of new state and local government bonds, in 1966 banks absorbed less than 33 per cent. Second, some banks did not replace maturing municipals while others dumped large amounts of municipals in the secondary market in order

to satisfy business loan demand. From September 30, 1965 to September 30, 1966, the nation's one hundred largest commercial banks reduced holdings of municipals by nearly 2 per cent. Earlier in 1966, holdings by the largest banks had fallen more than 4 per cent from the end of the third quarter of 1965. One or two individual banks slashed their investment in tax-exempts by as much as 35 per cent.

The leveling-off of bank holdings of state and local government bonds during 1966 followed five years of uninterrupted rapid acquisition of such bonds by a reserve-rich banking system. During the first half of the decade, the volume of municipal bonds owned by commercial banks had jumped 118 per cent as banks sought a profitable haven for funds.²

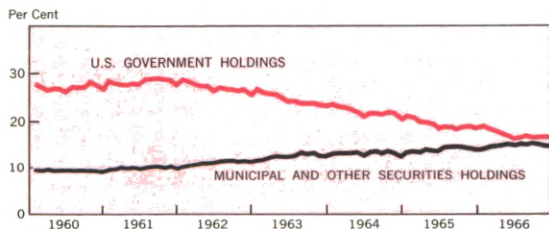
During the past three months of easing monetary conditions, commercial banks apparently have returned to the market with a large appetite for municipals. While the figures are not yet in, preliminary reports and dealers' com-

¹*Bond Buyer index of 20 municipal bonds.*

²*For a discussion of the patterns and dimensions of bank investments in municipal bonds, see "The Move to Municipals," Federal Reserve Bank of Philadelphia Business Review, September 1966.*

CHART 1

MUNICIPAL AND OTHER SECURITIES AND U.S. GOVERNMENT SECURITIES AS PROPORTION OF TOTAL DEPOSITS



Source: *Federal Reserve Bulletin, all commercial banks.*

ments indicate that bank purchases have contributed strongly to the recent sharp drop in yields.

Experience of the past six years suggests a shift in the nature of bank municipal investments. Traditionally, banks purchased state and local government bonds with the intention of holding them to maturity, counting on U. S. Government securities as a rather temporary repository of funds not needed for loans. When loan demand built up, banks simply quit adding to their small stock of municipals. Now, however, many banks are beginning to view municipals as somewhat more cyclical investments and not only stop acquiring new issues but sell some of their holdings when lending opportunities increase. Chart 1 indicates the extent of the substitution of municipal and other securities for Government securities which has occurred in bank portfolios over the past six years. What does this policy shift mean to the market for municipals?

Implications for the market

As shown in Chart 2, the percentage of outstanding state and local government securities owned by commercial banks rose sharply from 25.3 per cent in 1960 to 38.5 per cent in 1966. This indicates that not only an increasing absolute

amount but also a greater proportion of outstanding bonds are subject to cyclical liquidation by commercial banks. Moreover, the municipal holdings of the nation's 100 largest commercial banks climbed from 10 per cent of the total outstanding at mid-1960 to 17.6 per cent at mid-1966. The increased concentration of municipal securities in the largest banks—those banks which would be more subject to spurts in business loan demand—may also result in greater cyclical swings in the municipal bond market.

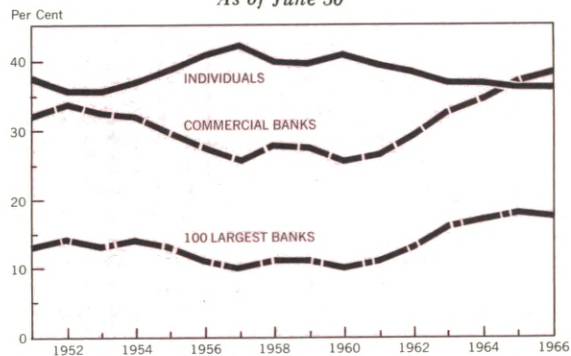
Commercial banks are likely to become even more dominant in the municipal securities market. During the next 8-year period, banks are expected to boost their holdings of state and local government obligations by 170 per cent to about \$107 billion. It is anticipated that banks will own about 51 per cent of the total of municipals outstanding at the end of 1975.³ Of course,

³Estimates by Wray O. Candilis, Department of Economics and Research, American Bankers Association, for the Joint Economic Committee. See State and Local Public Facility Financing, Vol. II, Joint Economic Committee (Washington: Government Printing Office, 1966), pp. 337-350.

CHART 2

PERCENTAGE OF TOTAL STATE AND LOCAL SECURITIES HELD BY INDIVIDUALS, COMMERCIAL BANKS, AND THE 100 LARGEST BANKS

As of June 30



Source: Computed from data supplied by the United States Treasury Department.

these projections are based upon several assumptions which may or may not turn out to be valid.

The increasing importance of state and local government obligations in bank portfolios, coupled with bank willingness to liquidate the bonds in periods of intense loan demands, points to greater fluctuations of municipal bond yields over the business cycle. Commercial bank liquidation of municipal obligations in periods of restrictive monetary policy tends to push yields on tax-exempt securities up faster than they would have risen in the past. Conversely, during periods of an expansionary (or a less restrictive) monetary policy, heavy purchases of municipals by banks tend to push rates down more rapidly than they would have dropped before extensive bank activity in the market.

During the days and weeks of peak bank liquidation of state and local obligations in 1966, the continuity of a usually adequate municipal market was disrupted. Evidence indicates that in times of rapidly falling municipal bond prices there may be as much as 6 points (\$60 per thousand dollar bond) difference in prices of two consecutive trades in the same bond. Moreover, uncertainty as to the magnitude of bank liquidation in these periods tends to cause some dealers to refrain from even placing bids on bonds offered for sale. The effect, of course, is an accelerated decline in bond prices. On the other hand, when commercial banks jump into the market and vigorously acquire municipal bonds as in January 1967, prices tend to increase sharply, pushing yields down very rapidly.

These fluctuations in municipal bond prices could be moderated if a greater number of other investors were standing in the wings waiting to buy or sell municipals. Because heavy bank liquidation usually occurs when other institutional investors are also strapped for funds, the burden

of market stability falls upon individual investors. While the low tax-exempt yield on state and local obligations makes them particularly suitable for taxpayers in the higher tax brackets, perhaps more individual investors could be attracted to municipals. In the absence of more market participants, commercial bank investment policies seem to be the key to the behavior of municipal bond rates.

Implications for monetary policy

Experience of commercial banks in the municipal bond market of 1966 suggests that the "locked-in effect" apparently is not a strong deterrent to commercial bank liquidation of municipal securities and, hence, expansion of other credit. During the 1950's the idea was developed that investors would not liquidate securities if faced with the prospect of a capital loss. Undoubtedly, policies of many banks are influenced by this consideration. Economic as well as institutional factors in 1966, however, persuaded many others to take capital losses in order to free funds for meeting loan demand. Some capital losses sustained by banks in 1966 ranged as high as 10 and 12 per cent of cost of certain municipal bonds. Monetary authorities cannot rely heavily on bank reluctance to take capital losses to inhibit expansion of business loans.

A second implication for monetary policy is that the occasionally large price fluctuations of municipals caused by bank investment behavior tend to transfer some of the impact of restrictive monetary policy to state and local governments. A restrictive policy, if it is to be effective, must curtail expenditures somewhere in the economy. Exactly where the burden falls depends on many things, including the ability of various sectors of the economy to compete for a limited supply of funds. In 1966 some munic-

ipal governments decided to postpone spending for capital projects. Those state and local governments which proceeded with financial plans had to pay higher rates than would have been required in the absence of reallocation of bank credit.

A third implication for monetary policy stems from the occasional discontinuity in prices arising largely from bank activity in the municipal bond market. Changes in interest rates are an important channel through which monetary policy exerts its influence. But sudden, heavy and intense bank liquidation of state and local governmental obligations may tend to disrupt the operation of capital markets generally as fluctuations are transmitted from one market to another. Again, the magnitude of any short-run disorder is likely to increase as banks buy and sell larger proportions of outstanding municipal bonds.

Prospects for the future

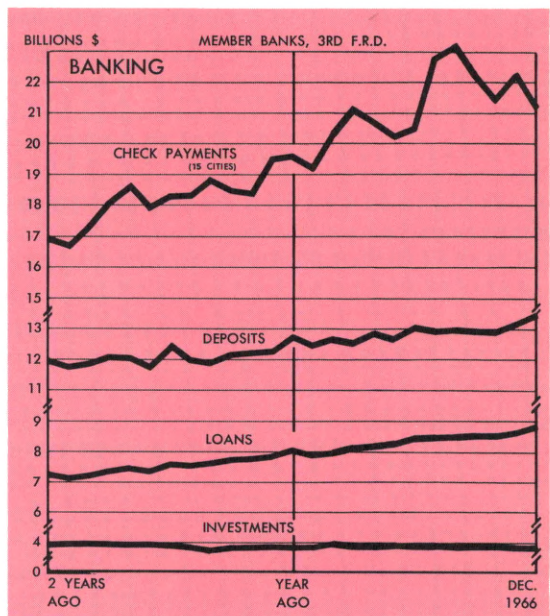
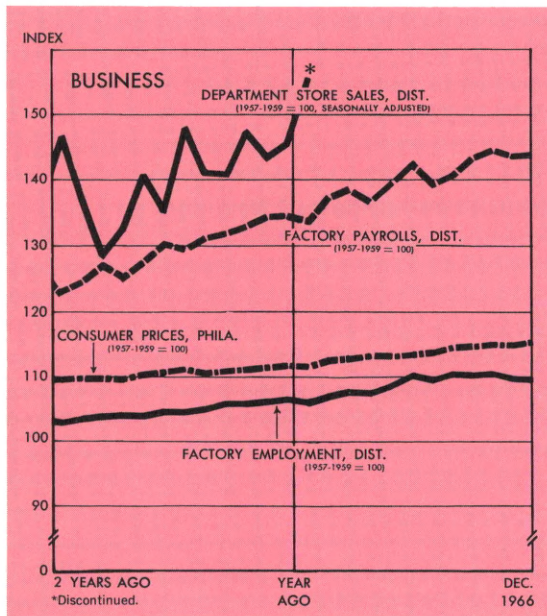
Further development of the municipal market may, in time, tend to moderate these fluctuations. For example, municipal bond dealers may seek

increasingly to expand interest in tax-exempt bonds among a larger number of noninstitutional investors rather than selling their wares primarily to institutions which (when they are buying) purchase large volumes of securities. This could result in a greater proportion of state and local obligations being placed in "strong hands" of individuals who are not likely to dump the bonds in times of a restrictive monetary policy. Moreover, increasing personal incomes may make the tax-exempt feature of municipals attractive to more investors. Development and promotion of municipal bond funds also may improve the "breadth" of the market for tax-exempt securities.⁴

As the volume of municipal bonds outstanding continues to increase at a rapid clip, more participants probably will be attracted to the market. This would moderate to some extent the effects of commercial bank activity in the market for state and local government bonds.

⁴*Municipal bond funds and their impact on the market are discussed in "A New Package for Municipal Bonds," Federal Reserve Bank of Philadelphia Business Review, November 1966.*

FOR THE RECORD . . .



SUMMARY	Third Federal Reserve District			United States		
	Per cent change			Per cent change		
	Dec. 1966 from		12 mos. 1966 from	Dec. 1966 from		12 mos. 1966 from
	mo. ago	year ago	year ago	mo. ago	year ago	year ago
MANUFACTURING						
Production				- 3	+ 7	+ 9
Electric power consumed	- 3	+ 6	+ 9	.....	.....	.....
Man-hours, total*	- 1	+ 1	+ 4	.....	.....	.....
Employment, total	0	+ 2	+ 3	.....	.....	.....
Wage, income*	0	+ 6	+ 8	.....	.....	.....
CONSTRUCTION**	-23	-26	- 2	- 8	-14	+ 2
COAL PRODUCTION	+ 1	+ 2	- 1	+ 3	+ 6	+ 3
BANKING						
(All member banks)						
Deposits	+ 3	+ 6	+ 7	+ 3	+ 5	+ 7
Loans	+ 2	+ 9	+10	+ 2	+ 8	+12
Investments	0	- 1	- 1	+ 2	- 1	0
U.S. Govt. securities	0	- 9	- 9	+ 3	- 6	- 8
Other	0	+ 9	+11	+ 1	+ 6	+10
Check payments***	- 5†	+ 8†	+16†	+ 5	+15	+16
PRICES						
Wholesale				0	+ 2	+ 3
Consumer	0‡	+ 3‡	+ 3‡	0	+ 3	+ 3

LOCAL CHANGES Standard Metropolitan Statistical Areas*	Manufacturing				Banking			
	Employment		Payrolls		Check Payments**		Total Deposits***	
	Per cent change Dec. 1966 from		Per cent change Dec. 1966 from		Per cent change Dec. 1966 from		Per cent change Dec. 1966 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
Wilmington	0	+ 3	+ 1	+10	-20	+26	+10	+ 1
Atlantic City .....	.....	.....	.....	.....	- 4	- 1	- 1	+12
Trenton	- 1	0	- 2	+ 3	+21	+42	0	+ 8
Altoona	0	+ 7	0	+ 9	+ 3	+ 6	0	+10
Harrisburg	- 1	+ 4	- 1	+ 7	- 3	+ 2	+ 4	+ 9
Johnstown	0	+ 5	- 3	+ 3	- 2	- 1	+ 2	+ 7
Lancaster	0	+ 6	- 1	+ 9	- 6	+ 4	+ 1	+ 9
Lehigh Valley ..	- 1	0	- 1	+ 6	- 4	0	+ 2	+ 4
Philadelphia	+ 1	+ 3	+ 2	+ 7	- 3	+ 4	+ 3	+ 8
Reading	- 2	- 3	- 4	+ 1	+ 3	- 5	- 1	-39
Scranton	- 1	+ 3	0	+ 8	- 1	0	+ 2	+ 8
Wilkes-Barre	- 1	+ 8	- 3	+12	0	+ 7	+ 2	+ 8
York	0	+ 2	- 1	+11	- 9	+ 8	+ 2	0

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

†15 SMSA's
 ‡Philadelphia

*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.