

PORTFOLIO SHUFFLING AND TAX REFORM

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Abstract - *This paper analyzes the response of households to the provision in the Tax Reform Act of 1986 that phased out the deductibility of interest paid on consumer debt. The evidence suggests that the policy goals of the provision were frustrated because households shuffled their portfolios, substituting mortgage debt for consumer debt. High-income homeowners appear to have shuffled more of their debt and thus increased their share of the benefits of the mortgage interest deduction. One reason for this difference in shuffling may be that high-income homeowners scored better on measures of financial sophistication, and better scores appear to predict greater shuffling. Policy options that would reduce the use of mortgage debt for nonhousing purchases are discussed.*

Before enactment of the Tax Reform Act of 1986 (TRA 86), interest paid on all types of household debt was deductible from income before taxes were paid. TRA 86 phased out the deductibility of consumer interest over the period from 1987–91. The view of policymakers was

that deductibility of consumer interest gave an incentive for households to consume rather than save; phasing out interest deductibility was meant to increase personal saving. A second important goal of the deductibility phaseout was to increase revenue by about \$10 billion per year (U.S. Joint Committee on Taxation (JCT), 1987).

Policymakers retained the deductibility of interest on residential mortgage debt in order to encourage home ownership (JCT, 1987). Under TRA 86, mortgage interest was deductible up to a taxpayer's basis in his residence.¹ The Omnibus Budget Reconciliation Act of 1987 changed the law so that mortgage interest paid on up to \$1 million in acquisition debt and \$100,000 in home equity debt was deductible from income.² Debt was defined as acquisition debt if it was used for the purchase or improvement of a first or second residence, while home equity debt included all other debt secured by a home.

The disparate treatment of consumer and mortgage interest provided a loophole for some taxpayers. Homeowners could borrow against their homes to fund the same types of purchases they had previously financed with consumer loans. As a result, homeowners had an incentive to shuffle

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their portfolios from consumer debt into mortgage debt, and the greater availability of home equity lines of credit in the mid-1980s provided a relatively simple method for households to make this shift. Sizable shifts of consumer debt into mortgage debt would detract from the goals of increasing saving and increasing tax revenue collected.

This paper is organized into five sections. The first section reviews the existing empirical evidence on the reaction of households to the deductibility phaseout. The second section provides new evidence suggesting a link between financial sophistication and portfolio shuffling. The third section discusses changes in the distribution of the benefits of the mortgage interest deduction over the years of the phaseout. The fourth section considers policy issues and reform options, and the last section provides conclusions.

EMPIRICAL EVIDENCE ON PORTFOLIO SHUFFLING

Table 1 provides some circumstantial evidence on the reaction of households to the deductibility phaseout. Consumer debt and mortgage debt grew at roughly similar rates from 1981–86, with consumer debt rising an average 11 percent and mortgage debt increasing about 10 percent. As the phaseout was implemented from 1987–91, the growth of consumer debt slowed to an average of 6 percent, while mortgage debt grew at a robust 10-1/2 percent. In both the early and later periods, the growth of mortgage debt exceeded the growth in the value of owner-occupied real estate, and the gap between the growth rates of mortgage debt and real estate increased in the postreform period. This fact suggests that the rise in mortgage debt over the period of the

TABLE 1
PERCENTAGE CHANGE, 1981–91

	Consumer Debt	Mortgage Debt	Real Estate
1981	4.8	7.5	12.7
1982	4.4	3.2	4.1
1983	12.6	8.8	5.2
1984	18.7	11.7	8.0
1985	15.8	15.5	8.2
1986	9.6	13.8	10.3
1987	5.0	13.7	9.7
1988	7.2	11.5	10.7
1989	7.3	10.0	10.8
1990	2.0	11.4	1.3
1991	-1.8	6.6	1.1
Average 1981–86	11.0	10.1	8.1
Average 1987–91	5.9	10.6	6.7

Source: Federal Reserve Board Flow of Funds Accounts (includes unpublished revisions).

phaseout cannot be explained by increases in the value of real estate. These data suggest that the phaseout may have induced a shift from consumer debt to mortgage debt.

To distinguish whether households who were affected most by the phaseout were the households who shifted their debt, data on individual households can be used. As part of an analysis of the response of personal saving to TRA 86, Skinner and Feenberg (1990) examined a panel of high-income tax returns over 1985–87. By following the same households over time, they found that for every dollar decrease in consumer interest, mortgage interest increased by 67 to 86 cents. Because the tax data cannot compare the mortgage and consumer interest changes for nonitemizing households, it is not possible to determine whether this shift took place only for itemizing households, who had the largest tax incentive to shuffle their debt, or whether this shuffling was done to the same extent by all households. However, the data suggest that debt shuffling may have

occurred among the households most affected by the phaseout between 1985–87.

Scholz (1994) analyzed portfolio changes from 1983–89 using the Surveys of Consumer Finances. He found evidence that homeowners shifted their debt portfolios from 1983–89 toward mortgage debt and away from consumer debt, and that this shift was largest for high-income households, suggesting portfolio shuffling in response to the phaseout may have occurred. Scholz notes, however, “Because the tabulations condition only on income, and other factors . . . presumably affect the use of debt, strong conclusions require further analysis.”

Maki (1995a, 1995b) used data from the Consumer Expenditure Survey (CEX) and the IRS–University of Michigan panel of tax returns to analyze household response to the phaseout. Data from the CEX contain consumer debt balances and consumer and mortgage interest paid over the 1984–91 period, thus spanning the years just before and during the deductibility phaseout. The CEX provides demographic and consumption data in addition to the debt data.

These studies use the “difference-in-difference” method, where changes for groups of households that were affected most by a policy change are compared to changes for other groups. The analysis compares changes in the debt holding of high-income households, who faced the largest increase in their after-tax consumer debt interest rate, with changes for other households. The difference-in-difference technique controls for permanent differences in debt holding between high-income households and the

general population, and also controls for economy-wide changes to debt holding. If there are no other systematic changes to debt holding between the two groups, the differential reactions of high-income households and other households measure the response of households to the deductibility phaseout.

Results from difference-in-difference estimations for consumer debt and mortgage debt are presented in Maki (1995b). The analysis first compared changes from the prereform to the postreform period by high-income homeowners relative to other households. High-income homeowners are likely to itemize deductions, are subject to high marginal tax rates, and have access to home equity borrowing, so they have the incentive and opportunity to shift their consumer debt into deductible mortgage debt.³ The results indicated that high-income homeowners shuffled their debt portfolios extensively between the 1984–86 and 1987–91 periods, even after controlling for demographic factors. High-income homeowners decreased their consumer interest by 36 percent relative to other households between the pre- and postreform periods, and increased their mortgage interest by 16 percent relative to other homeowners. Both of these relative changes were statistically significant at the five percent level.

Estimations were also performed separately for renters to infer the response of households that did not have access to home equity borrowing, but still faced a significant change in their after-tax consumer debt interest rate. The results indicated that high-income renters did *not* decrease their consumer debt or interest paid relative to other renters. This result suggests

that the reduction in consumer debt by high-income homeowners was likely due to their ability to shuffle consumer debt into mortgage debt, rather than reflecting a cutback in consumption and total borrowing.

Effects of Portfolio Shuffling on Policy Goals

The two goals of the phaseout were to increase saving and to raise federal tax revenue. Maki (1995b) examined consumption changes between high-income homeowners and other households between the pre- and postreform periods. A difference-in-difference estimation indicated that consumption actually *rose* for high-income homeowners relative to other households. While many other factors affected consumption over this period, there is no evidence that the phaseout was effective in decreasing consumption, even among the households who reduced their consumer debt.

To analyze the revenue effects of portfolio shuffling, an estimate of the “tax price” of consumer debt was made for each household in the CEX; the tax price was defined as the factor that is multiplied by the pretax consumer debt interest rate to get the post-tax interest rate. A tax price elasticity based on the differential reaction of high-income homeowners and other households was applied to households in a panel of tax returns, and the results indicated that portfolio shuffling reduced the revenue raised by the phaseout 42–49 percent compared to a “no shuffling” case. In sum, both goals of the phaseout appear to have been frustrated by portfolio shuffling: saving did not appear to increase, and the revenue raised by the phaseout was reduced significantly.

FINANCIAL SOPHISTICATION AND PORTFOLIO SHUFFLING

Recent studies have indicated that education and financial sophistication may play an important role in household financial behavior. Bernheim and Scholz (1992) find that even after controlling for income, college-educated households save more than less educated households. Bernheim (1994) presents evidence that many U.S. households lack financial literacy, and that more financially literate households have a higher saving rate than other households.

The consumer interest deductibility phaseout provides an excellent experiment to examine whether differences in financial sophistication affect the response of households to a change in the tax law. Financial sophistication may be important because understanding the effect of the deductibility phaseout requires a certain level of financial expertise, and responding to this change in the law requires balancing the tax benefits and additional costs of increasing mortgage debt.

One proxy for financial sophistication is a household’s level of education. Maki (1995a) performed difference-in-difference estimations separately for households who had attended college and for those who had not attended college. Only the high-income homeowners in the group that attended college showed statistically significant evidence of decreasing their consumer debt and increasing their mortgage debt in response to the deductibility phaseout. This was the case even though high-income homeowners in both groups faced similar changes in the tax price of their debt. Thus, education appears to be an important predictor of portfolio shuffling.

If differences in reaction to the phaseout are in part due to differences in financial skill, it might be expected that households who perform better on tests of financial understanding would be more likely to respond to the phaseout. The 1983 Survey of Consumer Finances provides one such measure. In this Survey, households were asked:

“Suppose you were buying a room of furniture for a list price of \$1,000 and you were to repay the amount to the dealer in 12 monthly installments. How much do you think it would cost in total for the furniture after one year—including all finance and carrying charges?”

The respondents were subsequently asked,

“About what percent rate of interest per year do you think this would be?”

By comparing the respondent’s estimated interest rate with the actual interest rate corresponding to their payment amount, it is possible to construct a measure of financial sophistication. The following measure is used:

$$\text{Quiz score} = \text{absolute value of } [\log(\text{estimated rate}) - \log(\text{actual rate})]$$

If a household’s guess equalled the actual rate, this measure would equal zero. The higher the quiz score, the less accurate is the household’s guess and the less sophisticated the household would appear to be.

Very few households in the survey recognized the role that amortization plays in interest calculations. Even ignoring that problem, however, most households overestimated the interest they would have to pay for a given

interest rate. Table 2 shows how the sophistication variable breaks down by income group, and also shows the percentage of college graduates in each income group. Higher-income households have better quiz scores and are more likely to be college graduates.

The 1983–89 panel of the Survey of Consumer Finances provides an excellent opportunity to analyze the effects of financial sophistication. Using the panel, one can follow individual households over time to analyze their reaction to TRA 86. While the 1983–89 period does not span the entire length of the phase-out period, it does give observations before and during the deductibility phase-out.

To analyze whether financial sophistication may be having an important effect, a sample of 1983 homeowners was split into those who scored better than the median on the quiz and those who scored worse than the median. To check the role of education, the sample was further split between households who had graduated from college and those who had not. By looking at households who owned a home in 1983, the focus is put on a group who had the opportunity to borrow against their home equity.

TABLE 2
SOPHISTICATION MEASURES BY INCOME PERCENTILE

Income Percentile	Quiz Score	Percent College Graduates
0–50	1.37	12.9
50–75	1.14	19.3
75–90	1.09	34.1
90–100	0.92	61.1

Note: Lower score indicates better quiz performance; statistics have been weighted to reflect population estimates.

Source: 1983 Survey of Consumer Finances.

Table 3 shows the debt portfolio share of consumer debt in 1983 and 1989 for 1983 homeowners split into these groups. The only group that reduced the share of consumer debt in their debt portfolios was the group of college graduates who scored better than the median on the quiz. These households reduced the share of consumer debt from 14 to 12 percent over this period. The other three groups increased the share of consumer debt in their debt portfolios by three to nine percent. Because the share of mortgage debt is one minus the share of consumer debt, this evidence indicates that only the college-educated households who scored well on the quiz rearranged their portfolios toward mortgage debt and away from consumer debt to maintain tax deductibility.

Because households in the group with college educations and better than median quiz scores, or “sophisticated” households, tend to have higher incomes than those in the other groups, it is possible that income differences are the driving force behind this result. To test this, Table 4 compares the consumer debt shares for sophisticated

TABLE 3
SHARE OF DEBT PORTFOLIO IN CONSUMER DEBT
SAMPLE OF 1983 HOMEOWNERS

Quiz Score Better Than Median	1983	1989	Change
College graduates	14.2	12.1	-2.1
Other households	17.4	24.1	6.7
Quiz Score Worse Than Median	1983	1989	Change
College graduates	13.2	22.2	9.0
Other households	19.7	23.0	3.3

Note: Statistics have been weighted to reflect population estimates.
Source: 1983–89 Panel, Survey of Consumer Finances.

TABLE 4
SHARE OF DEBT PORTFOLIO IN CONSUMER DEBT
SAMPLE OF 1983 HOMEOWNERS WITH 1983
INCOMES ABOVE 90th PERCENTILE

	1983	1989	Change
Sophisticated homeowners	19.3	13.2	-6.1
Other homeowners	17.5	19.5	2.0

Note: Statistics have been weighted to reflect population estimates.
Source: 1983–89 Panel, Survey of Consumer Finances.

homeowners and other homeowners in the top ten percent of the income distribution in 1983. It is likely that all of these households were in high enough tax brackets to benefit from shuffling their debt. The table indicates that even for this high-income group of homeowners, only the college graduates who scored well on the quiz rearranged their portfolios toward mortgage debt and away from consumer debt. While firm conclusions require further analysis that controls for other possible differences between sophisticated homeowners and other homeowners, these results suggest that sophistication may be an independent and important determinant of which households responded to the tax change. Because sophistication appears to be positively correlated with income, the differences in financial sophistication may be making the benefits of the mortgage interest deduction more unequally distributed than they would be if all households had the same amount of financial skill. Interestingly, this is a case where increasing the financial skill of less sophisticated households may not be in the interest of the government. If households became more financially sophisticated, they may be more likely to use deductible mortgage debt to pay for consumer purchases, costing the government tax revenue.

THE DISTRIBUTION OF THE MORTGAGE INTEREST TAX EXPENDITURE

Table 5 shows the distribution of the mortgage interest tax expenditure for different percentiles of adjusted gross income in 1986 and 1990 as computed from the IRS–University of Michigan panel of tax returns. This period spans the time before and near the end of the phaseout. The tax expenditure measures the decrease in tax liability associated with the mortgage interest deduction. The benefits of the deduction have become more concentrated in the top ten percent of the income distribution over this period; this group’s share of the benefit increased from 54 percent in 1986 to 62 percent in 1990. This group’s share would likely have increased even with no deductibility phaseout due to a decline in itemization for lower-income households because of other provisions in TRA 86. See Poterba (1992) for more discussion of TRA 86 and the mortgage interest deduction. However, the empirical evidence discussed earlier suggests that shuffling of consumer debt into mortgage debt by high-income households contributed to this change in the distribution of benefits, and the results of the last section suggest that sophistication differences between the highest income group and other households may also have played a role. Quantifying the relative importance of these factors in the change in the distribution of the mortgage interest tax expenditure is an important topic for future research.

TABLE 5
SHARE OF MORTGAGE INTEREST TAX EXPENDITURE

Income Percentile	1986	1990
0–50	2.4	1.4
50–75	14.1	10.8
75–90	29.4	25.5
90–100	54.1	62.4

Source: Author’s calculations using IRS–University of Michigan Panel of Tax Returns.

Another Type of Portfolio Shuffling?

It has been argued that looking at the distribution of the mortgage interest tax expenditure gives a misleading impression of which households would be hurt if the deduction were eliminated, because high-wealth households would substitute investment debt for mortgage debt if mortgage interest became nondeductible.⁴ Interest on investment debt likely will remain deductible as long as income from investments is taxed, so it is possible that accounting for this type of shuffling could change our view of the distributional impact and revenue effects of eliminating the mortgage interest deduction.

To see how this type of shuffling could work, suppose a household has net worth of \$100,000 composed of a \$100,000 home, \$50,000 in mortgage debt, and \$50,000 held in taxable securities. If all mortgage interest were made nondeductible, this household could sell its taxable securities and pay off the mortgage debt on its home. Ignoring margin requirements, a household could then repurchase \$50,000 of taxable securities using a \$50,000 margin loan.⁵ This household would then have \$100,000 in home equity, \$50,000 in taxable securities, and \$50,000 in investment debt, and would be able to deduct the interest on its investment debt. Depending on the interest rates on mortgage and margin loans, the tax burden of this household may not increase if the mortgage interest deduction were eliminated. Households with large amounts of financial assets are among the most financially sophisticated households, and it would not be surprising to see them shuffle their portfolios in this way.

If this type of shuffling were pervasive, it could have important implications for

the distributional effects of eliminating the mortgage interest deduction. Just as eliminating the consumer interest deduction penalized renters and nonitemizing homeowners relative to itemizing homeowners, eliminating the mortgage interest deduction could penalize homeowners with little financial wealth, while high-wealth homeowners could still borrow on a tax-deductible basis. This type of shuffling could also decrease the revenue raised by eliminating the mortgage interest deduction.

How extensive would this type of shuffling be? It is possible to get a rough idea of the magnitude of the potential for shuffling by using tax return data. Households whose investment assets exceed their investment debt have some opportunity to shuffle their mortgage debt into investment debt. In order to get an upper bound estimate on the potential for this type of shuffling, it is assumed that households can purchase securities with no margin requirement.⁶ Because tax returns provide data only on income and interest, not assets and debt, assumptions must be made about the interest rates on various debts and assets to make inferences about shuffling. To get an upper bound on the amount of shuffling, it is assumed that investment assets, investment debt, and mortgage debt carry the same interest rate,⁷ and investment interest paid is subtracted from investment income. This calculation provides an estimate of the “potential investment interest” that could be used to replace mortgage interest. If a household’s potential investment interest was more than the level of mortgage interest, the potential investment interest was set equal to the amount of mortgage interest. Summing up the potential investment interest in the panel of tax returns indicates that

about 25 percent of the benefits of the mortgage interest deduction in 1990 could have been “easily shuffled” into investment interest deduction benefits, indicating that about one-fourth of the revenue that could be raised by eliminating the deduction would be lost if households fully shifted their portfolios in this way.⁸ It should be emphasized that this is an estimate of the *potential* for shuffling, rather than a prediction of the actual amount that would be shuffled.

It is possible that the benefits of the mortgage interest deduction are distributed differently after subtracting the amount of interest that could be easily shuffled. If the easily shuffled portion of the mortgage interest deduction is subtracted, the benefits of the remaining deduction are shown in the last column of Table 6. The table indicates that in 1990, about 59 percent of the benefits of the mortgage interest deduction would still have gone to the highest 10 percent of households in the income distribution. While there would certainly be other reactions by high-income households to minimize the increase in tax liability if the mortgage interest deduction were eliminated, the distribution of the benefits of the deduction does not change much after accounting for the potential shuffling of mortgage interest into investment interest.

TABLE 6
SHARE OF MORTGAGE INTEREST
TAX EXPENDITURE, 1990

Income Percentile	No Adjustment	After Adjustment for Easily Shuffled Debt
0–50	1.4	1.4
50–75	10.8	11.7
75–90	25.5	27.8
90–100	62.4	59.0

Source: Author’s calculations using IRS–University of Michigan Panel of Tax Returns.

POLICY ISSUES

It appears that tax-deductible mortgage debt is now more widely used to fund nonhousing consumer purchases. This is contrary to one of the goals of the deductibility phaseout, since Congress wished to discourage borrowing for consumer goods. Also, this use of mortgage debt does not appear to increase the rate of home ownership, which Congress gave as the goal of maintaining the mortgage interest deduction. The mortgage interest deduction also appears to provide other portfolio shuffling opportunities not directly related to home ownership. Engen and Gale (1995) find evidence that households with access to 401(k) plans increased both their mortgage borrowing and 401(k) contributions from 1987–91. Thus, homeowners may currently be using a portion of their deductible mortgage debt to finance investments in tax-preferred pension assets.

Another factor that policymakers may wish to consider is that the benefits of the mortgage interest deduction have become increasingly concentrated among high-income households. Tables from the JCT suggest that in 1995, 71 percent of the benefits of the deduction went to the top 12 percent of households in economic income (JCT, 1995). It is not clear that the home ownership rate among households in this group is more responsive to this form of housing subsidy than is the rate among other groups.

Possibilities for Reform Under an Income Tax

Several options are available if policymakers wish to reform the present system of housing subsidies. One option would be to tax the imputed income associated with housing and consumer

durables. The returns from investing in these assets come partly in the form of services that are not subject to tax. Under a pure income tax, the imputed income associated with these services would be taxed and interest deductions would be allowed; one reform option is to move to such a system. However, the JCT suggests that imposing a tax on imputed income would be difficult administratively (JCT, 1995), and taxing imputed income may also be unpopular politically.

A different policy approach is to limit the mortgage interest deduction to debt incurred at the time of home purchase. Congress indicated in passing TRA 86 that it wished to discourage borrowing for consumer purchases, but did not wish to discourage home ownership. Eliminating the deductibility of interest paid on postpurchase loans for home improvements or for nonhousing purposes is unlikely to have a significant impact on the rate of home ownership. However, this change would not be completely effective in deterring the use of deductible mortgage debt for nonhousing purposes, because homeowners who move could borrow more against their new home. In addition, households who stay in their homes could pay off their mortgages more slowly than they otherwise would, and use the money that would have gone into home equity to fund other purchases. Restricting deductible mortgage borrowing to the time of home purchase may limit its use for nonhousing purposes, but only through complete repeal of the mortgage interest deduction could this use be eliminated.

Green, Hendershott, and Capozza (1996) point out that eliminating the mortgage interest deduction would introduce a bias against debt financing

of a home. For a household that uses cash to finance its home purchase, the opportunity cost of buying a home is the *after-tax* return the household would have earned if its funds were invested in financial assets. For a home purchaser that uses debt, the cost of financing is the after-tax rate on its mortgage, while it would be the *before-tax* rate if the mortgage interest deduction were eliminated.

This would not be the first wedge between the cost of equity and debt financing in the tax system. By eliminating the consumer interest deduction, policymakers explicitly introduced a bias against the use of consumer debt to finance consumption. If a household pays for its consumer purchase with cash, the opportunity cost is the after-tax interest rate it would earn if it invested the cash in financial assets, while with no consumer interest deductibility, the cost of financing a consumer purchase with consumer debt is the before-tax consumer loan interest rate. See White and White (1977) for further discussion of this point. Similarly, the cost of financing tax-preferred municipal bonds or pension assets is higher for households who must borrow on consumer loans to have the money to purchase them. Thus, there are cases where current policy exhibits an antidebt bias.

In deciding whether to retain the mortgage interest deduction, policymakers must balance competing priorities. Eliminating the mortgage interest deduction would discourage the use of mortgage debt for nonhousing purposes and would raise \$62.2 billion in 1997 according to the U.S. Congressional Budget Office (CBO, 1995), while it would drive a wedge between the tax treatment of debt and equity financing

of home purchases.

If policymakers wish to retain the mortgage interest deduction but are concerned about the distribution of benefits among income groups, alternatives for changing this distribution are available. One option is to make mortgage interest paid an adjustment to income rather than an itemized deduction, as suggested by Follain, Ling, and McGill (1993). This change would expand the benefit to many low-income homeowners whose standard deduction exceeds the benefits of itemizing.⁹

To help offset the revenue loss from this provision, the cap on the amount of deductible debt or the amount of deductible interest could be lowered. The revenue gains from lowering the cap are estimated by the CBO to be \$6.5 billion in 1997 for reducing the debt cap from \$1 million to \$300,000, while capping the amount of interest at \$12,000 for singles and \$20,000 for married households is estimated to raise \$9.9 billion (CBO, 1995). Capping the deduction could also be combined with restricting interest deductibility to mortgage debt incurred at the time of home purchase.

Interest Deductibility Under a Consumption Tax

If the mortgage interest deduction is maintained under a consumption tax, many of the same issues arise as under an income tax. Households could use tax-deductible home equity loans to finance nonhousing purchases. The Nunn–Domenici USA tax proposal would limit the use of deductible mortgage borrowing to debt used for home purchases or improvements. However, as under an income tax, households who move could liquidate

home equity to finance other purchases with tax-deductible debt, and households who stay in their homes could pay down their mortgages more slowly.

Allowing the mortgage interest deduction under a consumption tax also would provide expanded shuffling opportunities (Gale, 1995; Ginsburg, 1995). As noted earlier, homeowners may currently be using their deductible mortgage debt to invest in tax-preferred pension assets. Under a consumption tax, all savings assets become tax-preferred, so households may borrow on a deductible basis against their home and use the funds to invest in a much broader class of tax-preferred investment vehicles. In addition, investments in these tax-preferred assets would not be subject to the same withdrawal penalties as pensions are under the current system.

The Nunn–Domenici USA tax plan contains antiabuse provisions that are designed to prohibit households from using deductible mortgage debt to fund tax-preferred savings investments. However, Ginsburg (1995) shows a way around these provisions. If a household that owns a home moves, it can reduce its housing equity by increasing its mortgage borrowing. It can then invest the liquidated home equity in land or collectibles, which are not treated as savings assets under the USA tax. The household could sell these assets over time to finance consumption; it could then save more than it otherwise would from current earnings and invest this saving in tax-preferred assets. This household effectively borrows on a tax-deductible basis to finance investment in tax-preferred savings assets. As under an income tax, limits on the amount of interest that is deductible may decrease

this use of mortgage debt somewhat, but the only solution that completely prevents this use is elimination of the mortgage interest deduction.

The results discussed earlier suggest that the benefits from using deductible mortgage debt to fund investments in a broader class of tax-preferred assets would tend to accrue to high-income homeowners, because these households generally have more home equity to tap, and they may be more likely to do this type of portfolio shuffling because they perform better on measures of financial sophistication.

Conclusions

This paper has reviewed evidence on portfolio shuffling induced by the consumer interest deductibility phaseout in the Tax Reform Act of 1986. The evidence indicates that high-income homeowners substantially shuffled their portfolios in response to the phaseout by increasing mortgage debt and decreasing consumer debt. This shuffling frustrated both goals of the phaseout: savings did not appear to increase and the amount of revenue raised by the phaseout was reduced by nearly 50 percent. In addition, portfolio shuffling and differences in financial sophistication appear to have helped concentrate the benefits of the mortgage interest deduction among high-income households. Fundamental tax reform presents an opportunity to address the use of deductible mortgage debt for nonhousing purposes. The use of deductible mortgage debt for nonhousing purposes can be discouraged by changes in the mortgage interest deduction, but the only option that can completely prevent this use is elimination of the mortgage interest deduction.

ENDNOTES

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Federal Reserve Board or its staff. I wish to thank Albert Teplin, William Gale, Craig Furfine, Raphael Bostic, and Calvin Schnure for helpful comments.

- ¹ Under TRA 86, interest paid on qualified educational and medical debt secured by the home was also deductible. This provision was not renewed in the Omnibus Budget Reconciliation Act of 1987.
- ² Home equity debt also could not exceed the difference between the fair market value of the residence and the amount of acquisition debt, even if this difference was less than \$100,000.
- ³ Throughout the paper, the terms "tax-deductible debt" or "deductible debt" will be used as shorthand for "debt on which the interest paid is deductible from income before taxes are paid."
- ⁴ This point was raised at a recent seminar on the mortgage interest deduction.
- ⁵ The household could not simply borrow against its financial assets to pay off its mortgage, since debt is considered investment debt only if it is used to purchase new investment securities. Thus, the household must sell its existing assets, pay off its mortgage, and then repurchase the securities with a margin loan in order for interest on the debt to be deductible.
- ⁶ In practice, margin requirements vary across securities. Under New York Stock Exchange rules, investors can purchase U.S. Treasury securities with less than one year to maturity with only a 1 percent required margin, while equities have a 50 percent initial margin requirement. Assuming there is no margin requirement will thus give an upper bound on the amount of assets that can be purchased on margin.
- ⁷ It is probable that the household earns a higher interest rate on its investment assets than it pays on its investment or mortgage debt. Otherwise, the household may have an incentive to pay off its debt with its assets. Assuming identical interest rates will overstate the amount of potential shuffling, again providing an upper bound.
- ⁸ If households invested in securities with 50 percent margin requirements, about 17 percent of the benefits of the mortgage interest deduction could be shuffled into investment interest deduction benefits.
- ⁹ This change would also benefit households who itemize deductions but have few nonhousing deductions. Suppose a household has \$6,000 in mortgage interest and no nonhousing deductions. If the standard deduction were \$5,000, this household would benefit by only \$1,000 from the mortgage interest deduction, while it would benefit by \$6,000 if mortgage interest were an adjustment

to income. Because nonhousing deductions tend to increase with income, making mortgage interest an adjustment to income would increase the share of the benefits going to lower-income households.

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