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The use of the property tax to fund our public schools was once revered as the cornerstone of the American system of education. . . If the property tax is to continue to serve as the primary source of local revenues, additional corrective measures must be employed to mitigate the taxpayer inequities that result under the current system.

FINANCING PUBLIC EDUCATION: An Examination of the Public and Private Sector Responses to Perceived Inadequacies of the Property Tax

by Brian O'Neil Brent and David H. Monk

Introduction

Although it has ancient and European antecedents, the American property tax system is a uniquely indigenous institution. However steeped in American tradition, the cry of baseball, apple pie, and the property tax, is rarely heard. When asked, "which do you think is the worst tax—that is the least fair?" respondents have consistently identified the property tax as the least equitable.[1] Why then is this institution, which serves as the primary local taxing mechanism, and accordingly, source of local contribution for our public schools, so vilified?

One of the foremost criticisms of the mechanism is that the illiquid nature of property does not provide an accurate measure of one's ability to pay. Taxation requires the transfer of resources from the taxpayer to the public sector. Therefore, a taxpayer must have sufficient resources available, or convert property holdings into currency or other negotiable instruments, in order to honor his or her obligation. The latter notion of disposing of one's real property to satisfy tax liabilities is rather disturbing to many taxpayers. Accordingly, circuit breakers or homestead credits, which provide targeted tax relief for property owners who do not have sufficient liquid resources to satisfy their property tax liabilities, are employed by 31 and 40 state governments, respectively. The private sector has also responded to the dilemma of the "property rich-cash poor" homeowner. Through the implementation of Reverse Equity Mortgages (REMs), lending institutions now allow elderly homeowners to systematically "convert" the equity in their homes to liquid resources. It is proposed that the income stream generated from these periodic payments will aid the homeowner in satisfying his or her obligations, including taxes.

Education policy makers are currently in the throes of assessing not only reforms in the manner in which educational services are to be delivered, but additionally, the manner in which the resources required to provide such services are to be secured. Accordingly, policy makers must re-examine the traditional use of the property tax as a means to fund our public schools. This paper examines the efficacy, within an educational finance context, of both the public and private sector responses to the aforementioned criticism of the property tax. Section I, examines the role the property tax currently plays in the financing of our public elementary and secondary schools. Section II, addresses the aforementioned criticism of the property tax in reference to theories of taxation. Section III, examines the efficacy of the public sector's implementation of homestead exemptions and circuit breakers to provide targeted tax relief. Section IV, addresses the private sector's use of reverse equity mortgages to mitigate the perceived shortcoming of the property tax system. And Section V, concludes with a discussion of the educational finance policy implications.

I. Funding Sources of Public Schools

Public schools in the United States are financed through a system of fiscal federalism. That is, the funds used in their operations have been appropriated on the federal, state, and local levels. Nationally, during the last two decades, the combined federal and state support for public education has ranged from 41% to 50%, while the complementary local contribution has ranged from 52% in 1969–70 to 44% in 1986–88 (See Table 1). Therefore, approximately one-half of the resources required by districts has traditionally been provided by local sources.[2]

With regard to the procurement of locally raised revenue, public school systems may be divided into two distinct classes: Those systems in which the schools are fiscally *independent*, and those in which the districts are fiscally *dependent* on some other form of local government. Dependent districts are those systems which function as operating segments of larger governmental units (e.g.—counties, cities, etc.). Therefore, support for the subordinated dependent districts is secured through contributions made by the parent government. Accordingly, the dependent district must solicit funds from the same budget that addresses the need for police and fire protection, sanitation, health services, parks and recreation, and other municipal support subunits. In 1987, all school districts in Alaska, Hawaii, Maryland, North Carolina, and Virginia, in addition to some systems in twelve states, were fiscally dependent (See Table 2).[3]

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The characteristic that defines independent school districts is their ability to raise revenues autonomously. That is, their ability to secure funds for education independent of the operations of other competing municipal services.[4] This ability may include the establishment of tax rates on a respective tax base, assessment, and the subsequent collection of the proceeds.[5] In districts which have independent taxing authority, the property tax accounts for more than 80% of the local revenues.[6] Additionally, in several states it is the sole tax base upon which districts may levy.[7] Accordingly, in 1988–89, independent school districts obtained 97% of their local tax revenue from the property tax.[8]

The source of local funds for dependent school districts is often less clear, however. As noted, these districts rely on appropriations from the local municipality, which may have in addition to the property tax, other taxing and assessment mechanisms. Among these are local sale taxes, occupation taxes, motor vehicle license fees, mineral extraction and severance taxes, interest income, and proceeds from court fines. However, because property taxes are the single most important source of revenue for local municipalities in the majority of states,[9] for purposes of this analysis it is presumed that they are the primary source of local funding for both dependent and independent districts. Accordingly, approximately one-half of the resources required by a given school district, are secured through the assessment and collection of a locally administered property tax.

II. The Property Tax and Standards of Equity

"The property tax's retention can be explained only through ignorance or inertia."

The above statement, written by tax expert E.R.A. Seligman over seven decades ago, reveals the sentiment felt by the majority of taxpayers throughout the century.[10] What accounts for such widespread dissatisfaction? One of the primary criticisms of the use of the property tax is the potential for the mechanism to violate fundamental principles of taxpayer equity. Adam Smith wrote eloquently about what is required to make a tax equitable:

> *The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, that is in proportion to the revenue that they respectively enjoy under the protection of the state.*[11]
>
> —*Adam Smith*

A careful reading of this passage reveals that there are actually two tests that need to be met in order for a system of taxation to achieve equity. Smith asserts that the burden of taxation should be born in proportion to one's "respective abilities" (ability to pay principle), and also in proportion to the revenue one "enjoys under the protection of the state" (benefit principle). Although Smith argues that an "equitable" system of taxation would encompass both of these tenets, upon closer examination these principles are far from complementary.

The Benefit Principle:

The benefit principle asserts, that an equitable system of taxation, is one in which each taxpayer contributes in accordance with the "benefits" he or she will receive. Accordingly, under a strict interpretation of this principle, each taxpayer would be taxed in line with his or her respective demand for services.[12] This notion, the more you benefit, the more you pay, fits nicely into one's sense of fairness. However, it is not always easy to measure levels of benefit, and this seriously limits the applicability of this equity standard.

These measurement problems are particularly serious in the context of public schools. One may assert that it is the family of the student who is receiving the "benefit" provided by the public service. Accordingly, the cost of funding public schools should be borne only by those who have children within the institution. However, does not the public as a whole benefit when a child receives an education? That which may be attained in school, not only broadens employment opportunities, but also enables the youth to become both a better citizen and consumer. Therefore, there is a resultant "value" to society when the education system enables a youth to become a scientist, doctor, laborer, or public servant, any one of whom may one day provide services for the "benefit" of the community. How then can we measure and assess the *benefit* each taxpayer receives when a child is educated? Since individual preferences differ, and positive externalities may result, it is unlikely that an absolute measure of value, in a practical sense, can be derived. Accordingly, use of the benefit principle is best reserved for those public services, which more clearly identify the relationship between the individual benefited and the service provided.[13]

The Ability to Pay Principle:

The ability to pay principle is the foundation upon which most systems of taxation, including the property tax, rest. Unlike the benefit principle, whose focus is on the degree to which individuals receive public services, the ability principle seeks to assess each taxpayer based on his or her wherewithal to pay. That is, regardless of the benefits received, each individual is required to contribute to the resource pool, an amount commensurate with his or her fiscal capacity. The three most widely employed measures of ability to pay are income, consumption, and wealth. Income refers to the inflow of resources, from whatever source derived, within a given time frame. *Consumption* based measures are founded on the premise that those who "consume" more, are better able to pay than those who consume less. And lastly, *wealth* based measures seek to determine an individual's wherewithal to pay based upon the "value" of the resources they possess at the time of assessment. Irrespective of the measure of ability employed, contribution is to be determined in accordance with the tenets of horizontal and vertical equity. Horizontal equity requires that equals be treated as equals. Conversely, vertical equity requires that unequals be treated unequally.

The Property Tax and the Ability to Pay

"It was the best of taxes, it was the worst of taxes?"

As stated above, the equity standard on which the property tax mechanism rests, is the imposition of tax in accordance with the taxpayer's respective *ability to pay*. But, does the property tax system employ a suitable means for determining one's ability to pay? For at least the following three reasons, the answer is no.

1. *Inaccurate Definition of Wealth:* The property tax system seeks to assess an individual's wherewithal to pay based upon their "wealth". However, the term wealth in this context is misleading. The tax is universally applied to the assessed fair market value of all non-exempt realty.[14] Thus the property tax system, which disallows the deduction of liabilities and excludes personal property, securities, and deposits, does not accurately reflect the more inclusive financial based concept of "net worth".[15] Rather, the tax looks solely to one component of an individual's holdings to determine his or her ability to pay.[16] Consider the following: All else being equal, two individuals, A and B, both own identical parcels of real property valued at $100,000 each. Additionally, A owns the property free and clear, while B has a $100,000 mortgage on his respective parcel. Therefore, A has a net worth of $100,000, while B has a net worth of $0 ($100,000 asset - $100,000 liability = $0 net worth). As property tax system presently functions, how-

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ever, both A and B's ability-to-pay will be determined to be equal ($100,000). Accordingly, they will be assessed equal levies. Conversely, if the property tax system measured an individual's net worth, A, whose worth is higher, would be levied an increased amount commensurate with his holdings. Therefore, in this example, unequals are treated equally. Thus, if one subscribes to the concept of net worth as a more representative measure of an individual's "wealth", the property tax system is in violation of the principle of vertical equity.

2. *Elements of a Regressive Incidence:* A second widely espoused criticism of the property tax, as a measure of one's ability to pay, is that the tax is regressive.[17] That is, lower income taxpayers will pay a higher percentage of their income to satisfy property taxes than higher income taxpayers. If this assertion is true, it brings into question the efficacy of the property tax as a means to secure public support. This long-standing assertion, termed the traditional view of property tax incidence, has, however, come into question. In, *Who Pays the Property Tax*, a discourse on property tax incidence, Aaron demonstrates that in many ways the tax can have a progressive effect on taxpayer incidence. Thus, the true nature of property's tax incidence is still subject to question.[18]
3. *Illiquid Nature of Real Property Wealth:* A third criticism of the use of "wealth" as a measure of ability to pay centers on the illiquid nature of real property. Taxation requires the transfer of resources from the taxpayer to the public sector. Therefore, a taxpayer must have sufficient liquid resources available, or convert property holdings into currency or other negotiable instruments, in order to honor his or her obligation. Clearly, the notion of disposing of one's real property to satisfy tax liabilities is rather disturbing to many taxpayers.

All men are created equal. But, are they treated equally? The remainder of this article examines both the public and private sector responses to the perceived failure of the property tax system to accurately measure one's ability to pay.

III. The Public Sector Response—Targeted Tax Relief

Property tax relief includes a melange of mechanisms designed to limit reliance on the tax to secure local resources. These mechanisms may be grouped into two broad categories: general and targeted. General relief attempts to indiscriminately lower property taxes for all classes of property. This may be accomplished by implementing one, or any combination, of the following programs :[19]

- Increased state aid (e.g.-school finance equalization programs at the state level)[20]
- Assumptions of local functions by state government (e.g.-school district transportation)
- Increased local sales and income taxes or user charges[21]
- Tax and spending limitations (e.g.—legislative constraints on school district expenditures)[22]

General tax relief is designed to reduce taxes across all classes of property types and owners. Accordingly, it does not directly address the property tax in relation to an individual's ability to pay, therefore it will not be further examined. In contrast to general relief, targeted relief reduces property taxes for only a select group of taxpayers, generally owners of residential or agricultural property. There are two methods of providing relief in this category:[23]

- Homestead credits or exemptions
- Circuit breakers

Homestead exemptions and circuit breaker programs are designed to give relief to taxpayers within the same class. Accordingly, targeted tax relief is the public sector's response to the property tax's alleged inability to accurately assess one's ability to pay.

Homestead Exemptions and Circuit Breakers

A homestead exemption, one of the oldest property tax relief mechanisms, seeks to reduce the property tax for a specific class of taxpayers who own homes. For example Montana provides a homestead credit for individuals, 62 years or older, equal to property taxes paid, less some specified amount based on income. Other states seek to reduce the assessed valuation of property for specific classes of taxpayers (e.g.—elderly). The result, regardless of the means, is that the tax bill of the respective "homestead taxpayer" is reduced. Although some states reimburse local governments for the revenue losses caused by the homestead credit, more commonly the cost is borne by the local unit, or more accurately the local ineligible taxpayer.

Circuit breakers derive their name from the following analogy. They (circuit breakers) are designed to protect a taxpayer against property tax "overload" in the same manner an electrical circuit breaker protects a power line against an overload of current. Overload may be the result of a drop in current year income due to illness, unemployment, or other extraordinary circumstances. Overload may also be the result of a drop in income due to retirement. As such, in the latter case, overload will not likely be mitigated by future increases in income.

Circuit breakers provide payments to taxpayers, usually in the form of income tax credits, equal to the excess residential property tax liabilities over a designated percentage of income. For example the New York State tax code provides the following:

> *Law 59,072.40-.67 Property Tax Circuit Breaker Credit.*—A resident individual, who occupies the same residence for at least six months and whose household gross income is $18,000 or less for the tax year, gets this credit. It is given in the maximum amount of $75, $375 for persons age 65 or older, for the first $1,000 of household gross income, and down $2, or $17 for the elderly, for every additional $1,000, to $41, or $86 for the elderly, for household income over $17,000 but not over $18,000. Credit represents a fraction of the excess property taxes. An owner of a home valued at $85,000 for property taxation, a tenant whose adjusted monthly rent is $450 on average, and homes exempt from property tax do not qualify.[24]

In 1989, some type of circuit breaker program or homestead credit were employed in 31 and 40 states, respectively.[25] (See Table 3) The great disparities in circuit breaker and homestead plans reflects the diversity of their objectives. Among the most common objectives of the mechanisms' proponents are the following:[26]

- The programs can decrease the regressive nature of the property tax.
- The mechanisms can operate as an indirect form of revenue sharing if the losses are financed by the state.
- Targeted relief can protect low-income taxpayers with unusually large liabilities or with temporary depressed incomes.
- And, since benefits often accrue to largely low-income households, they can be supported by advocates of greater income redistribution as an interim device until larger welfare programs can be enacted.
- By rebating or crediting taxes, circuit breakers and homestead credits can allow the elderly, who frequently have paid off all mortgages and experience no out-of-pocket costs other than maintenance and property taxes, to remain in their homes.

As noted, the programs differ widely in their structure, and accordingly, in their intentions with regard to the above objectives.

The Efficacy of Targeted Tax Relief

Although "noble", critics have addressed the validity of several of the programs' general goals. First, the circuit breaker and homestead exemptions are justified primarily on the premise that the property tax is regressive. However, as noted in Section II, several economists assert that the tax is borne largely by the owners of capital, and thus progressive.[27] The second objective, revenue sharing, supports the notion that localities with predominantly low-income residents can transfer a portion of their property tax burden to non-residents through state intervention. The use of targeted tax relief mechanisms as a mean of promoting *revenue sharing* is a matter of political judgment. Third, if temporary decreases in income justify the lessening of taxes, temporary gains, would accord increasing the burden. This notion, however, would not likely be met with overwhelming enthusiasm. The fourth objective of using targeted tax relief mechanisms to provide *maintenance*, until other social programs can be implemented, creates an interesting dilemma. Recall, from the above example (New York State), that taxpayers with higher property tax burdens (presumably indicating higher assessed property valuations), are afforded a larger per dollar credit. Thus, to use relief from the property tax system, as means of "welfare", results in benefits being distributed directly in proportion to wealth, hardly the foundation upon which public assistance programs are built. Thus, the first four objectives of targeted tax relief are not without inherent complications.

The fifth objective of targeted tax relief, credits for elderly homeowners, serves as the primary purpose of the implementation of circuit breakers and homestead exemptions in the majority of states.[28] However, it is through a closer examination of the use of targeted tax relief with regard to the elderly, that, in terms of theories of taxation, cast doubt on the efficacy of the system as it currently functions.

As noted in Section II, the three most widely employed measures of ability to pay are income, consumption and, wealth. Traditionally, the property tax system seeks to assess an individual's wherewithal to pay based upon their "wealth". The creation of targeted tax relief, however, served to shift the property tax from a wealth based measure of ability to pay, to a hybrid wealth-income based measure.

Income as a measurement of ability to pay has two primary advantages. First it can be tied to a given period. That is, if one incurs a loss in a given year, his or her decreased ability to pay, and resultant assessment, adequately reflects the singular nature of the event. Thus, targeted tax relief mechanisms, tied to levels of income, could be perceived to adequately address the possibility of temporary decreases in income. Second, income, although not exclusively, has a liquid nature. Remuneration for services provided, the sale of assets, or the receipt of retirement benefits is traditionally in the form of currency or other negotiable instruments. It therefore follows that one could easily transfer these resources to the public sector if a timely assessment were made. Thus, targeted tax relief allows individuals who do not have liquid resources the ability to *exempt* themselves from the payment of a portion of the property tax and accordingly preserve their holdings (i.e.—real property).[29]

Difficulties arise, however, when select groups of taxpayers are able to circumvent the payment of the tax under the guise of a different ability to pay standard. That is, when select taxpayers (e.g.—elderly) receive credits or exemptions, a disparity is created between the designated group, and taxpayers who do not fall within the exempt class. Recall that horizontal equity requires that equals be treated as equals. Targeted tax relief serves to treat equals unequally. Ineligible taxpayers are required to transfer resources to the respective governmental unit, regardless of temporary declines in income or the illiquidity of their assets. Thus, circuit breakers and homestead exemptions create horizontal inequities.

IV. The Private Sector Response—Reverse Equity Mortgages

The private sector has also, indirectly, addressed to the perceived inability of the property tax to measure one's ability to pay. Response in this sector, however, has not addressed the needs of all taxpayers, but rather only the burdens of elderly residential property owners. The banking industry's implementation of Reverse Equity Mortgages has attempted to mitigate the often espoused dilemma of the "house rich-cash poor" aged.

Approximately three quarters of Americans aged 65 or older own their own homes, with roughly 80 percent of these having fully satisfied mortgages.[30] Although estimates vary, elderly homeowners are said to have approximately $1 trillion in unencumbered equity that cannot be utilized unless the property is sold.[31] For many, however, the notion of selling one's residence is less than desirable. The American Association of Retired Persons (AARP) purports that 86 percent of senior citizens would prefer remaining in their homes as they age, rather than selling their residences and moving to retirement communities.[32] But, does one have to sell their home to "unlock" the resources the property holds? The answer is no, if one can be convinced of the merits of a reverse equity mortgage (REM).[33]

Reverse equity mortgages are designed to allow the elderly to convert the accumulated equity in their homes into an income stream, without having to move or sell their property interests. Generally, the borrower receives a monthly payment from the lender, to be repaid with interest either upon the borrower's death or the sale of the house, or at a fixed repayment date. The difference from this plan, and a traditional mortgage, is that in the former each disbursement by the lender reduces the homeowner's equity interest in the designated property. Although numerous variations on the theme of REMs are offered, by both the public and private sector, there are four general classes of the debt instrument:

1. *Fixed-Term Reverse Mortgages:* The lending institution will disburse to the homeowner a monthly advance, generally calculated on 80 percent of the appraised value of the home for a predetermined period (generally three to ten years). Upon completion of the designated term, the loan principal, plus interest, must be repaid in full.
2. *Tenure Reverse Mortgages:* The lending institution will disburse to the homeowner a monthly advance, as determined by the assessed value of the property and the life expectancy of the borrower (determined actuarially), until such borrower dies, moves, or sells the residence. Upon the occurrence of any of the aforementioned events, the borrower, or his or her estate, are required to pay the loan balance in full.
3. *Line of Credit Reverse Mortgages:* This instrument is designed to allow borrowers to draw a flexible amount of equity if, when, and to the degree that it is required. The amount of the line of credit is determined by the life expectancy of the homeowner and the assessed value of the designated property. The loan balance will be repaid in full upon the relocation or death of the borrower, or the sale of the residence.
4. *Shared Appreciation Mortgages:* Under this type of arrangement, a variation on all three of the above types of reverse mortgages, the lender agrees to provide the borrower with a larger monthly payment (or credit line) in exchange for a future share in the property's appreciation. However, when you die, move, or sell the residence, you or your estate are required to remit to the lender the agreed upon portion of your home's appreciation, plus the balance of your monthly advances (including interest).

The first REMs appeared on the scene in 1961. Since their inception, however, and through 1992 the mortgage instrument

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has not been met with wide spread consumer support.[34] Nor was the concept of such a lending device initially embraced by the banking industry.[35] The failure of the banking industry to aggressively pursue the promotion of the instrument, and resultant negligible consumer demand, was largely due to the fact that no secondary market existed for the factoring or securing of executed loans. Thus, lending institutions were required to manage the entire risk of their REM portfolios, hardly desirable for a product that had not yet demonstrated its earnings potential. In 1988, however, Congress established the Home Equity Conversion Mortgage Insurance Demonstration, the first federal endorsement of home equity conversion (HECM) as a viable option for the elderly.[36] By 1992, Congress had expanded the number of HECMs that the Department of Housing and Urban Development (HUD) could insure from 2,500 to 25,000. In response, Fannie Mae, as part of its $10 billion affordable housing initiative, has committed to purchase the HUD-insured HECM loans, thereby creating a secondary market for originators who do not want to maintain and continually fund HECM loans in their own portfolio.[37]

HUD Insured (FHA) vs. Private Institution REMs:

The arrival of the HUD insurance option has further altered the product mix of available reverse equity mortgages. In addition to the four basic mortgage payment options detailed above (term, tenure, line of credit, and shared appreciation), the loans can be further classified as FHA-insured, lender-insured, and uninsured.

1. *FHA Insured:* Under these arrangements, although HUD insures the loans, it is the private lenders that are responsible for their origination. To be eligible the borrower must be at least 62 years of age, live in a single family residence, and own the residence free and clear (or nearly so).[38] Additionally, the maximum amount of the insurable mortgage is limited by statute. Currently, the allowable amount, which addresses the demographic characteristics of the geographic locale, ranges from $67,500 to $124,875 (1992 limits).[39] The terms of the mortgage may also provide for a fixed or adjustable interest rate.[40] The primary advantage of these instruments, with regard to the lender, rests in the provision that the institution will be protected by the HUD insurance feature up to the "maximum claim amount", even if the loan's outstanding balance exceeds the value of the property on the date of sale.[41] In this case, HUD will repay the lenders for any deficiency out of the mortgage insurance premiums (MIP) previously collected under the terms of the HECM loan.[42] Accordingly, provided the borrowers occupy the home as their principal residence, they cannot be forced to sell the home to satisfy the mortgage, even if the value of the property is less than the outstanding balance of the obligation.[44] Therefore, with regard to the borrower or his estate, the lender's recovery will be limited to the value of the home. Thus, HUD insures both the lender and the borrower against risk of loss.[45]
2. *Lender-Insured:* Private lenders offer a multitude of lender-insured REM products. Although variations exist, both within and between institutions, several general characteristics of the arrangements can be outlined. Lender-insured REMs offer tenure or line of credit payment plans. The interest may be assessed at an adjustable or fixed rate. And, like HUD-insured loans, the instrument incorporates a mortgage insurance premium into the balance due. The primary distinction between the two insured arrangements is that the lender-insured plan does not have limits on the value of the property to be mortgaged. Additionally, the lender-insured REM may also allow the borrower to mortgage less than the full assessed value of his or her residence. This provision affords the opportunity to preserve equity for the homeowner, or his or her heirs. Generally, the loan advances under a lender-insured plan are larger than disbursements under the HUD arrangements. This "premium", however, may be offset by the increased insurance or origination fees that are charged by the private institution.
3. *Uninsured Plans:* The uninsured plan stands in stark contrast to the aforementioned insured arrangements. Under this type of instrument the borrower is given monthly loan advances for a *fixed term* only. Although interest is set at a fixed rate, and no mortgage insurance premium is required, when the disbursements cease, the balance becomes due and payable. Thus, if the borrower is unable to repay the loan from external sources, he or she will be required to sell the home and move.

Advantages and Disadvantages of REMs:

Although, currently eagerly marketed by the banking industry, the private sector has not been convinced of the absolute value of the debt instrument. Personal investment and retirement publications are generally split on their support for the REM.[45] Therefore, a brief analysis of the general advantages and disadvantages of the program is warranted.

Advantages:

1. The borrower retains title to the property. Therefore, under all plans, except uninsured term-plans, the homeowner may maintain possession of the residence until death or voluntary disposal.
2. The proceeds of the loan can be used for any purpose, including satisfying housing expenses such as taxes, insurance, and fuel, or general living expenses, such as food and health care.
3. The loan advances are a return of equity and not income, accordingly the event is non-taxable. Thus, the inflow of funds will not have an adverse effect on the receipt of other supplemental programs such as Medicare or social security. [46]

Disadvantages:

1. Because title to the property is retained by the homeowner, the borrower is responsible for the taxes, repairs and maintenance of the residence. Although the property related expenses will likely increase, the monthly payment will remain static.
2. The liquidation of the property interest will presumably diminish the estate of the borrowers, and accordingly the eventual distribution to their heirs.
3. The interest on the obligation is not deductible until the loan is satisfied in full.
4. As in a traditional forward mortgage, several fees arise during the origination of the REM. Lenders charge an *origination fee* for arranging the mortgage. These fees are generally expressed as a percentage of the home's value or the amount of equity being mortgaged.[47] Insured lenders also charge risk premiums from 2% to 7% of the house's value. Like points on a traditional mortgage, the premiums are charged upon origination.[48] Some lenders also charge a monthly insurance premium to the borrower to cover *risk-related* costs. In addition to the fees charged by the lending institution, the borrower must also account for other third party costs associated with a transfer of residential real property. For example, the homeowner is responsible for appraisals, title search and insurance, inspections, recording fees, servicing fees, and any other profes-

sional costs such as accountants and attorneys fees. Most lending institutions will arrange to have these fees added to the balance of the obligation. However, although they do not represent out of pocket expenditures for the borrower, they do serve to decrease they monthly payment to the homeowner.

5. Under all obligations interest is charged. Therefore, although the borrower or his estate will eventually receive a tax deduction for the interest incurred under the arrangement, the resultant monthly payment is lessened by the interest charged. Thus, there is a cost of liquidating the property that would not be realized if the property were sold outright.

As previously noted, financial planners are split as to the relative applicability and merit of the reverse equity mortgage. Some general recommendations can be made however. Uninsured REMs (term mortgages) may be useful to secure interim resources until the homeowner is eligible for pension or social security benefits. However, this type of arrangement is not suitable for those who desire to remain in their homes. Under insured programs, those who outlive their actuarially predetermined life expectancy will benefit. Accordingly, those who predecease or otherwise vacate or dispose of the property prior to the attainment of the targeted life span estimate are unlikely to realize the full value of their asset. The latter situation is a result of the high costs of origination, which places a disproportional amount of debt service in the initial period. (See Table 4 and 5)

House Rich-Cash Poor:

The proponents of REMs have envisioned a populace of "house rich-cash poor" elderly citizens. However, upon closer examination, this is not truly reflective of the reality of the aged. Most low-income elderly have very little housing wealth.

Monthly Household Income:	Average Home Equity
Less than $900	$37,834
$900–$1,999	42,174
$2,000–$3,999	48,267
$4,000 and over	82,535

Source: U.S. Bureau of Census 1984[49]

One can see that housing wealth and income are directly related. Further, Social Security and pension benefits are by far the most important components of wealth for most elderly. The median SS and pension wealth for households with heads in the 65–70 range is $113.4 thousand (present value) while the median liquid wealth is $10.0 thousand and the median housing wealth is only $38.0 thousand.[50] Thus the examples of REM distributions (Table 4), which were based on $100,000 of housing equity is not reflective of the property wealth of the vast majority of elderly homeowners. Accordingly, the monthly advances are unlikely to significantly improve the standard of living for the low-income, low housing equity elderly (See Table 6).

The demand for REMs has been limited. This may be the result of the public's perception that the mortgages are too costly (fees and interest). As noted above, it may likely be the result that families that have low incomes from other sources, also have low housing equity.[51] Or, it may be that seniors are understandably reluctant to touch the equity nest eggs they have taken their entire lives to build. Regardless of the cause, REMs have been met with little public support, as evidenced by only 12,000 HECMs being originated since 1987.[52] Therefore, as with the public sector's response, the efficacy of the private sector's implementation of REMs to address the problems inherent in the property tax system ability to assess one's ability to pay, is also questionable. The reality is that most low-income elderly have very little housing wealth. Accordingly, those who are most likely in need of income support do not have the equity to liquidate.

Section V. Implications for Policy Makers

Targeted tax relief has converted the property tax system from one that assesses ability-to-pay based on a measure of wealth, to one that measures this ability based upon a hybrid of income and wealth. The result is that both homestead exemptions and circuit breakers create horizontal inequities. That is, eligible and ineligible taxpayers, with comparable holdings, are not treated equally. This result, however, is well hidden in the inherent complexities of, and interactions between, the various taxing mechanisms. Circuit breakers and homestead exemptions are not directly subtracted from the tax bill. Accordingly, most taxpayers fail to see the connection between the relief mechanism and the reduction of the property tax liability for a given homeowner. Further, since the relief is granted on the state level, local units are often unable to derive the overall effect the mechanisms have on their community, namely ineligible taxpayers. Should states get out of the business of targeted tax relief? The answer relies on one's perception of the role of state governments in the redistribution of resources and an assessment of their efficacy in doing so.

Although much has been written regarding the redistribution of wealth from both an economic and moral perspective, it soon becomes evident that the issue is largely encouched in one's personal view point. If one favors distributional policies, targeted tax relief mechanisms have been somewhat effective in increasing income equality.[53] If, however, one does not support the implementation of such programs, the avenue of legislative repeal may prove a troublesome course. For example, some political theorists allege that the complexity of the existing system of taxation is the result of "support maximizing politicians", who attempt to provide tax benefits to easily identifiable interest groups without generating significant opposition from other groups.[54] Accordingly, although the average ineligible property taxpayer is unaware of the existence of property tax relief mechanisms and their impact on his or her personal assessment, the removal of such benefits would likely be met with the affected party's political resistance.

In contrast to the targeted tax relief granted to eligible property owners through homestead exemptions and circuit breakers, the creation of REMs appeared to be a viable means to unlock residential equity, and as a result increase income, for the elderly taxpayer. However, as evidenced, this vehicle has not only failed to be embraced by the public, but also falls short in its attempt to adequately address the needs of the low-income elderly. Thus, currently, both the public and private sectors have been unable adequately address the inability of the property tax system to accurately assess one's ability to pay.

The use of the property tax to fund our public schools was once revered as the cornerstone of the American system of education. However, in a wave of education finance reform that attempts to balance equity in per pupil funding, through an expansion of the tax base, with local control, the use of the property tax to secure revenues has increasingly been subject to closer scrutiny. The above discourse served to provide education policy makers with an additional perspective, that of the taxpayer, in assessing the efficacy of the utilization of the property tax to fund our public schools. Accordingly, policy makers should not limit their analyses solely to examinations of equity issues with regard to students, but also, equity as it relates to taxpayers. As evidenced, both the public and private sectors have failed in their response to the property tax system's inability to accurately measure one's ability to pay. Therefore, if the property tax is to continue to serve as the primary source of local revenues, additional corrective measures must be employed to mitigate

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the taxpayer inequities that result under the current system. If such measures are unable to be devised, or implemented, public school systems must then look to alternative sources of revenues to secure support for their operations.

References

1. See "Property Taxation", *National Education Association*, Washington D.C., Research Division, 1985.
2. Although the percentage of local contribution varies among states, with the exception of Hawaii, all states rely on local sources to fund their public school system (See Table 1).
3. The 1490 dependent school systems represent 9.2% of all identified districts.
4. It should be noted, that the classification of a district as dependent or independent will be determined by how one defines "fiscal independence", a definition for which there is no agreed upon meaning. Accordingly, the number of independent versus dependent districts, as reported by the U.S. Bureau of Census, the American Education Finance Association, and the School Finance Collaborative, will generally differ. Although the classification of districts is meaningful to the discourse at hand, a detailed examination of the nuances of the divergent definitions is unwarranted.
5. The notion of independence must be viewed in light of the many restraints that have been placed on the districts' power to raise local revenues. Among these "checks" on the fiscal autonomy of independent local school districts, are state constitutional and statutory provisions that limit tax rates and spending levels, and local referenda which exercise voter control over school taxing and spending decisions.
6. U.S. Advisory Commission on Intergovernmental Relations, T*he Structure of State Aid to Elementary and Secondary Education*, (1990) : 15.
7. Ibid.
8. U.S. Department of Commerce, Bureau of the Census, GF-89-5. (February, 1991) Government Finances: 1988–89, Table 2.
9. U.S. Advisory Commission on Intergovernmental Relations, p. 16.
10. National Education Association, p. 14.
11. See Louis Eisenstein, *The Ideologies of Taxation* (New York: The Ronald Press Company, 1961), pp. 26–27.
12. See Richard A. Musgrave and Peggy Musgrave, *Public Finance in Theory and Practice* (New York: McGraw–Hill Book Company, 1984) p. 229.
13. Taxing mechanisms such as fees, user charges, and tolls attempt to apply the benefit principle to those who consume a public good.
14. Exempt realty includes qualified religious, educational, and charitable properties, and property utilized for federal, state, or local governmental operations.
15. Net worth is defined as assets less liabilities. In the financial community it is used as a measure to assess an individual's or entity's financial well being. For example, individuals are required to provide statements of net worth when seeking loans. Additionally, the analysis of balance sheets, a formal statement of net worth for commercial enterprises, is a central endeavor to players in securities markets.
16. Several states do assess taxes on personal and intangible property in addition to real property. Due to the apparent difficulties in administration of the tax, however, the amount of revenue raised by this type of property is negligible compared to that of real property.
17. Discourse espousing the shortcomings of the property tax system are replete with assertions that allege the property tax is regressive. See Frank Ambrosie, "The Importance of Property Taxes to the Future of School Finance," *Journal of Education Finance* 49 (June 1983): 44, 62–63.
18. See Henry J. Aaron, *Who Pays The Property Tax? A New View*. (Washington, D.C.: Brookings Institute, 1978).
19. See Steven D. Gold "Preventing a Property Tax Uprising in the 1990s: Matching Policies with Problems," *Property Tax Journal 9* (December 1990) : 277–289.
20. See Richard G. Salmon, "State/Local Fiscal Support of Public Elementary and Secondary Education: A Look Backward and Prospects for the Future," *Journal of Education Finance* 12 (Spring 1987) : 549–60.
21. See John Augenblick, "The Importance of Property Taxes to the Future of School Finance", *Journal of Education Finance*, 9 (Winter 1984) : 384–393.
22. See Helen F. Ladd and Julie Boatwright Wilson, "Education and Tax Limitations: Evidence from Massachusetts," *Journal of Education Finance* 10 (Winter 1985): 281–296.
23. Gold, p. 821.
24. It should be noted that where renters are eligible, their property tax liability will be presumed to be some percentage of rent.
25. Many states employ both types of targeted tax relief. Several, however, structure the programs to allow reductions in taxes based upon only one mechanism. That is, double benefits can not be received because a taxpayer qualifies for both forms of credits.
26. Henry J. Aaron and Michael J. Boskin, *The Economics of Taxation* (Washington D.C.: The Brookings Institute, 1980) : 74–75.
27. See Joseph A. Pechman, Federal Tax Policy (Washington D.C.: The Brookings Institute, 1983): 266.
28. A close examination of Table 3 reveals that 23 states have circuit breakers, and 15 states have homestead credits, exclusively for elderly homeowners. However, the advantages granted to elderly taxpayers may in fact be more expansive than represented. That is, although several states offer circuit breakers and homestead credits to all-homeowners, preferential treatment is additionally given to the aged. For example, the New York State circuit breaker (outlined above) is listed per Appendix 1 as applying to all homeowners. However, if we re-examine the law, one can see that an additional preference is granted to persons 65 or older. Thus, although targeted tax relief mechanisms do aid non–elderly low–income households, the majority of the programs focus on reducing the property tax burden of the aged homeowner.
29. One must recall that targeted tax relief does not generally exempt an individual from the entire property tax obligation. Rather it provides a credit through the state income taxing instrument based on a inverse sliding scale between property tax paid and income.
30. See William Sullivan, "Sale Leaseback as Elder Care Vehicles," *Small Business Reports* 14 (January 1989) : 91–93.
31. See Paul Muolo, "Are Reverses Set to Advance?," *Unites States Banker* 103 (May 1993) : 28–30.
32. See Arthur B. Axelson and Cheryl S. Moliken, "A Roadmap for HECMs," *Mortgage Banking* 52 (February 1992): 53–60.
33. Also called home equity conversion mortgage (HECM). The potential HECM market is presently comprised of approximately 11 million senior citizens, this figure is expected to increase as the "graying" U.S. population continues. See Axelson and Moliken, p. 54.

34. Muolo, p. 28.
35. Between 1961 and 1991 only about 152,000 REMs have been written, and 90% of those have been made by state and local governments so the elderly can have enough cash to repair their homes. See Lew Sichelman, "A Tough Sell," *Mortgage Banking* 52 (November 1991) : 22–26.
36. Home Equity Conversion Mortgage Insurance Demonstration, 12 U.S.C. 1715z–20 et seq. (Supp. V 1988), 417 of the Housing and Community Development Act of 1987, Pub. L. No. 100–242, 101 Stat. 1815 (1988).
37. Although Freddie Mac has announced its participation in the HECM program, and has promulgated guidelines for the purchasing of HECM loans, it has not yet done so. Axelson and Moliken, p. 54.
38. 12 U.S.C. 1715z–20.
39. 12 U.S.C. 1709
40. Presently, only adjustable rate loans have been originated, due to the fact that Fannie Mae will only purchase this type of HECM (Axelson, 53).
41. The intricacies of the HUD definitions and requirements are beyond the scope of this paper. For additional information concerning the program see the HUD HECM Handbook.
42. The MIPs, which are comprised of an initial 2 percent at closing and .5 percent monthly, are added to the borrower's outstanding balance. Thus it is the borrower who is responsible for the premiums payment.
43. Provided the borrower chooses either a tenure or line of credit program, they can remain in the home until he or she dies, moves, or sells. If the property is sold, he or she may retain any of the proceeds remaining after paying off the mortgage (53 Fed. Reg. 43168 (October 25, 1988).
44. This plan further protects the borrower by guaranteeing that the loan advances (payments) will continue to be provided even in the event the lender defaults on the obligation.
45. See Walter Updegrave, "Cashing in on your Big Blue Chip," *Money* 18 (Fall 1989) : 83–88; William Sullivan, "Housing Strategies for Your Elderly Parent," *Supervisory Management* 34 (January 1989) : 32–34; Denise M. Topolnicki, "Reverse Mortgages an Idea Whose Time is Finally Coming," *Money* 18 (March 1989) : 169–170; Clint Willis, "How to Retire on Your House," *Money* 17 (May 1988) : 117–118; Joan E. Fairbanks, "HECM Programs: A Housing Option for the "House-Rich, Cash-Poor" Elderly," (Summer 1989) : 481–487; Richard L. Kaplan "Tapping the Equity of Older Homeowners with Reverse Mortgages," *Journal of Accountancy*, 175 (February 1993) : 36–39.
46. Social Security Administration Program Circular No. 09-84-OSSI (Aug. 1, 1984). See also Kaplan, p. 37–39.
47. (e.g.—2% x assessed valuation)
48. Updegrave, p. 88.
49. Adapted from Pat Allen, "Do Seniors Get the Royal Treatment?," *Savings Institutions* 112 (April 1991) : 18–23.
50. Steven F. Venti and David A. Wise, "Aging and the Income value of Housing Wealth," *Journal of Public Economics* 44 (1991) : 371–397.
51. Venti and Wise, p. 372.
52. Muolo, p. 28.
53. See Kathy Hayes and Daniel J. Slottjie, "The Efficacy of State and Local Governments' Redistributional Policies," Public Finance Quarterly 17 (July 1989) : 302–322.
54. See Pamela H. Moomau and Rebecca B. Morton, "Revealed Preferences for Property Taxes: An Empirical Study of Perceived tax Incidence," *The Review of Economics and Statistics* (1992) : 176–179.

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Table 1. Source of Origin of School District Revenues

Location	1969–70			1979–80			1986–88		
	Federal	State	Local	Federal %	State	Local	Federal	State	Local
U.S.	7.2	40.9	51.8	9.2	48.9	41.9	6.4	49.8	43.9
Alabama	15.2	63.3	21.5	12.6	69	18.4	11.7	66.3	22
Alaska	27.1	53.3	19.6	13	70.2	16.9	11.7	63.7	24.7
Arizona	8.2	46.4	45.4	11.1	41.6	47.3	9	48.3	42.7
Arkansas	18.2	44.5	37.3	14.5	53	32.5	11.5	54.8	33.7
California	5.3	37.3	57.4	8.7	71.2	19.1	7.1	69.5	23.5
Colorado	7.6	27.8	64.5	6.1	41	52.9	4.9	39	56.1
Connecticut	2.1	25.2	72.8	6.1	31.5	62.5	4.4	40	55.6
Delaware	7.4	71.3	21.3	13	64.7	22.3	7.7	69.2	23.1
D.C.	30.2	N/A	69.8	15.8	N/A	84.2	10.3	N/A	89.7
Florida	9.5	55.7	34.8	11	55.2	33.7	7.2	54.2	38.6
Georgia	10.5	58.3	31.1	11.8	57.6	30.6	7.1	59.7	33.2
Hawaii	9.7	87.2	3.2	12.5	85.2	2.4	11.8	88.1	0.1
Idaho	8.4	37.8	53.8	9.5	55	35.5	8.9	62.8	28.3
Illinois	5.7	34.6	59.5	12.8	41.2	46	4.3	39.1	56.5
Indiana	6.8	39.4	53.8	6.9	56.1	37	4.9	58.1	37
Iowa	3.6	28	68.4	6.7	42.2	51	5.1	44.5	50.4
Kansas	5.9	31.2	62.9	6.9	43.3	49.8	4.8	42.4	52.8
Kentucky	13.6	56.2	30.2	12.5	69.7	17.8	11.6	64.5	23.8
Louisiana	11.9	56.4	31.7	14.8	54.4	30.8	11.5	55.1	33.4
Maine	6.7	32.5	60.8	9.6	48.9	41.5	6.4	50.2	43.4
Maryland	6.4	35.2	58.4	8	40.2	51.8	5.1	58.5	56.4
Massachusetts	6	20	74	6.5	36.3	57.2	4.9	45.1	50
Michigan	3.9	45.1	51	7.4	42.7	49.9	5.9	34.9	59.3
Minnesota	5.3	46	37.3	6.1	56.6	37.3	4.2	56.9	38.8
Mississippi	21.4	53.1	22.8	24.1	53.1	22.8	10.5	65.2	24.3
Missouri	7.9	33.7	58.4	9.7	36.7	53.6	6.3	41.2	52.5
Montana	8.5	25.4	66.2	8.4	49.3	42.2	8.5	47.8	43.7
Nebraska	6.4	17.6	76	7.9	18.2	73.9	6.1	22.5	71.3
Nevada	8.8	36.5	54.7	8.6	58.5	32.9	4.4	39.5	56
New Hampshire	5.1	8.3	86.7	5.1	6.8	88.1	3.4	5.9	90.7
New Jersey	5.4	27	67.6	4.1	40.4	55.5	4.4	43	52.5
New Mexico	17.7	61.9	20.4	16.6	63.4	20	12.2	75.1	12.7
New York	4.7	46.4	48.9	5	40.6	54.4	4.8	42.4	52.8
North Carolina	15.6	65.7	18.7	15.2	62.4	22.3	7.9	66	26
North Dakota	9.3	25.7	65	7.7	46.5	45.7	9.4	50.8	39.8
Ohio	5	28.3	66.7	7.7	40.6	51.6	5.5	49.6	44.8
Oklahoma	11.8	43.8	44.4	11.8	43.8	44.4	5.6	63.5	30.9
Oregon	6	20.8	73.2	9.9	35.5	54.6	6.6	28246	65.4
Pennsylvania	6.2	46.2	47.6	8.5	45	46.5	5.1	46.3	48.6
Rhode Island	5.9	38.8	55.4	5.9	38.8	55.4	4.5	42.6	52.9
South Carolina	14	59.5	26.4	14.9	56.8	28.3	8.9	56	35.1
South Dakota	11.7	13.1	75.2	13.9	20.8	65.3	11.8	27.2	61
Tennessee	11.9	48	40.1	14	48.3	37.7	11.1	44.5	44.4
Texas	9.3	46.4	44.3	11	50.1	38.9	7.1	47.1	45.8
Utah	7.6	52.8	38.2	7.8	54	38.2	6.1	54.4	39.6
Vermont	2.9	37.1	60	7.7	28	64.2	5.1	34.4	60.6
Virginia	11.1	36.4	52.5	9.5	40.9	49.6	6.7	32.9	60.3
Washington	6.6	56.6	36.8	8.6	70.8	20.6	6.3	72.4	21.3
West Virginia	12.4	48.2	39.4	10.6	60.1	29.3	7.5	69.8	22.7
Wisconsin	2.5	31.6	65.9	5.5	37.6	56.8	4.7	34.5	60.8
Wyoming	20.2	24.8	55	6.6	29.6	63.8	3.7	43	53.3

Source: Advisory Commission on Intergovernmental Relations, Significant Features of Fiscal Federalism, 1988 edition, Volume II (Washington, D.C., 1988), Table 58; and U.S. Department of Education, National Center for Education Statistics, Digest of Education Statistics 1989 (Washington, D.C., 1989), Table 139.

Table 2. Number of Fiscally Dependent and Independent School Districts

	Independent	Dependent		Independent	Dependent
Alabama	129		Nebraska	952	
Alaska		55	Nevada	17	
Arizona	227	12	New Hampshire	160	9
Arkansas	333		New Jersey	551	71
California	1098	53	New Mexico	88	
Colorado	180		New York	720	35
Connecticut	16	149	North Carolina		198
Delaware	19		North Dakota	310	
Florida	95		Ohio	621	
Georgia	186		Oklahoma	636	
Hawaii		1	Oregon	350	
Idaho	118		Pennsylvania	515	
Illinois	1029		Rhode Island	3	37
Indiana	304		South Carolina	92	
Iowa	451		South Dakota	193	
Kansas	324		Tennessee	14	128
Kentucky	178		Texas	1113	
Louisiana	66		Utah	40	
Maine	88	194	Vermont	272	
Maryland		41	Virginia		140
Massachusetts	82	354	Washington	297	
Michigan	590		West Virginia	55	
Minnesota	441		Wisconsin	433	9
Mississippi	171	4	Wyoming	56	
Missouri	561				
Montana	547				

Source: U.S. Department of Commerce, Bureau of Census, Government Organization, 1987 Census of Governments, Volume 1, Number 1 (Washington, D.C., 1989), p. xii.

Table 3. Property Tax Relief Mechanisms

States	Circuit Breakers	Homestead Exemption or Credit
Alabama		
Alaska		EHR, W
Arizona	AR, EH	
Arkansas	EH	
California	EHR	AH, DV
Colorado	DHR, EHR	LIED
Connecticut	EHR	D, DV
D.C.	EHR	AH
Delaware		E, LI
Florida		AH
Georgia		AH, LIE, V
Hawaii	AR	AHR, D, DV, E
Idaho	D, EH	AH
Illinois	D, EHR	AH, EV, V
Indiana		AH, DV, LIE
Iowa	DHR, EHR	AH, DV
Kansas	B, D, EHR	
Kentucky		E, D
Louisiana		AH
Maine	AHR	B, V
Maryland	AH, D, ER	B, DV
Massachusetts		AH, EV, LI
Michigan	AHR	DV
Minnesota	AHR	AH
Mississippi		AH, D, EH
Missouri	EHR	
Montana	EHR	DV, LI
Nebraska		D, DV, EH
Nevada	EHR	B, DV, O, V, W
New Hampshire		B, DV, E
New Jersey		AH, D, DV, E
New Mexico	EHR	AH, V
New York	AHR	
North Carolina		DV, LIE, D
North Dakota	DHR, EHR	B, E, D
Ohio	D, EH	AH
Oklahoma	D, EH	AH, V
Oregon	AHR	DV
Pennsylvania	D, EHR	B, D, DV
Rhode Island	EHR	
South Carolina		B, D, DV, E
South Dakota	DHR, EHR	
Tennessee		DV, EDH
Texas		AH, D, EH
Utah	EHR	B
Vermont	AHR	V
Virginia		D, EH
Washington		LIED
West Virginia	EHR	D, E
Wisconsin	AHR	
Wyoming	D, EHR	

KEY:

AHR	All Homeowners and Renters
AH	All Homeowners
AR	All Renters
B	Blind
D	Disabled Homeowners
DV	Disabled Veterans
DHR	Disabled Homeowner/Renter
E	Elderly
EDH	Elderly Disabled Homeowners
EH	Elderly Homeowners
EHR	Elderly Homeowner/Renter
ER	Elderly Renters
EV	Elderly Veterans
LI	Low-Income
LIE	Low-Income Elderly
LIED	Low-Income Elderly Disabled
O	Orphans
V	Veteran Homesteaders
W	Widows or Widowers
AV	Assessed Valuation
NA	Not Available

Adapted from: Robert D. Ebel and James Orthal, "Direct Residential Property Tax Relief," Intergovernmental Perspective 15 (Spring 1989): 9–14.

Table 4. Scheduled Monthly Payments Under the Various Options:

These tables show the estimated monthly payments that an owner of a $100,000 house would receive under different types of reverse mortgages. In these examples, 10% interest is charged on all but the shared-appreciation loan, which charge 8.5%. The lower interest rate allows the lender to claim up to 25% of the home's appreciation.

FHA Insured Plan

Age	Tenure	Tenure Shared-Appreciation	Five Year Term	Ten Year Term
65	$207.00	$249.00	$496.00	$312.00
75	$347.00	$381.00	$790.00	$496.00
85	$599.00	$623.00	$1,166.00	$731.00

Lender Insured Plan: Capital Holding Inc.

75	$450.00	N/A	N/A	N/A
85	$747.00	N/A	N/A	N/A

Uninsured Private Loan:

All Ages	$1,025.00	$387.00

*Source: Ken Scholen, Retirement Income on the House (Marshall, NCHEC Press, 199?), pp. 157, 252.

N/A—not available

Table 5. Loan Programs

	Uninsured REM	FHA-Insured REM	Lender Insured REM
Offered by	Private Lenders in AZ, CA, CT, MA, MN, NJ, NY	Private lenders in 32 states at 6/91; approx. 10,000 lenders are eligible.	Capital Holding in CA, FL, KY, MD, VA, IL; other plans currently being developed.
Loan Advance Types	Monthly for a fixed term; optional lump sum	monthly tenure or term; stand-alone or optional credit-line or lump sum.	monthly tenure or term; stand-alone or optional credit-line or lump sum.
Repayment Requirement	when loan advance stops	at death, sale or permanent move.	at death, sale or permanent move.
Start Up Costs	closing costs, origination fees	closing costs, origination fees, insurance	closing costs, origination fees, insurance
Interest	market rate fixed	market rate; fixed or adjustable	market rate; adjustable

Source: Adapted from Ken Scholen, Retirement Income on the House (Marshall, NCHEC Press), pp. 285–286.

Table 6. Aging, Income and Housing Wealth

		Age				
Income Interval		60–65	65–70	70–75	75–80	85+
1	REM Payment*	$1,130	$1,401	$1,898	$2,780	$4,106
	Income*	$10,959	$9,234	$6,990	$5,916	$4,434
	Housing Equity	$43,000	$37,000	$35,000	$32,750	$31,000
2	REM Payment	$1,335	$1,515	$2,110	$3,005	$4,887
	Income	$23,553	$18,495	$14,880	$12,648	$9,612
	Housing Equity	$50,250	$49,500	$48,800	$45,000	$40,000
3	REM Payment	$1,549	$1,902	$2,800	$3,631	$5,175
	Income	$45,246	$34,491	$29,586	$27,384	$22,710
	Housing Equity	$68,960	$62,000	$65,000	$60,000	$45,000

Source: Steven F. Venti and David A Wise, "Aging and the Income Value of Housing Wealth," *Journal of Public Economics* 44 (1991):371–397.

Note: Income and Housing Equity—Adapted from U.S. Bureau of Census Data 1984
Authors did not disclose REM source data.

All REM and Income figures annualized.