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GOVERNMENT POLICIES AND THE ALLOCATION OF
CAPITAL BETWEEN RESIDENTIAL AND INDUSTRIAL USES

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Abstract

This paper contains three parts: a discussion of the tax advantages of household capital (owner-occupied housing and consumer durables) relative to business capital (structures and producers durables), an analysis of alternative mechanisms for reducing these advantages (including the use of the mechanisms since 1965), and a brief enumeration of various attempts to lower the residential mortgage rate relative to other debt yields that have been employed during the past two decades or are currently being advocated.

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Government Policies and the Allocation
of Capital Between Residential and Industrial Uses *

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Public finance economists have been concerned for some time with the costs of misallocation of the American capital stock. Misallocation occurs ex post when some capital earns a lower pretax net (of depreciation charges) return than other capital. Many of the differences in ex post pretax returns can be attributed to vagaries of the market place or economic uncertainty. Expectations regarding the demands for products and the costs of inputs are seldom fully correct, and often even the best of plans do not work out. Because much capital is not malleable, or is so only at large cost, mistakes are not easily corrected.

On the other hand, many of the differences in average ex post pretax returns across broad classes of capital can be attributed to systematic biases in government tax policies that create differential wedges between ex ante pretax and posttax returns on these classes. Because the market place tends to equate posttax returns across investments, the wedges cause differences in pretax returns and overinvestment in lightly taxed capital and underinvestment in heavily taxed capital. As a result, productivity losses occur and national income is lower than it would have been in the absence of the biases. Some sources of differential wedges that have been studied include: the double taxation of corporate dividends, the relatively light taxation of short-lived business capital (owing to its highly accelerated depreciation schedule

and eligibility for the investment tax credit), and the more favorable tax treatment of specific industries (such as oil and gas).¹

In this paper, I feature another differential wedge, namely, the favorable taxation of income earned on household capital relative to that earned on business capital. This general topic has been the subject of much of my recent research, upon which I will draw extensively. My presentation is divided into three broad parts: a discussion of the tax advantages of household capital (owner-occupied housing and consumer durables) relative to business-capital, an analysis of alternative mechanisms for reducing these advantages (including the use of these mechanisms since 1965), and a brief enumeration of various attempts to lower the residential mortgage rate relative to other debt yields that have been employed during the past two decades or are currently being advocated.

I. The Tax Advantages of Owner-Occupied Housing and Durables

Owner-occupied housing and durables receive two types of favorable tax treatment relative to industrial capital. First and foremost, the cash flow income from household capital (the implicit rents earned or net rental outlays avoided) is not taxed, while that generated by industrial plant and equipment is. Second, nominal capital gains realized upon sale are not taxed if the proceeds are reinvested in another house within a reasonable period, and a one-time gain of up to \$125,000 is exempt without reinvestment for households above age 55. With industrial structures, a realized gain from a sale is taxed at the firm level and unrealized gains that are reflected in higher

share prices are taxed when the shares are traded. Nominal capital gains on consumer durables are not taxed at all, but these are unlikely to occur except in a high inflation period owing to the generally high depreciation rate on durables.

Note that I have not identified the deduction of household interest expense from the taxable income base as the fundamental source of the tax subsidy to owner-occupied housing and durables. To understand this, consider a household with marketable wealth equal to or in excess of the value of its house and whose best alternative investment is home mortgages. The ability to borrow mortgage money to invest in mortgages where the interest on the one is deductible and on the other is taxable is obviously of no value.² The tax advantage to this household is the absence of taxation of the return on the own equity invested in the house.³ Whether the house is equity or debt financed, the magnitude of the advantage is directly related to the household's marginal tax bracket and to the level of nominal pretax returns in the economy; the higher the bracket and the level of returns, the more valuable the exemption. Because the tax advantage varies by marginal tax bracket of household, overinvestment in owner-occupied housing and durables is greater the higher is the tax bracket of the household.

Now this is not to say that the deductibility of household interest payments is of no value to most households or that removal of this deduction from the tax statutes would have no impact on the demand for owner-occupied housing and durables. Such is hardly the case. The deductibility of interest is a means of extending the full tax advantage of owner-occupied housing and durables to the numerous less wealthy households who cannot entirely equity finance their real assets. The deductibility is thus analogous to safe-harbor leasing which extends the full advantages of tax credits and accelerated write

offs available to profitable, slow or moderately growing firms to non-profitable and/or rapidly growing firms.⁴ The underlying tax credits and accelerated write offs, not the leasing, are the fundamental source of the tax advantage.

Again let me emphasize that the deductibility of household interest expense is merely an extension of the basic tax advantage of household capital to less wealthy households, not an additional advantage. It has been sometimes said that household capital is negatively taxed owing to the ability to deduct this interest from wage income. This view is incorrect. While there is a negative explicit tax, there is an offsetting positive implicit tax in that households will purchase owner-occupied housing and consumer durables that yield them a lower pretax return than could be earned on other assets.⁵ At the margin, the implicit positive tax exactly outweighs the explicit negative tax so that household capital is properly viewed as being zero taxed.

The result of favorable tax treatment for owner-occupied capital is increased demand. The increased demand for housing takes three forms. First, owning households with given real incomes demand more housing than they would otherwise, the increase being greater for those in higher marginal tax brackets. Second, the number of households is greater than otherwise, and because there are economies of scale in the provision housing services, more households with a lower average income demand more housing in total than do fewer households with a higher average income. Third, the homeownership rate is higher than if there were no tax advantages. Note that the first two of these raises the share of capital in residential use.

The tax advantage of owner-occupied housing increased with the acceleration of inflation between the middle 1960s and late 1970s because nominal pretax interest rates increased and tax bracket creep occurred.⁶ The price of

housing services fell because posttax real interest rates fell, the decline being greater the higher was one's marginal tax bracket. As a result, the demand for housing increased for households with a given real income, household formations accelerated (headship rates rose), the home ownership rate increased, and some of the increased demand for housing units was met by conversions of structures from industrial to residential use.

II. Methods of Reducing the Tax Bias in Favor of Owner-Occupied Capital

There are at least three means through which the tendency to overinvest in owner-occupied housing and durables can be dampened or removed altogether. I will discuss each in turn. Because the major concern from an allocation point of view has been owner-occupied housing, the discussion is in terms of this asset.

The Standard Fixed Rate Mortgage and Credit Market Constraints

As just noted, the bias toward housing tended to intensify with the increase in inflation in the 1970s. I say tended because constraints caused by imperfections in the housing finance instrument could have offset the tendency. Given the rising inflationary premium in interest rates (and the observed increase in the real asset price of housing) mortgage payments on the standard fixed-rate mortgage tended to increase far more rapidly for potential home buyers than did nominal incomes. While households could expect the real value of mortgage payments to be eroded rapidly by inflation, the initial payments were tilted upward, making them "unaffordable," even though the cost of obtaining housing services actually fell.⁷ At the same time, existing homeowners with standard fixed-rate mortgages found themselves paying a below-market interest rate. To the extent that they would lose this rate if

they "traded up" in response to the decline in the price of housing services, they would be reluctant to do so.⁸ One might argue, then, that the effect of the increased tax bias in favor of housing was largely offset by the usage of the standard fixed rate mortgage.⁹ Thus there wasn't further overinvestment in housing, and the economy did not suffer additional productivity losses.

There are two problems with this argument. First, usage of the standard mortgage instrument may not have greatly dampened housing demand in the 1970s.¹⁰ Most sellers were able to capture much of the value of their below-market mortgage financing via loan assumptions and various owner-financing arrangements. Also, many young households adjusted to the affordability problem by altering the pattern of their real labor income to better match the pattern of real mortgage payments. By postponing child raising, households were able to tilt their real income forward in time to match the pattern of real mortgage payments. The second problem with the offsetting-tendencies argument was that the tax-bias effect is applicable to a broad range of households, while the mortgage-instrument effect was generally applicable to only a small subset of households: largely young, first-time homebuyers who had not accumulated sufficient wealth generally or earned sufficient housing capital gains specifically to allow them to achieve a moderate initial mortgage payment to income ratio via a large downpayment. If the mortgage-instrument effect were sufficient in magnitude to lead to an optimal aggregate distribution of structures between residential and industrial, then the maldistribution of the housing stock among households would have been enormous. Older, established households would have consumed too much housing, and younger, starting-out households, far too little. One misallocation problem would have been replaced by another, possibly worse one.

An alternative would be to attack directly the residential-industrial capital misallocation problem. At the same time, the misallocation of the housing stock among households could be minimized by the development and usage of more efficient mortgage market instruments. A number of relatively new instruments would reduce the initial mortgage payment in an inflationary environment.¹¹ With price-level adjusted mortgages or PLAMs, the initial mortgage payment is based on a real, rather than nominal, interest rate, and payments rise through time with the price level. With shared-appreciation mortgages or SAMs, the initial payment is based on a below-market nominal rate, in return for which the lender receives a share of the actual appreciation in the underlying house. With graduated-payment mortgages, payments rise from a reduced initial level at a prescribed rate for a specified period. Finally, the negative impact of the mortgage capital gains on household mobility could be reduced by use of adjustable-rate mortgages.

Removal of the Tax Bias for Owner-Occupied Housing

The most obvious and direct method of eliminating the tax bias is to remove its source, i.e., to tax the imputed rental income from owner-occupied housing and maybe some of the capital gains. Economists have long advocated this, but politicians generally do not want even to discuss it. In fact, the one-time exemption of a \$100,000 gain (now \$125,000) after age 55 is of recent vintage. It was enacted well after most people understood the already favorable tax treatment of owner-occupied housing. Nonetheless, some proposals have been made to limit the deductibility of mortgage (and consumer credit) interest. One would replace the interest tax deduction with a flat tax credit of, say, 15 to 25 percent. This would reduce the maldistribution of housing among households--the tax advantage would be the same for all, rather than

rising with one's tax bracket--and, if the credit were low enough, it would reduce the maldistribution of capital between residential and industrial. Jimmy Carter's infamous effort to place a ceiling on the amount of interest that could be deducted had a similar intent. This effort was especially enlightening regarding the politics of the matter because Congress rejected the proposal even though the ceiling was set so high that few households were expected to be affected.¹²

The flat-tax proposals currently being debated in Congress would also affect household interest deductions. Under the pure Hall-Rabushka plan, the deduction would be eliminated. The Bradley-Gephardt multiple-layer plan would be quite similar in effect to the above-mentioned tax credit proposal. Interest would continue to be fully deductible, but at the taxpayers' initial tax rate (14 percent under the plan), rather than at their higher marginal tax rate. I should reemphasize, however, that removal of the mortgage interest deduction is not equivalent to removal of the tax bias. The bias for wealthy households who can fully equity-finance their houses would remain intact. The bias would be reduced for other households in proportion to the amount of external or debt financing required.

Given the obvious political problems of removing the tax advantages for owner-occupied housing, attention shifted in the late 1970s to indirect methods of discouraging overinvestment in housing.

Reduced Taxation of Industrial Capital

In a paper Sheng Hu and I wrote four years ago, we argued that the bias in favor of owner-occupied housing could be removed by taxing income from industrial capital the same as income from housing, rather than doing the reverse.¹³ That is, rather than taxing income from housing more heavily, income from industrial capital could be taxed less heavily. We then de-

scribed a set of business tax cuts that would remove biases against long-lived business capital (extend an enlarged investment tax credit to structures), against unincorporated businesses (cease double taxation of corporate dividends), and against business capital generally. The latter was to be achieved by switching to replacement cost depreciation and shortening tax service lives. The mechanism by which the demand for owner-occupied housing was to be reduced was an increase in real pretax interest rates driven by an increased demand for funds by businesses to finance their capital expansion.

Three years later, Congress enacted the Economic Recovery Tax Act (ERTA). While this legislation enlarged some tax biases, most obviously that against long-lived business capital,¹⁴ the general bias against business capital was reduced by the sharp shortening of tax service lives (including that of rental housing). Of course, many would contend that the high level of real interest rates in the second half of 1981 and the first half of 1982 has been due to a very restrictive monetary policy designed to wring out inflation, not to a surge in the financing of business investment. The point, though, is that even with a monetary policy conducive to real growth in the economy, real interest rates will remain higher than in the pre ERTA years.

ERTA has reduced the tax bias in favor of owner-occupied housing directly as well as indirectly via higher real interest rates. Recall that the fundamental source of the bias is the failure to tax the return on equity invested in one's own home. The magnitude of the bias then depends, at least in part, on how heavily investments in assets other than one's own home are taxed. The cut in the maximum tax rate on unearned income, the expansion of allowable tax-exempt contributions to IRA accounts, the creation of the tax-exempt All Savers certificate and eventual partial exclusion of interest income from taxation, and the new exclusion for dividends reinvested in

utilities all tend to lessen the relative tax advantages of homeownership.

In order to deduce the likely impact of ERTA on the allocation of the real capital stock, James Shilling and I constructed a simulation model of the American economy.¹⁵ The model is highly simplified in that there are only three types of private tangible capital -- owner-occupied and rental housing and industrial capital -- and the aggregate capital stock is taken as given. The special feature of the model is the division of households into four income classes, each of which makes tenure choice and portfolio decisions. All classes hold taxable debt and equities, while only the highest two classes hold rental housing and tax-exempt securities. The fractions of the classes that are homeowners initially rise from 0.49 (lowest income) to 0.90 (highest income). The model was parameterized to conform with the American economy in 1977, the last year of income tax data available when the study began.

Three aspects of the 1981 legislation were analyzed: the shortened tax service lives of industrial capital and rental housing and the reduction in the maximum tax rate on unearned income to 50 percent (this has a negligible impact on capital allocation). The major result of these provisions in our analysis is a sharp increase in the demand for industrial capital that raises interest rates (real) by 1.85 percentage points. The latter clearly reduces the demand for owner-occupied housing. In our analysis, the demand for housing by individual renters also declines, the impact of the increase in interest rates overwhelming that of the more favorable tax treatment of rental housing investment. However, the real price of housing services from rental units rises by less than that from owner-occupied units so the number of renting households increases (the aggregate homeownership rate falls by 1.3 percentage points). The net result is a roughly unchanged rental housing stock. Most important, the share of total capital in industrial use rises by

3½ percentage points and that in owner-occupied housing falls by a like amount. While these results are only suggestive, the suggestion is that the tendency to over-invest in owner-occupied housing (and, by analogy, consumer durables) would be greatly dampened.

III. Other Subsidies for Housing

To this point, I have discussed only one bias in favor of owner-occupied housing, that attributable to the favorable (zero) taxation of income from this asset. In this section, I note briefly a number of additional governmental policies that alter the allocation of capital toward residential use by lowering the cost of residential mortgage debt relative to other forms of debt. These policies, which either have been employed in the past or are advocated in the present, include: direct interest rate subsidies, the use of tax-exempt mortgage revenue bonds, and tax advantages for lenders (the tax preferences of thrifts and the mortgage interest tax credit proposed by the President's Commission on Housing).

Interest Rate Subsidies

Below-market interest rate subsidies were initiated in 1961 under the Section 221 (d) (3) program, but they did not become an important factor until the Section 235 and 236 programs established in 1968. Under these programs, households were able to borrow at rates as low as one percent. In early 1973, high levels of defaults and abandonments, as well as scandals entailing bribery of FHA inspectors, led to the suspension of these programs.

Below-market rate financing reappeared in 1974 with the Tandem plan in which borrowing rates were lowered to 7½ percent. The original Tandem was designed to stimulate housing production during the 1974-75 housing recession,

but the plan has continued in effect for multifamily housing. While a 7½ percent borrowing rate was a minor subsidy in 1976-78; in 1980-82, the subsidy has been enormous. The Reagan administration is fully committed to getting out of the business of providing 7½ percent multifamily mortgages as soon as the in place pipeline of projects the Administration inherited is completed, which will be shortly. Further, the Administration's position against any new below-market rate subsidies can be inferred from its flat opposition to the Lugar subsidy bill this past summer.

Mortgage Revenue Bonds

Another means of lowering interest rates for homeowners has been the use of tax-exempt mortgage revenue bonds (MRBs). With this financing, the interest cost has been cut by about 20 percent, i.e., 3 percentage points when mortgage rates are 15 percent. (Businesses, with IDB issues, are well aware of the advantages of tax-exempt financing.) A surge in the issuance of MRBs occurred in the second half of 1978, and in the absence of restrictive legislation, much of the housing stock would have eventually been so financed.¹⁶

The 1980 Mortgage Subsidy Bond Act limited tax-exempt financing to first-time home buyers who purchased inexpensive or moderately priced houses (those having a price less than 90 percent of the average area purchase price). That is, MRBs were to be used largely to overcome problems created by the standard fixed-rate mortgage instrument in an inflationary period--to correct for underinvestment by financially constrained households. Moreover, the legislation prohibited issues of MRBs after the end of 1983. The Tax Equity and Fiscal Responsibility Act of 1982--with that title it is a wonder that passage was ever in doubt--raised the price limit to 110 percent of the average area purchase price and allows 10 percent of the financing to be used

by multiple, rather than first-time, buyers. However, the end-of-1983 cut off remains.

Some have been particularly critical of MRBs because they tend to drive up tax-exempt yields. In fact, this side effect is a plus from the viewpoint of efficient capital allocation if one considers the tax-exempt status of state and local governments to be economically inefficient. State and local capital formation is favored under current tax law in a manner similar to owner-occupied housing. The income generated by the capital is not taxed, while the opportunity cost of funds is below-market owing to the exemption of interest received on state and local debt. Under this view, it is preferable to substitute housing for state and local capital via MRB financing than for industrial capital via below-market rate taxable debt financing.

Tax Preferences for Investors in Mortgages

Our last topic is tax preferences for investors in residential mortgages. In the Revenue Act of 1962, tax preferences (computation of loan loss reserves that far exceed a reasonable provision for expected loan losses) of savings and loan associations were explicitly tied to a minimum investment in housing-related loans and liquid assets. In the Tax Reform Act of 1969, the tax preferences of mutual savings banks were similarly tied. Because of these preferences, these institutions would be willing to earn a lower pretax return on mortgages than on otherwise comparable debt instruments. If these institutions were the marginal investors in mortgages, then competition among them would result in borrowers paying the lower rate. Depending on the profitability of the institutions, the reduction could be as much as a half percentage point.¹⁷ On the other hand, if these institutions are not the marginal investors in mortgages (possibly because binding deposit rate ceilings limit their ability to attract funds) or are not profitable (in

which case the tax preferences lose value), then mortgage rates will not be lowered by the tax preferences.

One way to insure relatively low mortgage rates is to extend tax preferences to all investors in mortgages, and one method of doing this is to enact a universal mortgage interest tax credit (MITC). While a MITC has never been adopted, it was part of the Financial Institutions Act of 1975 (which passed the Senate but not the House) and it has been recently advocated by The President's Commission on Housing. Although a specific level of credit was not stated in the Report of the Commission, a 2 percent credit was apparently contemplated. With yields on comparable debt securities at $14\frac{1}{2}$ percent, investors in the 44 percent tax bracket would be willing to accept a 14 percent pretax return on mortgages.¹⁸

This half point reduction is, of course, small compared to the depth of the interest rate subsidy available with the Tandem program and MRB financing. Note, however, that the subsidy would apply to all housing, not just a small, targeted part. The administration is not pushing passage of the MITC.

IV. Summary

Where all this leaves us in terms of the efficient allocation of capital between industrial and residential uses? Probably in better shape than we have been in a long time. The business tax cuts of 1981, even after the 1982 correction, and the personal saving incentives of 1981 (the cut in the maximum tax on unearned income, the expansion of IRAs, etc.) have sharply lowered the rate at which income from industrial capital is taxed at both the business and personal levels. At current inflation rates, producer's durables are, like consumer durables, effectively exempt from taxation. However, structures in

industrial use are still taxed somewhat more heavily than structures in residential use. On the other hand, the extent of below-market residential mortgage financing is probably at a 20 year low. The Tandem funds have been depleted, the Lugar plan was not adopted, no one is seriously pushing the MITC, and the restrictions on MRBs remain relatively tight (and the end-1983 cut off is still intact).

It would appear, then, that investment in real capital in the 1980s is likely to be allocated more efficiently between residential and industrial uses than in the 1970s. Two factors could upset this conjecture. First, there is always the possibility of new legislative initiatives to favor household borrowing. The strong support in Congress for the Lugar bill is one indication. Second, there is also the possibility that the economy will be reinflated. Because the taxation of business capital rises with inflation, owing to FIFO accounting and historic cost depreciation, a higher inflation rate would tend, again, to lead to overinvestment in household capital and underinvestment in industrial capital.

Footnotes

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¹ For a recent calculation of the productivity or efficiency loss from these wedges, see J.G. Gravelle, "The Social Cost of Nonneutral Taxation: Estimates for Non-Residential Capital," in Hulten (ed.) Depreciation, Inflation, and the Taxation of Income from Capital, The Urban Institute Press, 1981, and Don Fullerton, "Why Do Varying Effective Corporate Tax Rates Matter?," Special Report, 1981 Effective Tax Rate Supplement, Tax Notes.

² Insofar as high income households can borrow indirectly at taxable rates and invest in tax-exempt securities (direct borrowing for these purposes is against IRS regulations), the deduction of mortgage interest can have value to such households. Note, however, that transactions or intermediation costs limit this. Say that the cost of borrowing mortgages is 14 percent but that the return for investing in mortgages (say GNMA securities) is only 12 percent and that the return on tax exempts is 70 percent of 12 percent or 8.4 percent. Households in the 40 percent tax bracket pay 8.4 percent after tax for mortgage funds and cannot arbitrage between mortgages and tax exempts.

³ Thus owner-occupied housing has a tax advantage in Canada even though interest is not deductible.

⁴ For an enlightening discussion of tax leasing, see A.C. Warren and A.J. Auerbach, "Transferability of Tax Incentives and the Fiction of Safe Harbor Leasing," Harvard Law Review, 8, 1982.

⁵For an early discussion of this phenomenon, see M.J. Bailey, "Progressivity and Investment Yields Under Income Taxation," Journal of Political Economy, November-December 1974. For a general equilibrium view of explicit and implicit taxes, see Harvey Galper and Eric Toder, "Measuring the Incidence of Taxation of Income from Capital," Proceedings of the Seventy-Fifth Annual Conference on Taxation, National Tax Association, 1982.

⁶For empirical evidence upon which this paragraph is based, see P.H. Hendershott, "Real User Costs and the Demand for Single-Family Housing," Brookings Papers on Economic Activity, 2, 1980.

⁷For an excellent discussion of this problem, see Donald Lessard and Franco Modigliani, "Inflation and Housing Finance: Problems and Potential Solutions," in New Mortgage Designs for Stable Housing Finance in an Inflationary Environment, Federal Reserve Bank of Boston, Cambridge Mass., 1975.

⁸See P.H.Hendershott and Sheng Hu, "Accelerating Inflation and Nonassumable Fixed-Rate Mortgages: Effects on Consumer Choice and Welfare," Public Finance Quarterly, April 1982.

⁹For a simulation study illustrating the combined impacts of increased tax bias and the effects of the standard fixed-rate mortgage, see P.H. Hendershott and Sheng Hu, "The Allocation of Capital between Residential and Industrial Uses: Taxes, Inflation and Capital Market Constraints," Journal of Finance, forthcoming.

¹⁰See P.H. Hendershott, "Nominal Interest Rates and Housing Demand," "Mortgage Capital Gains and Housing Demand," and "The Development and Future of Owner Financing," all in the Quarterly Review, Federal Home Loan Bank of Cincinnati, 2, 1982.

¹¹For a discussion of these instruments and their merits, see the articles by McCulloch, Villani, and Alm and Follain in the Quarterly Review, Federal Home Loan Bank of Cincinnati, 3: 1982.

¹²The expectations were incorrect. The subsequent sharp run up in mortgage rates and house prices would have resulted in a significant number of households being affected.

¹³The paper was published as P.H. Hendershott and Sheng Hu, "Government-Induced Biases in the Allocation of the Stock of Fixed Capital in the United States," in von Furstenberg (ed.) Capital Efficiency and Growth, Ballinger Publishing Company, 1980.

¹⁴See A.J. Auerbach, "Whither the Corporate Tax?: Reform After ACRS," National Tax Journal, forthcoming.

¹⁵See P.H. Hendershott and J.D. Shilling, "Capital Allocation and the Economic Recovery Tax Act of 1981," Public Finance Quarterly, April 1982.

¹⁶For discussions of MRBs, see P.H. Hendershott, "Mortgage Revenue Bonds: Tax Exemption with a Vengeance,:" and H. Galper and E. Toder, "Modelling Revenue and Allocation Effects of the Use of Tax-Exempt Bonds for Private Purposes"

both in Kaufman (ed.) Efficiency in the Municipal Bond Market, JAI Press Inc., 1981.

¹⁷For detailed discussions of the tax preferences and their possible impact on relative mortgage rates, see P.H. Hendershott and K.E. Villani, "Residential Mortgage Markets and the Cost of Mortgage Funds," AREUEA Journal, Spring 1980 (especially the appendix) and "Savings and Loan Usage of the Authority to Invest in Corporate Bonds," Savings and Loan Asset Management Under Deregulation, Federal Home Loan Bank of San Francisco, 1981.

¹⁸For analyses of the 1975 MITC, see P.H. Hendershott, "An Analyses of the Expected Impact of the Financial Institutions Act of 1975," in Buckley, Tuccillo and Villani (eds), Capital Markets and the Housing Sector, Ballinger Publishing Company, 1977, and E.J. Kane, "Costs and Benefits of the Proposed Credit on Residential-Mortgage Income," Journal of Bank Research, Summer 1975. On the MITC proposed by the President's Commission on Housing, see P.H. Hendershott, "An Analysis of Five Proposals to Subsidize Single-Family Housing," Symposium on Countercyclical Stimulus for Single-Family Housing, U.S. General Accounting Office, 1982.