

# BUSINESS REVIEW



SEPTEMBER 1969

FEDERAL RESERVE BANK OF PHILADELPHIA

Taking Aim at Tax-Exempts  
Philadelphia's Working Women  
Inventory Adjustment and  
Inflationary Expectations

### Taking Aim at Tax-Exempts

*. . . Proposals currently being debated in Congress would modify tax exemption of interest on municipal bonds and could have substantial effects on the equity of the nation's tax structure.*

### Philadelphia's Working Women

*. . . More and more women in Philadelphia are entering the labor market, but many face greater problems than men in competing for jobs and income.*

### Inventory Adjustment and Inflationary Expectations

*. . . Inventory adjustment could cause a deeper and more protracted slowdown in 1970 than most economists now are willing to predict.*

## ERRATA

The chart labeled "Employment of Women by Industry, 1968" on page 13 should appear on page 14 in place of "Labor Force Participation Rates, 1968;" this chart, in turn, should appear at the top of page 13.





Interest income from bonds issued by state and local government units has always been exempt from Federal income tax. This year, however, desire for tax reform has swelled the ranks of those who are . . .

## Taking Aim at Tax-Exempts by William F. Staats

---

Stalking the municipal bond has become a favorite pastime of the 91st Congress, although for many years devotees of this sport were largely confined to the Treasury Department. This new popularity has prompted loud protests from "conservationists," particularly officials of state and local governments and participants in the municipal bond market. Although it is by no means sure that interest paid on state and local securities will lose its tax-exempt status, a new sentiment and a number of recent innovative proposals have made it more likely than ever before that income from municipals will someday be taxed by the Federal Government. But, unless specific proposals are carefully selected, the reform package may not achieve desired objectives and may, in fact, have perverse impacts.

### WHY THE FUSS?

Proposals to eliminate or to curtail tax-exempt bonds vary in detail but share the objective of making the tax system more equitable by closing a loophole.<sup>1</sup>

Many observers, concerned about the inequities of the nation's income tax structure, believe the tax-exempt feature of municipal bonds benefits primarily banks and rich individuals at the expense of other taxpayers. Commercial banks, attracted by tax-free income, hold large volumes of municipals. State and local bonds also are popular among the well-to-do. As shown in the table, the greater one's income, the more likely he is to own municipals. Actually, for taxpayers in tax brack-

---

<sup>1</sup> Treasury officials also are concerned with structural problems of the municipal bond market. It is believed that elimination of the tax-exempt feature of municipal bonds would improve the market, thereby benefiting cities and states that borrow.

## ORIGIN OF EXEMPTION

Exactly a century and a half ago, the Supreme Court established the principle that one level of government could not tax another. In the classic case, *McCulloch vs. Maryland*, Chief Justice John Marshall presented the doctrine that powers of the Federal and state governments to tax one another must be limited in order to keep one government from destroying another.

Those who defend exemption from Federal taxation of interest on state and local debt look to Marshall's opinion as the cornerstone of their position. A similar decision was enunciated, again by Marshall, in *Plowden Weston vs. Charleston*. This case involved a tax levied by the city council of Charleston on United States Government securities. The tax was declared invalid because it interfered with the Government's constitutional power to borrow money:

The tax on government stock is thought by this court to be a tax on the contract, a tax on the power to borrow money on the credit of the United States, and consequently, to be repugnant to the constitution.

These cases dealt mainly with the power of states and localities to tax the Federal debt and foreshadowed the Pollock case of 1895. In *Pollock vs. Farmers' Loan and Trust Company*, Marshall's earlier language was applied explicitly to taxation of interest from municipal bonds. A Federal tax on income derived from bonds issued by a municipal corporation was interpreted as unconstitutional because such tax was held by the Supreme

ets below usually about 30 per cent, municipals are not attractive because tax savings do not offset lower yields of these securities relative to yields on United States Government or corporate bonds of approximately comparable maturity and quality.

Given the usual differential in yields of taxable bonds and tax emempts, an investor in about the 30 per cent tax bracket is indifferent toward investing in municipals or, say, corporate bonds. In that bracket, his return on a corporate security after deducting income tax usually would be roughly equal to the tax-free

**The Proportion of Consumer Units Holding State and Local Government Securities in Each Income Category Increases as Income Increases ...**

1962 Income (Dollars)	Per Cent
0 - 2,999	*
3,000 - 4,999	*
5,000 - 7,499	*
7,500 - 9,999	1
10,000 - 14,999	*
15,000 - 24,999	2
25,000 - 49,999	7
50,000 - 99,999	24
100,000 and over	67

\* Less than one-half of 1 per cent.

Source: Dorothy S. Projector and Gertrude S. Weiss, "Survey of Financial Characteristics of Consumers," Board of Governors of the Federal Reserve System, Washington, D.C., 1966.



Court to be a tax on the power of the state and its instrumentalities to borrow money. The majority opinion stated:

As the states cannot tax the powers, the operations, or the property of the United States, nor the means which they employ to carry their powers into execution, so it has been held that the United States has no power under the Constitution to tax either the instrumentalities or the property of a state.

In the court's view, taxation of income derived from bonds, in effect, meant taxation of the bonds themselves and was a violation of the states' power to raise revenue necessary for operation. Other cases—for example, *Mercantile Bank vs. New York*—reaffirmed the Supreme Court's earlier position.

Tax exemption of income gained through municipal securities remains a feature of Internal Revenue codes to the present day. And because of the legal background, legislation removing tax exemption would probably face extensive review by the judiciary.

Law often appears to work in mysterious ways, and it is impossible to predict what the outcome of any such judicial review would be. There is a precedent for a major change in legal opinion on a very similar issue, however.

Originally, about the same argument developed in these cases was applied to wages paid by states to their employees. Those wages were exempt from Federal income tax until that exemption was eliminated about three decades ago. Thus, labor income paid by state and local governments is not exempt from Federal income tax, but interest income is. Some view this as paradoxical, if not illogical.

income he would receive from a state or local obligation having comparable characteristics. So, municipals carry an implicit tax of about 30 per cent.

The concept of implicit tax is often overlooked, and wealthy investors are widely believed to be escaping taxation completely when they buy municipal bonds. But they are not. For example, an investor in the 30 per cent tax bracket can invest in a corporate bond which yields, say, 7.10 per cent. His interest income from a \$1,000 bond would be \$71, and he would pay an income tax of 30 per cent, or \$21.30. His after-tax return would be a shade under 5 per cent. And that return would be

just about equal to what he could get on a tax-exempt municipal bond of comparable quality.

This investor pays no tax on the interest he would get from a municipal security, but he would get a yield roughly 30 per cent less than that available on a corporate issue. After taxes, each type of security carries the same yield for a person in the 30 per cent tax bracket. In the case of a corporate bond, his tax would be paid in cash; in the case of the state or local issue, his implicit tax is gross income foregone. This investor clearly is not getting away with anything by investing in municipals—but his wealthier neighbor who is in a higher tax bracket may be.



Assuming the neighbor is in the 60 per cent tax bracket, Uncle Sam gets three-fifths of each additional dollar of taxable interest received by the taxpayer. This fellow, too, can invest in corporate or municipal securities, but he would lean toward municipals if after-tax yield was his sole consideration. Here's why. If he bought the corporate issue, his gross return also would be \$71 per \$1,000 bond, or 7.10 per cent. Of this, \$42.60 would be paid in taxes, leaving him with an after-tax yield of \$28.40, or 2.84 per cent. Now, if he invested in the municipal bond yielding 5 per cent, his net return would be \$50. He would pick the municipal issue because of the larger net return. The point is, however, that in buying the municipal bond, this investor would not get the equivalent of the corporate yield after a 60 per cent tax—rather, he would get the equivalent of a corporate yield after a 30 per cent tax. So, he would have an implicit tax of only 30 per cent. Therefore, he would be getting off with a *reduced* tax bite if he invested in a tax-exempt security.<sup>2</sup>

The tax-exempt feature of municipal securities is a boon to state and local governments because it enables them to borrow money at lower rates than would prevail in the absence of tax exemption. In effect, the implicit tax is "paid" to state and local governments. This implicit tax benefits these governments through reduced interest expenses instead of through increased revenues.

The implicit tax depends on the size of the differential between yields on taxable securities and those on municipals. Historically, this dif-

ferential usually has been about 30 per cent, but it fluctuates widely. For example, when interest rates rise, yields on municipals tend to climb faster than yields on taxable issues. So, the differential narrows, and the implicit tax shrinks. As the differential narrows, the benefit of tax avoidance is opened to people in lower income brackets. Of course, those in higher brackets would reap relatively greater benefits than those in lower brackets.

Although state and local governments benefit from lower interest rates on tax-exempt securities, the Federal Government is on the short end of the stick. Officials of the United States Treasury claim that the Federal Government loses about \$2 billion each year because interest on municipals is not taxed. That is, if the Treasury were to collect income tax on each dollar of interest income from municipals at the marginal tax rate of the recipient, revenues would be boosted by roughly \$2 billion.<sup>3</sup> The prospect of obtaining this additional income is appealing to Treasury officials and to many Congressmen.

Any additional revenues pouring into the

<sup>2</sup> Some of that \$2 billion possibly could evaporate if the ownership distribution of municipals and other income-producing assets would change following elimination of the tax exemption. Taxable securities issued by state and local governments may be attractive to low-income individuals, pension funds, and tax-exempt institutions which now do not own them. It is possible that the potential increase in receipts of the Federal Government would be diminished if certain shifts in ownership of municipals and other assets would occur. However, such shifts probably would have only a slight effect on the potential increase in total Federal revenues.

In order for investors to buy taxable municipals, they would have to curtail purchases of corporate or Government securities. As demand for these securities eases, their yields would increase, raising the return for those who invest in them.

So, elimination of the tax-exempt feature does not necessarily mean that the Federal Government will collect all of its anticipated increased revenue from holders of municipals—rather, some of it may stem from higher yields on already taxable non-Government securities.

<sup>3</sup> The lower an investor's tax bracket (below usually 30 per cent), the stronger is his preference for taxable investments over municipals. Conversely, the higher his bracket (above 30 per cent), the greater is his preference for municipal issues over taxable investments.



Federal coffers because of elimination of tax exemption on municipal securities would not be all gravy for taxpayers in general because borrowing costs of state and local entities would rise. Federal taxpayers are also state and local taxpayers. So, some of the benefit of additional Federal revenues would be wiped out either by higher borrowing costs which taxpayers must make up at the state and local level or, at the Federal level, by a subsidy paid to borrowing political subdivisions.

Aside from effects on the several levels of government, there will be distributional effects among different taxpayers as well. The effective tax structure at the Federal level is at least somewhat progressive (and it would be more so in the absence of loopholes), while at the state and local level the tax structure is more regressive.<sup>4</sup> Hence, any increase in the financial burden of state and local entities means an increased burden for lower-income earners, mainly property owners (as well as consumers in areas having a sales tax).

The extent of shifts of burden among governmental levels and, therefore, of redistributions among different groups of taxpayers depends in part upon what changes in the capital markets would flow from a change in the tax-exempt feature of municipal bonds. Although it is not possible to spell out exactly how the several proposals for reform would affect capital markets, we can trace some of the more likely developments, and show their probable effect upon the equity objective of tax reform.

<sup>4</sup> A progressive tax structure takes relatively more from high-income people than from low-income taxpayers, and a regressive tax takes relatively more from low-income people than it takes from those with higher incomes.

## IMPACT ON CAPITAL MARKETS

Each hunter stalks the tax-exempt feature of municipal bonds with his favorite weapon, ranging in potential impact from slingshot to bomb. There is an almost bewildering array of reform proposals, variations of proposals, and combinations of proposals. They are in different stages of the legislative process. Some are still being formulated in the minds of legislators and Treasury officials; others have been passed by the House of Representatives and are now being studied in the Senate.

Despite their dissimilarities, all reform proposals employ one of two tactics—compulsion or inducement. Under the compulsion tactic, tax exemption is simply removed; under the inducement tactic, state and local borrowers are given a choice of selling tax-exempt debt or taxable securities—but they are encouraged to tap the taxable market by the promise of a subsidy to offset higher interest rates incurred there.

**Elimination of tax-exemption.** Proposals designed to reduce or eliminate the tax-exempt feature of municipal bonds would have a strong impact on markets. This impact would show up in the rates of interest on bonds. Two things would dominate the reaction of markets to a change in the tax-exempt status of state and local securities: (1) preferences for different types of capital market instruments, and (2) shifts out of capital markets.

Should the entire exemption be eliminated either by compulsion (which is not contemplated seriously now) or by inducement (which is very much contemplated), demand for municipal bonds at current rates would disappear. Before buying municipals, investors probably would require interest returns as high or higher



than those obtainable from United States Government securities or corporate bonds.

Just how taxable yields on municipals would compare with those on other instruments in the capital markets would depend largely on investors' preferences. Given characteristics such as maturity and coupon rate, these preferences turn on considerations of risk. Federal securities are considered to be free of credit risk—there is no uncertainty that those securities will be paid off at maturity. There is some risk, however slight, that any municipal bond will not be paid off. Moreover, a highly developed market for Government obligations—particularly those with short maturities—makes them very marketable and liquid. For these reasons, yields on Federal Government securities would be lower than yields on taxable municipals, just as Federal issues now yield less than corporate securities.

An important question is whether investors would judge municipals to be riskier than corporates. Perhaps they would feel safer with corporate bonds because of the possible negative effects of the highly publicized urban crisis. Executives of corporations likely enjoy greater confidence of investors than do politicians struggling to run governmental entities. Major corporations probably have a more dynamic image than do cities and states. And, in the face of a "taxpayers' revolt," the probability of municipalities raising large amounts of new revenue via taxes is not great.

Commercial banks, which over the past nine or ten years have come to dominate the municipal market, probably would prefer to hold some state and local debt regardless of yield or market conditions. There always have been close ties between banks and the communities they serve. Motivated by a civic spirit which they

hope means goodwill and future profit, banks often support their communities by investing in municipal bonds. Perhaps more often, those investments are made in order to land the deposit account of a borrowing municipality. It is estimated that state and local governments have more than \$15 billion in demand deposit accounts in the nation's banks. Most bankers would be happy to take a bit lower yield on municipals if that would enable them to get a city's account.

Structural differences among segments of the capital markets may have a fairly strong influence upon investor preferences. For some investors, corporate bonds are attractive because they are term securities—that is, they are paid off in a lump sum at maturity out of a sinking fund. In contrast, municipals are issued in serial form with a portion of the entire issue coming due each year for, typically, twenty years. Also, corporate issues usually are larger than state and local issues. Institutional investors often find portfolio management more efficient if sufficiently large blocks of a given issue are available. Many investors believe the secondary market for corporate obligations is superior to that for municipals. Although marketing channels and facilities for municipals are well developed, the dominant role of commercial banks makes the market subject to sharp cyclical pressures.

These factors, as well as others, might cause investors on balance to prefer corporate debt over that of municipalities if interest rates were identical. To get investors to take taxable state and local obligations, it may be necessary to offer higher rates than those prevailing on corporate securities having approximately the same maturity and rating.

But demand for taxable municipals depends not only upon investor preferences among capital



market instruments. Demand depends, in part at least, upon preferences for other investment alternatives. For example, if state and local securities were stripped of the tax-exempt feature, some investors formerly channeling funds into the municipal market may choose to hold some other asset, such as common stocks or real estate. Commercial banks may beef up loans with some of the funds that now are put into the municipal market and they may find new tax loopholes outside the traditional sphere of banking. Banks, of course, are subject to regulatory constraints which may preclude rechanneling of much of the money away from the municipal markets. Additional research is required to determine how extensive these shifts out of capital markets might be. But it seems likely that such shifts would occur, and it would appear that they would boost interest costs for all types of borrowers.<sup>5</sup>

In summary, elimination of the tax-exempt feature of state and local bonds likely would raise the interest rate on such securities at least as high as—and probably higher than—yields on corporate securities. However, should municipal rates fail to rise sufficiently, given investors' risk preferences, there would be a substantial shift of funds out of capital markets and into tax-sheltered assets.<sup>6</sup> And that would cause a general increase in rates on all securities in the capital markets. In that case, corporations and the Federal Government likely would bear some of the burden of tax-reform measures which erase the tax exemption of state and local securities.

<sup>5</sup> See David J. Ott and Alan H. Meltzer, *Federal Tax Treatment of State and Local Securities*, (Washington, D.C.: The Brookings Institution, 1963), pp. 38-41.

<sup>6</sup> Tax legislation now being deliberated in Congress would shrink the number of tax-sheltered alternatives and reduce the efficacy of many of the ones remaining, thereby curtailing tax avoidance.

**Elimination with subsidy.** Provisions employing the inducement tactic to eliminate the tax-exempt character of state and local securities were passed in the House of Representatives and currently are being debated in the Senate. If the provisions become law, Federal policy will be to encourage other governmental entities voluntarily to issue taxable debt. In return, the Federal Government would subsidize interest expense incurred by borrowing governments. The bill passed by the House of Representatives would offer the Federal subsidy regardless of the project financed or of the issuer's ability to pay.

In terms of the impact on capital markets, elimination of the tax-exempt feature through compulsion rather than inducement would be preferable. The inducement tactic (relying solely on subsidizing interest expense for taxable state and local debt to lure municipalities into the taxable market) initially could weaken the market for state and local issues by splitting it into two parts—the conventional tax-exempt market and the new taxable one. The new taxable instrument at the outset would have to fight for investor acceptance. The inducement tactic would create additional uncertainty in the municipal market because investors would not know which borrowers would choose to issue taxable bonds in the future and what volume of taxable issues would be sold. These factors would affect prices on securities in the secondary market. For example, a future glut of taxable municipals could push down prices of outstanding taxable municipals.

Another cause of uncertainty is the possible variation in the size of the subsidy. However, if the Federal Government simply treated all municipal issues equally, the quality of the markets likely would not deteriorate. Of course,



in the absence of subsidy or guarantee sweeteners, reform proposals would meet even heavier resistance from officials of state and local governments than they are now.

**Partial elimination of tax exemption.** Some proposals now being considered in Congress would use the compulsion tactic to take part of the tax-exempt benefit away from individual investors while leaving the benefit intact for banks and corporations. Partial elimination of the benefit would be accomplished in two ways. First, imposition of a minimum tax, technically called a limited tax preference, would prevent individual taxpayers having more than half of their income in the form of "tax preferred" income from escaping income tax entirely through use of loopholes.<sup>7</sup> To the extent municipal securities were used as a loophole, the limited tax preference would be a partial elimination of the tax-exempt character of such securities. Second, deductions would have to be allocated to tax-exempt income as well as taxable income. Currently, taxpayers need not show tax-exempt income anywhere on the tax return, and deductions permitted under the Internal Revenue Code are made only against taxable income.

Those proposals now being debated in Congress which make only individual investors—not banks and corporations—subject to the limited tax preference and to the requirement of allocating deductions may have a significant impact on capital markets. Despite whatever arguments can be raised in support of this discrimination against individuals, the different treatment of various types of investors may

weaken the market for municipal bonds by further segmenting it.

Perhaps the effect of these proposals on individual taxpayers may be so slight and variable that investors will not adjust their behavior markedly. Just what the impact on capital markets would be depends on the extent to which the tax-exemption advantage is cut. As more of the advantage is lost, the impact on capital markets may approximate that of complete elimination of the tax-exempt feature.

### IMPLICATIONS FOR EQUITY

The objective of tax reform is to make the Federal income tax structure more equitable. As shown earlier, proposals for reform have impacts in capital markets, and these impacts, in turn, have implications for equity.<sup>8</sup> In the light of the previous discussion, we can sketch some of these broad implications of each major type of proposal.

*Case 1: Elimination or reduction of tax exemption without interest subsidy but with alternative tax shelters.* This is the simplest reform of the tax treatment of municipals that could be made. And it is the least desirable, given the stated goals of reformers.

In this case, rates on state and local securities would rise, as shown earlier. Because of higher rates, owners of the issues would get a larger gross return on their investments. But for high-income investors, the increased return would be more than wiped out by increased taxes, so they

<sup>7</sup> The minimum tax preference feature of the House-passed act contains a number of exemptions. Consequently, it would have an impact primarily on taxpayers having very high incomes.

<sup>8</sup> This discussion of equity does not consider problems related to optimal allocation of resources in the economy. The equity and inequities of a tax structure may have a significant impact upon the efficiency of an economic system. However, reform proposals affecting municipal bonds involve an estimated \$2 billion—a quite trivial amount when compared with combined Federal, state, and local revenues of \$266 billion in fiscal 1968.



would shift at least some funds out of municipals and into remaining tax shelters.

Such shifts would not enable investors to escape unscathed by reform, however. As they reallocate funds from the municipal market to other sheltered investments, their rate of return would fall. First, costs of seeking and making these investments might be greater than the costs involved in purchasing tax-exempt securities. Second, the rate of return on these alternatives is probably less than that on municipals. Otherwise, the rich would have been investing in them already. Third, more funds would be chasing available sheltered investments, so prices would be bid up and yields would slip to lower levels. The over-all effect on high-income investors of modifying tax exemption of municipals, however, is moderated by existence of other loopholes.

The burden on state and local governments could be substantial under this case because interest rates would rise. In some instances, entities could not afford to borrow as much at the higher rates; so, crucial new projects may have to be financed largely by tax revenues if they could not be postponed. Even where borrowing remains a feasible means of financing capital projects, increased taxes at the state and local level may be necessary to pay the extra interest on taxable municipal bonds.

Tax structures of state and local governments tend to be regressive—that is, they hit moderate-to-low-income people relatively harder than they hit high-income people. Therefore, the burden of these governmental entities largely becomes the burden of people who do not have high incomes. So, reallocation of the total tax burden is not so great as might be expected.

At the state and local level, taxpayers with moderate and low incomes would pay more

interest to holders of municipal debt in this case, and the higher-income investors would pay additional Federal taxes in excess of the additional interest they would receive. The Federal Government is the only party to all this that would benefit—tax receipts would swell.

The ultimate allocation of burden in Case 1 depends on what the Federal Government does with the additional tax revenue. There are four possibilities: (1) spend the money; (2) cut taxes; (3) pay the money back to state and local governments (The third possibility is discussed in Cases 2 and 3.); and (4) simply hoard the money—the least likely of the four.

As a practical matter, Case 1 has little chance of approval by lawmakers because of potentially intense opposition from officials of state and local governments. From the standpoint of equity of the tax structure, it is just as well that this case probably would not be adopted. The proposals incorporated in this case do less to increase equity than those in any of the other cases unless new Federal revenues, or the tax cuts they make possible, favor the poor.

*Case 2: Elimination or reduction of tax exemption without interest subsidy and without alternative tax shelters.* This case differs from the first in that investors have no investment opportunities which are not fully taxed. Consequently, the rich would suffer a greater burden than under provisions of Case 1 because they could not channel funds to other tax-sheltered investments.

Interest rates on municipal securities would rise, but perhaps not to such high levels as in Case 1, because a lack of alternative tax-sheltered investments would preclude wholesale shifts of funds out of capital markets. State and local governments and their taxpayers would not bear quite as large a burden as they would if alterna-

tive tax shelters were available.

Because higher-income people are hit harder, and moderate-to-low-income taxpayers at the state and local level would get by a bit easier, the reform provisions comprising Case 2 increase the equity of the tax structure. So, as far as equity is concerned, it is important to close other loopholes when municipals are stripped of tax exemption.

*Case 3: Elimination or reduction of tax exemption through a subsidy but with alternative tax shelters.* If the Federal Government paid a subsidy to state and local entities equal to the additional interest required on taxable municipals, the political subdivisions and their taxpayers would not bear any increased burden.<sup>9</sup>

As in the first two cases, municipal investors having high incomes would suffer a shrinkage of after-tax income. Existence of alternative sheltered opportunities would temper the burden on the wealthy.

In terms of total, over-all effect on equity, Case 3 would rank ahead of Cases 1 and 2. Use

of the subsidy plan would trim the burden on state and local taxpayers (primarily the moderate-to-low-income crowd), while the taxable nature of the new breed of municipals would hit the wealthy.

*Case 4: Elimination or reduction of tax exemption through a subsidy in the absence of alternative tax shelters.* This case is similar to the preceding one except that the wealthy investors have no other sheltered investments to turn to. As stated in the discussion of Case 2, the absence of alternative loopholes causes a greater burden on high-income investors by sharply cutting after-tax yields.

Use of the subsidy keeps state and local governments and their taxpayers from bearing the burden of higher interest costs and taxes, respectively.

Of all the cases, this one contains a combination of provisions which seem likely to have the maximum impact on equity. So, the subsidy is a necessary part of a package of tax reforms—not only to make the package more palatable to officials of state and local governments, but also to maximize the effect on equity. Furthermore, reforms in the municipal bond area would be most effective if they were accompanied by provisions to close other loopholes too.

<sup>9</sup> This statement assumes that the subsidy is sufficient to offset completely the higher borrowing costs faced by the municipalities. If the subsidy fell short of increased interest on taxable issues, officials of state and local governments would exercise their privilege to issue tax-exempt bonds.

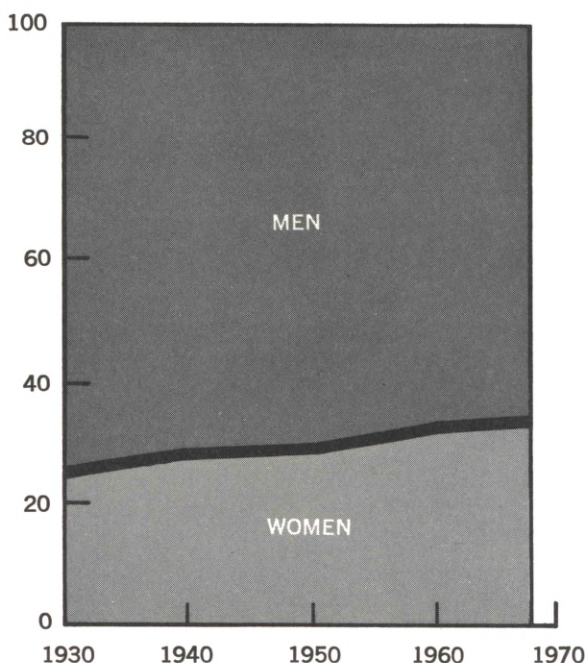


# Philadelphia's Working Women

by Shirley Goetz

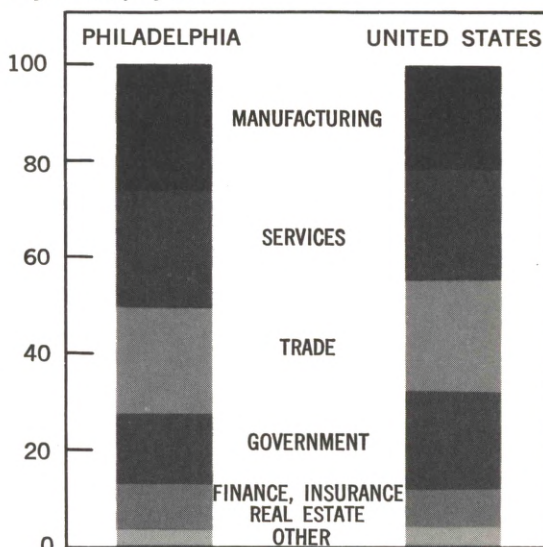
## LABOR FORCE IN PHILADELPHIA

Per Cent



## EMPLOYMENT OF WOMEN BY INDUSTRY, 1968

Per Cent of Nonfarm  
Payroll Employment



In Philadelphia, as throughout the nation, men are twice as likely to be in the labor force as women.<sup>1</sup> Locally, almost 90 per cent of all men are in the labor force compared to only 40 per cent of all women.

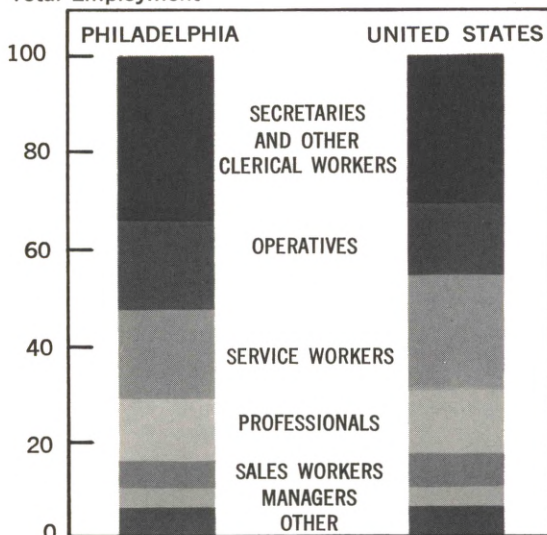
But within the labor force, the role of Philadelphia's women is increasing. In 1930, one out of every four workers was a woman. Today, one out of every three in the labor force is a woman.

<sup>1</sup> Philadelphia means the Philadelphia metropolitan area and includes Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania and Burlington, Camden, and Gloucester counties in New Jersey.

More females in Philadelphia are employed in manufacturing than in any other major industry. Services, trade, and government are also leading employers.

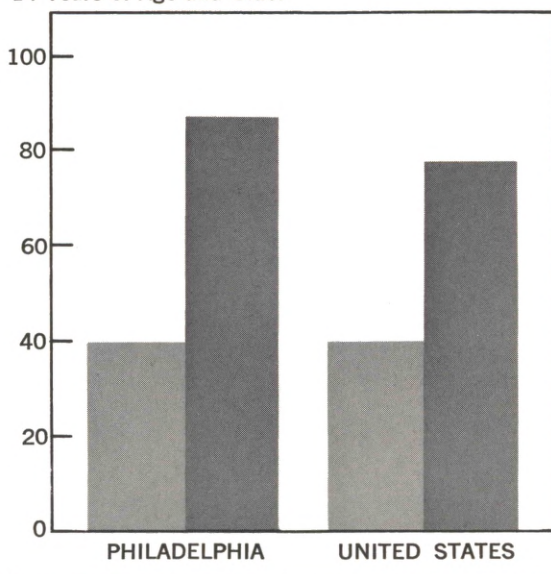
### EMPLOYMENT OF WOMEN BY OCCUPATION, 1965

Per Cent of  
Total Employment



### LABOR FORCE PARTICIPATION RATES, 1968

Per cent of Population  
14 Years of Age and Older

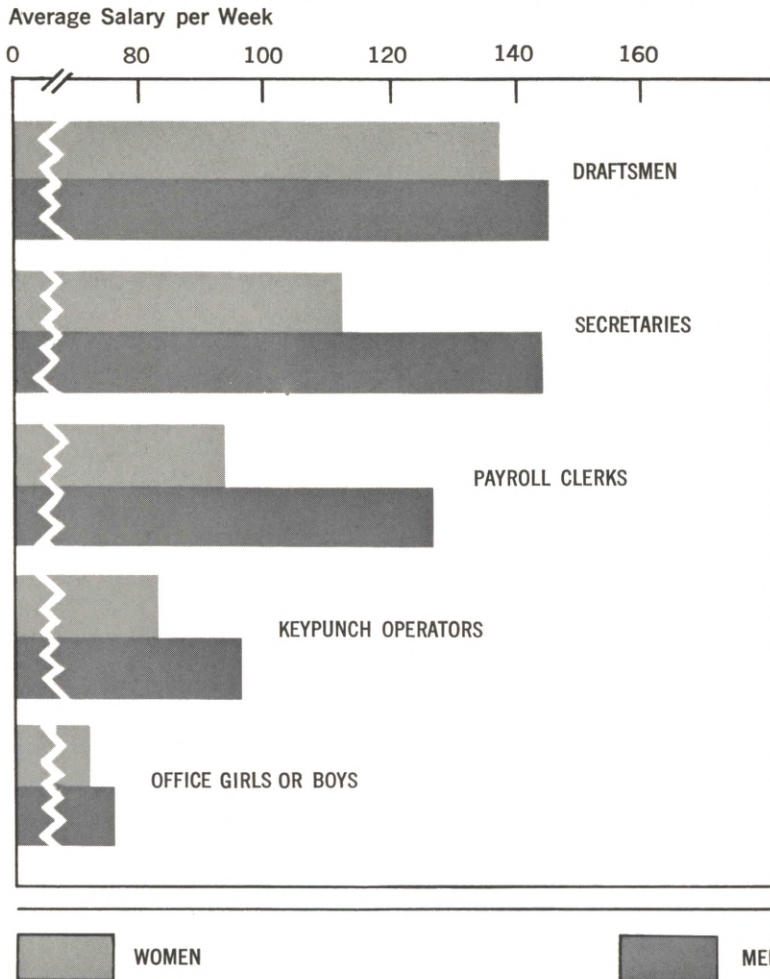


Within all industries, women are concentrated in low-skilled occupations. About one-third of all working women, locally and nationally, are employed as clerks. Seventy per cent work in just three occupations—as clerks, operatives<sup>2</sup>, and service workers.

<sup>2</sup> Operatives are semi-skilled, manual workers, who generally use a variety of handtools and machines. For example, women operatives are employed as sewing machine operators, packers and wrappers in food processing plants, assemblers of electronic components, and laundry and dry-cleaning operators.



# SALARIES IN REPRESENTATIVE OCCUPATIONS IN PHILADELPHIA, 1967

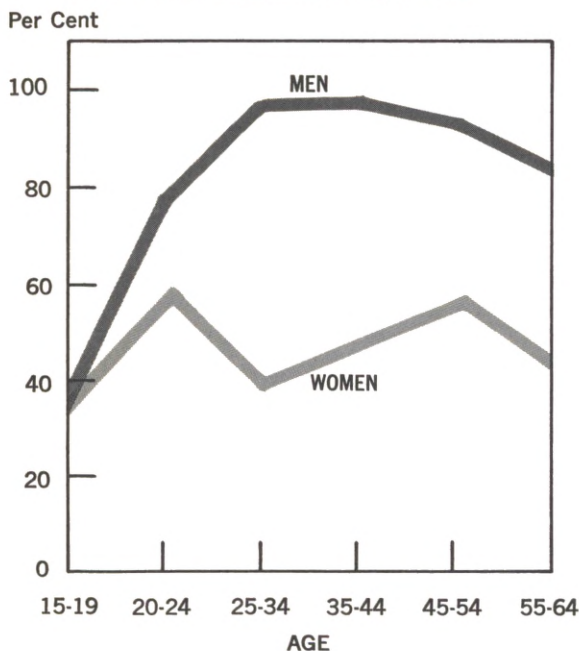


Women's wages generally are lower than men's, partially because of the type of work they do. However, even when they are employed in the same occupations, females often earn less than males.<sup>3</sup>

<sup>3</sup> See Carol P. Howell, "The Fair Sex in the Banking Industry," *Business Review*, Federal Reserve Bank of Philadelphia, July, 1969, for a discussion of the dimensions of pay differentials between male and female employees in banking.

In addition, women generally experience a higher rate of unemployment than men. Although the gap between the two rates widened in Philadelphia from 1965 to 1967, it narrowed last year.

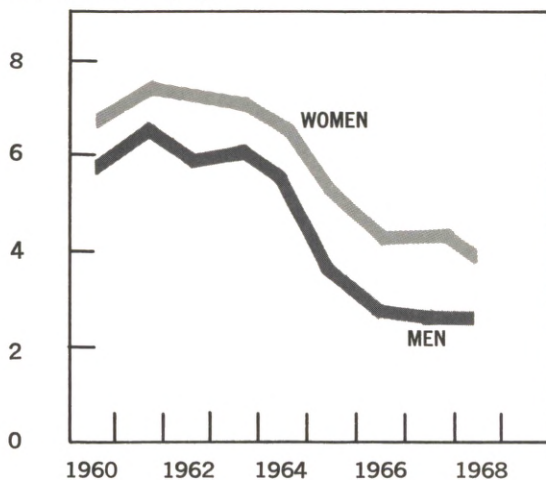
### LABOR FORCE PARTICIPATION RATES BY AGE IN PHILADELPHIA, 1965



Sources: Pennsylvania Employment Service, Pennsylvania State Planning Board, United States Department of Commerce, United States Department of Labor, Bell Telephone Company of Pennsylvania.

### UNEMPLOYMENT RATES IN PHILADELPHIA

Per Cent Unemployed



Part of the differential between men and women in unemployment and earnings is a result of different work patterns. Typically, men enter the labor market in their teens and twenties and remain until retirement. Women tend to leave the labor force in their mid-twenties and early thirties to marry and raise families. As children grow older, females return to the labor market, but may find it difficult to compete for jobs and earnings because of outmoded skills or lack of recent experience.

# Inventory Adjustment and Inflationary Expectations

by Edward G. Boehne

---

After nearly four years of inflationary boom, signs are mounting that a business slowdown may be in the offing. Consumers are losing much of their zeal for spending. Increasingly, potential owners of new houses are having their hopes dashed because of a dwindling flow of mortgage money. Caught in a profits squeeze, corporations are scaling down the pace of spending for plant and equipment.

As in the past, decisions which businessmen make about inventories could play a major role in determining the severity of any slowdown that might occur. In the 1966-67 mini-recession, for example, it was a sharp shift from a rapid accumulation of inventories to a more modest tempo which triggered the decline in economic activity.<sup>1</sup>

A look at current levels of inventories suggests that businessmen may be carrying higher stocks in relation to sales than they would in the absence of spiralling prices and supply bottlenecks. If economic policy is successful in cooling business activity and puncturing inflationary expectations, they may find current stocks out of line with their sales outlook. Thus, even if businessmen do not add unintentionally to inventories in the coming months, inventory adjustment still could have a very bearish impact on the direction of economic activity as 1970 unwinds.

## INVENTORIES AND BUSINESS FLUCTUATIONS

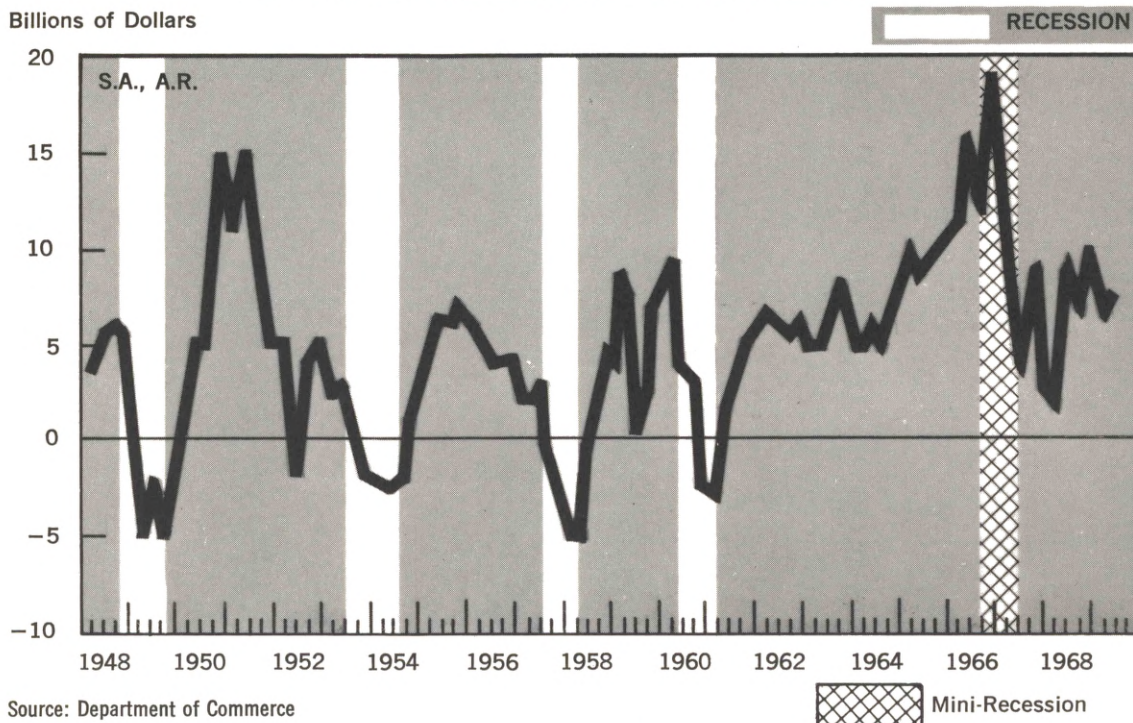
Chart 1 shows changes in business inventories over the last two decades as well as major de-

---

<sup>1</sup> A recession occurs when Gross National Product—the nation's total output of goods and services—expressed in constant dollars declines for at least two consecutive quarters. The experience in 1966-67 is dubbed a mini-recession because constant dollar GNP fell for only one quarter.



CHART 1  
CHANGE IN BUSINESS INVENTORIES



Source: Department of Commerce

clines (shaded areas) in economic activity. Although the correlation between stock liquidation (or less accumulation as in 1967) and business downturns is not perfect, changes in inventory clearly have played a significant role in postwar recessions. Each of the major business downturns shown in Chart 1, including the mini-recession of 1966-67, has been accompanied by a period of substantial adjustment in inventories.

The scenario goes something like this. Businessmen place orders for goods on the basis of projected sales. Actual sales fall short of expectations. In the meantime, previously ordered goods continue to be delivered—and inventories bulge. To correct for this involuntary accumulation, businesses liquidate excess stocks

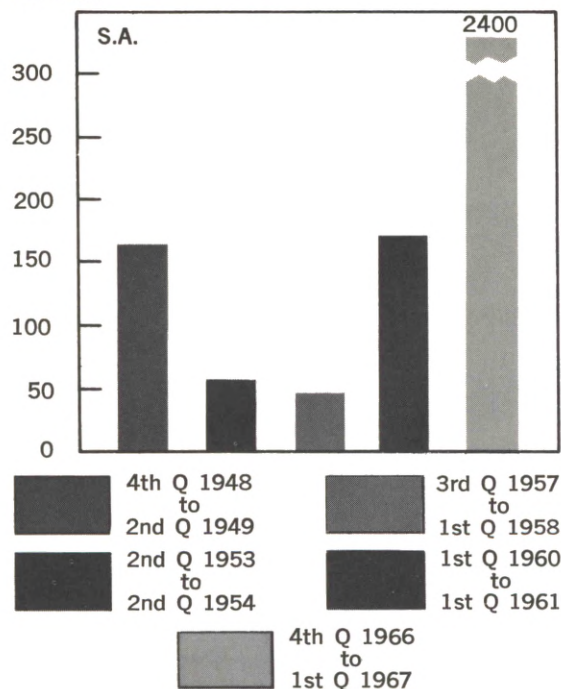
by letting the ordering pace fall below the rate of sales. The result: inventories are brought back in line with sales at the expense of current production.

Chart 2 shows one way of looking at the relationship between declines in total spending and inventory investment in each of the postwar recessions as well as the mini-recession of 1966-67. From peak to trough in each business cycle, changes in inventory investment have accounted for at least half of the decline in Gross National Product. In the milder downturns, dips in inventory investment actually accounted for more than the decline in GNP. The explanation is that in these periods spending for noninventory purposes (for example, personal consumption, government purchases, and



**CHART 2**  
**DECLINES IN INVENTORY**  
**INVESTMENT AS A PERCENTAGE**  
**OF DECLINE IN REAL GNP**

Per Cent



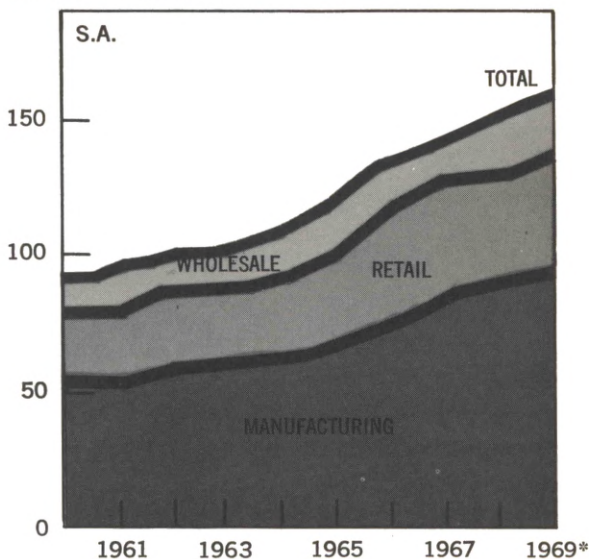
business expenditures for plant and equipment) continued to rise throughout the cycle and offset most of the decline in stock building. This was particularly apparent in the mini-recession of 1966-67, when there was little more than a pause in the upward climb of real output.

#### HOW HIGH ARE INVENTORIES?

At present, the book value of inventories is about \$160 billion (Chart 3). Manufacturers account for nearly 57 per cent of the total, wholesalers 15 per cent, and retailers 28 per cent. Despite the overall volatility of inventories, these proportions have remained fairly constant in recent years.

**CHART 3**  
**BUSINESS INVENTORIES**  
**(BOOK VALUE)**

Billions of Dollars



\* June Figures

Source: Department of Commerce

Inventories act as a buffer between production and sales. Therefore, changes in inventories themselves make economic sense only when they are related to sales. Inventory-sales relationships, in turn, can be affected by a host of variables, including improved management techniques, availability of supplies, order backlogs, composition of sales, and price expectations.

The pattern of inventory-sales relationships since the early 1950's is shown in Chart 4. Despite cyclical variations, a downward secular trend in the inventory-sales ratio is apparent throughout the period.



## UNDERSTANDING INVENTORY DATA

Two principal sources of data on business inventories exist. Both are published by the Department of Commerce in the *Survey of Current Business*. One is an end-of-month inventory *level* series, and the other is the inventory component of Gross National Product which measures the *change* in business inventories and is published quarterly.

Unfortunately, the economic analyst simply cannot compare the levels of business stocks for consecutive months, calculate the changes, and arrive at a figure comparable to the change in inventories as recorded in the GNP accounts. There are two reasons for this: one, the coverage of data is not the same; and two, the monthly series is at book value whereas the GNP change is valued at current prices.

The table below summarizes the differences in coverage of the two inventory series. The areas of differences are with wholesalers, farmers, and the miscellaneous category of "all other." Only merchant wholesalers are included in the end-of-month series, and this series does not include farm inventories or the "all other" category.

	Coverage of inventory data	
	GNP change in business inventories series	End-of-month inventory level series
Manufacturing	All manufacturing	All manufacturing
Wholesale trade	All wholesalers	Merchant wholesalers
Retail trade	All retailing	All retailing
Farm	Included, but shown separately	Excluded
All other	Included, not shown separately	Excluded

Carrying inventories gives rise to financing, storage, handling, and transportation costs. Businessmen would like to see these expenses reduced whenever possible. Through the use of improved inventory control systems, often aided by computers, businessmen are able to curtail costs by reducing the amount of goods-in-hand in relation to sales. In addition, more automated and conveniently located warehouses as well as improved transportation help to reduce inven-

tory-sales relationships. These and other factors help explain a downward secular trend for the ratio of inventories to sales over the last decade and a half.

In the first quarter of 1966, however, the chart shows that a cyclical upturn began and was followed by a modest adjustment in inventories during 1967. The adjustment apparently was halted early in 1968, for since then the inventory-sales ratio has remained



Book values of inventory and the GNP valuation differ also because of the way businessmen keep their books. GNP, and therefore its components, include expenditures only for *current* production measured in *current* prices. Businessmen, however, typically calculate inventory holdings on the basis of some mixture of current prices and historical costs. This has the effect in years of rising prices to overstate real additions to inventories, especially if businessmen calculate stocks on the basis of "first-in-first-out" (FIFO).

A numerical example should illuminate this point. Suppose a business has 1,000 physical units of inventory on January 1, 1968. Each unit is valued on its books at \$5 for a total book value of inventory of \$5,000. On January 2, the price of these units on the open market increased to \$7 each. During the course of the year, the firm used up 900 units and replenished its stocks with 800 units. In terms of current production measured at current prices, a \$700 inventory liquidation occurred in 1968. But the change in book value on a FIFO basis is calculated as follows:

$$(800 \times \$7) - (900 \times \$5) = \$1,100.$$

Hence, in terms of book value, an inventory accumulation of \$1,100, not liquidation, took place in 1968. An inventory adjustment of \$1,800 [ $\$1,100 - (-\$700)$ ] is necessary, therefore, to convert changes in book values to changes in inventory investment valued at current prices.\*

\* For a thorough explanation of the mechanics of inventory valuation adjustment, see *National Income Supplement to the Survey of Current Business*, United States Department of Commerce, 1954, pp. 135-138. For a less detailed, but more readable version, see John P. Lewis and Robert C. Turner, *Business Conditions Analysis*, (New York: McGraw-Hill Book Co., 1967), pp. 56-58.

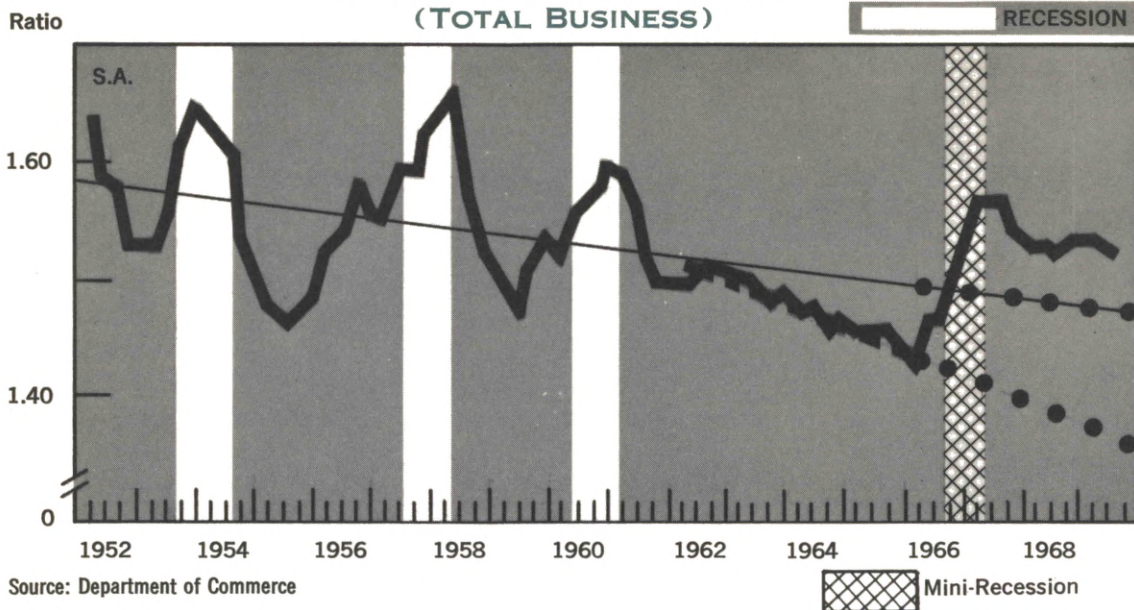
fairly constant, although at a relatively high level. Compared to the secular trend that has prevailed since the early 1950's (Chart 4), inventories relative to sales are about \$5 billion too high. Compared to the trend in the 1963-65 period, the most recent years of high employment and price stability, inventories are about \$15 billion too high. Further, the inventory-sales ratio is now about what it was in December 1966, highpoint of stock accumulation

during the 1966-67 mini-recession. Thus, an inventory gap appears to have developed—a gap between the level of inventories today and what one might expect this level to be in the absence of cyclical distortions (Chart 4).

As has happened since 1966, lower inventories stemming from the secular influences of improved management techniques can be more than offset by cyclical factors. The decision to escalate the Vietnamese War had severe reper-



CHART 4  
INVENTORY-SALES RATIO  
(TOTAL BUSINESS)



cussions on the American economy. A sharp increase in defense expenditures (from less than \$50 billion in 1965 to over \$80 billion in the current year) upset the delicate balance between high employment and stable prices. Labor markets tightened, prices spiralled, order backlogs piled up, and defense contracts loomed larger on the production horizon (see Chart 5). All of these factors spurred inventory accumulation.

As the economy heated up, unfilled orders rose and businessmen became more confident about future sales. To hedge against supply bottlenecks, there was a tendency to build up stocks. And expectations of rising prices intensified the stockpiling drive as businessmen attempted to "buy now" rather than pay more later. Also, after nearly a half decade of uninterrupted expansion in business activity, there was little concern about being stuck with excess inventories.

Another cause of the higher inventory-to-sales ratio prevailing since 1966 is the output and shipments of defense industries themselves. Because of longer production schedules, defense industries, on average, carry relatively larger inventories than do producers of civilian goods. Hence, as the share of total output earmarked for military purchase increased over the last three years, total inventories grew at a faster pace than total sales.

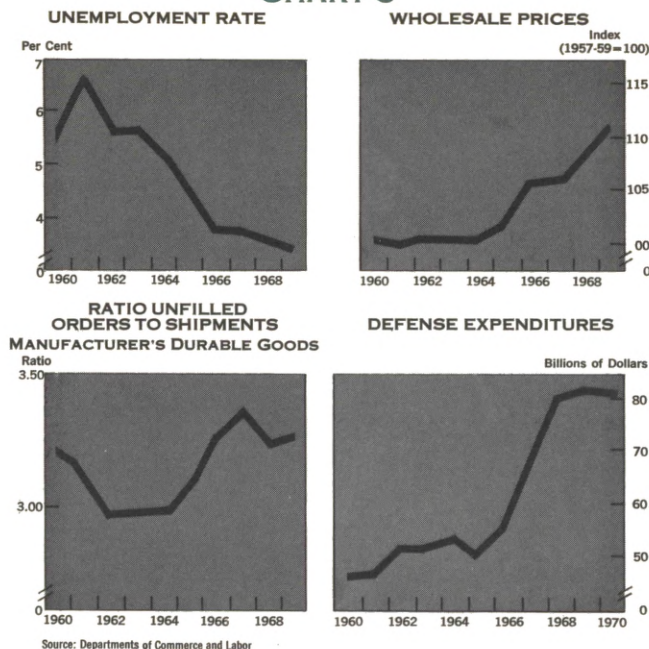
However, even if allowance is made for the rising defense component of inventories, stocks remain high relative to past standards. Thus, expectations of rising prices, supply bottlenecks, and hefty unfilled orders in the main help explain the willingness of businessmen to carry higher than usual stocks of inventory.

#### IMPLICATIONS FOR THE FUTURE

If current monetary and fiscal policy is successful in cooling off the economy and bringing



CHART 5



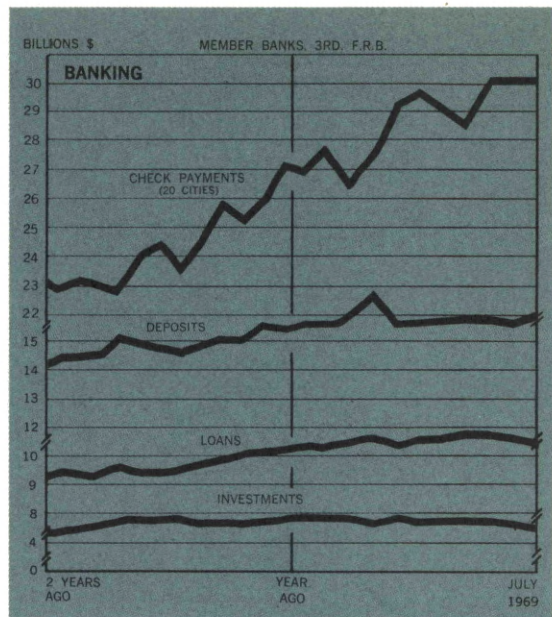
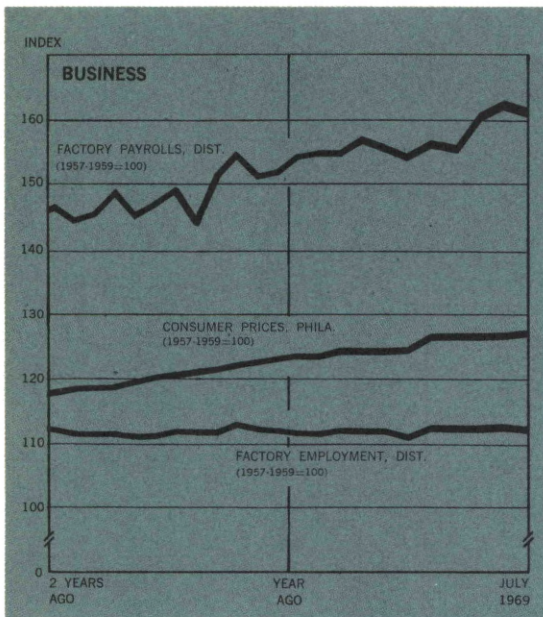
substantial relief from inflationary pressures, the rationale for maintaining the present high level of inventories relative to sales could lose much of its persuasiveness for businessmen. In a slower-paced economy, order backlogs can be expected to diminish. Supply bottlenecks will become, for the most part, unclogged. If there is a reasonable expectation that prices will regain relative stability, the "buy now" strategy to avoid future price hikes becomes less convincing, and the costs of carrying inventory loom larger by comparison. In short, even in the absence of involuntary accumulation of stock in the coming months, a reasonable view is that if current economic policy is successful a major inventory adjustment could occur. And judging from Chart 4, an adjustment greater in magnitude than the one which happened in 1967 may be in the cards.

But to a greater extent than the inventory correction in 1967, which stemmed largely from unintended build-ups in stocks the pre-

vious year, a downward adjustment in inventory during 1970 hinges on the success of economic policy to curb excessive price increases and snuff out inflationary expectations. Should policy be unsuccessful, there can be little or no price-motivated scaling down of inventories. But if policy is successful, inventory liquidation could cause a deeper and more protracted slowdown in 1970 than most economists now are willing to predict.

A lengthier and more pronounced slowdown because of inventory adjustments is all to the good if one focuses exclusively on the tough tasks of bringing inflation under control and subsequently maintaining price stability. But the possibility of a more severe downturn because of inventory adjustments also raises the risk of greater unemployment. In the wake of economic excesses since 1965, however, there is little choice but to accept this risk if the inflationary spiral is to be unwound.

# FOR THE RECORD...



SUMMARY	Third Federal Reserve District			United States		
	Per cent change			Per cent change		
	July 1969 from		7 mos. 1969 from	July 1969 from		7 mos. 1969 from
	mo. ago	year ago	year ago	mo. ago	year ago	year ago
<b>MANUFACTURING</b>						
Production .....	.....	.....	.....	- 6	+ 5	+ 5
Electric power consumed .....	- 2	+ 7	+ 7	.....	.....	.....
Man-hours, total* .....	- 2	+ 1	0	.....	.....	.....
Employment, total .....	- 1	0	0	.....	.....	.....
Wage income* .....	- 2	+ 8	+ 7	.....	.....	.....
CONSTRUCTION** .....	-16	+51	+14	- 1	+ 4	+13
COAL PRODUCTION .....	-25	- 9	+ 1	-28	-20	- 4
<b>BANKING</b>						
(All member banks)						
Deposits .....	- 2	0	+ 7	- 2	+ 1	+ 6
Loans .....	- 1	+10	+12	+ 1	+13	+13
Investments .....	- 1	+ 1	+ 4	0	- 1	+ 2
U.S. Govt. securities..	- 1	- 9	- 6	+ 2	-11	- 7
Other .....	- 1	+ 9	+13	- 2	+ 7	+11
Check payments*** ..	0†	+22†	+21†	- 2	+13	+19
<b>PRICES</b>						
Wholesale .....	.....	.....	.....	0	+ 4	+ 4
Consumer .....	+ 1‡	+ 5‡	+ 5‡	0	+ 6	+ 5
*Production workers only **Value of contracts ***Adjusted for seasonal variation						
†15 SMSA's ‡Philadelphia						

LOCAL CHANGES Standard Metropolitan Statistical Areas*	Manufacturing				Banking			
	Employment		Payrolls		Check Payments**		Total Deposits***	
	Per cent change July 1969 from		Per cent change July 1969 from		Per cent change July 1969 from		Per cent change July 1969 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
Wilmington ..	- 5	- 6	- 5	- 1	+ 5	+41	+ 1	+ 2
Atlantic City..	.....	.....	.....	.....	+ 2	+ 9	+ 5	+ 6
Trenton .....	0	+ 3	+ 2	+ 7	- 3	+ 1	+ 5	+11
Altoona .....	- 1	+ 4	- 2	+16	+12	+20	+ 2	+ 9
Harrisburg ...	+ 1	- 1	0	+ 6	- 4	+13	- 2	+ 8
Johnstown ...	+ 2	- 2	- 2	0	0	+10	+ 1	+13
Lancaster ...	0	+ 3	- 3	+11	+ 5	+18	+ 4	+13
Lehigh Valley..	- 1	0	- 1	+ 5	+ 2	+ 7	-13	- 7
Philadelphia ..	0	- 1	0	+ 7	- 2	+21	- 2	+ 2
Reading .....	0	+ 6	- 7	+ 7	0	+22	+ 1	+10
Scranton .....	- 2	+ 1	- 3	+ 6	+ 4	+ 6	0	+ 4
Wilkes-Barre ..	- 3	+ 1	- 3	+ 9	+ 2	+12	-24	-20
York .....	+ 1	+ 5	0	+14	+ 5	+12	0	+ 7
*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.								