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Wage Pressures on City Hall: Philadelphia's Experience in Perspective

The '72 Unemployment Puzzle

Bank Bond Management: The Maturity Dilemma

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FEDERAL RESERVE BANK of PHILADELPHIA

business review

1972

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Wage Pressures on City Hall: Philadelphia's Experience in Perspective

. . . The substantial wage increases of Philadelphia's City employees have outstripped those of other major cities, but national trends, it seems, overshadow the influence usually accorded union and other local pressures.

The '72 Unemployment Puzzle

. . . If '72's unemployment rate is to drop appreciably, more *newly-created* jobs will have to be developed relative to the expansion of the labor force.

Bank Bond Management: The Maturity Dilemma

. . . Like a tightrope walker, a bond portfolio manager performs an act fraught with pitfalls as he delicately balances risks against returns for his bank.

On our cover: Carpenters' Hall was built in 1770 by the Carpenters' Company — an association of the master carpenters of Philadelphia organized in 1724 — which still owns and maintains it. The First Continental Congress met here in September 1774.

BUSINESS REVIEW is produced in the Department of Research. Ronald B. Williams is Art Director and Manager, Graphic Services. The authors will be glad to receive comments on their articles.
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Wage Pressures on City Hall: Philadelphia's Experience in Perspective

By James L. Freund

Fiscal woes have plagued America's cities for generations, but only in recent years have the crises become so painfully acute. At the same time that citizens are demanding more and better services, school systems are forced to shut early, roads are falling into disrepair, and capital spending plans are shelved. Philadelphia, like other large cities, has had its problems compounded by uphill efforts to meet its chronic social ills. And, while demands on the City government have increased, soaring costs have heightened pressures on the budget. The major source of Philadelphia's increased costs in recent years can be attributed to the City's constantly expanding payroll.[1]

Rapid payroll growth is not peculiar to Philadelphia. City halls throughout the country as well as higher levels of government also have experienced large increases in payrolls as their workers have chalked up sizeable wage gains. Many commentators blame rising government wages on such forces as the spiraling costs of living, unionization, and "catch-up" increases. Yet, the underlying problem may be inherent in government itself rather than in these popular notions. If this is the case, taxpayers are in for some tough decisions.

WAGE PRESSURES ON CITY BUDGETS

Philadelphia's Growing Payroll. During the past twenty years, the total wage bill — the payroll the City pays its workers — has grown dramatically; in fact, it more than doubled in the period between 1952 and 1965 (see Chart 1).[2] Between 1965 and 1970

[1] Last year the Federal Reserve Bank of Philadelphia conducted an exhaustive study that projected a grim future of mounting costs and lagging revenues for both the City and the School District. The report singled out the City's ever-increasing payroll as the primary cause of the cost increases (see David Lyon, "The Financial Future of City and School Government in Philadelphia," *Business Review*, March 1971, pp. 3-71).

[2] The information in this study regarding payrolls

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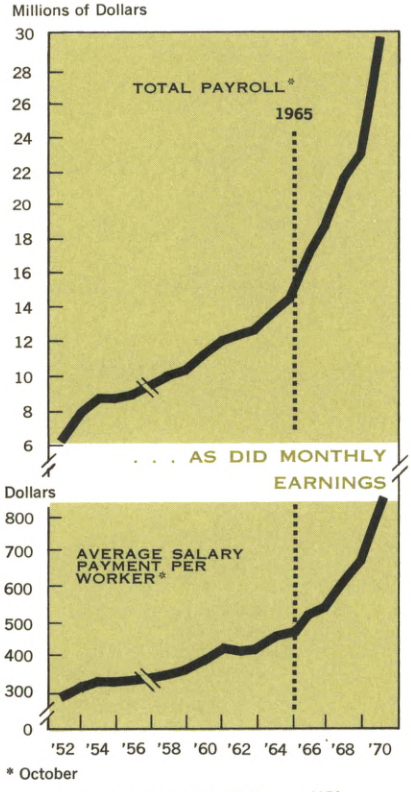
CHART 1
PHILADELPHIA'S MOUNTING PAYROLL SOARED . . .



* October

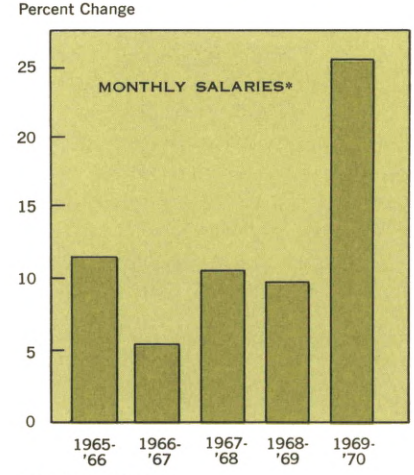
Source: *City Employment in 1952 . . . 1970*, GE-No. 1, U.S. Department of Commerce, Bureau of the Census.

the City's monthly wage bill increased at even a greater rate — from about $12 million to just under $30 million.

One reason for the payroll increases is expansion in City employment. Since the early 1950s the City's work force has swelled from 22,000 to over 35,000. The burgeoning payroll can only partially be attributed to increases in employment, however. Increases in the wage rate of city workers also have put great upward pressure on the payroll. As shown in the lower frame of Chart 1, the average monthly salary of City workers has climbed continuously since the early 1950s. In 1952 the monthly salary of a City worker averaged about $291; in 1970 it was up to $835 — a jump of 187 percent.

Over three-fourths of this increase in monthly earnings occurred between 1965 and 1970. Chart 2 shows the estimated pay increases of all City workers for each of these years. (Box details the statutory history of recent wage settlements in Philadelphia.) The yearly rise in per worker wage cost for the City ranges from 5.4 percent (between October 1966 and October 1967) to well over 20 percent (between the same months in 1969 and 1970). Over the entire five-year span annual gains averaged 12.4 percent. While these increases in monthly earnings

CHART 2
CITY WORKERS SCORED SIZEABLE SALARY GAINS DURING 1965-70



* October to October

Source: *City Employment in 1965 . . . 1970*, GE-No. 1, U.S. Department of Commerce, Bureau of the Census.

and earnings in city governments was derived from data in *City Employment in 1965* and *City Employment in 1970*. U.S. Department of Commerce, Bureau of the Census. GE-No. 1 and GE-70 No. 2. It is important to note that this study deals with only employees of the governments involved and not with teachers and other school-related employees. Data limitations made it impossible to include the latter group.

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RECENT INCREASES IN EARNINGS FOR PHILADELPHIA CITY GOVERNMENT WORKERS

Date	Amount of Increase	Groups Receiving Increase
July 1965	$500	Police and Fire Fighters
January 1966	$145	Police and Fire Fighters
	Increases averaging 10-15%	Municipal Nonuniformed Employees
January 1967	$294	Police and Fire Fighters
	3%	Municipal Nonuniformed Employees
January 1968	8%	All Municipal Employees
January 1969	$900	Police and Fire Fighters
	$600	Municipal Nonuniformed Employees
July 1969	Reduction of steps per salary level	Municipal Nonuniformed Employees
January 1970	$671	Police and Fire Fighters
	$600	Municipal Nonuniformed Employees
July 1970	$900, plus differentials for all grades above patrolmen	Police
	$1000	Fire Fighters
	$800	Municipal Nonuniformed Employees
	Longevity increases of $100 per 5 years added to salary	All Municipal Workers
January 1971	$200	Police
	$100	Fire Fighters
July 1971	$750	Police and Fire Fighters
	6-14% differentials to create rank differentials	Fire Fighters
	$650	Municipal Nonuniformed Employees

Source: *Philadelphia Municipal Employees, Compensation Chronology, 1953-1971.* Regional Report No. 3, November 1971, U. S. Department of Labor, Bureau of Labor Statistics.

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were affected by such things as seniority gains, the types of employees hired during the period, and overtime payments, they have been caused primarily by frequent and substantial boosts in City workers' salaries.

Payroll figures do not represent the entire burden to the City of its employees, however. Nonwage benefits to City employees, the other part of the burden, have also risen substantially over the last five years (see Box). Consequently, the total increased cost to the City of Philadelphia over the period has been even greater than 12.4 percent annually.

INCREASES IN NONMONETARY BENEFITS FOR EMPLOYEES OF THE CITY OF PHILADELPHIA — 1965-1971

I. PENSIONS

A large chunk of the City of Philadelphia's budget is contributed to its employee's pension fund. The increased burden on the City budget in recent years has been substantial (see "The Financial Future of City and School Government in Philadelphia," *Business Review,* March 1971, pp. 33-34). One reason for this increased burden has been liberalization of the pension benefits in 1967 and again in 1971. In 1967 the plan underwent a major overhaul. Employee benefits were increased, and the eligibility age was lowered. In July 1971 the retirement age for service pensions was again reduced. The Pennsylvania Economy League estimates that pension costs to the City could increase by about a third as a result.

II. WORKING CONDITIONS

Several adjustments were made over the last five years that added to City costs by improving conditions under which municipal employees work. The number of workers eligible for overtime increased substantially over the period; all workers earning $14,258 and below now may receive monetary benefits for overtime. The limit on holiday pay was raised for nonuniformed municipal employees in 1965. Firemen and policemen also experienced increased holiday benefits; in particular, in 1965 firemen received a 50 percent hike in paid holiday time. A further improvement was the reduction of the workweek for policemen from 42 to 40 hours in July 1971.

III. OTHER FRINGE BENEFITS

The costs to the City of health insurance, sick leave, and vacations for its workers have increased in recent years. Vacation benefits have been liberalized several times in recent years. Nonuniformed employees received three extra noncumulative vacation days in 1969 and, in 1970, had the maximum allowable vacation raised from three weeks to four weeks. The minimum seniority level at which the maximum vacation benefit accrues was lowered twice. Uniformed workers received similar increased vacation privileges.

Benefits paid at retirement for accumulated sick leave were substantially liberalized both in 1969 and 1970. Both percent of the salary paid and the number of days which could be accumulated were increased. Conversely, in July 1971 the annual days of allowable sick leave for policemen were reduced from 21 to 20.

(Continued on next page)

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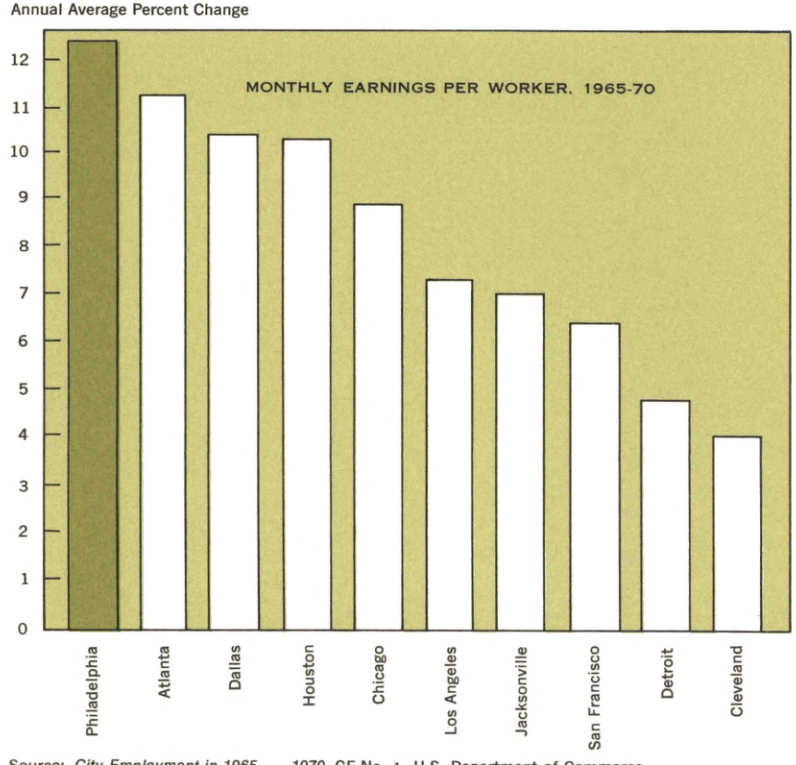
Finally, life insurance and health benefits have been increased for City workers. In July 1971 the City upped the benefits on the noncontributory, double indemnity policy it provides its employees from $2500 to $4000. Likewise, the contribution of the City for health benefits for its workers has increased steadily since 1966. After five increases, the maximum municipal contribution for the employee health plan is $310, representing a 496 percent increase for uniformed workers and a 158 percent increase for nonuniformed workers.

Source: *Philadelphia Municipal Employees, Compensation Chronology, 1953-1971.* Regional Report No. 3, November 1971, U.S. Department of Labor, Bureau of Labor Statistics.

Is Philadelphia Alone? While the gains of Philadelphia's workers have been large, those of workers in comparable cities have also been substantial — some barely slower than the Quaker City's. Of the nation's major cities, Philadelphia was one of four in which monthly earnings increased more than 10 percent annually (see Chart 3). At

CHART 3
PHILADELPHIA HAS OUTPACED OTHER LARGE CITIES IN RECENT YEARS



Source: *City Employment in 1965 . . . 1970,* GE-No. 1, U.S. Department of Commerce, Bureau of the Census.

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the other end of the scale, cities such as San Francisco, Detroit, and Cleveland posted rates of increase less than half the size of Philadelphia's.

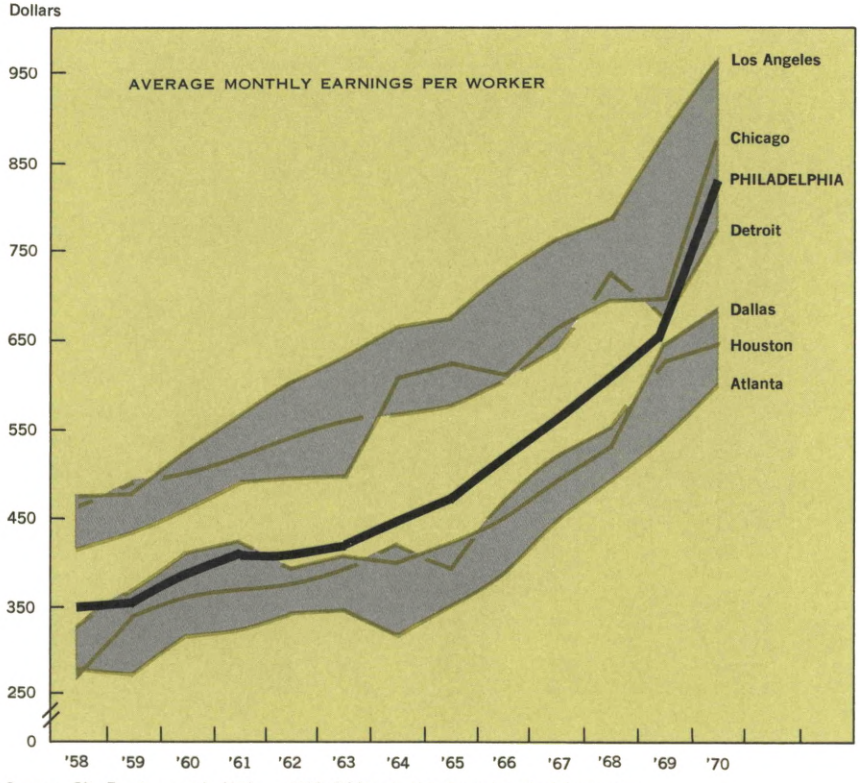
Part of the difference among cities may be attributed to "catch-up" increases. As seen in Chart 4, City salaries were fairly low when compared to those of some northern and western cities in 1965. By 1970, however, Philadelphia's relatively large increases lifted it to a level more typical of these similar cities.[3] Other cities—Houston, Dallas, and Atlanta — reporting annual increases almost as great, also ranked comparatively low on the pay scale in 1965.

WAGE PRESSURES ON CITY HALL: SOME POPULAR VIEWS

"Catch-up" increases only partially explain wage changes and only apply to a few

[3] It must be remembered, when comparing average monthly earnings across cities, that these figures reflect such factors as overtime, the number of part-time workers, and the composition of the work force. Therefore, Philadelphia could have been low in 1965 partly because it did not employ as many relatively high-paid workers (such as policemen) as other cities. More important, these figures do not reflect nonwage benefits such as pensions, health plans, and holidays that could be much higher in Philadelphia.

CHART 4
EARNINGS OF CITY WORKERS MOVED UP TO THE LEVEL OF SIMILAR CITIES



Source: *City Employment in 1958 . . . 1970*, GE-No. 1, U.S. Department of Commerce, Bureau of the Census.

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cities. For Philadelphia and most other cities, additional forces influence earnings changes. Popular notions abound concerning these forces, but few have been verified. Some persons contend that skyrocketing wage costs are a consequence of the size of large cities. Others argue that the cost of living has increased more in large cities and that government wages reflect this. The most widely-held opinion, however, is that union activity caused the lion's share of recent wage boosts.

Cost of Living Pressures. Since the cost of living has increased substantially in recent years, wages could be expected to increase accordingly. Between 1965 and 1970 Philadelphia's cost of living rose at an average rate of about 4 percent per year. Obviously the City's 12.4 percent average boost in earnings can be only partially justified on these grounds.

Moreover, cities with the largest change in the cost of living are not those where government earnings have risen the most. Chart 5 compares average annual changes in the cost of living to similar changes in earnings in several large cities. For example, Detroit and New York — cities where the cost of living has risen most during the last five years — had relatively small increases in earnings over the same period. While Kansas City, Los Angeles, and Pittsburgh — cities where cost-of-living increases averaged only a half percent less than Philadelphia's — experienced wage changes a full 3 to 5 percent less per year. In short, over the five-year period, differences in salary hikes for government workers in the Quaker City and other large cities bore little relationship to differences in changes in the cost of living.

City Size and Labor Costs. Contrary to popular notions, large city governments as a group do not have much higher wage growth rates than smaller areas. Chart 6 shows that, except for very small cities, the average annual increase in earnings varied little with city size. All groups of larger-sized cities (those over 50,000) averaged increases of about 7 percent per year.

Philadelphia's municipal government is one of the nation's largest. Only New York, Los Angeles, and Chicago employ more people. While employees in all of these urban governments experienced average annual wage gains greater than 7 percent over the period 1965-1970, only Chicago (8.9 percent) and Philadelphia (12.4 percent) posted much higher increases than other large cities. Thus, it is difficult to attribute a dominant part of Philadelphia's wage pressure to its size.

Unionization and Wage Increases. Philadelphia's government is highly unionized. The City negotiates with spokesmen of three groups that form the bulk of its work force — the general employees, the policemen, and the firemen. Philadelphia is not alone in the degree of unionization of its workers, however. In recent years unions have organized workers at all levels of government, especially in large urban areas. Many persons blame the increasing wage pressures in the public sector on union activity.

Unions may affect wages by organizing employees so that they will not work unless wages are raised.[4] While studies of union influence have not been conclusive, they have shown that the effect of unions is strongest over short periods, especially in times when unionism is growing. The impact of public sector unions in Philadelphia and other cities in which unions have been aggressive has yet to be established. The influence of public sector unions should, however, be related to the same measures of union power which apply to their industrial counterparts: the legal status they have

[4] Wage increases are only one facet of union activity. Unions may affect work rules and procedures, nonmonetary benefits, and even hiring and firing procedures. On the other hand, economic theory also tells us that if unions are effective in increasing wages, they will have an adverse effect on the number of jobs available. This study is concerned, however, only with the limited question of the union's effect on the size of wage increases in recent years.

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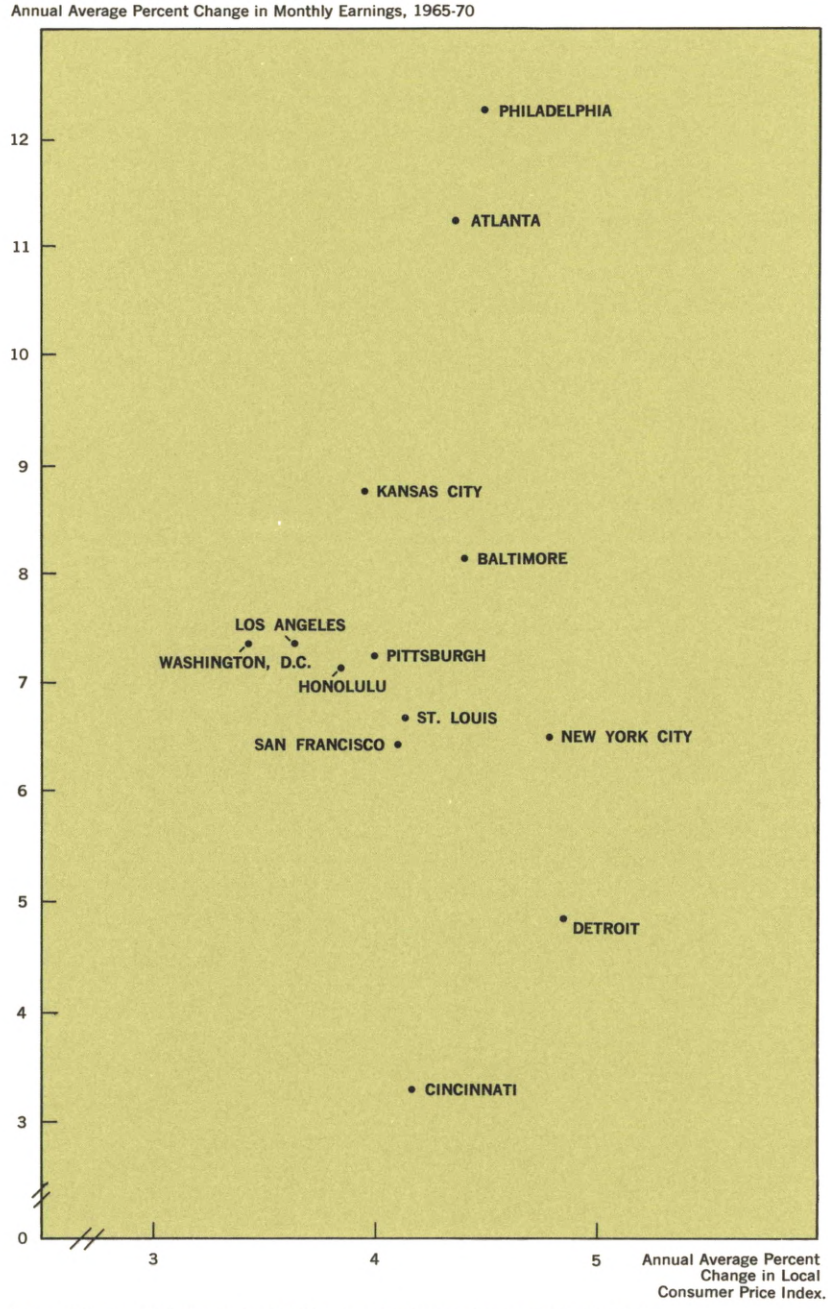
CHART 5
INCREASED SALARIES HAVE OUTSTRIPPED COST OF LIVING CHANGES



Source: Data supplied directly by U.S. Department of Labor, Bureau of Labor Statistics.

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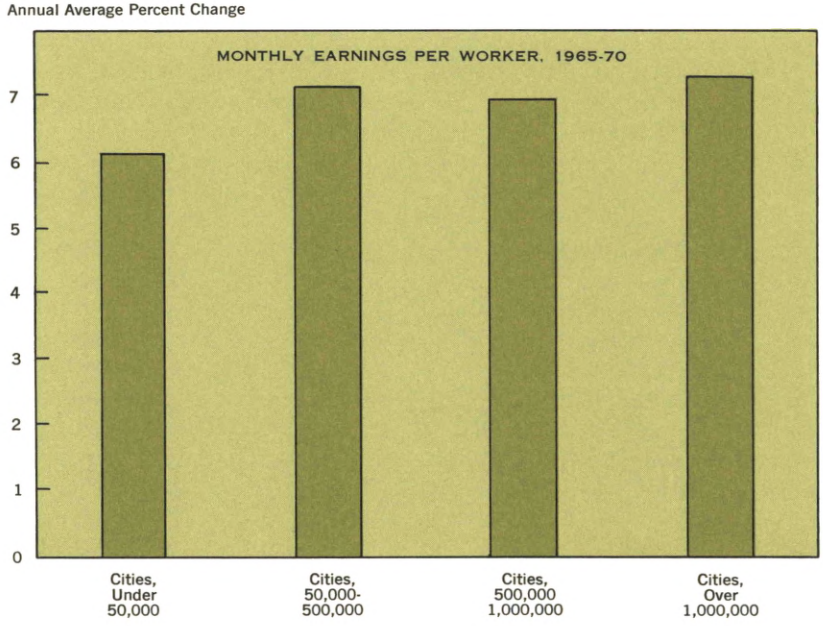
CHART 6
EARNINGS JUMPED IN CITIES OF ALL SIZES



achieved, the extent to which workers have been organized, the frequency of work disruptions a city has suffered.[5]

If the legal right to organize and the extent of unionization are accurate measures of government unions' effectiveness, then the common belief that they are the culprits in recent wage increases is not valid. For cities of at least 250,000 population, the fact that authorities were legally permitted to sign negotiated agreements with their employees did not tend to affect wage settlements as much as other influences. Cities in which written agreements were legal averaged a 6.9 percent annual increase in earnings over the period 1965-1970, as opposed to 7.7 percent in cities where such agreements were illegal.

However, cities that could legally negotiate with single representatives of large groups of their employees experienced slightly higher wage growth. Cities that dealt with their public safety and general employees as single negotiating units had an average of 7.6 percent increases between 1965 and 1970. Municipalities that could not legally negotiate with unions in this manner registered annual increases averaging 6.8 percent. Although other factors tend to obscure the exact relationships, it would appear that the ability to represent workers

[5] The data in this study, upon which statements and conclusions about the effects of union activity are made, are based on a survey conducted by the *International City Management Association*. The survey, "Public Employee-Employer Relations in Local Governments," was sent to all major U.S. city governments in 1969. It asked for information on city background, number of organized employees, in addition to local laws, policies, and practices regarding local public sector unions. The results derived in this study from the survey are, naturally, limited by the usual problems of sampling. Statistical tests were applied to all comparisons made to determine whether the differences in question were significant.

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in a *large* unit may provide a more important avenue of union power than simply the ability to negotiate.

Perhaps the most commonly held belief about government employee unions is that the more organized they are, the more powerful they are, the higher the wage increases they can negotiate. There is no accurate yardstick of the strength of public unions in large cities. Available information does provide a general idea of union membership, however.

Among large cities there are no overwhelming wage effects associated with the extent of unionization (see Table). Cities reporting a completely unionized work force registered, as a group, the lowest average annual wage change. Highly unionized cities (above 50 percent but less than 100 percent of their work force unionized) posted the highest average annual increase — 7.9 percent. Moderately unionized cities (including only two cities that reported no union activity) also experienced large wage advances. In short, the degree of unionization alone did not have enough effect on the rate at which wages increased to overwhelm other forces which affect wages.

Because of their widespread impact on the public, work disruptions and other "labor troubles" have received much attention in recent years. If some public sector unions have been aggressive enough to disrupt government operations and successfully influence wages, cities that have experienced such problems should have registered the largest increases. Apparently, this has not been the case. Large cities that have been disrupted by strikes, slowdowns, or picketing do not appear to have had significantly higher wage increases than other large cities (see Chart 7). In cities where negotiations have broken down and work disruptions have occurred, earnings increases averaged 7.8 percent as opposed to 7.2 percent for those without strikes. If there were positive gains from striking after all other factors worked themselves out, then they were not very large ones. Furthermore, local governments facing recalcitrant unions that required binding arbitration in negotiations had wage increases at the rate of 7.4 percent — almost the same as of those parties that did not have arbitration.

The averages cited in all these comparisons reflect more than just militancy. The salient point is that cities with strong and active unions do not as a class register higher wage increases than those with less aggressive unions. It is certainly possible that unions have caused wages in Philadelphia or other large cities to be higher than they would have been had workers never organized. It seems, however, that unions have hardly constituted the dominant force for wage increases in large city governments in recent years.

WAGES IN THE PUBLIC SECTOR: A UNIVERSAL PROBLEM

Since popular notions about local governments do not fully explain why the wages they pay have risen, other possibilities must be considered. Wages in the public sector

DEGREE OF UNIONIZATION AND RECENT WAGE CHANGES IN LARGE CITIES

Reported Degree of Unionization	Number of Cities Reporting	Average Annual Rate of Wage Change, 1965-1970
Completely Unionized	9	7.0
Highly Unionized	18	7.9
Moderately Unionized	25	7.3

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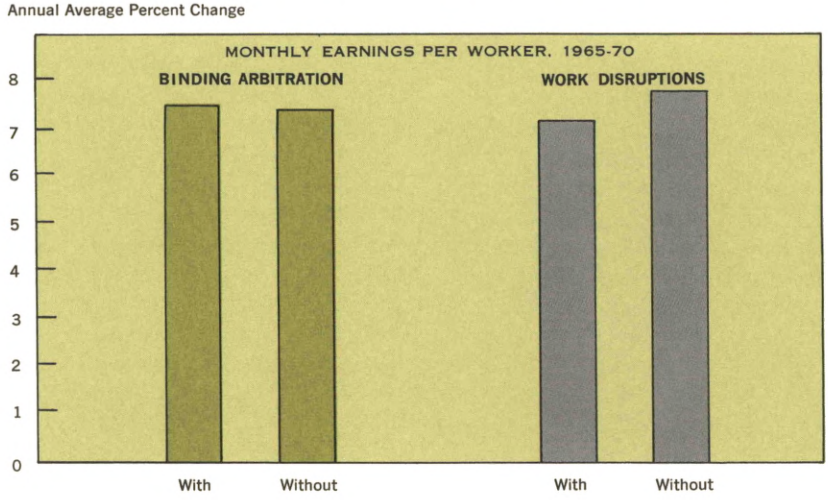
CHART 7
WAGE CHANGES SHOW LITTLE IMPACT FROM UNION ACTIVITY



are determined differently than are those in the private sector, and the attitudes of government employees in part differ from those of other workers. Moreover, all levels of government are subject to interrelated demands and revenue sources. Consequently, growth in municipal wages may be subject to forces largely shaped by general characteristics of governments. Increasing wage burdens throughout the public sector indicate that the underlying reasons for budgetary pressures on local governments do pervade higher levels of government as well.

Public Sector Wage Determination. Although economists do not fully understand what causes wage changes in the public sector, there are several characteristics unique to wage determination in governments that may help explain recent wage increases. For example, unlike a private firm, a governmental unit does not operate under the profit motive. Therefore, the incentive for holding labor costs down may not be as strong as that in private firms where higher costs may be immediately translated into lower profits. Another aspect of public sector wage determination is that accountability for the outcome is often split. The executive branch of the government negotiates or decides upon wage settlements, while the legislative branch passes on the funding. For administrative and political reasons, the legislative branch is unlikely to reject or refuse to fund negotiated or promised wage boosts, thereby weakening resistance to such upward thrusts.[6]

Other economic forces may have generated additional pressure for spiraling government wages generally and those of city governments such as Philadelphia. Unlike most private sector jobs, a government position is viewed by most workers as a secure one because the chances of being fired or laid off are slim. This aspect of civil service

[6] The recent experience of the City of Philadelphia is illustrative. The previous Mayor's Administration negotiated a lowering of the pension age in August, and the City Council had little choice regarding the funding of it this past January. For Philadelphia and all local governments the issue of how public sector wage decisions are reached is even broader. Many commentators consider the union's political role in municipal decision processes as a serious factor in wage determination. For instance, see Harry H. Wellington and Ralph K. Winter, Jr., *The Unions and the Cities* (Washington: Brookings Institution, 1971).

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has traditionally led government workers to accept low wages in return for security. In the 1960s the economy expanded steadily. Since most workers could find jobs easily, the security of a government position was not as attractive as before. Consequently, government workers at all levels may have received raises to compensate them for the loss of this advantage.[7] Finally, some wage gains in the public sector as a whole can be attributed to increased demand for government workers. In recent years employment in the public sector has been expanding faster than most other areas of the economy, and all governments have found that wage increases are necessary to attract capable personnel.

The Record. Philadelphia and other local governments were hardly alone in the late 1960s. Governments at all levels have experienced substantial earnings gains. While these increases fell somewhat short of Philadelphia's, they were in line with those of workers in most large municipalities (see Box).

Like Philadelphia's employees, other public workers have made real absolute progress. The wages paid by all levels of government have increased at a rate well above the average annual cost-of-living increase of 4.5 percent. Relative to workers in other industries, government employees have fared quite well. Only the "hard hats" of the construction industry have achieved wage gains in the same range as government workers. Except for the construction, mining, and service sectors, most other industries experienced wage increments at an average annual rate of 5 percent or less from 1965 to 1970 compared to the above 6 percent gains by government workers (see Box for details).

While the reasons behind the gains of public sector workers are unclear, it does seem that all levels of government have been suffering from wage pressures on their budgets. Everyday concepts about why cities are under wage pressures at best have explained the variations from the general trend among cities. Unless the underlying trend of economic forces affecting wages in the public sector is radically reversed, no city government should expect to be immune from rising wage demands.[8]

INCREASING WAGE BILLS AND THEIR CONSEQUENCES

Continuing Pressures. Although wage pressures will continue in Philadelphia, there are reasons to expect a partial easing. General movement in government wages may not create as strong an upward momentum as in the past. This is especially true in one area. Since recent gains by government workers have made earnings more comparable to those in the private sector, such adjustments should not be as important in the future. Likewise, local conditions indicate wage pressures on Philadelphia's City Hall may not be as great as before. If some of the past growth was, in fact, a "catch-up" gain, the future rate should be less than that of the past few years. Moreover, future

[7] Pressure from workers on this issue and the notion that government workers have been doing otherwise comparable work for less pay than other workers apparently has been held by many besides public sector union leaders. For instance, Congress evidently held this view. An increase of Federal salaries was mandated by Congress in 1962 in order to attain comparability between Federal workers and those in similar jobs in private industry. The average earnings increases of Federal workers over the last five years reflect this process. It is likely that many state and local governments have raised wages for this same reason. See Jerome Roskow, "Government Pay Trends," *The Conference Board Record* (New York: National Industrial Conference Board) 7 (July 1970): 15-22.

[8] Generally one would expect that local governments in areas with depressed labor markets could escape upward wage adjustments by hiring locally. However, like most other employers in the economy, either union influence or feelings of "fairness" do not allow government units to use low-priced labor when it is available. Often governments give wage increases to workers when there are many local workers who would be willing to work at the old wage.

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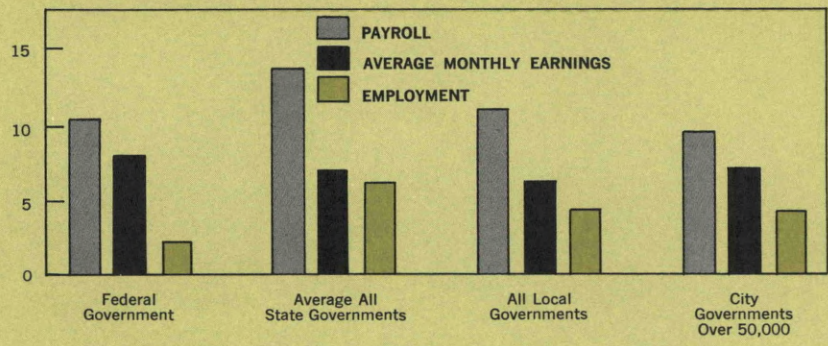
wage settlements will certainly be affected by the City Administration's attitude at the bargaining table and by Phase II regulations. Still, there is little doubt that the problem of intensified budget pressure because of increases in the wage bill will be with Philadelphia and other cities for quite some time.[9]

Wage hikes are burdensome to all economic units that use labor, but they work a particular hardship on local governments. This results from the fact that local governments, such as Philadelphia, are what econ-

[9] The preliminary "demands" of Philadelphia's unions for next year have been made known through the press. Although a limit of 5.5 percent would be consistent with Phase II guidelines, it has been reported that the "demands" are for greater amounts, more in line with those of past years. Policemen are reported asking for about 23 percent, firemen want a 20 percent wage hike plus increased fringe benefits, and representatives of the general city employees are said to be asking for about a 9 percent increase plus fringe benefits.

WAGES HAVE RISEN AT ALL LEVELS OF GOVERNMENT...

Annual Average Percent Change, 1965-70



The boom in wage costs that Philadelphia and other large cities experienced has affected all levels of government. Since only 1960 the payroll (■) for the entire public sector has soared from $3.3 billion to $8.3 billion. Like Philadelphia, the growth rate for all governments has been most rapid over the period from 1965 to 1970. In fact, the plight of many governments was greater than that of large municipalities — the growth of state and Federal payrolls exceeded that experienced at local levels.

Expanding employment (■), especially in state governments, explains much of the growth in payrolls. However, not unlike Philadelphia, pay increases of employees during the last five years inflated wage bills at all levels of government. While average monthly earnings in the Federal Government increased on the average by about 8 percent per year, state and local employees received annual average increases of 6.9 and 6.3 percent respectively (■). These large, continuous increases have accumulated into substantial gains for workers.

Source: *Public Employment in 1965*, GE No. 2, U.S. Department of Commerce, Bureau of the Census; *Public Employment in 1970*, GE 70 No. 1, U.S. Department of Commerce, Bureau of the Census.

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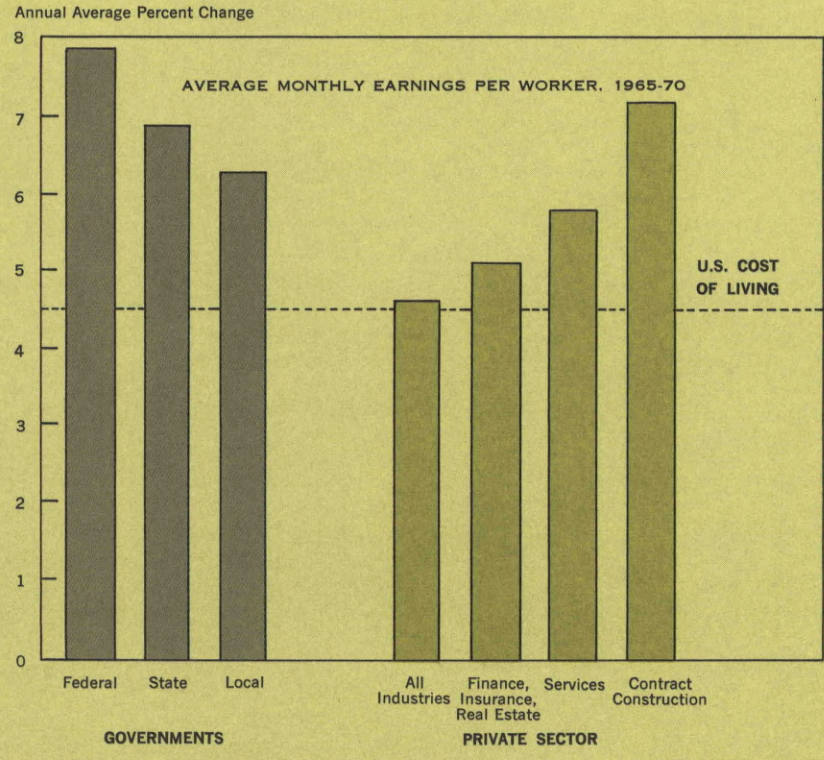
AND GOVERNMENT WORKERS AT ALL LEVELS HAVE ACHIEVED REAL GAINS



Government workers at all levels achieved average monthly earnings gains well in excess of the cost of living. During the period 1965-1970 they also made gains relative to workers in other industries. The average gain in monthly earnings in the private sector was 4.7 percent per year — well below all gains in the public sector. While some industries such as contract construction posted gains comparable to those in the public sector, earnings changes in industries with occupational structures similar to those of governments did not increase as much. For instance, annual increases in earnings in finance, insurance, and real estate — an industrial class with a work force similar to many governmental units — averaged 5.1 percent over the last five years. This is a full percent below the average for any level of government.

Source: The estimates of earnings changes for the private sector are based on data on average weekly earnings, Table C-5, *Employment and Earnings*, U.S. Department of Labor, Bureau of Labor Statistics. Comparisons here are tempered because growth in workers earnings in the private sector are affected more by changes in hours worked per week than those of government workers. Thus, average *hourly earnings* of government workers probably did not exceed those of private sector workers as much as did monthly earnings over this period.

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omists call "labor intensive." That is, their budgets are heavily weighted toward wage payments. In Philadelphia more than two-thirds of current general expenditures are for the money wage bill alone. Any increase in the wage rate, therefore, places a heavy burden on the budget.

The Choices Facing Local Taxpayers. Like any business firm experiencing increased wage costs, governments must adjust. One way is greater efficiency. If growing demands could be met by increased productivity from the City's labor force, the City could be relieved of the financial burden of new hiring and could more easily "afford" higher wages. Although gains can probably be made in this area, it is unlikely that they will offset the bulk of budgetary pressures. Thus, other adjustments will have to be made. One painful solution is cutting back on the use of the item — in this case labor — which is causing increased costs. An alternative course of action would be to pass the burden on to the consumer, either by higher taxes or reduced services.

The first alternative is a standard economic adjustment, but it may be of limited use to government. If wage costs are rising, a firm will attempt to use less labor and substitute more capital in the production process. It may be less expensive to buy a new machine than to hire several new workers. If wages keep rising in government, it may be cheaper to buy more street-cleaning machinery than to hire men to hand-sweep the streets. Or, alternatively, an expensive fire truck may take the place of several men and be more economical in the long run. Another possibility is that it may prove cheaper to farm out contracts for entire services such as recordkeeping or billing, rather than have government workers performing them. There is a limit to how much of this adjustment is possible, however. The policeman or the buildings inspector can probably never be replaced by a machine. Where this is the case, the burden must be borne by taxpayers.

When a firm's costs rise and internal economizing is unsuccessful, it must receive higher prices from consumers or accept lower profits. Since large city governments don't make profits, they must receive higher "prices" to continue operating at the same level. Governments "raise prices" by increasing taxes — the price of public services to citizens. This solution has fallen on hard times, however. Taxpayers across the land are "revolting" against increased levies. Philadelphia's Mayor Rizzo has emphatically ruled out tax increases. If this adjustment cannot be made, another solution would be to have someone else — the State or the Federal Government — pick up the tab for increased wage payments in the form of government aid. However, this is often easier said than done and in the past has been only a temporary solution.

If no other source of funds can be tapped, the only alternative for a government is to slash expenditures and services. If the price of theater tickets or dinners goes up, people generally go out less often. In sum, the taxpayers of large cities face a Hobson's choice. If wage changes raise the cost of police protection and city taxpayers refuse to fork over higher taxes, "somebody else" — the state house or even the White House — must foot the bill or there will be less protection. The same goes for schools, streets, and social welfare. The laws of economics apply just as clearly to governments as to firms. Public employees can not be paid more unless greater sacrifices are made. ■

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The '72 Unemployment Puzzle

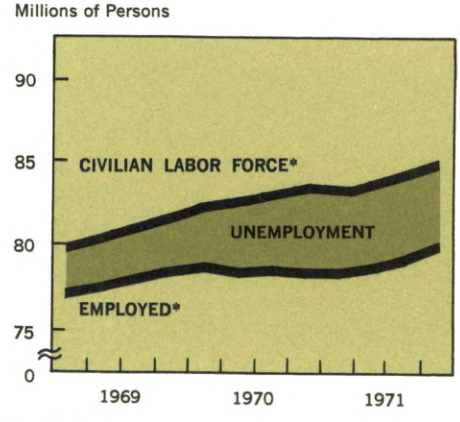
By L. Christine Grad

The unemployment rate is quickly proving itself to be one of the most intractable of all domestic economic problems. While some progress has been made in fighting inflation, significant improvement in the unemployment picture has not materialized. The reasons for this are fairly clear. The unemployment rate depends on two things — the number of persons in the job market and the number at work. And, since government has little control over the size of the labor force and only indirect control over the number employed, its direct influence on the unemployment rate is limited.

Although the unemployment rate usually makes the headlines, its determinants — the civilian labor force* and the number of employed persons — often go unnoticed. The gap between labor supply (measured by the civilian labor force) and labor demand (measured by those having jobs) is the number of unemployed persons. This difference has increased since early '69. Similarly the unemployment rate — which simply states what proportion of the civilian labor force is out of work—has risen substantially from a low of 3.4 percent in the first quarter of '69 to the 6 percent range during '71.

*The civilian labor force comprises the total of all civilians 16 years of age and over classified as employed or unemployed, in accordance with specific criteria determined by the Bureau of Labor Statistics. The civilian labor force does not include members of the armed services and those not actively seeking jobs.

CHART 1
UNEMPLOYMENT REFLECTS THE DISPARITY BETWEEN THE NUMBER OF PEOPLE IN THE JOB MARKET AND THOSE HOLDING JOBS.



* Seasonally adjusted.
Source: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings, February '72.*

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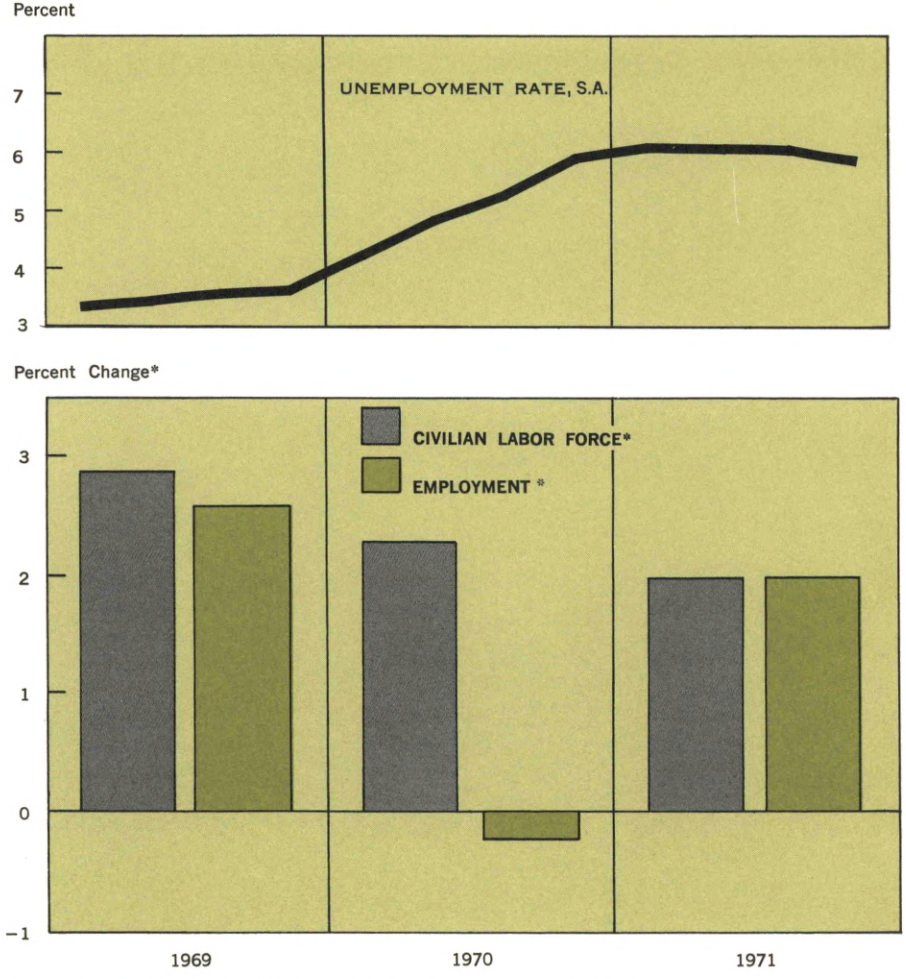
CHART 2
RELATIVE CHANGES IN THE GROWTH OF JOBS AND THE LABOR FORCE DETERMINE THE UNEMPLOYMENT RATE.



* Annual changes are based on year-end averages of seasonally adjusted data.
Source: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings, February '72.*

Merely achieving growth in employment will not reduce the unemployment rate. In fact, job opportunities must expand at a faster pace than the labor force if both the currently unemployed and new entrants are to find work. For example, in 1970 the general economic slowdown brought about a severe cutback in the demand for labor, causing layoffs and leaving new entrants without employment opportunities. The result — a jump of 2.6 percentage points in the unemployment rate between December '69 and December '70. While the number of new jobs created in '71 nearly matched the 1.6 million increase in the labor force, too few jobs were added to make up for those lost during the previous year. Hence, the unemployment rate remained at a high level for the year.

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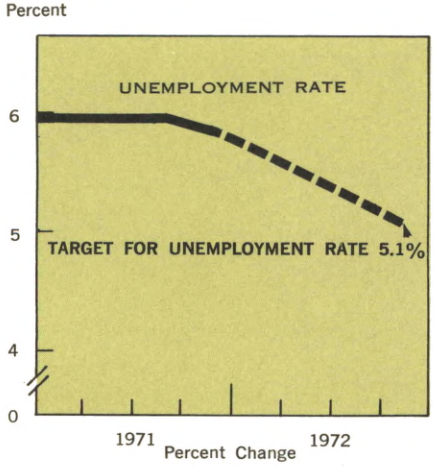
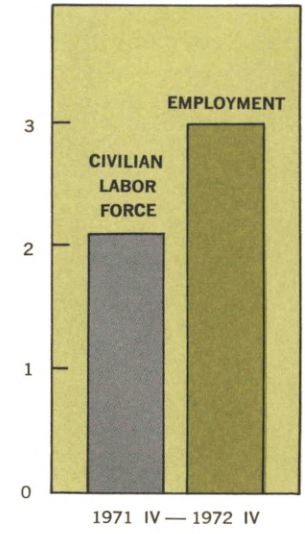
CHART 3
THE SAME RULE APPLIES IN '72.





Success of policies aimed at reducing the unemployment rate this year will depend, therefore, on how fast job offerings grow relative to the expansion of the labor force. Over the last decade, normal growth in the civilian labor force has been about 2 percent per year — or approximately 1.8 million persons in '72. If this labor supply expansion materializes, then the Administration's goal — reducing the unemployment rate to "near 5 percent by the end of the year"* — will require about 2.4 million newly-created jobs during 1972.

*"Near 5 percent by the end of the year" has meant for our calculations an unemployment rate of 5.1 percent for the fourth quarter of 1972.

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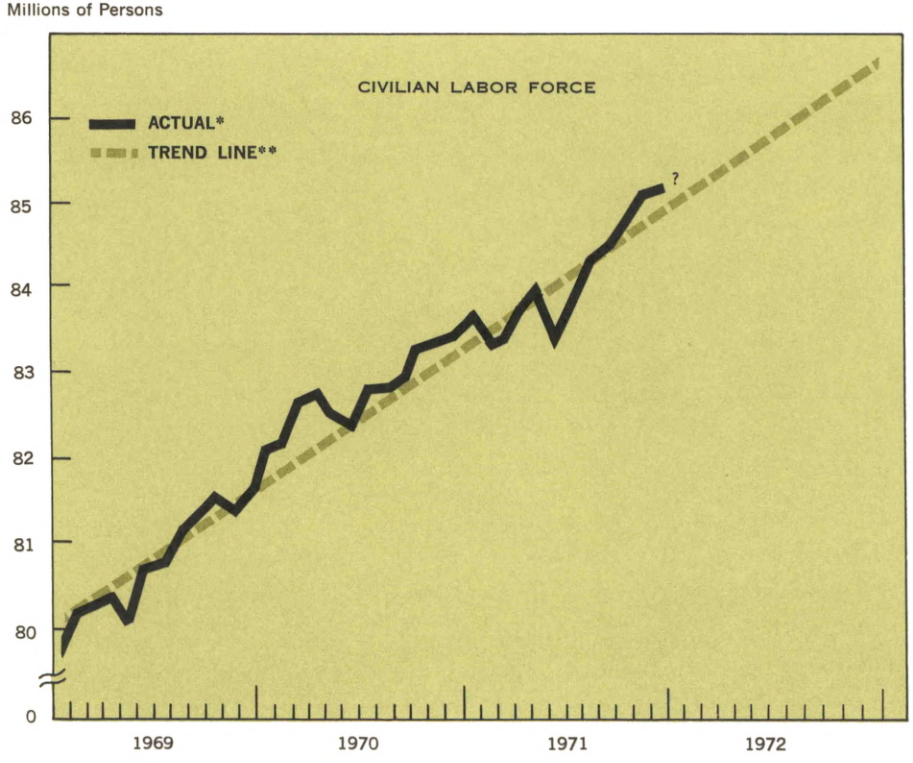
CHART 4

HOWEVER, UNPREDICTABLE GROWTH OF THE LABOR FORCE . . .



* Seasonally adjusted.
** Based on average annual growth of 2 percent over the last decade.
Source: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings, February '72.*

If, however, the civilian labor force expands more rapidly — as could easily occur — even more new jobs will be needed for the same target level of unemployment to be realized. The volatility of labor supply is, undoubtedly, a source of uncertainty. In 1971, for instance, the labor supply, although bouncing around, remained virtually unchanged during the first half of the year, and then increased by 1.6 million persons in the last half. Population growth, military manpower requirements, and fluctuations in the proportion of the population desiring employment (the labor force participation rate) are the key factors which will determine the number of people looking for jobs in '72. If, for example, the labor force participation rate increases as unemployment falls — as has happened in the past — then policymakers will have to get additional mileage out of measures designed to spur employment expansion in order to reduce the unemployment rate.

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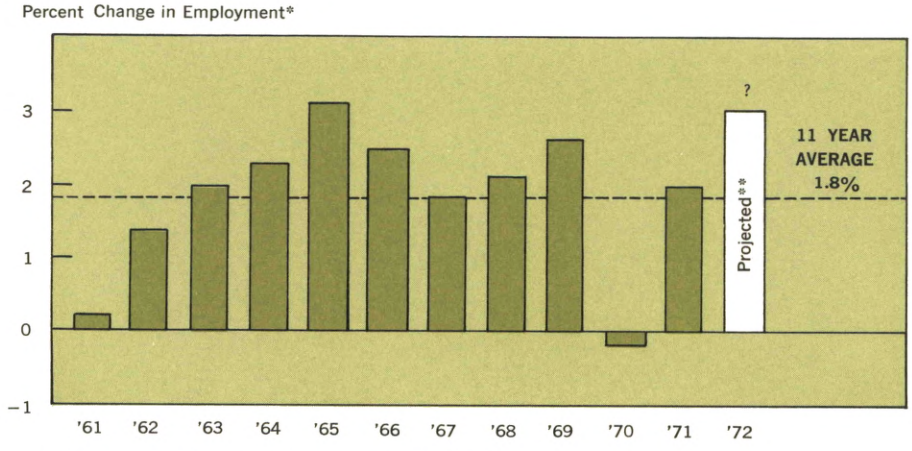
CHART 5
AND UNCERTAINTY ABOUT THE MAGNITUDE OF JOB EXPANSION IN '72, MAKE ANY PREDICTIONS ABOUT THE RATE OF UNEMPLOYMENT LESS THAN A SHOO-IN.



* Based on year-end averages of seasonally adjusted data.
** 1971 IV to 1972 IV; necessary to achieve a near 5 percent rate of unemployment with average growth in the labor force.
Source: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings, February '72.*

Even if the labor force does grow by an average amount, the number of jobs will have to grow about 3 percent — an above average gain — to reach an unemployment rate near 5 percent. Indeed during the '60s, jobs increased by 3 percent or more in only one year — 1965. And, even the growth of labor demand required to achieve a more modest unemployment goal of, say, 5.5 percent is above the average.

Nevertheless, a performance similar to that of '65's is possible. Much excess capacity exists within the economy, and there is ample room for creating jobs for the presently unemployed and upcoming entrants into the labor force. Too much stimulus, of course, will rekindle inflation. But, clearly, more than a small dent needs to be made in the number of unemployed. ■

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Bank Bond Management: The Maturity Dilemma

by Ronald D. Watson

Had Gilbert and Sullivan been as familiar with managing bank investments as they were with policemen and pirates, they might well have intoned "a banker's [policeman's] lot is not a happy one."[1] The meter of this change of phrasing might have caused them some problems, but those difficulties pale when compared to the headaches of managing millions of dollars of government securities investments in today's financial markets. Recently bank investment officers have become aware that this complex job requires more than simply understanding the financial markets in which they ply their trade. They must also discern how their superiors will measure the success of their bond management performance. Recent developments in banking research suggest that the bond management script may need to be rewritten before future performances. At a minimum there are ways to make the leading role — that of the bond account manager — easier to play.

[1] William S. Gilbert and Arthur Sullivan, *The Pirates of Penzance; or the Slave of Duty,* Act II.

SETTING THE STAGE: BANK LIQUIDITY MANAGEMENT

Banks, just like any other business, come upon times when they could use more hard cash. When a bank wants money, say to meet a cash outflow, it has many sources to tap. Cash balances not currently held to meet reserve requirements might be reduced, additional deposits solicited, loan outflows curtailed, temporary borrowings made from the Federal Reserve Bank, or portions of the bond portfolio sold. As this incomplete list of possibilities indicates, management can convert earning assets into cash or acquire new liabilities to meet cash demands. The choice depends on the relative cost of the alternatives. This process is called *liquidity management.*

Before the mid-1960s, techniques for managing bank liquidity focused on *selling assets,* such as bonds, to generate additional cash. However, considerable attention has been devoted recently to solving these liquidity problems exclusively by *buying short-term liabilities* in the money markets as

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funds are needed. This strategy is known as *liabilities management*. Awareness and use of this option has added a new dimension to managing a bank's liquidity. Bankers now have more flexibility in meeting unexpected cash demands because this borrowing power enables them to avoid selling bonds or other assets when they find that prices are unfavorable.

However, the simple fact that these money markets are now well-developed sources of financing doesn't make them the most economical method for alleviating every financial pinch. The credit crunches of '66 and '70 showed the folly of presuming that money markets can accommodate all the banking community's liquidity demands at the borrowing rates it is willing to pay. Thus, bank assets, particularly government securities, and the men who control them continue to play key roles in bank liquidity management.

The Role of Government Bonds. Cash, U.S. Treasury securities (bills, notes, and bonds), government agency bonds, municipal bonds, and loans all have some value for meeting liquidity needs. Just as a playbill lists actors in order of appearance, the balance sheet ranking above suggests the probable order in which assets would be converted to cash and applied to satisfying a liquidity problem.

Cash is the most readily usable liquid asset, but much of a bank's cash is likely to be tied up meeting legal reserve requirements. Justifying an increase in the cash account beyond minimums required for reserves and daily business is difficult because the bank receives no income from this asset. At the other extreme, loans are a costly source of liquidity. There is no formal market in which to dispose of these obligations cheaply and easily. Hence, using loans to meet a liquidity pinch is impractical except as a last resort.

The assets which remain — the bank's portfolios of government securities — are a more practical source of liquidity. These bonds are formal obligations of borrowers who are financially sound, which can be traded in relatively well-organized markets. Some are more marketable than others, of course, but all can be converted into cash with little difficulty. The Treasury security, because of its ready marketability, has become the most common source of asset liquidity used by the men who manage bond portfolios at commercial banks.

The Role of the Bond Portfolio Manager. The man running the bond portfolio show has to be a first-rate director. His job is balancing the bank's liquidity requirements against bank earnings. An important part of this balancing act involves shaping the *maturity distribution of bonds* — the balance of short-, intermediate-, and long-term issues — in the securities portfolio.

There are no easy rules that will allow a banker to set a maturity distribution which enables him to meet cash outflows at a minimum cost. Sometimes short-term borrowings will be the cheapest and easiest source of funds. At other times the banker may be unable to use that market at all. Irregularities in the securities markets may make it advisable to raise cash by selling long-term rather than short-term bonds. A desire to take capital gains or capital losses for tax purposes may affect the selection of maturities to sell. Further, the choice of bonds to sell might depend on what the banker wants to leave in his securities portfolio for future liquidity protection. Despite the diverse circumstances, a bond portfolio manager's job in shaping the maturity distribution of the portfolio ultimately comes down to matching returns against risks.

ACT ONE: THE UNCERTAIN WORLD OF THE ACCOUNT MANAGER

The curtain rises with the bond manager at his desk scratching his head over the bewildering choice of bond maturities before him. In choosing which assets to hold

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and how long to hold them, he is out to achieve the highest possible returns for the bank without exposing it to unwanted risks. But this task is easier said than done. It is a simple fact of life that a portfolio which offers the expectation of above-average returns — either in the form of interest or capital gains—normally brings higher risks. The uncertainty of future interest rates lies behind much of this problem of balancing risks and returns.

A Problem with Interest Rates. Changes in interest rates cause changes in bank earnings and in the value of the portfolio. Thus, the vagaries of interest rates involve the portfolio of the manager in two kinds of troublesome risks: 1) the variations occurring in the interest income earned on bond investments, and 2) the capital losses resulting from an upward shift in market interest rates.[2] Managing these risks can be particularly difficult because reducing the portfolio's exposure to one often increases exposure to the other.

For example, suppose an account manager seeks to reduce exposure to the first risk, fluctuating interest income. He may be able to do this by putting more of his portfolio in longer-term maturities. Long-term bonds offer a steady flow of coupon or interest income as long as they are held. And since their rates tend to fluctuate less than short-term rates, reinvestment income is also more stable.

But what happens if interest rates in the market shift upward after this move to long-term bonds is made? Our manager has that unsettling experience of seeing his portfolio drop in value. This change in interest rates results in a loss because more interest income could now be earned with the same investment in a newly issued bond. Hence, no one would pay the old price for the bond, and its market price would be bid down until its effective yield matched the current market rate. Whether or not the account manager has to record or "realize" this capital loss would depend on whether he has to sell any long-term bonds to cover cash drains on the bank. If he does have to sell, say, a 15-year bond yielding 5 percent in a market where the current yield has risen to 6 percent, he will have to swallow a capital loss of nearly 10 percent.

Thus, by attempting to avoid the first risk of interest income fluctuation, our account manager falls victim to the second risk, capital loss, all because of the fickle nature of interest rates. Consequently, a portfolio manager's outlook for interest rates must necessarily shape his selections for the government bond account. Honing the accuracy of his interest rate predictions allows him to reduce capital losses or increase capital gains while still meeting the bank's liquidity demand. Moreover, top management could help by making its interest rate expectations clear. Senior management can hardly set the level of future interest rates by decree. However, interest rate forecasts have a strong impact on the maturity distribution appropriate for the portfolio. It only makes sense to insure that top management's expectations are considered in formulating portfolio policies so that these policies are consistent with those followed in other areas of the bank's operations.

To the extent that the portfolio manager is uncertain about future interest rates, he's likely to "hedge" his bets when balancing risks against returns by planning for a variety of contingencies.[3] The manager hedges by

[2] Falling interest rates create capital gains. However, this form of income instability is not viewed as a "problem" by portfolio managers.

[3] An important element of the portfolio maturity decision is the structure that is assumed for future interest rate movements. Until recently it had been common to presume that bond yields would generally rise as the maturity of the bond increased. Such an assumption implies that there will be a long-term improvement in a portfolio's income (after capital gains and losses) if maturities can be lengthened. In the last few years, short-term yields have exceeded long-term rates so frequently, that some bond man-

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putting some of his assets in long-term bonds while keeping others in short-term bonds. This provides some income stability plus a ready supply of emergency liquidity free of capital loss risk. In short, the hedging manager won't lose big, but he won't win big either.

Uncertainty for Top Management. Not only does an account manager run into uncertainty from interest rates but also from top management. Portfolio managers may be unsure as to how their bosses weigh the risks of unstable portfolio income as opposed to capital losses. That is, how much management is willing to forego in potential earnings to avoid or reduce exposure to each type of risk.

Quite likely those evaluating a bond manager's performance will be less than elated by significant capital losses, and some will be even more unhappy if the capital losses have to be "realized." These bankers usually try to keep realized losses at a minimum, because such losses stand out in the income statement. Thus, reporting them creates unfavorable publicity and embarrassment. This forces the portfolio manager to hold enough short-term securities (for instance, Treasury bills which are virtually free of capital loss risk) to cover any cash outflow likely to come down the pike.

Other portfolio managers may have to please bosses (or possibly stockholders) who are more concerned with the steadiness of the bank's overall income than with capital losses. This will encourage the portfolio manager to select more long-term bonds for the account. However, as income stability improves, the risk of capital losses climbs. Therefore, he will lengthen his maturities only as long as the combined effects create a more stable net income.

But often an account manager is uncertain as to the weight management attaches to these alternative forms of risk. As in the case of uncertainty about future interest rates, the manager is likely to shape the maturity distribution of the portfolio to hedge his bets. He will hold a supply of short-term securities sufficient to cover most cash drains without severe capital losses. He will also keep some longer maturities to steady the portfolio's interest earnings. Thus uncertainty about management's views on risk poses a difficult problem for the account manager in terms of balancing risks against returns.

ACT TWO: MANAGEMENT TECHNIQUES

Surrounded by the uncertainty of which risks his bosses most want to reduce along with a great deal of uncertainty about what the future holds for interest rates, the account manager seeks some method to guide him in plying his trade. The technique often chosen for selecting the bond portfolio is the "liquidity reserve classification system" (see Box).

Liquidity Reserve Approach. Under the most common form of this system, each kind of investment is categorized (primary, secondary, tertiary, and investment) according to how liquid it is. Cash, of course, is the most obvious source of liquidity, but most of it is needed to meet the bank's reserve responsibilities. The short-term Treasury bill becomes part of the bank's secondary reserves which are held as the next line of defense against outflows. Long-term bonds are an investment reserve to be sold or "cashed in" when the bank is under the pressure of extended funds outflows.

Under this layered system of reserves the greatest concentration of invested funds occurs in the short-maturity Treasury bills and notes. However, some reserve funds

agers are beginning to doubt the wisdom of trying to extend the portfolio's average maturity. The longer-term bonds still seem to offer an opportunity for more stable income flows, but their net return may not be higher. To the extent that one believes that interest rate movements will more closely mirror the recent past than the overall experience since 1951, the following discussion will have to be modified. Funds normally invested in long-term bonds, because their yield was expected to be high, might be shifted into shorter maturity issues.

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THE LIQUIDITY RESERVE SYSTEM FOR PORTFOLIO MANAGEMENT

The most common scheme for managing the bond portfolio's distribution is the reserve system. It is characterized by the wide variety of bond maturities included in the portfolio. According to this method of portfolio management, both the kinds of liquid assets available for bank investment and the sources of instability in the bank's cash flows are grouped into several categories. Assets needed for maintaining the bank's liquidity can be safely allocated to cash, short-term government securities, other short-term securities that are also highly liquid, and long-term government bonds. Paralleling this asset structure, sources of cash flow uncertainty are divided into daily, weekly, seasonal, and cyclical cash flows. Net cash inflows represent a liquidity problem for the bank only in an opportunity-cost sense, but net outflows are presumed to have specific causes and are met from specific sources of reserve funds.

The *primary reserve* is the part of a bank's cash account that exceeds its legally required reserves: ready money for meeting net outflows that occur in the normal course of the bank's daily activities. This reserve must be large enough to allow the bank to meet its current obligations without encountering embarrassing cash shortages. Yet primary reserves must be kept at a working minimum because they earn no interest.

The *secondary reserve* is composed of short-term, highly marketable government securities. Paramount is the requirement that these assets be readily convertible into cash at little or no risk of capital loss. Generally, the most suitable security for this purpose is the Treasury bill. However, Treasury notes of less than two years to maturity or even government bonds which mature in the near future satisfy these requirements. This reserve provides a useful source of liquidity for seasonal cash outflows such as crop cycles, holiday periods, and tax deadlines.

A *tertiary reserve* might be held by the bank for protection against major cyclical outflows associated with either loss of deposits or with the heightening of loan demand, both phenomena occurring over a long period of time. The reserve for this kind of outflow need not be as liquid as the primary or secondary reserves, so it is generally composed of securities of somewhat longer maturities and higher yields. Government securities with maturities of two to five years could normally qualify for this reserve designation.

To the extent that bonds of still longer maturities have a reserve function, they are said to be part of the *investment reserve*. Securities of this type can be held to provide an additional cushion in case of severe financial stress. Combining assets held for each of these reserve purposes produces a spaced maturity portfolio.

Seldom is this one-to-one correspondence of reserve to function followed very rigorously in the banking community. Any sensible banker needing to convert a portion of his reserves to cash would analyze his portfolio to determine the most advantageous sale. However, the liquidity reserve system provides a banker with a rough tool for measuring his reserve needs for cash outflows and for protecting himself from serious losses in bond account dealings.

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are spread over a wide range of maturities to increase the average return on the portfolio and to stabilize the flow of interest income. By advocating an extension of a portion of the portfolio's investment funds into intermediate- and long-term securities, this management approach assumes that, on the average, short-term yields will be lower than long-term ones. Moreover, it implicitly assumes that stabilizing interest income is desirable as long as capital losses are under control. Avoidance of losses is the key to this philosophy as evidenced by a heavy concentration in short-term securities. Attaining a "reasonable" level of income without incurring high capital loss risks, rather than seeking high income, is the name of the game.

The problem with the liquidity reserve approach is that it is not designed to find a bank's *best* bond maturity distribution. It serves only to suggest one that will *suffice*. Therefore, the portfolio manager may be missing chances for higher returns that would not increase the bank's risks. Another difficulty encountered in following the liquidity reserve system is deciding which intermediate and long maturities to include in the portfolio. Specialists in the field sharply differ in their willingness to include maturities of more than five years because of the heavy capital losses that can occur in ten- and fifteen-year bonds. If long-term government bonds are held only as a backstop against catastrophic outflows, the longest maturities are suitable. "Forced sales" and hence realized capital losses will rarely occur. However, if these bonds are to be used frequently in absorbing cyclical liquidity demands, the chances of realizing capital losses are higher, and some authorities are reluctant to suggest commitments longer than five to seven years. In either case, the liquidity reserve approach yields a portfolio that is hedged with intermediate maturities.

Split Maturity Strategy. Some recent research may result in an eventual rewriting of the script for portfolio managers. It has uncovered a *split maturity strategy* as an alternative to the *liquidity reserve approach* to bond management. This recent addition to the banker's repertoire was uncovered by computer analysis, using techniques from operations research.[4] The preliminary results merit careful analysis for they contradict the liquidity reserve system under certain assumptions.

This research discloses that the bond maturity distributions which produce the most attractive combinations of risks and returns are structures comprised of either all short-term bonds, all long-term bonds, or combinations of the two (split maturity structures).[5] These maturity distributions contain no bonds maturing between five and fifteen years. This result depends heavily on the presumption that there is a yield advantage to investing in long-term bonds.

Split maturity strategies contradict the basic approach of the liquidity reserve system. Rather than trying to produce a "sufficient" return without heavy capital loss risks, the split maturity structures result from attempts to earn the highest return possible while controlling *probable* losses. These

[4] A detailed description of this research can be found in Charles R. Wolf, "A Model for Selecting Commercial Bank Government Security Portfolios," *Review of Economics and Statistics,* 5 (1969): 40-52 (a nonlinear mathematical programming model); Dwight B. Crane, "A Stochastic Programming Model for Commercial Bank Bond Portfolio Management," *Journal of Financial and Quantitative Analysis,* 6 (1971): 955-976 (a probabalistic linear programming model); Ronald D. Watson, "Tests of Maturity Structures for Commercial Bank Securities Portfolios — A Simulation Approach" (unpublished D.B.A. dissertation, Indiana University, Bloomington, Indiana, 1971) (a simulation model).

[5] For purposes of this discussion short-term bonds are defined as those being less than five years to maturity, intermediate from five to ten, and long-term from ten to fifteen years. In addition, this result is predicated on: 1) the bank's management being averse to taking risks, 2) the unequal trade-off of capital losses and increasing bond maturities, 3) the assumption that long-term interest rates normally exceed short-term rates.

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results suggest that it may be more efficient for a manager to control capital loss risks by investing only in the shortest maturities available and to seek income by investing in the maturity offering the highest expected yield rather than spreading investments over many maturities. The manager would then be investing in a portfolio of "balanced risks and returns" rather than one that is hedged with intermediate maturities.

A further point highlighted by this split portfolio research is the importance of the account manager's measure of risk. When the risk measure used in the analysis was "capital gains and losses," the entire short-term portion of the portfolio was invested in the shortest available maturity. However, altering the concept of risk to include both capital value changes and income instability made it more efficient to spread the short-term investments over a range of short maturities (up to four or five years to maturity). Extension of some short-term investments over several years increases the portfolio's capital loss risks, but it more than compensates by reducing interest income uncertainties. But even with this concept of risk, there remains a gap between the short and long maturities in the portfolio.

The split maturity strategy may help the portfolio manager improve his performance in the face of changing interest rates, but it isn't a cure-all. He must still weigh the risks of capital losses versus income stability in allocating his investable funds. He must also make the decision of how risky he wishes his portfolio to be (relative to the bank's liquidity requirement). Finally, he must incorporate expectations of future interest rates into the managing of the bond account's maturity distribution. These decisions can be simplified when top management makes the ground rules clear, but it's still a delicate balancing act.

FINALE

Again, to paraphrase slightly Messrs. Gilbert and Sullivan, the portfolio manager's lot is certainly not a happy one. The performance of his bond portfolio is subject to forces beyond his control — the bank's liquidity requirement and the vagaries of interest rates. Estimating both of these is a tricky business. He may also face the dilemma of having his performance rated by a criterion that is unknown to him.

A bank's top management has a responsibility to reduce the difficulty of this job by helping the portfolio manager cope with this uncertainty. It should first decide how his performance will be evaluated (with a full understanding of the implication of each criterion) and make him aware of the decision. Then it should work out with the portfolio manager a set of interest rate projections to be used in managing the bond account. These two acts will enable the bond account manager to devise a strategy that is consistent with the objectives and expectations of the bank as a whole. When the plot has unfolded, the strategy could well be a split maturity structure. However, the important point is that the bond account manager should understand the constraints under which he must make his decision. If this can be done, the portfolio manager's lot will be a much more happy one. ■

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The Fed in Print

Business Review Topics, Fourth Quarter 1971, Selected by Doris Zimmermann

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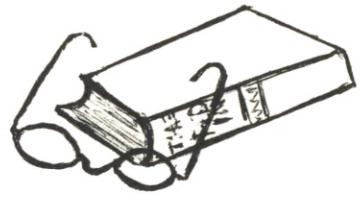

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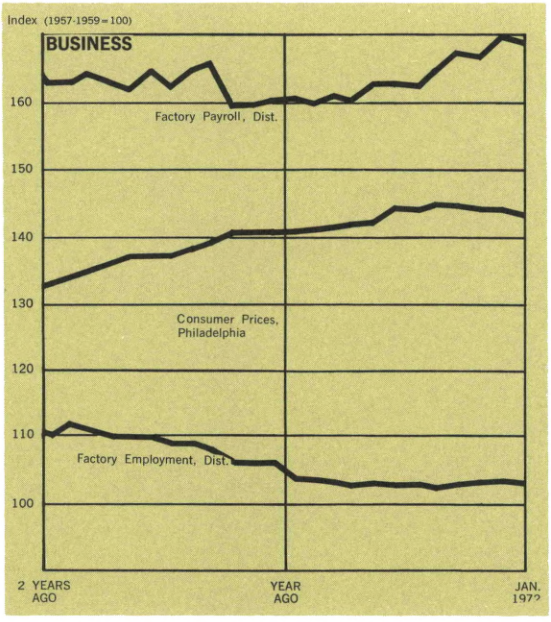

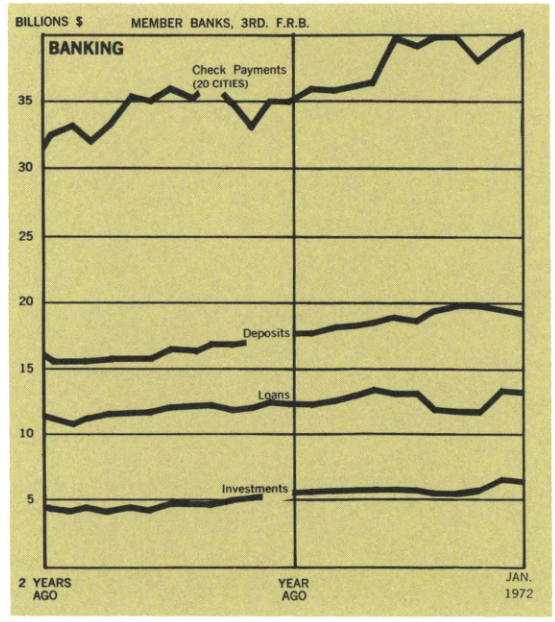

SUMMARY

	Third Federal Reserve District		United States	
	Percent change		Percent change	
	January 1972 from		January 1972 from	
	mo. ago	year ago	mo. ago	year ago
MANUFACTURING				
Production	....	....	+ 1	+ 3
Electric power consumed	− 1	+ 3	....	....
Man-hours, total*	− 2	− 2	− 3	0
Employment, total	− 1	− 3	− 1	0
Wage income*	− 3	+ 5	− 3	+ 6
CONSTRUCTION**	−26	− 6	− 1	+43
COAL PRODUCTION	−11	−17	− 4	− 6
BANKING (All member banks)				
Deposits	− 2	+13	− 1	+11
Loans	− 2	+ 9	− 1	+10
Investments	0	+19	− 1	+11
U.S. Govt. securities	− 4	+ 7	− 3	+ 1
Other	+ 1	+25	+ 1	+18
Check payments***	N/A†	N/A†	N/A	N/A
PRICES				
Wholesale	....	....	+ 1	+ 4
Consumer	0‡	+ 3‡	0	+ 3

*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***	
	Percent change January 1972 from		Percent change January 1972 from		Percent change January 1972 from		Percent change January 1972 from	
	month ago	year ago	month ago	year ago	month ago	year ago	month ago	year ago
Wilmington	− 1	− 2	−10	− 4	N/A	N/A	− 9	+12
Atlantic City	0	+ 2	+ 4	+15	N/A	N/A	0	+30
Bridgeton	0	− 4	N/A	N/A	N/A	N/A	N/A	N/A
Trenton	− 1	− 3	− 1	+ 4	N/A	N/A	+ 1	+13
Altoona	0	− 5	+ 2	+ 2	N/A	N/A	− 1	+10
Harrisburg	0	0	+ 1	+ 5	N/A	N/A	0	+11
Johnstown	− 1	− 4	−11	+ 8	N/A	N/A	− 4	+11
Lancaster	− 2	− 5	− 3	+ 5	N/A	N/A	0	+16
Lehigh Valley	0	− 3	− 5	+ 7	N/A	N/A	0	+16
Philadelphia	− 2	− 3	− 3	+ 6	N/A	N/A	− 3	+12
Reading	− 1	− 1	− 3	+ 4	N/A	N/A	0	+ 9
Scranton	− 1	+ 2	− 2	+ 8	N/A	N/A	0	+18
Wilkes-Barre	− 1	− 2	− 3	+ 6	N/A	N/A	0	+23
Williamsport	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
York	− 1	+ 1	− 3	+ 9	N/A	N/A	0	+13

*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.

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