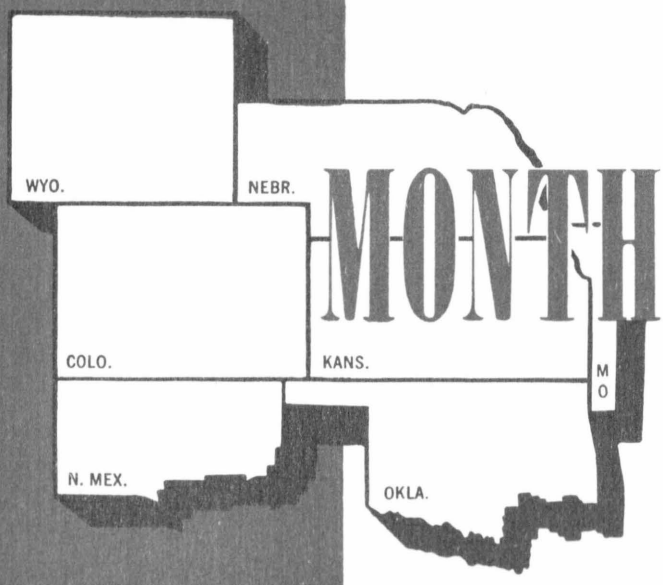
December 1961



MONTHLY REVIEW

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FEDERAL RESERVE BANK
OF KANSAS CITY

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Relationship of

Bank Size and Bank Earnings

A SERIES OF ARTICLES in the February, March, and April 1961 issues of the *Monthly Review* dealt with the association between bank size and costs among a sample of member banks in the Tenth Federal Reserve District. The results of the study described in those articles indicated clearly that ratios of costs to assets among District banks tend to decline with increasing size of bank. The lower cost ratios of larger banks were traced mainly to substantially lower wage and salary expenses per dollar of assets.

In the discussion of the size-cost relationship, care was taken to avoid implying that the cost advantages of large-scale operations meant that larger banks enjoyed an equivalent advantage with respect to net income. Such an inference could be drawn from the association between costs and size among sample banks only if gross earnings rates of large and small banks in the District were identical. For a variety of reasons, this is not the case. Gross earnings rates of the larger banks tend to be lower than those of the smaller banks, and thus the association between bank size and net income is considerably different from that between size and costs.

The present article investigates the relationship between size and net earnings among District members. A study of this nature requires not only statistical measurement of the association between size and net income, but also consideration of the appropriate measure of income and interpretation of the differing relationships between size and net income suggested by alternative measures of earning rates. The factual framework for the discussion is provided by the use of statistical analysis applied to earnings data for a sample of about 270 District member banks—the same sample used in the study of size-cost relationships. The data employed are figures for the years 1956-59 averaged together to minimize the influence of unusual factors that may distort the size-earnings relationship in a single year.

In the following exposition, technical features of the study that would be of interest only to a limited readership are discussed in footnotes and in the notes to the charts.

CHARACTERISTICS OF BANK EARNINGS REPORTS

Since one of the points at issue is the interpretation of various measures of bank earnings, it may be helpful to note some of the relevant characteristics of member bank earnings reports from which data are taken for this study.

In calculating its income position for earnings reports, a bank first computes its net current earnings—representing the difference between gross current earnings and current operating expenses. Adjustments to net current earnings made to arrive at net profits before income taxes, a figure which as a rule is smaller than net current earnings, include losses or recoveries on loans and investments, profits or losses on securities sold, transfers to and from valuation reserves for loans and securities, and other miscellaneous chargeoffs and recoveries. Income tax liabilities accrued during the period

(or taxes paid if the bank's accounts are maintained on a cash basis) are then deducted to arrive at profits after taxes.

When comparing bank income figures, those familiar with bank accounting statements lean toward the use of net current earnings as the most reliable measure of profitability. A major consideration underlying this choice is that adjustments to net current earnings used in arriving at net profits figures may vary erratically from one year to the next because banks have a fairly wide degree of latitude as to the nature and timing of these adjustments. For example, a bank might elect to charge off the cost of a new building against the earnings of a single year, and its profits before and after taxes in that year would understate greatly the true earnings position of the bank.[1] Such an understatement, in fact, might be seriously misleading even in average profits figures for several years.

This fact suggests that measurement and interpretation of the size-earnings relationship in banking should depend primarily on the relationship of net current earnings to size of bank. That measure of income is, in any case, a good one to use in the initial search for a relationship between bank size and earnings, for it is likely to record most of the variations in earnings ability that are systematically associated with size of bank. Differing degrees of efficiency between large and small banks in the performance of routine banking functions, for example, are reflected in total current expenses and hence in current income. Moreover, differences by size of bank in rates charged for banking services clearly influence the relative magnitudes of current income at large and small banks.

For this study, net current earnings of the sample banks were measured both as a per cent of bank assets and as a per cent of bank capital. The present article is concerned with the relationship between bank size and ratios of net current earnings to assets. The association between size and net income as a per cent of capital accounts will be treated in a future issue of the *Review*.

[1]This does not mean, of course, that a bank has the freedom to write off large outlays of this kind in its statement of income for tax purposes.

BANK SIZE AND THE RATIO OF NET CURRENT EARNINGS TO ASSETS

The bottom panel of Chart 1 shows the average relationship between ratios of net current earnings to assets and bank size found among the sample banks for the 4 years 1956-59. On the average, net current earnings amount to about 1.25 per cent of assets for sample banks with assets of $1 million, and the ratio increases by .07 percentage points for each tenfold increase in asset size of bank.

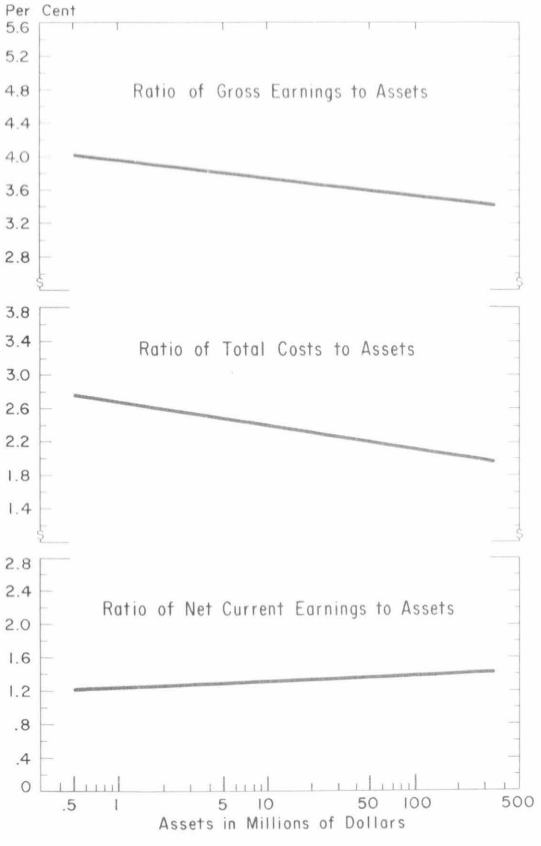
The rise in net current earnings rates with increasing bank size reflects the combined behavior of gross earnings and total costs (expressed as a per cent of assets) as the size of bank increases. Although both gross earnings and total cost ratios fall rather sharply with increasing bank size, as displayed in the top two panels of the chart, the decline in the total cost ratio is somewhat steeper.

The relationships shown in Chart 1 make no allowances for differences in the characteristics of assets and liabilities between large and small banks that influence their revenues and expenses, and hence are termed "simple" relationships. For example, large banks usually have higher ratios of loans to total assets than do small banks. This tends to raise both gross earnings rates and cost ratios of large banks relative to small banks, but it is not clear what effect is produced on rates of net current earnings by size of bank.

The statistical method of multiple regression analysis was used, therefore, as a means of measuring the influence of bank size on net earnings rates after eliminating the effect on net earnings of a variety of characteristics of the sample banks. These characteristics in-

clude the distribution of assets by major types (loans, U. S. Government securities, other securities, and cash), the division of loans by principal class of borrower (business, consumer, farm, and real estate), the proportion of deposits consisting of time accounts, and the banks' growth rates between 1947 and 1959 and between 1956 and 1959. The average relationship between size and the ratio of net current earnings to assets found among the sample banks, when this method of analysis is employed, is depicted in Chart 2.[2]

Chart 1
SIMPLE RELATIONSHIPS OF BANK SIZE AND RATIOS OF GROSS EARNINGS, TOTAL COSTS, AND NET CURRENT EARNINGS TO ASSETS
Sample of Tenth District Member Banks, 1956-59



NOTE: The relationships portrayed are based on simple regression functions fitted to average data for the years 1956-59. The equations are: (1) $X_1 = 3.940 - .209 \log X_2$; (2) $X_1 = 2.694 - .284 \log X_2$; (3) $X_1 = 1.248 + .072 \log X_2$; where X_1 is the ratio of gross earnings to assets in equation (1), the ratio of total costs to assets in equation (2), and the ratio of net current earnings to assets in equation (3), with these ratios expressed in per cent. X_2 is assets in millions of dollars. A logarithmic expression for X_2 was chosen for reasons outlined in an article dealing with size-cost relationships published in the February 1961 issue of the **Monthly Review.** For equation (1), the simple correlation coefficient (r) is $-.171$; for equation (2), $r = -.262$; and for equation (3), $r = .108$.

The relationship shown there differs little from that portrayed in the bottom panel of Chart 1. The similarity in the slopes of these two lines of average relationship means that the ability of larger banks to earn higher net rates on their assets does not stem simply from differences between large and small banks in the characteristics mentioned in the preceding paragraph. Rather, it results from other factors influencing net current earnings rates that are so closely associated with bank size as to be inseparable from it by statistical analysis.

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[2]As the text implies, the group of six independent variables included in the equation underlying Chart 2 was selected from a larger list of characteristics that might reasonably be expected to be related to net earnings rates. Since these characteristics are bound to be intercorrelated, however, not all of them can be included in the same regression equation and turn out statistically significant. Various combinations of these variables were tested experimentally to obtain the best fit in terms of maximizing the multiple correlation coefficient, corrected for degrees of freedom, while confining the list of independent variables to those which proved to be statistically significant.

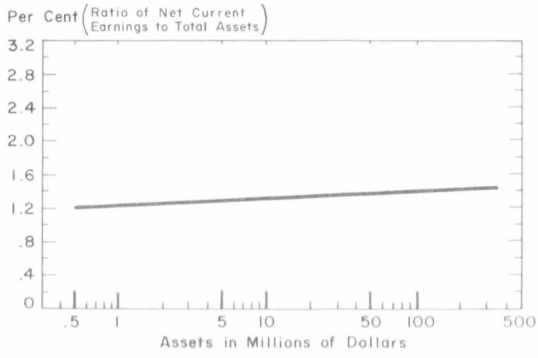
In the experimental process, attention was given to what effect the omission of a variable might have on the regression coefficient of the size variable. This is important because some of the omitted variables may have been insignificant by reason of intercorrelation with bank size. The ratio of business to total loans is a prime example. This raises a question concerning the interpretation of the size-earnings relationship, since it is not entirely clear whether larger banks earn higher rates of return simply because they are larger, or because they specialize in commercial lending, or both. The results of the experimentation indicate that omission of these characteristics does not influence materially the interpretation of size-earnings relationships. For example, addition of the ratio of business to total loans to the group of independent variables employed in the equation alters the regression coefficient of the size variable by only about 10 per cent of one standard error.

The margin of difference in ratios of net current earnings to assets between large and small banks is not, to be sure, exceptionally great. But it is sufficient to confer a meaningful earnings advantage to larger District members. Thus, the line of average relationship shown in Chart 2 implies that banks with $100 million in assets achieve an average ratio of net current earnings to assets about 12 per cent higher than for banks with $1 million in assets. The increase in net current returns to scale does not, furthermore, end when the $100 million point in asset size is reached, but continues over the full range of sizes present within the District banking community.[3]

Chart 2

RELATIONSHIP OF BANK SIZE AND RATIOS OF NET CURRENT EARNINGS TO ASSETS

Sample of Tenth District Member Banks, 1956-59



NOTE: The equation on which the chart is based is: $X_1 = 1.265 + .076 \log X_2 + .0171 X_3 - .0225 X_4 + .0067 X_5 - .0121 X_6$, where X_1 is the ratio of net current earnings to assets, X_2 is assets in millions of dollars, X_3 is the ratio of total loans to total assets, X_4 is the ratio of cash to total assets, X_5 is the ratio of consumer to total loans, and X_6 is the ratio of time to total deposits. All ratios are expressed in percentage terms. The multiple correlation coefficient for the equation is .53, and all independent variables are statistically significant at the 5 per cent level. The chart is obtained by setting variables X_3 through X_6 at their mean values and then graphically portraying the resulting relation between X_1 and X_2.

FORCES INFLUENCING NET EARNINGS RATES BY SIZE OF BANK

Identification of the specific factors that permit larger banks to earn higher net rates of return on their assets would go far beyond the scope of the present investigation. Nevertheless, it is well worthwhile to consider the broad forces that might account for the earnings advantage accruing to large-scale operations.

Prices of Banking Services

It might be thought, first, that the relatively greater net earnings rates of larger banks reflect, in part, higher charges to bank customers for services comparable to those performed by smaller banks. Interest rates on loans of similar credit quality would be the most important case in point, since roughly 60 per cent of the gross earnings of District member banks during the years 1956-59 consisted of interest and discounts on loans. An additional 25 per cent was accounted for by interest income on investments, on which yields are established by market forces generally well beyond the influence of the individual bank.

While data needed for a careful examination of this hypothesis are scarce, inferences may be drawn from statistics relating to interest rates on business loans obtained in surveys of business lending at District member banks. The last survey of this type—taken in the fall of 1957—disclosed a structure of interest rates by size of bank, size of business borrower, and maturity of loan as indicated in Table 1. Loans to quite large businesses—those with assets of more than $5 million—were not included in the table, because only the biggest banks in the District have any appreciable amount of loans outstanding to these larger firms.

[3]The statistical basis for the last statement lies in an examination of the fit of the equation for larger banks. To inspect more closely this area of the size range, the equation underlying Chart 2 was fitted to the data for sample banks with over $25 million in assets. The regression coefficient of the size variable in this case proved to be larger than when data for all sample banks were included (.102 as opposed to .076). A test for nonlinearity of fit using the Durbin-Watson ratio also was employed for the equation describing the size-earnings relation among the larger banks, and it did not indicate any significant departure from linearity.

Table 1

AVERAGE INTEREST RATES ON BUSINESS LOANS BY SIZE OF BUSINESS, SIZE OF BANK, AND MATURITY OF LOAN

Sample of Tenth District Member Banks, October 1957

Bank Size (Deposits in Millions of Dollars)	Asset Size of Business: $1 to $5 Million		$250,000 to $1 Million		$50,000 to $250,000		$25,000 to $50,000		Under $25,000	
	Short-Term Loans	Long-Term Loans	Short-Term Loans	Long-Term Loans	Short-Term Loans	Long-Term Loans	Short-Term Loans	Long-Term Loans	Short-Term Loans	Long-Term Loans
	Average Interest Rate (Per cent per annum)									
Over 100	5.04	4.95	5.07	5.07	5.40	5.38	5.76	6.14	6.24	7.35
50-100	5.04	5.22	5.16	5.46	5.38	5.90	5.62	6.96	6.12	9.10
20-50	4.92	4.90	5.24	5.38	5.52	5.94	6.27	7.02	6.47	7.70
10-20	5.09	5.17	5.58	5.62	5.88	6.07	7.11	7.52	7.56	9.06
0-10	5.11	*	5.40	5.70	6.00	6.40	6.80	6.74	7.52	8.38

*Number of loans too small to permit meaningful calculation of average interest rate.

NOTE: Long-term loans are defined as loans with an original maturity of more than 1 year. It is not surprising that, in some cases, average rates of interest are higher on short-term loans than on long-term credits for a given size class of business and size class of bank. This reflects the fact that the survey was made in October 1957, when bank loan rates were at cyclical peaks. Long-term loans negotiated considerably earlier thus would tend to carry lower average rates than would generally have been available on the survey date.

The assumption underlying the construction of the table is that loans of a given maturity to a given size of business are reasonably comparable in terms of risk exposure of the lender. Thus, rates may be compared among the various bank size groups to gain an impression of price differences for similar banking services. The data in the table indicate that interest rates of a given maturity to a given business size class are not directly related to bank size, but tend to be inversely related to it. That is, rates generally are higher the smaller is the size of bank. Data from a business loan survey at District member banks in 1955 display a pattern of interest rates by size of bank consistent with that shown in Table 1.

It is to be recognized, of course, that aspects of loan contracts other than those listed in the table—such as the type of collateral, the business of borrower, the size of loan, and the existence of compensating balance requirements—also affect rates of interest on business loans. The rate differentials shown in Table 1, therefore, reflect not only the size of the lending bank but other characteristics of the loan also. Nevertheless, when the effects of these characteristics are taken into consideration as adequately as possible, given the available data, differentials in interest rates still exist that appear to be associated with the size of the lending bank.

The tendency for rates of interest on comparable loans to be lower at larger banks may reflect, in part, the fact that administrative costs of lending are less at larger banks, even for loans comparable in size to those made by small District members. If that is the case, prices of other banking services may bear a similar relationship to bank size—tending to decrease with increasing size of bank—since the greater efficiency of larger banks which results in lower administrative costs of lending presumably influences costs of performing other banking services as well. It should be noted, however, that cost differences *per se* are not an adequate explanation of differential pricing of services between large and small banks. The strength of competitive forces in local markets also is an important consideration. The larger sample banks are concentrated in the District's metropolitan areas, where competition among banks may be relatively

strong. The distribution of medium-size and smaller banks, on the other hand, is more diverse. Some of them are located in major cities, but the majority are scattered among the farm communities and the small- to medium-size cities of the District's seven states, where competitive forces in local financial markets are less intense.

Since the above data relate only to interest rates on business loans, they can at best be merely suggestive of the association between bank size and the prices of comparable banking services among District member banks. Nonetheless, they do seem to indicate that the rise in ratios of net current earnings to assets with increasing bank size shown in Chart 2 does not emanate from differential pricing of banking services. If anything, it occurs despite these price differences.

Differences in Types of Banking Services

A second possible source of the earnings advantage of large banks is the existence of differences in the types of banking services offered by large and small banks, some of which may be more profitable than others. The statistical method employed to derive Chart 2 sought to allow for many important characteristics of the sample banks that influence their net earnings rates. However, other characteristics remain which, because they are so intimately related to bank size, could not be dealt with adequately by this method.

Several additional differences in structural characteristics of large and small banks were discussed in the study of size-cost relationships mentioned earlier. These include differences in the relative size of trust departments at large and small banks, in the proportion of demand deposits made up of interbank balances, and in the average size of demand deposits.[4] Further consideration of these attributes seems unnecessary, for they do not appear to be dominant factors in explaining variations in earnings rates by size of bank. The association between bank size and net current earnings rates is, however, very importantly influenced by a fundamental characteristic of asset structure that is closely related to bank size—namely, that larger District banks engage in transactions for individual earning assets in substantially larger dollar amounts than do the smaller District members.

With respect to transactions in open-market securities, purchases and sales in large dollar quantities is an unalloyed blessing. Transactions costs are reduced thereby, and since yields on these instruments are set by market forces, the lower cost reflects itself in higher net earnings. Added to this is the fact that management of the portfolio of Treasury securities—the major type of open-market instrument held by banks—is largely a one-man job, and hence the larger is the portfolio, the cheaper is the cost of its administration.

But quite different principles are involved in determining the effect of acquiring large versus small loans on ratios of net current earnings to assets. For while the granting of loans in large dollar amounts is highly significant in holding down expenses at large banks, it is also important in reducing gross earnings, since interest rates are substantially lower on large than on small loans. The impact on net current earnings depends on which of the two is reduced more.

There are two good reasons for believing that as banks increase in size and gradually move into the markets for larger and larger loans, their ratio of net current earnings to assets is affected adversely. The first reason is that larger loans typically are made to larger borrowers, and generally are thought to be less risky. Consequently, the return to the lender over and above administrative costs tends to be considerably less than that for smaller loans. The second reason is that the

[4]The effect of these attributes on bank costs was discussed in the March 1961 issue of the *Monthly Review*.

strength of competitive forces is also substantially greater for larger loans than for small loans, since large borrowers have greater access to alternative sources of credit. At the one extreme, the small business firm borrowing in a local loan market may have no more than one or two alternative sources of credit open to him. At the other end of the spectrum, the largest corporations are able to tap the financial resources of the entire Nation.

An inkling as to how important differences in the strength of competitive pressures can be in determining loan rates is provided by the data in Table 1. It was noted above that for any business size class and maturity of loan, rates tend to be somewhat higher at the smaller bank. But the margin of difference between rates at large and small banks tends to be smaller for the larger business size classes. Thus for the smallest business size class shown in the table, the average rate on short-term loans is about 1¼ percentage points higher at banks with up to $10 million in deposits than at banks with over $100 million in deposits. For the largest business size class, on the other hand, the differential is only .07 percentage points.

Differences in Efficiency

This line of reasoning suggests that, on balance, large banks are not able to achieve higher rates of net current earnings to assets either because of differences in the prices they charge for banking services comparable to those supplied by smaller banks, or because they offer different types of services to banking customers. Their higher net ratios of earnings to assets occur despite price differences and variations in types of banking services. They are associated, rather, with the fact that dollar costs of rendering given banking services are markedly lower for large banks. This, in turn, reflects the ability of larger banks to organize their activities in ways that contribute to lower costs and hence to higher net current earnings per dollar of assets.

FURTHER LINES OF INVESTIGATION

The development of the argument in this article has left open two important avenues of investigation that deserve further pursuit. One interesting question is whether bank profits—both before and after taxes—as a per cent of assets are related to size of bank in the same way as net current earnings. A second question has to do with the relationship between bank size and measures of bank income as a per cent of capital accounts—a relationship which, as noted earlier, differs considerably from that disclosed by ratios of net earnings or profits to assets. These questions will be treated in a future issue of the *Monthly Review*.

Should the Income Tax Be Overhauled?

THE LAST two issues of the *Monthly Review* have carried articles dealing with proposed revision of the Federal tax on individual incomes. The October article outlined the structure and coverage of the income tax, which applies to less than half of the Nation's total personal income. The November article reviewed several proposals that would add greatly to the amount of income that is taxed.

Proponents of broadening the tax base rest their case on several grounds. First, they argue that broader coverage, or fewer "loopholes," would make the income levy a fairer tax than it is now. In addition, it is contended that broadening the tax base would make it possible to lower significantly the rates at which individual income is taxed without loss of revenue to the Treasury. As the October article pointed out, a lowering of marginal tax rates with no change in the total tax yield presumably reduces the adverse effect on incentives of an income tax because taxpayers are allowed to keep a higher share of any additions to their taxable income. Furthermore, most analysts agree that income taxes should have the maximum feasible coverage to avoid creating artificial incentives to channel income into tax-sheltered categories, thereby interfering with the working of the market system.

For all these reasons, the proposals outlined in the November article—which would enlarge the taxable income base by over 30 per cent—have received widespread support among disinterested students of taxation. Nonetheless, many of the proposals have also encountered strong opposition—in part from those whose financial status would clearly be harmed by the suggested changes.

It is sometimes tempting to dismiss such opposition by those adversely affected as mere selfishness, but the fact is that changes in the income tax, even those designed to perfect it, can themselves create inequities. A person who makes economic decisions under one set of tax rules may experience great hardships if the rules are changed. Even if all concerned agree that the new rules make more sense than the old ones, the change itself may have repercussions that would be hard to justify as equitable. Fear of potential adverse repercussions lies behind much of the opposition to some of the proposals for enlarging the taxable income base outlined in the November *Monthly Review*.

In addition, some of the proposed changes might raise difficult, perhaps insurmountable, problems of administration or taxpayer compliance, or both. At least one, the proposal for treating capital gains as ordinary income, clearly involves substituting one imperfect device for another.

Thus, income tax revision cannot be taken lightly, and there is room for honest debate over the advisability of making practically any important change. This final article on the individual income tax deals primarily with arguments for and against some of the proposed changes in the coverage of the income tax outlined last month. Attention is centered on proposals that have invoked the most opposition. The purpose here is not to settle the debates, but to clarify the nature of the conflict and, in some cases, to show how disagreements can be resolved, or at least lessened, by careful planning of changes in the coverage of the tax.

TAXING STATE AND LOCAL INTEREST

A clear-cut example of the economic effects of favored tax status is found in the market for state and local securities. Because interest paid

on these securities is exempt from the Federal income tax, investors are willing to buy state and local bonds at lower yields than those available on other securities.

The precise advantage of holding tax-exempt securities depends on the investor's marginal rate of tax. A person in the 90 per cent tax bracket would gain as much income after tax from a state or local bond yielding 0.4 per cent as he would from a corporate issue carrying a yield of 4.0 per cent (0.4 per cent after tax). The advantage diminishes as the taxpayer's marginal rate declines—a taxpayer in the first (20 per cent) bracket would require a tax-exempt yield of 3.20 per cent to equal the aftertax yield on a corporate bond yielding 4.0 per cent.

The preference of investors for tax-exempt bonds has made it possible for state and local governments to borrow at rates substantially below rates paid by other borrowers. However, as state and local government borrowing has mushroomed over the postwar period, the demand of high bracket taxpayers for tax-exempt securities has tended to become satiated. It has thus become increasingly necessary for nontaxable bonds to carry yields that make them appealing to investors in lower tax brackets. In consequence, the rate advantage for state and local issues has diminished considerably in recent years, while the advantage of investing in tax-exempt issues has been enhanced for people in higher tax brackets.

In 1946, tax-exempt issues rated Aaa sold at yields less than one half as high as those on corporate securities of comparable quality. The subsequent heavy volume of municipal offerings has progressively reduced this differential. Last year, for example, Aaa-rated state and local issues sold at rates nearly three fourths as high as those on comparable corporate issues. It was thus possible for investors in the highest brackets to find substantial shelter from tax progression. A taxpayer in the highest (91 per cent) bracket could realize a tax-free return of $32,600 per year on a $1 million investment in Aaa-rated state and local bonds at the average rate available in 1960. He could earn, after tax, only about $4,000 annually from an equal investment in Aaa-rated corporate issues at the average rate for 1960.

Not only does this state of affairs provide an unwarranted haven from tax progression, it is often argued, but it also encourages investment in rather safe securities by those who are in the best position to finance riskier private undertakings, the income from which is taxable.

Tax exemption of state and local interest payments has often been defended on the ground that it subsidizes desirable spending programs by reducing the borrowing costs of lower levels of government.[1] However, the postwar decline of the differential between tax-exempt bonds and taxable issues has called into serious question the efficiency of the tax exemption feature as a subsidy for state and local borrowing. Taxpayers in high brackets save in taxes (and the Federal Government thereby loses in revenue) an amount far in excess of the saving of interest costs to lower levels of government. Many analysts who do favor Federal subsidies to state and local governments have urged that financial aid be given directly. Such assistance might take the form of Federal subsidies based on the volume of state and local interest costs. In that case, interest savings to the states and municipalities would precisely equal the cost to the Treasury, and would thus be less expensive for the Federal Government than the present system. An alternative plan would grant to lower levels of government subsidies which were not necessarily tied to indebtedness, so as to avoid encouraging deficit finance and discriminating in favor of states and municipalities which borrow heavily.

[1] Some people also contend that Federal taxation of state and local interest payments would be unconstitutional. Others express a contrary view; in the absence of a Supreme Court test this remains a moot question.

Although those who propose removal of the tax-exempt status of state and local issues feel they have a strong case, the plan has received much opposition. It is often pointed out that a simple elimination of the tax exemption feature itself would cause important inequities. Present holders of tax-exempt securities would suffer substantial capital losses since, with repeal of tax exemption, market values of outstanding state and local issues would necessarily fall to the point where their pretax yields were competitive with available pretax yields on alternative investments.

To get around this difficulty, it is sometimes proposed that only the interest on new state and local issues should be taxable—presently outstanding issues would retain their tax-exempt status. Such a provision would prevent arbitrary capital losses to people who held state and local bonds at the time of the change, but would have the effect of removing the exemption gradually as tax-exempt issues were retired.

Even if this plan were followed, there might be hardships created for some people. Municipal bond dealers might encounter major and expensive problems in ferreting out new sources of demand for state and local issues. Quite possibly some marginal firms would go out of business. People connected with these firms might find it difficult to take comfort from the notion that the tax system had been made more efficient, and it would be hard to persuade them that the change was equitable.

TAXATION OF IMPUTED RENT

One of the most far-reaching proposals for broadening the tax base involves taxation of imputed net rent on owner-occupied houses. As the article in the November *Monthly Review* explained, the present deductibility of interest payments on mortgage loans and property taxes, combined with the fact that none of the rental value of owner-occupied homes is reportable income for tax purposes, results in favored treatment of homeowners as opposed to renters.

Many students of income taxation argue that this unequal treatment should be corrected by making the rental value of owner-occupied houses reportable in the owners' adjusted gross income for tax purposes. The homeowner would then be permitted to deduct all expenses of producing this imputed rental income, including currently allowed deductions for interest payments on mortgage loans and property taxes, and additional allowances for depreciation and maintenance expenses connected with the home.

Such a plan would involve certain administrative difficulties and perhaps would raise serious problems of taxpayer compliance—some people have objected to the proposal on these grounds. To be administratively feasible, estimation of rental values for the millions of owner-occupied houses in this country probably would require the use of arbitrary formulas. For example, a system of estimating rental values from property tax evaluations might be set up, although the extreme unevenness of assessment practices throughout the country would greatly complicate such a procedure. Depreciation and maintenance deductions also would involve serious problems of administration and taxpayer compliance. Again, it might be necessary to impose arbitrary rules, such as the use of a uniform percentage of estimated property or rental values for depreciation and maintenance allowances.

If such arbitrary formulas were used, inequities no doubt would arise among homeowning taxpayers who encountered divergent circumstances not recognized by the rules. But proponents of taxation of imputed net rent contend that these inequities would be much less serious than the ones presently arising out of preferential treatment of homeowners as compared with renters.

It is argued by some that since taxpayers do not ordinarily think of the rental value of their

homes as income, they might strenuously object to its inclusion in adjusted gross income. Even if reporting of rental values could be strictly enforced, it might nonetheless engender a serious over-all deterioration of taxpayer morale if it did not make sense to the average citizen. A successful income tax depends importantly on public willingness to comply, and experience in other countries has shown that widespread antipathy to a tax tends to promote evasion, defeating the purpose of raising revenues in an equitable and efficient manner. Too much quest for logical purity in a tax thus may actually make matters worse if it does not meet with general acceptance.

The kind of compliance and administrative problems envisaged by opponents of taxing imputed rent would be largely avoided under an alternative plan of simply disallowing the present deductions for interest and property tax expenses on owner-occupied houses. This change would be less likely to perplex taxpayers, and it would not require estimation of rental values and depreciation and maintenance costs. However, as the November article pointed out, this plan would only partly meet the criticism leveled at the present law, because it would not bring the rental value of the homeowner's equity into the tax base. People who own their homes outright would lose only the property tax deduction, and would continue to enjoy considerable tax advantages over renters and, in addition, over people with mortgaged homes.

Economic Impact of Taxing Imputed Rent

Beyond these more obvious problems of devising a fair and feasible method of eliminating discrimination in favor of homeowners lie issues concerned with the economic impact of such a change.

As the relative advantage of owning a home was reduced or eliminated by changes in the tax law, some people presumably would decide to rent rather than buy. Furthermore, the higher tax bills faced by homeowners would reduce their disposable income and their ability to borrow from mortgage lenders. These developments presumably would tend to reduce the demand of consumers for houses to own; prices of existing homes would come under pressure, while building of new homes would be retarded. Those who believe that homeownership should be encouraged by tax policy thus argue that either taxation of imputed net rent or elimination of the deductibility of interest and property tax expenses would tend to retard the growth of homeownership.

In addition, to the extent that the change tended to reduce the demand for houses, present homeowners and people connected with industries related to housing and home finance would suffer. Thus, in removing one source of inequity, the change in the tax law might bring with it another. No scientific rules exist which would make it possible to say whether the "short-run" setbacks suffered by homeowners and people connected with the housing industry would be sufficiently serious to offset the "long-run" gain in equity deriving from more equal treatment of renters and homeowners. Just as in the case of removal of tax exemption of state and local interest payments, the taxation of rental values of owner-occupied houses does not guarantee complete equity. One regrettable feature of imperfect tax provisions is that, once established, their removal may itself work hardships because of its economic impact.

TREATMENT OF CAPITAL GAINS AND LOSSES

Probably the most controversial of all proposals discussed in the November *Monthly Review* is the one which calls for taxation of capital gains in full as ordinary income. Present law provides for the taxation of any excess of net long-term capital gains (on assets held more than 6 months) over net short-term capital losses at rates of only one half the marginal rate applicable to ordinary income, or 25 per cent, whichever is lower. Thus, for example, a

taxpayer in the 91 per cent bracket who records net long-term capital gains of $10,000 and no short-term losses pays a tax of only $2,500 on the gains. His aftertax gain is 75 per cent of the total, or more than eight times as great as he would retain from an equal amount of ordinary income. Moreover, gains on assets held at the time of death are never subject to the income tax. Needless to say, investors in high tax brackets find it profitable to channel income into the form of long-term gains, and many investment decisions revolve around this consideration.

In contrast to the tax advantage of long-term capital gains is the limitation imposed on deduction of losses on the sale of capital assets. Taxpayers are allowed to offset losses against gains, but if losses exceed gains in any tax year, no more than $1,000 of net losses can be offset against ordinary income. "Unused" losses may be carried forward to offset capital gains and up to $1,000 of ordinary income in each of as many as 5 future years. However, the taxpayer who suffers severe capital losses may very well find that only a small portion of his total loss can be offset under these provisions.

The limited offset of capital losses is justified as an offset to the favorable treatment of capital gains. But a serious equity problem arises under these provisions since those who suffer capital losses which cannot be offset against capital gains or other income are not those benefitting from the favored tax treatment of capital gains.

The capital gain and loss provisions have come under considerable criticism, both because they distort investment decisions and because they considerably reduce the progressiveness of the income tax in practice. The proposal that all capital gains be taxed in full is generally coupled with a recommendation that limitations on loss offsets be removed. If adopted, these changes would no doubt have a profound influence on the distribution of tax burdens and on investment decisions as well. Their controversial nature can perhaps best be pointed up by noting that there is also a current movement afoot to *reduce* the severity of the capital gains tax. To understand the nature of the conflict, it is necessary to look rather closely at the features of capital gains which first led Congress to accord them special treatment.

Capital Gains vs. Ordinary Income

One of the chief reasons advanced for special tax treatment of capital gains and losses arises out of what is essentially a problem in the timing of income receipts. For administrative reasons, gains and losses enter into the computation of taxable income only when they are "realized" by sale or exchange of the assets in question. Thus, for example, a person who bought 100 shares of common stock for $10,000 in 1940 and sold them for $110,000 in 1960 realized the entire $100,000 gain in 1960, no matter when the actual rise in market value took place.

Under progressive income taxation, full taxation of the $100,000 realized gains in 1960 might have put the taxpayer into a much higher rate bracket than would seem justified. Suppose that he had $6,000 ordinary income after exemptions and deductions in each of the years 1941-1960. His average income for the 20 years would then be $11,000 per year. If he were married and filed jointly with his wife, his tax per year on $11,000 taxable income would be $2,460, using present rates, and his total tax over the 20-year period would be $49,200. But if the entire $100,000 were allocated to his 1960 income, he would pay $1,240 on his $6,000 taxable income in each of the first 19 years, and $58,140 on his 1960 income of $106,000. His total tax bill over the 20-year period would then be $81,700, or $32,500 more than in the case where the same income is spread equally over the 20 years.

As long as the realization method of accounting for capital gains is used, taxing long-term gains in full discriminates against them because their "lumpy" character tends to put

the taxpayer in excessively high marginal rate brackets in years of realization. This fact, more than any other, provides the rationale for special tax treatment of long-term gains.

But it is evident that, while the preferential tax treatment of long-term capital gains may prevent or reduce inequities in some cases, it also gives rise to considerable favoritism in others. Furthermore, the use of the realization criterion makes it possible for investors to avoid the capital gains levy by not selling or exchanging assets whose value has risen. If they are held until death, the gain in their value is never subjected to income tax. The current drive for reduced taxes on capital gains is based largely on the argument that at present tax rates investors are loath to sell assets whose value has risen. It is asserted that this seriously impedes the mobility of investment funds and makes it more difficult to raise capital for new ventures.

While it is clear that the present law may strongly favor taxpayers who are able to channel their incomes into the form of capital gains, the fact remains that taxation of long-term gains in full as ordinary income on a realization basis would also create inequities because of the lumpiness which often characterizes these gains. The problem arises out of the computation of taxes on an annual basis, and the most promising solution—administrative problems aside—lies in averaging income for tax purposes without any special treatment for capital gains.

Under an averaging scheme, taxpayers would be allowed to spread their incomes evenly over a number of years, so that unusually high incomes in particular years would not be taxed at unjustly high rates. This device is now available, on a limited basis, to artists and inventors. Under certain circumstances, they are permitted to spread the income from creative works over as many as 3-5 years.

However, averaging schemes are thought to entail important limitations because they add considerably to the complexity of taxes, both from the viewpoint of the taxpayer and from that of the tax administrators.[2] In the absence of averaging, it will always be possible for one group of critics to contend that taxation of capital gains in full is too severe while another group can point out that anything short of full taxation of these gains as ordinary income may allow the progressiveness of the income tax to be eroded for people whose income takes the form of long-term capital gains. Logic will support both cases and any compromise solution will be imperfect.

OTHER CONTROVERSIAL PROPOSALS

There is also opposition to some of the other proposals for broadening the tax base that were discussed in last month's article. However, it is not possible to discuss each case in detail here. Suffice it to say that proposals for inclusion of social insurance benefits, veterans benefits, certain military payments, and unemployment and workmen's compensation payments are not unanimously endorsed. Nor is the suggestion that taxes on interest and dividend income be withheld at the source by corporations and thrift institutions without strong opposition.

In all of these cases, the changes envisaged by those who back them are thought to be for the better. The appeal of broadening the tax base is strong, both because it would seem equitable to close off loopholes and because the reduction in tax rates that would be made possible by enlarging the tax base might greatly enhance economic incentives.

But opposition to change is not necessarily a manifestation of the self-interest of conniving tax dodgers. In many cases, people who have made economic decisions and investment com-

[2] However, one ingenious and logically impeccable averaging scheme has been proposed which would entail, according to its author, very few administrative or compliance difficulties. See William Vickrey, *Agenda for Progressive Taxation,* New York: Ronald Press, 1947, pp. 172-95.

mitments under one set of rules may find that a change in the rules has highly unfavorable economic repercussions for them. Any such hardships ought to be considered when tax changes are discussed. This is not to say that changes in the tax system should never be made simply because they may create some inequities. Rather, the potential gains of a change must be weighed against whatever disadvantages may be entailed before a decision is made.

One factor to be considered is that as time passes and personal incomes continue their upward trend, people will no doubt become increasingly tax-conscious, and efforts to channel income into tax-sheltered areas probably will intensify. As the economy becomes increasingly sensitive to the income tax, changes in the tax will become potentially more disruptive than they would be now.

FURTHER PROBLEMS OF TAX REVISION

Although the focus of recent criticism of the individual income tax has been on its fractional coverage of total personal incomes, other features of the tax also have come under fire. Among these are the tax treatment of retirement income, dividends, and income of personal trusts. There is also considerable controversy regarding the proper size of personal exemptions, and the granting of extra exemptions to the aged and the blind.

Furthermore, if the tax base is to be broadened so that a downward revision of rates is possible, the whole question of the proper structure of rates is reopened. Should income splitting of married couples be disallowed? Should the income tax be made less progressive as a spur to economic incentives?

These and many other questions of tax revision are beyond the scope of this series of articles. One thing, however, is clear. Very few proposals for tax revision are entirely free from difficulties, and differences of opinion over their advisability are bound to exist even among disinterested observers.

BANKING IN THE TENTH DISTRICT

District and States	Loans				Deposits			
	Reserve City Member Banks		Country Member Banks		Reserve City Member Banks		Country Member Banks	
	October 1961 Percentage Change From							
	Sept. 1961	Oct. 1960	Sept. 1961	Oct. 1960	Sept. 1961	Oct. 1960	Sept. 1961	Oct. 1960
Tenth F.R.Dist.	+1	+8	†	+7	+2	+6	+2	+8
Colorado	−1	+8	+2	+9	†	+9	+3	+9
Kansas	+2	+8	+1	+5	+2	+3	+1	+8
Missouri*	+2	+7	+1	+4	+4	+5	+3	+7
Nebraska	+6	+14	+2	+6	+6	+9	+3	+8
New Mexico*	**	**	−2	+3	**	**	+2	+9
Oklahoma*	−1	+6	−2	+11	†	+7	†	+10
Wyoming	**	**	−1	+8	**	**	+4	+7

* Tenth District portion only. ** No reserve cities in this state.
† Less than 0.5 per cent.

PRICE INDEXES, UNITED STATES

Index		Oct. 1961	Sept. 1961	Oct. 1960
Consumer Price Index	(1947-49=100)	128.4	128.3	127.3
Wholesale Price Index	(1947-49=100)	118.7	118.8	119.5r
Prices Rec'd by Farmers	(1910-14=100)	240	242	241r
Prices Paid by Farmers	(1910-14=100)	301	301	296r

r Revised.

TENTH DISTRICT BUSINESS INDICATORS

District and Principal Metropolitan Areas	Value of Check Payments		Value of Department Store Sales	
	Percentage change—1961 from 1960			
	Oct.	Year to date	Oct.	Year to date
Tenth F. R. District	+13	+7	−4	+3
Denver	+12	+13	−2	+6
Wichita	+12	+5	−11	−2
Kansas City	+14	+5	−1	+1
Omaha	+11	+4	−8	+14
Oklahoma City	+25	+11	−12	−10
Tulsa	+9	+4	−2	−2

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