

**Property Tax Circuit Breakers in 2007:
Features, Use, and Policy Issues**

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Abstract

This paper provides an overview of the nature, development, extent, and effect of residential property tax relief programs in the United States. Its major focus is on circuit breakers, which target aid to low-income taxpayers. Circuit breakers are unique in providing property tax reductions that vary inversely with income, enabling more precise targeting of needy recipients than other approaches. Compared to assessment or tax caps and general homestead exemptions, circuit breakers can provide more meaningful property tax relief to those most in need at lower total cost while preserving the ad valorem tax base.

Although circuit breakers have been in existence over 40 years and are found in a majority of states, there is little comparative data on their operation and effect. There are major differences among state programs, and researchers differ even in the definition of a circuit breaker itself. This paper provides more detailed information on circuit breakers than has previous been available in a single report. It summarizes the major features of circuit breaker programs in effect as of mid-2007, including common elements, variations in their design, and the impact of income and benefit limits on their delivery of tax relief.

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Property Tax Circuit Breakers in 2007: Features, Use, and Policy Issues

1. Introduction

A half-century ago, at the annual conference of the National Tax Association, George W. Mitchell predicted the end of the property tax: “Over the next two decades, I would expect to see the property tax all but wither away. Further relative decline is a foregone conclusion, but I would go beyond this and predict that in absolute terms, the property tax is headed for oblivion.” A few pages later, he restated this view, predicting that the property tax would “. . . become an all-but-forgotten relic of an earlier fiscal age” (Mitchell 1957, pp. 492, 494).

The property tax has refused to die, and the issue of property tax relief has taken on a life of its own. This paper provides an overview of the nature, development, and extent of residential property tax relief in the United States, including how various relief approaches affect property tax liabilities. Primary attention, however, is on circuit breaker programs, which use income to target the relief to certain recipients rather than providing it more broadly. Uniquely among property tax relief approaches, circuit breakers provide property tax relief that varies inversely with the income of the claimant, enabling more precise targeting of property tax relief than is accomplished by other approaches. Compared to assessment or tax caps and general homestead exemptions, circuit breakers can provide more meaningful property tax relief to those most in need of it at lower total cost while leaving the ad valorem logic of the tax more wholly intact.

Although in existence over 40 years, circuit breakers nonetheless are a comparatively new form of residential property tax relief. Found in a majority of the states, circuit breakers differ widely in many respects. Several property tax relief surveys provide some information on circuit breakers, but it generally is sketchy; moreover, there are some differences among the lists of circuit breaker states and, indeed, in the notions of what constitutes a circuit breaker. This paper provides more detailed information on property tax circuit breakers than previously has been available in one place. This includes consideration of the similarities and differences of the major circuit breaker variants, the effects of income and benefit limits, and the major features of circuit breaker programs in the several states as they existed in mid-2007. The hope is that the information will be useful to policy makers, academics, and others interested in property taxation.

Changing Nature and Role of Property Tax

Mitchell was right about further relative decline of the property tax, but incredibly wrong regarding absolute decline. In 1956, property taxation raised \$11.7 billion for state and local governments, an amount equal to 44.6 percent of all state-local taxes; for local governments alone, \$11.3 billion of property tax revenue amounted to 86.8 percent of all local tax revenue (Census Bureau 1969, Tables 4 and 6). By fiscal 1976-77, property tax revenue was \$62.5 billion, with \$60.3 billion raised at the local level, and accounted for

35.5 percent of state-local tax revenue and 80.6 percent of local taxes (Census Bureau 1978, Table 6). Data for the latest year available, fiscal 2004-05, show total state-local property tax revenue of \$335.7 billion, of which \$324.3 billion was raised by local governments; these amounts accounted for 30.6 percent of state-local taxes and 72.3 percent of local taxes (Census Bureau State and Local Government Finances).

Despite the relative decline, property taxation remains the dominant source of local government tax revenue, and it accounts for more revenue than any other tax for the combined state-local level. The absolute growth since 1956 has been impressive. Mitchell thought property taxation would have died out by fiscal 1977, but it raised over five times as much revenue then as in 1956 when he made his prediction, and nearly 30 times as much by fiscal 2005. Even stripping out inflation to express all amounts in 1956 purchasing power, the growth was strong – from \$11.3 billion in 1956 to \$28.1 billion in 1977 and \$46.8 billion in 2005.¹

There may be some debate as to the “relic” status of the property tax, but clearly it is not “all-but-forgotten.” Google searches yielded over 78 million hits for “property tax,” well over 2 million for “property tax relief,” and nearly a million for “property tax revolt,” and each of these searches yielded some very recent items, including a June 12, 2007 Time-CNN story on the current “property tax revolt” in Florida (Padgett and Peltier 2007).

Although it seems George Mitchell got it wrong, in a way, he was right. The property tax as it existed in 1956 is gone. In that year, the first homestead exemption for just the elderly had not yet been adopted (Gold 1979, p. 82) and the nation’s first use-value assessment law to provide property tax relief for farmers was passed that year in Maryland, and a subsequent constitutional amendment was needed to allow use-value to stand (Youngman 2005, p. 727); now, property tax relief for elderly homeowners (and often others) and for farmers are found in all states. In 1956, Proposition 13, its near-clones in some other states, and other sorts of caps on assessment or tax increases that have spread to a number of states in recent years had not appeared when Mitchell wrote. In 1956 only three states had a classified real property tax, whereas over half now have classified in some manner. Finally, in 1956 taxation of personal property was a considerably more important and widespread part of the tax base.² In short, the property tax of 1956 was more general and more uniform than today – at least in legal intent, and to a considerable extent in practice, as well.

Political Nature of Property Tax

The case against changes of the sort that have occurred was summarized 40 years ago by a property tax scholar writing about homestead exemptions for the elderly then emerging: “Exemptions of this kind compromise the in rem concept of the property tax. They also violate the ad valorem principle that is basic to the property tax. If tax equity is equated with strict adherence to the concept that all property should be taxed equally according to its value, these exemptions clearly are improper” (Stocker 1967, p. 292). The author went on to reject this “doctrinaire view” and to support “. . . a pragmatic evaluation that looks to the consequences of these forms of exemption” (Stocker 1967, p. 292). Many

years later, the same author offered this assessment of what the tax had become: “As found today in most states, the tax resembles a structure designed by a mad architect, erected on a shaky foundation by an incompetent builder, and made worse by the well-intentioned repair work of hordes of amateur tinkers” (Stocker 1991, p. 1).

A few years later another student of the property tax quoted part of this passage, commented that rather than having been designed, the property tax structure had evolved over time through political compromise. He then observed, “The universal truth about taxation is that people want government without paying for it. The history of taxation is the story of a struggle among individuals and groups intent upon achieving that goal for themselves or for their groups” (Fisher 1996, p. 187). Summing up at the end of the chapter, he commented, “These [political] forces resulted in a tax that is not necessarily uniform, but which is politically tolerable and produces enough revenue to be the major own-source revenue of thousands of local governments in the United States” (Fisher 1996, p. 205). In short, the end – providing a large source of revenue with sufficient local control to enable meaningful local government – is important enough that political compromises on the nature of the property tax and the distribution of property tax burden³ across taxpayers acceptable.

Need for Principles to Guide Policy

While rigid adherence to the notion of a uniform tax on market value may be neither possible nor desirable, wholesale abandonment of the ideal is unwise. Danger of this clearly exists. “In those states with a legal classification system, business property is assessed or taxed higher in proportion to value than residential or farm property. Within the business class, utility property is usually assessed or taxed higher than other business property. Clearly this reflects the reality of electoral and legislative politics. Every home and every farm is represented by one or more voters. Utility companies are far less represented in the electorate . . .” (Fisher 1996, p. 205). Classification taxes higher-taxed classes at specified multiples of the tax on the lowest-taxed class. In 1986, the highest-taxed class’s tax was more than 10 times as high as that of the lowest-taxed class in three states, and 27.5 times in one of those (Bowman 1987, p. 289). At some point, such differences make the tax more a tax on lack of political clout than a tax on property value. In considering property tax changes, some guiding principles seem necessary if the property tax label is to be at least somewhat descriptive of the tax.⁴

Minnesota was the first state to classify real property, in 1913, and the tax commissioner a half-century later advised other states against embarking upon that path (Hatfield 1967). He argued, in part, that once the notion that tax liability follows from value is abandoned, there is no logical stopping point; when *relative* property tax liabilities are determined by politics, virtually anything goes. There is a tendency for classes to proliferate if the legislature is free to create whatever classes it wishes. Minnesota started with four classes in 1913 but had 20 in 1966; less than 20 years later, it had 34 classes (Bowman 1987, p. 289). Property owners who believe their properties belong in another class that is taxed more favorably may end up with a new class created that puts them somewhere between where they had been and the class they had sought to be defined into. Class

proliferation and increased ratios of high- to low-tax classes have caused some to call adoption of classification “the first step on a slippery slope”; this is another way of saying that once you start, it is hard to stop. This admonition applies equally to other tax preferences. All tax preferences create differences in effective rates of taxation – that is, differences in tax as a percentage of market value. Because those differences are decided in the political process, it is important that political decisions be guided by some basic principles.

The legislative process involves committee meetings and hearings, and there is an opportunity to consider principles, information, and varying points of view. The end result may simply be striking a political deal based on nothing but self-interest – political compromise of a base sort. On the other hand, legislators may be influenced to some extent by what is presented in the deliberations. In any event, it is important to aspire to more than simply going quickly with whatever commands the most votes, or dominates the latest public opinion poll. As head of a research and tax policy unit in the Ohio Department of Taxation a number of years ago, I found that many politicians would change their minds about what constituted appropriate policy, after receiving new information or being presented a different perspective on the issue at hand.

Direct and Indirect Property Tax Relief

Property tax relief can be provided either directly, through changes in the property tax itself or relief programs based in some way on the property tax, or indirectly, through increased reliance on other sources of revenue. As noted earlier, between 1956 and 2004-05 the property tax share of state-local taxes dropped from 37.5 percent to 30.6 percent, and from 86.8 percent to 72.4 percent for local governments; clearly, other taxes provided indirect property tax relief.⁵ Over that period, the income tax share of state-local taxes jumped from 5.8 percent to 22.0 percent, and the general sales tax share roughly doubled, to 24.0 percent; for local governments only, the two taxes combined were 15.8 percent of all taxes, up from about 2 percent in 1956.

The extent of indirect property tax relief is greater than the statistics on the composition of tax revenues suggest because the overall role of taxes in funding state and local governments declined from 76.1 percent to 54.3 percent between 1956 and 2004-05, and from 56.2 percent to 38.6 percent for local governments. A major reason for this decline in the relative importance of taxes is the increased role of intergovernmental assistance, chiefly federal aid to states and state aid to local governments. For the state-local level, increased federal aid reduced reliance on all sources controlled directly by state and local governments. Between 1956 and 2004-05, such assistance increased from under 10 percent of all state-local general revenue to over 20 percent;⁶ for the local level, intergovernmental assistance rose from about 30 percent of local general revenue to nearly 40 percent.

Direct property tax relief includes changes to the property tax of the sorts noted briefly above. One, the diminished importance of personal property in the property tax base, has occurred largely because of the trend toward exemption of many forms of personal

property, including such tangible personal property as household furnishings, motor vehicles, and business inventories, and also intangible personal property, such as money, mortgages, stocks, and bonds. Other forms of direct property tax relief include real property tax classification, homestead exemptions, circuit breakers, caps on assessment or tax increases following reassessment, property tax concessions to attract businesses, incentives to restore historic properties, and use-value assessment of farmland. Circuit breakers, the emphasis of this paper, are discussed in some detail in later sections.

Targeting Property Tax Relief

Circuit breakers are a particular form of targeted property tax relief that produce an inverse relationship between the amount of property tax relief and a claimant's income. Before going more fully into this, the notion of targeted relief needs some explanation. Direct property tax relief can be targeted in various ways to assure that some property owners receive the benefits and others do not.⁷

All direct property tax relief, except an across-the-board uniform percentage reduction in the level of the tax, can be considered targeted property tax relief; the excepted relief would fall evenly across all property owners. Any other approach will reduce taxes for some property owners more than for others, and thus may be said to be targeted to those favored. Direct relief might be targeted on the basis of property use. Examples include:

- Use-value assessment of farmland while other properties are taxed according to market value;
- A classification system that taxes owner-occupied residential property at half the effective rate of other types, or uses, of property;
- A general homestead exemption that reduces the assessed value of homestead property by 30 percent for all owner-occupants of such property; and
- A 10-year, 50 percent abatement of the property of new businesses.

Within a given class of property, targeting might be by geographic area, perhaps to promote some other objective of the government. For example:

- Some portion of assessed value might be exempted for businesses that open at new sites in defined redevelopment areas; and
- Farmers might be granted use-value assessment of their land only if it is in an area zoned for such used in a land-use master plan.⁸

Within the residential class of property, relief might be targeted in a way that distinguishes among homeowners but avoids resort to personal characteristics. For example:

- A property tax credit might be given to homeowners whose assessed values increased by more than 10 percent in the latest reassessment; and
- An assessment freeze, or partial freeze, might be based on the year in which the current owner acquired the home.

Also within the residential class, targeting might be based on past activities, perhaps to show gratitude rather than to suggest greater financial need. For example, a homestead exemption might be available only for honorably discharged military veterans who served in a recognized period of war. Such a relief policy introduces personal circumstances, and thus moves away from the in rem principle of the property tax.

Still within the residential class, direct property tax relief might be reserved for those with certain traits or in certain circumstances, perhaps as proxies for financial need; the examples below also personalize the property tax to a degree:

- Homeowners might be eligible for a homestead exemption only if they are over a certain age;
- A homestead exemption might be available only to owners whose spouse has died and who have not remarried;
- A refundable income tax credit for all or a part of property taxes paid might be available to homeowners with at least one dependent child; and
- A circuit breaker might be restricted to homeowners (or perhaps owners and renters) who have certain disabilities.

A final set of examples of targeting of residential property tax relief uses income information for the owner (or renter), which obviously extends property tax personalization. For example:

- A homestead exemption equal to \$25,000 of market value might be given to all homeowners with household income below a given level, with no tax relief for those at or above that income level;
- A refund of property tax (or the portion of rent considered to represent property tax) in excess of a certain percentage of household income might be available to all homeowners and renters (threshold circuit breaker); and
- A property tax credit might be given to homeowners equal to a percentage of total property tax, with the percentage falling as income rises (sliding-scale circuit breaker).

These examples suggest a number of possible approaches to targeting direct property tax relief in general, and residential property tax relief in particular. They are illustrative of actual property tax relief policies found in one or more states, but they do not exhaust the possibilities. For instance, no example based relief eligibility on the amount of household wealth, or net worth, but limits on wealth are found in some residential property tax relief programs. The list also does not combine two or more targeting approaches in one program, but many states do. An example is a circuit breaker available only to homeowners at least 65 years old with household income less than \$40,000 and net worth (other than the home and retirement accounts) of no more than \$50,000.

Scope of and Reasons for This Study

This paper focuses on residential property tax circuit breakers for owners and renters as they existed in the several states in the late spring of 2007; in nearly all instances, the provisions are those for application in 2007 for relief based on 2006 taxes. These programs may benefit only homeowners, only renters, or both homeowners and renters. In the overview section, the paper also touches on all significant property tax relief programs that use income in some way to target their benefits, as well as some programs that are not income-targeted. Information on these programs, less detailed than for circuit breakers and generally for 2002, is drawn from other property tax relief surveys.

Within the category of income-targeted relief, circuit breakers are singled out for detailed consideration here for several reasons:

- Certain circuit breaker approaches provide a reasonable policy response to a number of situations in which other property tax relief mechanisms often are used or proposed.
- Circuit breakers can provide meaningful relief where it is most needed at minimal total cost and with minimal violence to the basic logic and nature of the property tax.
- Circuit breaker provisions vary widely in ways that seem often not to be appreciated.
- The amount of information needed to understand and appreciate those differences has not been provided in other studies.

The next section of this paper provides an overview of the development of residential property tax relief in the United States. This is followed by a discussion of the various forms of direct residential property tax relief, to highlight their similarities and differences. The discussion distinguishes among threshold, sliding-scale, and hybrid or special circuit breaker approaches; this necessarily gets into differences in income-targeting, and is followed by a section on income definitions used for property tax relief targeting. Next, current circuit breaker provisions are summarized and analyzed. Concluding observations and recommendations close out the paper.

2. Brief History of Residential Property Tax Relief

Residential property tax relief in the United States has a long history, and no doubt a long future; it is an issue that does not go away. If anything, interest in the topic has increased, even after decades of proliferation of the number and types of relief programs adopted. Driving this interest are the unpopularity of taxes generally; the property tax's standing as the largest tax of the combined state-local level; the significance of the home among family assets; the fact that the real property tax, since emerging as a general ad valorem tax roughly two centuries ago, imposes a tax on unrealized capital gains when real estate values are growing; and the success of earlier efforts to secure property tax concessions.

The Rapid Spread of Residential Property Tax Relief

Property tax relief spread rather rapidly. Between the start of the first U.S. residential property tax relief movement in the early 1930s and the early 1970s, all states adopted one or more programs to provide residential property tax relief. This understates the rapid pace of adoptions, however, as most states got on the bandwagon between 1957 and 1973. States' programs differed in many respects, including the manner in which the tax relief was structured, what population groups were eligible for it, and whether it was provided statewide or at local option. The broad outline of the development of residential property tax relief is sketched in the balance of this section.

General Homestead Exemptions

By most accounts, residential property tax relief in the United States emerged in the 1930s in the form of partial exemptions known as homestead exemptions.⁹ For example, Groves (1964, p. 98) observes, "Much of the legislation creating these exemptions took root during the foreclosure period of the depressed 1930s." Mabel Walker of the Tax Institute of America stated, "Homestead exemptions made their appearance during the depression of the thirties. They were adopted at that time by 14 states and . . . 11 states now provide exemptions: . . ." (Walker 1964, p. 5). Texas generally is credited with the first homestead exemption, in 1932, and before the end of the decade, one-fourth of the states had homestead exemptions;¹⁰ with the end of the Great Depression, though, the movement lost momentum (Sliger 1969, p. 213). Early homestead exemptions were for homeowners of all ages and income levels, and although the exemptions removed only a specified number of dollars from taxation, no upper limit was placed on the total value of eligible homestead property; failure to target the tax relief to those most in need attracted criticism (Fisher 1996, p. 193), and this no doubt helped to slow the homestead exemption movement.

Homestead exemptions to reduce homeowners' property tax bills may trace back to a legal movement with roots in the mid-nineteenth century, when interest arose in protecting basic homestead property from private-sector creditors. At the end of that century, Spofford reported that the first such law was adopted by the Republic of Texas in 1839, followed by Vermont in 1849, ". . . and thereafter this provision rapidly became the policy of nearly all the states" (Spofford 1899, at II.153.2). During the Great Depression, when many families lost their homes or farms through failure to pay property taxes, homestead exemptions in the property tax might well have seemed a logical extension of the other homestead exemption movement. It is not a long stretch from the idea of protecting homesteads from private-sector creditors to easing the property tax burden to make sale of homestead property for delinquent tax recovery less likely. (Is it coincidence that Texas was first in both movements?)

As an aside, it is interesting to note that Spofford described great variety in the protection afforded by various states' laws. The amount of homestead property protected from seizure by creditors ranged from a few hundred dollars to hundreds of thousands of dollars; he characterized the latter as excessive, given prices in the latter part of the

1900s. Such interstate variety will not seem unusual to anyone with even passing familiarity with the property tax relief provisions of the several states, some of which may strike a twenty-first century observer as overly generous.

Classification of Real Property

Another contender for early residential property tax relief surely is the general classified property tax, which typically favors residential property with lower tax levels than most other real property. The first classified property taxes were adopted in Minnesota and Montana, in 1913 and 1917, respectively, followed by West Virginia in 1934. After that, the classification movement came to a halt for over 30 years, until Arizona classified its property tax in 1968. In the 1970s, however, the move to classified property taxes took off, with 11 more adoptions, and by the end of 1986 a total of 22 states (including the District of Columbia) had classified real property taxes (Bowman 1987, p. 289).

The essence of a classification system is taxing various defined classes at different effective rates. This objective can be achieved by altering one or more of the three variables that determine the final tax bill: the statutory tax base, in this case assessed value; the nominal, or statutory, tax rate; and/or the tax amount – the product of the tax base times the tax rate – by subtracting a credit. The same result can be achieved by modifying any one or more of these variables. Most classification states accomplish differential taxation through different assessed value levels for different classes of property. Several apply differential rates to valuations that are intended to be a uniform percentage of market value, and a few use tax credits. Classification systems also differ in the number of classes defined and the degree of differentiation in effective tax rates across classes. In 1986 the number of classes ranged from two in each of three states to nine in one and 34 in another. The degree of effective-rate differentiation can be indicated by expressing the rate for the highest-taxed class as a percentage of that for the lowest-taxed class. This figure for the three states with the least differentiation was 111 percent, 138 percent, and 167 percent (the latter in two states), and for the three states with the highest degree of differentiation it was 1,000 percent, 2,000 percent, and 2,750 percent (Bowman 1987, p. 289).

For reasons not always clear, lists of classification states differ. One reason, however, is the view in some quarters that classification is achieved only through unequal assessment levels. This view was held by some people who worked on the Census of Governments,¹¹ which is conducted every five years and used to include a good deal of information on property taxation; unfortunately, that part of the Census of Governments has disappeared. The 1987 Census of Governments was the last to provide detailed property tax information; it listed 14 classification states, also in 1986, but in the discussion of classification another three were added – two where classification applies in only a geographically small part of the state, plus California, where Proposition 13's modified acquisition-cost valuation approach has introduced a different sort of classification (Census Bureau 1989, p. xv); California was on my 1986 list. A more recent list of classification states includes states with differential rates as well as those with differential assessments; however, it does not list states where credits accomplish

the same result, and it omits some states that classify through valuation or rate differences (Sexton 2003, Table 1). Even so, 25 states are on that list, so it seems clear that over half the states have some form of real property classification, although in some states it is at local option and therefore differs across localities.

In a meaningful sense, all states classify property; each has property tax relief programs for residential property and for agricultural property, and those property tax relief programs produce different effective tax rates for different classes of property. When the relief applies broadly – for example, a general homestead exemption, as opposed to one applicable to only a comparatively small group, such as veterans who became permanently and totally disabled from service-connected injuries received during one of a list of recognized periods of war (such provisions exist in several states) – a case can be made that there is a classified property tax in place, even if it does not go by that name. The case for considering a general homestead exemption a form of classification is strongest if the exemption (or preferential homestead rate, or homestead credit) provides the same percentage reduction to all homeowner-occupants; by contrast, an exemption that gives the same dollar reduction in the tax base or tax bill to all drops the average effective property tax rate for homestead property relative to other property uses, but it also produces differential rates within the homestead class because the fixed dollar amount of relief gives a larger percentage reduction for lower-value homes than for higher-value ones.

Many states' classification systems did not arise as a way of creating residential property tax relief, but rather as a way of preserving de facto relief. Many states that nominally required uniform assessment and taxation of all real property fell into a pattern of differential taxation – extra-legal classification – that ultimately was challenged, successfully, in the courts (Shannon 1969). It is possible to end conflict between assessment law and practice by changing practice to fit the legal requirements or by changing the legal requirements to reflect the prevailing practice, and several states adopted classification in an attempt to avoid reallocation of the tax burden toward homeowners, who generally had been favored by de facto classification (Shannon 1969, p. 51; ACIR 1974b, pp. 2-12). Attempts to avoid changes in tax burdens for homeowners by codifying what had been de facto classification often were futile, though, because the poor assessment practices that had resulted in average assessment levels that differed across classes of property also had resulted in considerable variation in the assessment levels of individual parcels within a given class. Because even in a classified tax system all properties uniformity within a class typically is required, reassessment was necessary to bring about compliance with the law, and reassessment produced higher tax bills for many homeowners.

Even so, the move to legal classification systems has been a major development in American property taxation. Still, homestead exemptions or credits have been found in more states than classification from the 1930s to the present, over which time the numbers have increased dramatically for both. Both have been part of the changes occurring as the pendulum swung away from the general property tax that had emerged

by the middle of the nineteenth century but soon thereafter began to erode, thus repeating a cycle observed across centuries and continents (Lynn 1969, pp. 16-17).

Relief for Low-Income Elderly Homeowners

Whether the lineage of the property tax relief movement is traced from the first classified real property taxes in the 1910s or the first homestead exemptions in the 1930s, the movement changed direction and regained strength in the 1950s and 1960s, with emphasis on relief for elderly homeowners and for farmers (Stocker 1967; Chen 1969). Reliance on owners' (and renters') ages and incomes to determine eligibility began to personalize the property tax. A paper presented in 1965 characterized senior-citizen property tax relief as a phenomenon of the 1950s and 1960s (Chen 1969, p. 225); indeed, such relief grew rapidly. In 1965, one form or another of such relief – mostly exemptions – was found in seven states (Chen 1969, pp. 234-35) but a paper presented in late 1966 counted 11 (Stocker 1967, p. 289), and by 1970 all 50 states had some form of residential property tax relief for at least the elderly (Table 1).¹²

Table 1. 1974 ACIR Table: State Action on Property Tax Relief Plans for the Elderly			
Kind of Relief	Number of States by Type of Plan As of –		
	Jan. 1, 1970	Jan. 1, 1973	July 1, 1973
State-Financed Circuit-Breaker	4	13	21
State-Financed Other Plans	8	11	10
State-Mandated Locally-Financed	12	15	13
State Authorized Locally-Financed	4	6	6
Total	28	45	50
Source: ACIR staff compilation based on Commerce Clearing House <i>State Tax Reporter</i>. Reproduced from ACIR 1974a (Table 106, p. 177).			

The renewed push for residential tax relief reflected some of the criticisms of the general homestead exemptions of the 1930s. Specifically, the movement of the 1950s and 1960s generally gave property tax relief to elderly homeowners with incomes below a given level, thus targeting the relief using both income, an objective measure of need, and old age, a proxy for need. Another reason (or another facet of the same reason) for restricting the new homestead property tax relief to the elderly was the rise of Social Security as a source of income for this age group, which made retirement a feasible option, albeit with reduced income, for more of the elderly population. “In the 1950’s, a sharp drop occurred in labor force participation for men 65 and older, as Social Security retirement affected labor force participation rates” (Fullerton 1999, p. 5).¹³ Income targeting used a broad definition of income (Chen 1969, pp. 234-35) and was seen as enhancing equity: “Conceived as a method of reducing the tax load on needy homeowners, most proposals for tax concessions to the aged are limited to those whose incomes do not exceed a specified sum, usually between \$2,000 and \$5,000 in family income from all sources. The merit of such an income test, of course, is that it limits the tax relief to those who genuinely need it, and holds down the total cost of the program” (Stocker 1967, p. 289).

It is somewhat surprising that income was defined more broadly for state property tax relief eligibility than for income taxes. Of the seven states that had adopted property tax

relief for the elderly by 1965 (Chen 1969, pp. 234-35), five already had state income taxes and a fifth adopted an income tax in 1967 (ACIR 1994, Table 43). Moreover, Wisconsin set up its new property tax relief program as a credit against the state income tax with different income definitions for the tax and the credit. The Wisconsin property tax relief measure was what came to be known as the circuit breaker and, as discussed later, it differed from the other six early elderly property tax relief programs in more ways than being administratively a part of the income tax system. However, the first of the income-targeted homestead exemptions or property tax credits for the elderly was adopted in New Jersey in 1957 (Gold 1979, p. 82), nearly 20 years before that state adopted an income tax, and it employed a broad definition of money income to direct the relief to those most in need (Chen 1969, p. 235). The use of such an income definition elsewhere no doubt is attributable, at least in part, to the tendency of states to copy other states' tax policy inventions.

Although income-targeted homestead property tax relief for the elderly proved popular with state legislators, it drew some criticism. One student of property taxation commented, "In the current wave of sentiment for doing things for the aged – many of whom are more able to pay taxes than many younger persons – resort is again being had to the exemption device" (Walker 1964, p. 8). After careful analysis of the new and spreading programs for the elderly and of the comparative economic status of the elderly and non-elderly, another analyst concluded, ". . . the case for tax favors seems tenuous, because the economic circumstances of the aged as a group appear to be better than those of most other age groups" (Chen 1969, p. 232). It is noteworthy that these assessments predated the maturing of Social Security and the indexing of its retirement benefits, developments that further improved the relative situation of the elderly. This improvement is evidenced in part by the drop in the poverty rate for people 65 and over from 35 percent in 1960 to 10 percent by 1995, putting it slightly below that for working-age adults and well below that for children¹⁴ (NBER 2004). The poverty rate for the population 65 and over has been below that for the total population since the early 1980s (SSA 2006b, p. 11). Despite this, the notion that the elderly have a greater relative need for public financial assistance still finds ready acceptance in many quarters, including legislative chambers when property tax relief is being considered.

Other aspects of the new wave of property tax relief for the elderly also drew some criticism (Stocker 1967, p. 289). Low income as a condition for receiving property tax relief was criticized on two rather different bases – that this constituted a means test, which was distasteful for some of those intended to be helped, and that the income ceiling created a "notch" problem, so that a small increase in income could cost a family much more in lost tax relief than its gain in income. Additionally, it was noted that renters as well as owners were burdened by property taxes, but homestead exemptions gave no relief to renters.

Property Tax Circuit Breakers

The next significant development in residential property tax relief, which soon came to be known as the circuit breaker, emerged less than a decade after the first elderly-only

homestead exemption. Pioneered by Wisconsin in 1964¹⁵ (ACIR 1975, p. 1), the circuit breaker addressed some of the criticisms of homestead exemptions. The initial Wisconsin program (Stark 1992, pp. 34-36; Chen 1969, p. 235) differed from the other recent residential property tax relief programs in several respects:

- It provided property tax relief to renters as well as to owners, defining 25 percent of rent for right of occupancy as property tax;
- Relief was determined in a manner that caused a gradual decline in the benefit amount as income rose, rather than abruptly dropping to zero upon reaching an income ceiling; and
- Relief was granted in the form of a refundable income tax credit.

As in the states that recently had adopted income-targeted property tax relief for elderly homeowners, the Wisconsin income tax credit for homeowners and renters defined income very broadly. Because the Wisconsin property tax relief was set up as an income tax credit, the state bore the cost of the program, but some other states also paid the cost of their property tax relief policies, either by reimbursing local governments for property tax revenues foregone or by making payments to the taxpayers qualified for property tax relief.

Examples of circuit breakers and other forms of property tax relief are given in a later section of this paper. For now it is noted that among the differences between the Wisconsin program and other forms of income-targeted property tax relief, the difference that makes it a circuit breaker instead of something else is the second one listed above – the gradual decline in relief amount as income increases. Generally stated, pending a fuller discussion of what is and is not a circuit breaker, if a property tax relief measure incorporates this feature and applies it over a substantial range of income, the program is a circuit breaker. States have designed programs that accomplish this inverse relationship between income and property tax relief in various ways and to varying degrees.

The Advisory Commission on Intergovernmental Relations (ACIR) tracked the spread of property tax relief in its annual statistical report. A table in the 1974 volume showing the rapid spread of residential property tax relief is reproduced above as Table 1. Between January 1, 1970, and July 1, 1973, the number of states with relief programs of all sorts rose from 28 to 50 and the number with circuit breakers rose from four to 21. By the end of 1974 there were circuit breakers in 24 states and the District of Columbia (ACIR 1975, p. 3). Although there is no inherent difference among relief forms that precludes state government funding of some programs, in practice state funding has been more common for circuit breakers.

Not all states with circuit breakers in 1974 were new to the list of states with property tax relief for the elderly. Four of the circuit breakers were in states identified by Chen as having another form of relief for the elderly in 1965: Indiana, Maryland, Michigan, and Oregon.¹⁶ As already noted, several programs that provide property tax relief for the elderly are for the non-elderly, as well. In 1974, of the 25 state-level circuit breakers (including the District of Columbia), six were for elderly homeowners only, 13 were

elderly homeowners and renters, one was for elderly renters only (a companion to a homestead exemption), and five were for owners and renters of all ages (ACIR 1975, p. 4). In the mid-1960s, only Wisconsin provided property tax relief for renters, in the first circuit breaker program.

Tax Deferrals

A third form of property tax relief for homeowners is deferral of all or a portion of the tax liability. The deferred amount, including interest on that amount, creates a lien on the property that must be settled at a future date, usually upon the death of the owner or other transfer of the property. Deferral, like the circuit breaker, was an invention of the 1950s and 1960s, the second wave of the residential property tax relief movement; at that time, a number of states provided for tax deferral as part of their property tax relief for farmers, and Oregon allowed deferral as one of two forms of residential relief for elderly homeowners (Stocker 1967, pp. 285-86, 289; Chen 1969, p. 235).

As it has evolved, deferral of residential property taxes most often is available to elderly homeowners. Eligibility may be based solely on age, or income may also be a factor. The deferred amount may be all or part of property tax liability; partial deferral often applies to the amount of tax increase over some base year (e.g., the year the claimant turned 65, the year prior to reassessment). In a few instances the amount that can be deferred is the amount in excess of some percentage of income (i.e., a circuit breaker approach is used).

Although all three relief forms can address the cash-flow problem that the property tax can cause, deferral differs fundamentally from homestead exemptions or credits and circuit breakers. The latter programs are grants, or gifts, to the recipients, but deferral is simply a loan, provided a market rate of interest is charged on the deferred amount. For this reason, a number of analysts prefer deferral over other property tax relief form – and most homeowners who might benefit from relief prefer a gift over a loan. Deferral programs often attract few takers.¹⁷

Whether considering owners or renters, property tax relief programs adopted after the renewed interest in residential property tax relief 50 years ago were much more likely to provide relief to the elderly than to the non-elderly. That remains true early in the twenty-first century, and often, when both elderly and non-elderly are covered by a program, benefits for the elderly are better. The notion that age is a reasonable proxy for need seems quite ingrained and difficult to dispel. More cynically – not to say unrealistically – the data show the relative effectiveness of lobbying for senior citizens. Fisher's comment in 1996 about why homes and farms are favored in classification programs, quoted above, is in this same vein. Indeed, 30 years earlier a paper considering property tax breaks for farmers and elderly homeowners observed, "The fact that both are well organized, with articulate spokesmen, is another point of similarity that helps account for the extent to which public attention has been focused on the plight of these two groups" (Stocker 1967, pp. 290-91).

Current Status of Residential Property Tax Relief

In the last 40 years, the number of states with property tax relief programs has increased greatly, and so have the number of programs found in individual states. Stocker counted 11 states with relief programs for farmers and for elderly homeowners in 1966, but for some time now every state has had at least one property tax relief program for each (ACIR 1994; Kashian 2004). This paper does not cover property tax relief for farmers, and not even all residential relief programs receive close consideration, as the focus here is on circuit breakers.

At least six earlier studies or surveys so far this century have generated lists of residential property tax relief programs in varying degrees of detail: International Association of Assessing Officers (IAAO 2000); National Conference of State Legislatures (NCSL 2002); American Association of Retired Persons, or AARP (Baer 2003); Sexton (2003); Cico et al. (2004); and Center on Budget and Policy Priorities, or CBPP (Lyons et al. 2007). Four of the six provide enough detail to enable identification of circuit breaker programs (IAAO, NCSL, Baer, Lyons et al.); because the coverage of the NCSL and Baer studies is more comprehensive than the others, particular attention is given to their enumerations.¹⁸ This overview of residential property tax relief development concludes with a look at the status of the two major forms of such relief, homestead exemptions or credits and circuit breakers, and also considers deferrals briefly. Although the findings of the NCSL and AARP (Baer) surveys often match, several differences also exist, even though both are for 2002. Some of these differences are considered in some detail in later parts of this paper. Some details that prior reports have given little attention are in the definition of income. More sources of income are excluded in some states than in others, and some of the exclusions are quite significant. Differences in income definitions for circuit breaker programs are among relief program provisions discussed later in this paper.

Homestead Exemptions or Credits

Nearly 30 years ago, the most common form of residential property tax relief was the homestead exemption, or an equivalent credit (Gold 1979, p. 81). In its most common form, the homestead exemption reduces assessed value by a specified number of dollars, thus reducing the property tax base to which the statutory tax rates are applied; a variant of this sets the exempt amount in terms of market value, which may be preferable because of differences in assessment levels relative to market value that often exist.¹⁹ Rather than state an amount of value that is to be exempt, an alternative exempts a given percentage of either assessed value or market value.

NCSL counted 44 states with at least one homestead exemption or credit program in 2002 (NCSL 2002, pp. 10-15) and AARP counted 41 states (Baer 2003, pp. 20-27); the District of Columbia is counted as a state here. Both studies found a close division between the number of states with programs for homeowners of all ages and those with programs for the elderly (31 and 28, respectively, for NCSL and 27 each for Baer). Each reported about half the states had both a program for all ages and another (often additional) for the

elderly; a common way the elderly are given more generous benefits is through an additional or enhanced program for the elderly.

Income ceilings for homestead exemption claimants were reported in 15 states by NCSL, compared to 18 by Baer. These income limits are found almost exclusively in programs restricted to the elderly; the only exception is that Baer reports an income ceiling in an Oklahoma program said to be for homeowners of all ages. The limiting of income in programs specifically for the elderly may be due in part to continuation of the way in which these programs began 50 years ago. One motivation then for restricting eligibility by income was to avoid the criticism that benefits were being squandered on people who didn't need help with their property taxes. That same motivation may apply today, whether the elderly program is a stand-alone program or exists alongside a more general homestead exemption or credit program. Something over half the income ceilings are found in programs where the elderly program is the only one (nine out of 15 according to the NCSL report, 10 out of 18 according to Baer). Income ceilings vary considerably, from \$12,000 to \$100,000 (the same range was reported in both studies), with lower figures in some of the local-option programs. For example, the Baer report accurately reported that the income ceiling "varies" across the localities in Virginia, while NCSL gave the ceiling as \$62,000, seriously overstating the ceilings in place at the time.²⁰

Circuit Breakers

The NSCL study reports circuit breakers in 34 states (NCSL 2002, pp. 17-20) and AARP shows them in 36 states (Baer 2003, pp. 12-19).²¹ Circuit breakers are most commonly available to elderly homeowners, but owners and renters of all ages are eligible for several programs. Each study shows roughly two-thirds of the circuit breaker programs were available only to elderly claimants (21 of 24 and 12 of 36), with the remainder available to all ages.²² Most often covered are elderly homeowners (19 according to NCSL, 23 according to Baer), followed by elderly renters (18 and 19), homeowners of all ages (12 in each study), and renters of all ages (11 and 10). Besides restricting eligibility according to age and occupancy status (owner or renter), many states place upper limits on the income and/or wealth (value of certain types of assets) that claimants can have. Income limits are by far the more common of these restrictions, but the limits specified vary dramatically. There also are vast differences among the programs in terms of the manner in which benefits are calculated, including limits that often are imposed that reduce benefits below those calculated by formula. Program similarities and differences, as well as criteria for considering a program to be a circuit breaker, are discussed later in this paper.

Tax Deferrals

Property tax deferral programs are found in 25 states, according to both studies for 2002 (NCSL 2002, pp. 21-23; Baer 2003, pp. 29-31). The studies also agree that deferral is available only to those below a given income level in 21 of the 25 states. As with other programs, the income ceilings vary a good bit, from a low of \$10,000 to a high of

\$60,000. Beyond the income restrictions, there are some differences in the two studies' findings, but they agree that most states have deferral programs for elderly homeowners.

3. Direct Residential Property Tax Relief Approaches Compared

As already noted, all property tax preferences, or concessions, are similar in that they create lower effective property tax rates for those who receive them. Nonetheless, there are differences among the several approaches, and even differences among variants of the same approach, in terms of the relative benefits they bestow upon their beneficiaries. Requirements for administration and compliance also are different, and in some instances greater, for some types of programs than for others. People's perceptions of their benefits likely vary across programs, as well. The two major direct residential property tax relief approaches – homestead exemption or credit and circuit breaker – are compared on these features in this section.

Providing Relief Through Exemptions, Credits, and Refunds

Direct property tax relief is received by claimants in a variety of ways. These include homestead exemptions, credits against the property tax, credits against the state income tax, and issuance of refund checks. In principle, all these are equally effective in getting relief to the taxpayer, but some differences are potentially important.

Approaches That Reduce the Property Tax Bill Itself

Tax liability is the product of the statutory tax base (assessed value) times the statutory rate, less any credits:

$$\text{Tax} = (\text{Rate} * \text{Base}) - \text{Credits}$$

Equivalent changes in net tax liability can be achieved by changes in any of the three terms on the right side of the equation, while leaving the other two unchanged; a homestead exemption and a homestead credit are equivalent, or at least can be. For example, if the market value of a home is \$100,000, its assessed value is \$100,000, the tax rate is 1.0 percent, and there are no property tax credits, the tax liability for that home is \$1,000. It does not matter which of three ways is selected to reduce the tax bill by 20 percent.²³

- 20 percent homestead exemption: $0.01 * \$80,000 = \800 tax bill;
- 20 percent lower homestead tax rate: $0.008 * \$100,000 = \800 tax bill; or
- 20 percent homestead credit: $0.01 * \$100,000 = \$1,000$; $\$1,000 - \$200 = \$800$ tax bill.

Any of these three approaches reduces the property tax bill directly. This avoids the need for separate administrative procedures for paying relief benefits, such as an income tax credit or a refund check; it also avoids concerns that arise when property tax relief is paid

only after the deadline for paying the property tax bill, as may be the case with an income tax credit. However, if renters also are included in the property tax relief program, direct reduction of the property tax bill will not work for them, and a separate administrative procedure will be needed for handling renters' claims for relief. Such a dual approach, in fact, is found in several states.

The three approaches are not unique to, or synonymous with, any particular form of direct property tax relief. Classification is achieved by differential assessment (partial exemption), by differential statutory tax rates, and by credits for the preferred class or classes of property. Similarly, some circuit breakers use partial exemption, others provide credits against the property tax bill, still other provide credits against the income tax, and several provide for a separate refund process.

Income Tax Credits

Income tax credits also can be structured to provide the same relief as that provided by directly reducing the property tax bill; thus, a homestead credit for property taxes taken against the income tax is equivalent to a homestead exemption or credit that reduces the property tax directly. A possible difference between an income tax credit and direct reduction of the property tax bill is the timing of the relief payment.

It sometimes is thought that extending property tax relief via a refundable income tax credit is the preferred route if property tax relief eligibility is related to income, but presumed advantages of the income tax credit often are not realized. Wisconsin's circuit breaker (Homestead Tax Credit) benefits are available as a refundable income tax credit. A 2006 report on the program offers this insight: "Over half (67%) of Homestead claimants file income tax returns, though less than 2% of these claimants actually have a net tax liability before the Homestead credit is applied. For those claimants with tax liability prior to the Homestead credit, the average tax due was \$170. Since the Homestead credit averages about \$500, the vast majority of Homestead claimants receive a refund check" (Wisconsin Department of Revenue 2006, p. 9). Another consideration is that income generally is defined more broadly for targeting property tax relief than for income taxation (this is discussed more fully in a later section), so additional income information has to be included with the income tax return and supporting schedules at time of filing to determine property tax relief eligibility.

Wisconsin's experience with income tax credits as the vehicle for delivering property tax relief provides another useful insight. A Legislative Reference Bureau report notes that the circuit breaker works through income tax credits and refunds, and thus "... it intertwined the property tax system with the income tax system, which also caused conceptual problems. It was difficult for taxpayers to recognize that certain tax benefits that appeared to be related to income taxes were actually intended as property tax relief" (Stark 1992, p. 35). If quieting unrest over property tax burdens is an important objective of property tax relief, it seems best to structure the relief in a manner that reduces the property tax bill directly. On the other hand, if property tax relief supporters wish to keep people stirred up about property taxes, even though they are being paid money to offset

those taxes, then divorcing the relief payments from the property tax process probably is the way to proceed. There are, of course, other considerations that might favor the income tax credit approach, but perceptions about what tax actually is being reduced – income or property – clearly are important, and it is easy to see how people might not think much about an income tax credit being a property tax feature, even though on some level they are aware that it is.

Separate Refund Process

A number of states with income taxes operate a separate refund process to pay out circuit breaker relief. A number of years ago, when I was working on a state tax study in Minnesota, a state tax official indicated that a primary reason for that state's not using an income tax credit was that the income tax and property tax calendars did not mesh well, and it was important to get property tax relief payments to claimants in time to apply them to their property tax payments. Different income definitions for the two tax programs, noted above, also help make the separate refund logical. A drawback is that claimants who have to file income taxes have an additional filing added to claim their property tax relief benefits, but considering the additional information that has to be supplied with the income tax to support the property tax relief program, the additional compliance and administrative efforts are less than might seem to be the case.

Examples for Variants of the Several Approaches

The major forms of direct residential property tax relief are alternative paths to the same general end of lowering net property taxes on housing, and there are variations within each of the major approaches, as well. Several of these are explored in the balance of this section.

Homestead Exemption

Although there are exceptions, homestead exemptions generally are only partial exemptions; they do not remove 100 percent of the value of the homestead from the tax base.²⁴ Such exemptions most often are stated as a given amount that is exempt, but sometimes as a given percentage, or even as a given percentage up to a specified dollar maximum. Even though each at times is referred to as a “flat” or “constant” homestead exemption, the two approaches distribute property tax relief quite differently.

Constant Amount versus Constant Percentage

Consider a homestead exemption that is a flat 20 percent of value for all owner-occupied residential properties used as an owner's primary residence and one that is a flat \$20,000 for each such property.

- For a home valued at \$100,000, a homestead exemption that removes a constant 20 percent of value from the tax base is the same as one that exempts a constant \$20,000.

- For homes valued at more than \$100,000, the 20 percent exemption provides more relief than the constant \$20,000 exemption; \$20,000 is a declining percentage of total value.
- For homes valued at less than \$100,000, the \$20,000 exemption provides more relief than the 20 percent exemption; the percentage reduction delivered by the \$20,000 exemption increases as home value falls.
- Relative effective property tax rates for homestead properties are not altered by the constant 20 percent exemption because all such properties receive an equal percentage reduction in their property tax bills.
- Relative effective property tax rates for homestead properties increase with home value as a result of a constant \$20,000 exemption for all such properties because \$20,000 is a declining percentage of total value as value rises.
- A 20 percent homestead exemption reduces the taxable value of a \$500,000 home by \$100,000, while it decreases the taxable value of a \$100,000 home by only \$20,000; for this reason, providing meaningful property tax relief at the low end entails a higher total cost of homestead relief if the exemption is a constant percentage of value.

A homestead exemption stated as a dollar amount of assessed value provides a higher level of property tax relief to areas where property is relatively undervalued. This can be important in a state where assessment levels differ significantly, either across localities or within them. For example, suppose the coefficient of dispersion²⁵ for single-family residential parcels in a county is 35 percent; this is a high level of assessment non-uniformity, but one that is too common. With this coefficient of dispersion, some homes could easily be assessed at twice as high a percentage of market value as other homes. Reasons for high levels of assessment non-uniformity include poor assessor performance in complying with assessment laws or from state laws that keep the assessed value of some homes from rising to full market value, or whatever fractional standard may generally apply; an example of legally-required non-uniformity is an assessment-increase cap, as these affect different homes differently.²⁶

Unequal Levels of Assessment

If different homes are assessed at different percentages of market value, a homestead exemption that is a constant number of dollars for each qualifying property, whether \$20,000 or some other amount, will provide quite uneven tax relief even for homes with the same market value. For example, suppose that homes A and B each have a \$150,000 market value; that property is to be assessed at full market value; that assessment uniformity has not been achieved; that the assessed value of home A is \$135,000 while the assessed value of home B is \$67,500; and that the statutory property tax rate is 1.2 percent (which might be stated as \$1.20 per \$100 of assessed value, or as 12 mils – i.e., \$12.00 per \$1,000 of assessed value). This situation is presented in Table 2, which shows the tax effects of a \$20,000 homestead exemption for homes A and B if they are assessed at 90 percent and 45 percent of market value, respectively.

Neither home is bearing an effective tax of 1.2 percent of market value because both assessed values fall below full market value. Assessment-level differences give an especially large tax breaker to the owner of home B, for which the gross tax bill is just half that for home A, despite the two having the same market value. The flat \$20,000 homestead exemption for each compounds the problem; because \$20,000 is a larger share of gross assessed value for home B, it produces a larger percentage reduction in the tax bill. The next tax bill for home B is 29.6 percent lower than the gross tax bill, due to the exemption, while the net tax bill for home A is only 14.8 percent lower than the gross tax bill.

Expressing the exemption as a percentage of assessed value rather than a fixed amount of assessed value helps in dealing with assessments that are not uniform with respect to market value. Suppose, for example, that a homestead exemption equal to 20 percent of assessed value is substituted for the \$20,000 exemption, keeping the basic facts of market values, assessed values, and tax rate unchanged. Table 3 presents this case. The 20 percent homestead exemption of course does nothing to correct for the unequal underlying assessment levels of homes A and B, but it does avoid compounding the inequality; it produces a 20 percent reduction in the tax bill of each home

Table 2. \$20,000 Homestead Exemption: Tax Effects with Unequal Assessment Levels		
Assessment or Tax Statistic	Home A	Home B
Market value	\$150,000	\$150,000
Assessed value	\$135,000	\$67,500
AV/MV	90%	45%
Gross tax @ 1.2% of AV	\$1,620	\$810
Tax savings from \$20,000 exemption @ 1.2%	\$240	\$240
Net tax bill	\$1,380	\$570
Gross tax as percent of market value	1.08%	0.54
Net tax as percent of market value	0.92%	0.38%
Percentage reduction from \$20,000 exemption	14.8%	29.6%
Source: Examples constructed by author.		

Table 3. 20 Percent Homestead Exemption: Tax Effects with Unequal Assessment Levels		
Assessment or Tax Statistic	Home A	Home B
Market value	\$150,000	\$150,000
Assessed value	\$135,000	\$67,500
AV/MV	90%	45%
Gross tax @ 1.2% of AV	\$1,620	\$810
Tax savings from 20% exemption @ 1.2%	\$324	\$162
Net tax bill	\$1,296	\$648
Gross tax as percent of market value	1.08%	0.54
Net tax as percent of market value	0.864%	0.432%
Percentage reduction from \$20,000 exemption	20%	20%
Source: Examples constructed by author.		

Unequal Levels of Assessment Within or Between Localities

Assessment inequality with respect to market value adds to tax inequities by giving larger percentage reductions in the gross tax bill to properties already under-assessed; moreover, the larger the degree of under-assessment, the greater the percentage decrease in tax liability provided by a fixed-dollar exemption. If there is to be a homestead exemption, and if it is to be state funded, the case for an exemption that is a constant percentage of assessed value is made somewhat stronger if assessment inequality is largely a problem across localities – i.e., most localities have rather low coefficients of dispersion, but the average assessment level varies considerably among localities. At least an exemption that is a uniform percentage of assessed value rather than one that is a uniform amount of value can deprive under-assessed localities of the advantage of a larger state-funded homestead property tax reduction. The percentage exemption, however, still may not be the preferred policy, because it still will spend much of the tax relief budget on tax breaks for expensive homes whose owners generally may be presumed able to pay their property taxes.

One solution may be to use a uniform percentage homestead exemption, but not allow it to rise above a given amount – cap either the absolute amount of the exemption or the value of homes that can receive any exemption.²⁷ Another solution, however, is to exempt only a certain amount (or percentage) of market value, rather than assessed value. This means equalizing for assessment inequities. For example, if one county is assessed at 50 percent of market value and another is assessed at 100 percent, in effect the reduction in assessed value due to the exemption (whether a stated amount or a stated percentage) would be only half as much in the county assessed at 50 percent as in the county assessed at 100 percent.

Unfortunately, working with market values is not as easy as it may sound, and thus it does not represent a complete solution to the problem of intra-area assessment non-uniformity. The only source of value for most homes is the tax assessor; it is precisely this fact that makes it necessary to estimate values for tax purposes – rather than working with observed values – in the first place. Thus, there is a reason the example in the preceding paragraph deals with differences in county-average assessment levels rather than differences across properties within a county or other jurisdiction. Equalization has to apply the same percentage adjustment to all properties within a given geographic area; it can do nothing to correct for underlying assessment inequality. The best cure for that is reassessment, taking pains to make assessments as uniform as possible.

Circuit Breakers

The circuit breaker is better viewed as a sort of philosophy of tax relief than as a specific sort of relief mechanism; a variety of mechanisms – property tax exemption, property tax credit, income tax credit, or separate refund process – can be used to provide circuit breaker relief, as discussed more fully below. Fuller consideration of circuit breaker basics begins with the underlying philosophy, which has two basic parts:

- Income, properly defined, is an appropriate measure of ability to pay property taxes; and
- As ability to pay property taxes increases, the amount of property tax relief should fall.

This philosophy has been implemented in several ways. The variety of circuit breaker provisions has been suggested above and will become even more apparent in the section that reviews circuit breaker provisions as they existed in the United States in mid-2007. For now, some areas of difference are noted briefly. These include different choices about features that must be part of any circuit breaker:

- What groups of people or property uses potentially eligible for tax relief;
- How relief amounts are calculated;
- How relief is paid to claimants;
- What definition of income is used, including possible adjustment for household size; and
- Whether the income of household members other than the claimant and spouse is to be considered.

Circuit breakers also differ in other questions of policy, or design, such as:

- Whether to set any income limit, which is optional in the threshold approach;
- What limits to set if the sliding-scale approach is being used (some limits are inherent in this approach), or if the threshold approach is being used an income limit;
- Whether to impose limits on some measure of wealth, to provide a broader measure of ability to pay property taxes;²⁸
- Whether to impose any limits on the benefits given by the basic benefit determination formula or matrix; and
- Whether to index dollar amounts to keep up with inflation.

Calculation of Circuit Breaker Relief Without Limits

Two basic ways to structure a circuit breaker, or types of formulas for determining property tax relief, are the threshold and the sliding-scale approaches (ACIR 1975, pp. 9-10). In fact, some states' programs do not fit either of these comfortably, and must be considered hybrids or special cases. However, if a program provides property tax relief for a given property tax amount that falls as income rises, over a significant range of income, it qualifies as a property tax circuit breaker.²⁹

Threshold Approach. The threshold approach, often considered the “classic” form of circuit breaker, is quite simple in its basic form. The portion of a claimant’s property tax that exceeds some percentage of broadly-defined income is eligible for relief. The percentage defines a threshold amount above which property tax must rise before any relief can be received; for this reason, the threshold amount can be thought of as a

reasonable or acceptable amount of property tax in relation to income. For example, if the threshold is set at 4 percent, then a household with \$20,000 would be eligible for relief on the amount of property tax in excess of \$800. Relief may be equal to all or only part of the tax in excess of the threshold amount, and other limits also may be imposed on benefits.

Benefit limits are ignored for the time being to allow the varied results of the different circuit breaker approaches to be highlighted through the use of the examples in the first set of columns of Table 4. Those examples use income and property tax information for three claimants, Brown, Green, and White; each has a \$2,000 annual property tax bill, but their incomes are \$7,000, \$16,000, and \$30,000, respectively. Income is assumed to be that given by the same very broad definition for all examples. Possible other considerations, such as household size and net worth, are not included in these examples.

The simple threshold approach is illustrated by circuit breaker A in Table 4, using the 3.5 percent threshold of the Michigan circuit breaker for the non-elderly. Before tax relief, Brown's \$2,000 property tax bill is equal to 28.6 percent of his \$7,000 income. The 3.5 percent threshold is equal to \$245 ($\$7,000 * 0.035$), which means Brown must bear \$245 in property taxes before any relief will be provided. Subtracting the \$245 threshold amount from the \$2,000 tax bill gives \$1,755 of "excess" tax that is subject to relief. Similar calculations using Green's \$16,000 income show that she is eligible for \$1,440 in tax relief: $\$2,000 - (\$16,000 * 0.035) = \$2,000 - \$560 = \$1,440$ excess tax. For White's \$30,000 income, the appropriate calculations show \$950 of excess tax eligible for relief. If relief is equal to 100 percent of the excess of property tax over the threshold amount of income, the net property tax bills for Brown, Green, and White are \$245, \$560, and \$1,050; these are the same as the threshold amounts of income, so the net tax as a percentage of income – the effective rate of property tax with respect to income – is 3.5 percent in each case. Thus, the basic threshold circuit breaker, with no limit on the amount of property tax relief, levels property taxes to a uniform percentage of income for claimants equal to the threshold percentage.

Circuit breaker B in Table 4 is a multiple-threshold variant of the threshold approach; threshold percentages rise from the lowest income bracket to the highest. The Maryland formula is used to illustrate the approach, which is used by several states. Maryland defines four income brackets, or ranges; the first is \$8,000 wide, each of the next two is \$4,000 wide, and the fourth extends from \$16,001 to \$60,000 for homeowners; threshold percentages are 0.0 percent, 4.0 percent, 6.5 percent, and 9.0 percent. In Maryland and most states with multiple-threshold circuit breakers, the thresholds apply incrementally. The principle is the same as in a graduated-rate income tax structure, where the marginal tax rate for a person's last dollar of income does not apply to his or her total income if that income spans more than one bracket. In other words, for all Maryland circuit breaker claimants, the first \$8,000 of income are assumed to provide no ability pay property taxes and 4 percent of the next \$4,000 of income is considered an acceptable amount of property tax in relation to income. The cumulative threshold amount for a claimant with \$10,000 of income, for example, is \$80; this is the sum of \$0 for the first \$8,000 of income \$80 for the next \$2,000 of income ($\$2,000 * 0.04$). The threshold for

the next \$4,000 of income (\$12,001-\$16,000) is 6.5 percent, so the cumulative threshold for a claimant with \$16,000 income is \$420 $((\$8,000 * 0.0) + (\$4,000 * 0.04) + (\$4,000 * 0.065)) = \$0 + \$160 + \$260 = \$420$. The 9 percent threshold applies to income above \$16,000.

All \$7,000 of Brown's income is within the zero-threshold income bracket, so the threshold amount of tax that Brown must bear before getting any tax relief is zero; with no benefit limits, relief is 100 percent of gross tax. This is shown in the second column of Table 4. Green's \$16,000 income is spread across the first three brackets, so the cumulative \$420 threshold amount calculated in the previous paragraph for this income level applies. Excess tax is $\$2,000 - \$420 = \$1,580$. Similar calculations show that White, with \$30,000 of income, qualifies for relief of \$1,050.

Comparing the results for circuit breakers A and B in columns 2-4 of Table 4 shows the important difference between single- and multiple-threshold circuit breakers. The net tax relative to income for Brown, at the low end of the income range in the examples, is reduced to a lower level by the multiple-threshold circuit breaker than by the single-threshold circuit breaker, while the reverse is true for White, whose income is the highest of the three in the examples. Use of multiple thresholds can target property tax relief more narrowly on those with the lowest incomes and give a progressive pattern to the effective property tax rates with respect to income for circuit breaker claimants. These examples are illustrative; the degree of difference between specific single- and multiple-threshold circuit breakers will depend upon the particulars of each – the number and width of brackets in the multiple-threshold variant and the threshold percentages used in each variant.

Another multiple-threshold variant that fortunately is less common is represented in Table 4 by circuit breaker C, which uses Rhode Island formula provisions. This circuit breaker has the following four brackets and threshold percentages: income \$0-\$6,000, 3 percent; \$6,001-\$9,000, 4 percent; \$9,001-\$15,000, 5 percent; and \$15,001-\$30,000, 6 percent.³⁰ The most obvious differences between this and circuit breaker B are that there is no zero threshold percentage, and that the spread between the highest and lowest threshold percentages is smaller; the first difference means no claimant qualifies for 100 percent property tax relief and the second means the effective rates of net property tax with respect to income will be less progressive than for circuit breaker B.

Another difference between circuit breakers B and C is not obvious. Form RI-1040H for 2006, Rhode Island Property Tax Relief Claim, presents the circuit breaker income brackets and threshold percentages and instructs the claimant to find the income range that includes his or her total income (calculated on the form) and to enter the percentage for that range on a specific line of the form. Total income is multiplied by the percentage and the product is subtracted from the tax amount to determine the circuit breaker credit (which will be the lesser of the calculated excess tax and the maximum relief allowed, but the maximum is ignored for now). In short, unlike circuit breaker B, only one threshold percentage is used to calculate the threshold amount for any one claimant.

Table 4. Examples of Circuit Breaker Benefit Determination: Three Hypothetical Claimants Under and Five Threshold and Sliding-Scale Circuit Breaker Variants Representing Actual State Formulas

Income & Tax Elements	State Limits Not Applied			State Limits Applied*		
	Brown	Green	White	Brown	Green	White
Income	\$7,000	\$16,000	\$30,000	\$7,000	\$16,000	\$30,000
Property Tax	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Property tax/income	28.6%	12.5%	6.7%	28.6%	12.5%	6.7%
<i>Circuit Breaker A</i>						
Threshold amount	\$245	\$560	\$1,050	\$245	\$560	\$1,050
Excess tax	\$1,755	\$1,440	\$950	\$1,755	\$1,440	\$950
Relief	\$1,755	\$1,440	\$950	\$1,053	\$864	\$570
Net tax	\$245	\$560	\$1,050	\$947	\$1,136	\$1,430
Net tax/income	3.5%	3.5%	3.5%	13.5%	7.1%	4.8%
<i>Circuit Breaker B</i>						
Threshold amount	\$0	\$420	\$1,680	\$0	\$420	\$1,680
Excess tax	\$2,000	\$1,580	\$320	\$2,000	\$1,580	\$320
Relief	\$2,000	\$1,580	\$320	\$2,000	\$1,580	\$320
Net tax	\$0	\$420	\$1,680	\$0	\$420	\$1,680
Net tax/income	0%	2.6%	5.6%	0%	2.6%	5.6%
<i>Circuit Breaker C</i>						
Threshold amount	\$280	\$960	\$1,800	\$280	\$960	\$1,800
Excess tax	\$1,720	\$1,040	\$200	\$1,720	\$1,040	\$200
Relief	\$1,720	\$1,040	\$200	\$300	\$300	\$200
Net tax	\$280	\$960	\$1,800	\$1,700	\$1,700	\$1,800
Net tax/income	4.0%	6.0%	6.0%	24.3%	10.6%	6.0%

Table 4. Examples of Circuit Breaker Benefit Determination (cont'd.)

Income & Tax Elements	State Limits Not Applied			State Limits Applied		
	Brown	Green	White	Brown	Green	White
<i>Circuit Breaker D</i>	\$220	\$660	\$1,500	\$220	\$660	\$1,500
Threshold amount	\$1,780	\$1,340	\$500	\$1,780	\$1,340	\$500
Excess tax	\$1,780	\$1,340	\$500	<i>\$300</i>	<i>\$300</i>	<i>\$300</i>
Relief	\$220	\$660	\$1,500	\$1,700	\$1,700	\$1,700
Net tax	<i>3.1%</i>	<i>4.1%</i>	<i>5.0%</i>	<i>24.3%</i>	<i>10.6%</i>	<i>5.7%</i>
Net tax/income						
<i>Circuit Breaker E</i>						
Relief percentage	50%	40%	10%	50%	40%	10%
Relief	\$1,000	\$800	\$200	\$1,000	\$800	\$200
Net tax	\$1,000	\$1,200	\$1,800	\$1,000	\$1,200	\$1,800
Net tax/income	<i>14.3%</i>	<i>7.5%</i>	<i>6.0%</i>	<i>14.3%</i>	<i>7.5%</i>	<i>6.0%</i>
Source: Author's calculations based on circuit breaker programs of the states indicated below (see body of report for sources).						
* Bold italics show changes in relief and net tax/income due to application of state limits.						
Circuit breaker A (Michigan, non-elderly); 3.5% threshold. Limits: Relief is 60% of tax above threshold amount, to a maximum credit of \$1,200.						
Circuit breaker B (Maryland): 4 thresholds: First \$8,000, 0%; next \$4,000, 4%; next \$4,000, 6.5%; amount above \$16,000, 9%. Limits: Maximum income, \$60,000 (owners); maximum amount of property value for which taxes will be considered, \$300,000; maximum net worth, excluding home, \$200,000.						
Circuit breaker C (Rhode Island): 4 thresholds, but a single threshold applies to the total income of each claimant: \$0-\$6,000, 3%; \$6,001-\$9,000, 4%; \$9,001-\$15,000, 5%; \$15,001-\$30,000, 6% (this is the schedule for households of two or more). Limits: Maximum income, \$30,000; maximum benefit, \$300.						
Circuit breaker D – same as C, except thresholds are applied incrementally, as in Maryland/circuit breaker B.						
Circuit breaker E (Connecticut): Sliding-scale with 5 brackets (maximum benefit for each bracket is in parentheses, after the relief percentage): \$0-\$14,300, 50% (\$1,250); \$14,301-\$19,400, 40% (\$1,000); \$19,401-\$24,000, 30% (\$750); \$24,001-\$28,800, 20% (\$500); \$28,801-\$35,300, 10% (\$250).						

No doubt everyone has at some time heard someone complain about the federal income tax in roughly the following words: “I got just enough of a raise last year to put me in a higher income tax bracket, and that caused my taxes to go up more than my income, leaving me worse off.” For the income tax, the complaint is unfounded; it reflects a misperception about how graduated tax rates work. Instead of shelving the complaint, though, it can be dusted off and directed toward the circuit breaker in Rhode Island (and at least one other state), where use of only one threshold percentage in a multiple-threshold structure creates what is called a “notch” effect, or problem. This means that a small difference in income can create a larger difference in the amount of tax relief a person can receive, so that a small income increase can leave the circuit breaker claimant worse off.

An example will help clarify the nature of the problem. If income is \$14,990 the applicable threshold rate is 5 percent and the amount of tax to be borne before qualifying for relief is \$749.50 ($\$14,990 \times 0.05$). If income is \$15,005 the 6 percent threshold rate applies and the amount of tax that has to be borne before qualifying for tax relief is \$900.30. A \$15 income difference results in a \$150.80 difference in potential property tax relief; the tax relief difference in this example is more than 10 times as great as the income difference that causes it. Although smaller near the boundaries between lower income brackets, because the amount of income to which a higher threshold rate applies is smaller, the notch problem still exists. The same \$15 difference in income near the boundary between the first two brackets – the difference between \$5,990 and \$6,005, for example – is associated with a \$60.50 difference in potential property tax relief.

The notch problem does not arise with either a single-threshold formula or a multiple-threshold formula such as that of circuit breaker B, where the rising threshold percentages applied only to incremental amount of income rather than total income.

Circuit breaker D in Table 4 is the same one just considered, except this time the multiple thresholds are applied incrementally, as they were for circuit breaker B. The difference is clear from the numbers for the three hypothetical claimants. Applying the threshold percentages incrementally yields smaller threshold amounts for all three claimants. As a result, relief amounts are larger and net property tax as a percentage of income is lower for all claimants under circuit breaker D compared to C, and the pattern of effective net tax rates with respect to income also is more progressive. The dollar changes are largest for Green and White, whose incomes of \$16,000 and \$30,000, respectively, fall within the same rather wide top income bracket of the Rhode Island circuit breaker. As Rhode Island applies the threshold percentages, both Green and White are ineligible for property tax relief until property tax exceeds 6 percent of total income, but when the thresholds are applied incrementally, each has a large portion of income at the lower three percentages.

Sliding-Scale Approach. Finally, circuit breaker E in Table 4 presents the sliding-scale approach to circuit breaker relief. A number of states use this general approach. It does not relate property tax relief to income in the same manner as in the threshold approach. A threshold circuit breaker provides no tax relief until the property tax rises above some

portion of income defined by the circuit breaker statute and given by the application of the threshold percentage(s). By contrast, a sliding-scale circuit breaker sets up multiple brackets of income and assigns a relief percentage to each bracket, with the relief percentage falling from bracket to bracket moving up the income scale.³² Thus, instead of defining a percentage of income that represents a tax “overload” eligible for relief, the sliding-scale approach in essence presumes that everyone at lower levels of income needs property tax relief to the same degree, and that the need for such relief declines as income rises. If the relief percentage for a given income bracket is 60 percent, that percentage reduction is provided for each claimant in that bracket, whether gross property tax was equal to 1 percent, 25 percent, or some other portion of income. Thus, it may not eliminate “property tax overload” for some claimants. Note that in Table 4, the Connecticut sliding-scale schedule applied to Brown’s property tax leaves him with a net tax equal to 14.3 percent of income, and that White, whose gross property tax amounted to 6.7 percent of income receives property tax relief even though Brown’s net tax after relief is more than twice as high, relative to income, as White’s even before relief.

Does sliding-scale circuit breaker property tax relief qualify as a circuit breaker, given such outcomes? Most writings on circuit breakers include threshold, sliding-scale, and hybrid varieties (for example, NCSL 2002, Baer 2003), but a new report on from the Center on Budget and Policy Priorities lists only 18 states with circuit breakers because the authors define circuit breakers to include only programs that limit property taxes to a stated percentage of income (Lyons et al. 2007, p. 2)³³ – the essence of the threshold approach, before benefit limits are taken into account. The reason most writers accept the sliding-scale approach as a bona fide circuit breaker variety is that it meets the critical criterion that relief *for a given amount of property tax* declines as income rises. To reject this approach is to take too narrow a view of what constitutes a circuit breaker.³⁴ In view of the fact that the sliding-scale approach may not prevent what most would consider an “overload” of property taxes relative to income, some name other than circuit breaker might be better for the general approach to providing property tax relief that varies inversely with income. Vermont calls the adjustment of property taxes via a three-threshold circuit breaker formula an “income sensitivity adjustment” of property taxes.

Choosing Between Threshold and Sliding-Scale Approaches

If two quite different property tax relief approaches are both circuit breakers, when is each appropriate?³⁵ The main difference between them, demonstrated by the Table 4 examples, is that the threshold approach alters relative tax burdens with respect to income across circuit breaker claimants while the sliding-scale approach generally leaves the relative peaks and valleys of tax burden in place, albeit at lower levels.³⁶ The relevant issue, therefore, is why property taxes take larger percentages of income for some households than for others within a given income range. If higher taxes result from one set of circumstances, disproportionate subsidy of those taxes is inappropriate and the sliding-scale approach is preferable to the threshold approach. On the other hand, if another set of circumstances is primarily responsible for higher property tax burdens, relieving them is appropriate and the threshold approach is preferable.

In general, higher property tax burdens should not be leveled out in the manner of a threshold circuit breaker if they result from choices made by the taxpayer and/or provide something roughly commensurate in return for the higher tax load. An example is consumption of more housing, whether larger quantity, higher quality, or both. Housing consumption is a matter of choice; those consuming more should pay more, and disproportionate subsidy of the resulting taxes is inappropriate. Emphasis is on disproportionate subsidy, in the manner of the threshold approach; the sliding-scale approach also provides a subsidy, but it is the percentage for all in a given income range. Further strengthening the case for the sliding-scale approach in this situation is the fact that circuit breaker claimants with higher property taxes also have greater net worth (more valuable homes) than those with lower taxes; using a broader measure of ability to pay taxes than can be provided by income alone, they have greater taxpaying ability. Another perspective on this situation is that a threshold circuit breaker would provide subsidies that are directly related to net worth, including housing asset value (Aaron 1973, p. 57).

The same basic case exists for the sliding-scale approach for property tax differences that reflect a higher level of public service consumption funded by property taxes; higher taxes are providing something of value to the taxpayer. They also are something over which the taxpayer has some control, through voting and other forms of participation in local government decisions, albeit less control than in the case of private housing consumption decisions. Similarly, if differences in property tax burdens across claimants in a given income range result from local differences in local tax structure choices, people with higher property taxes should not get greater property tax subsidies through state-funded circuit breakers – i.e., the sliding-scale approach is preferable to the threshold approach. Such differences in tax structure, and thus the funding role of the property tax, result if the state allows local income or sales taxes and some localities have provided indirect property tax relief by diversifying their tax bases but others have not. Residents of the localities with non-diversified tax structures will tend to have higher property taxes even if they do not have more valuable homes or better public services, but they also will have lower income or sales taxes. Taking total local taxes into account, residents of tax-diversified localities may be paying at least as much as residents of areas relying on the property tax. A disproportionate state subsidy of the property taxes of people in the non-diversified areas would inappropriately reward their tax-structure choices.

Despite these arguments for the sliding-scale approach, there is a case for the threshold approach, as well. To the extent that higher property taxes result from inter-local property tax base disparities, leveling down the highest taxes in relation to income through a threshold circuit breaker is more appropriate than leaving the relative differences, as a sliding-scale circuit breaker would do. Such disparities are well-known and often are quite large. They are due less to the nature of the property tax than to the small geographic size of local government areas (Bowman and Mikesell 1978 and 1981). State government ultimately is responsible for the structure of local government and for the tax types available for local use. If the property tax is the primary source of local tax revenue, and if the property tax base per capita is distributed unevenly across

jurisdictions so that some localities have much less taxable property per resident than others (as they do), then the state should take some responsibility for the consequences of state policies. One consequence is that property-poor localities often have to levy much higher property tax rates than other localities, just to fund necessary services, and perhaps cannot fund an adequate level of such services at politically viable rates. ACIR made this argument in favor of the threshold approach (ACIR 1975, p. 10). Gold correctly countered that “. . . intergovernmental fiscal transfers are a more appropriate tool than circuitbreakers for dealing with the problems of intercommunity fiscal disparities” (Gold 1976, p. 480). However, equalization of fiscal capacity across localities almost never is complete, and in many instances is not very great at all, so disparities remain a reasonable concern in circuit breaker design.

Evidence on the relative importance of the various possible causes of differences in property tax burden levels is scarce, but an earlier study of the New England states concluded, “Within states and within metropolitan areas, however, the tax base per capita does appear to be the major determinant of the tax rate of a given community . . .” (Ladd 1973, p. 71). If this is so, the case for the threshold approach seems stronger than the case for the sliding-scale.

Circuit Breaker Benefits – The Effects of Limits

Up to now, we have considered only the examples in columns 2-4 of Table 4. They calculated circuit breaker relief and net taxes, including net taxes relative to income, without placing any limits on the amount of relief given by the basic formula. This was done to focus on the inherent differences among different circuit breaker formulas. Looking at benefits without any limits was appropriate for the additional reason that limits do not have to be incorporated into circuit breakers, and if they are, they certainly do not have to be the same as those selected by the states chosen for Table 4. There is a difference between threshold and sliding-scale circuit breakers in this regard, though. While a threshold circuit breaker does not necessarily place any limits on qualifying income levels or dollar amount of relief, a sliding scale inherently includes both an income limit (the level at which relief drops to zero) and co-payment or co-insurance rates (100 minus the relief percentage for a given income bracket).

Columns 5-7 of Table 4 impose whatever limits exist in the states whose formulas are used to illustrate the various circuit breaker forms. Circuit breaker A is the Michigan formula for non-elderly claimants, and the state imposes two limits: 40 percent co-insurance (i.e., 60 percent of the excess tax is relieved) and a \$1,200 benefit ceiling. The combination of these is especially important for Brown, whose \$7,000 income is the lowest in Table 4. They cause the relief for the \$2,000 gross property tax to drop from \$1,755 to \$1,053; this allows the effective property tax rate with respect to income to drop from 28.6 percent to 13.5 percent – a big reduction, but much less than the drop to 3.5 percent when no limits are imposed. For White, whose \$30,000 income is the highest of the three claimants in Table 4, the limits have a much less dramatic effect. Relief drops from \$950 to \$570 and net tax rises to 4.0 percent of income instead of 3.5 percent.

With the limits applied, the net results become much more like those for sliding-scale circuit breaker E.

Circuit breaker B is Maryland's four-threshold formula. For homeowners, Maryland limits income to a maximum of \$60,000; homestead tax considered to that on the first \$300,000 of value; and net worth (excluding the home and most retirement accounts) to \$200,000. The income ceiling is higher than the income for any of the claimants in the examples, and the examples were not structured to reflect the other variables on which Maryland places limits. Therefore, all of the numbers in columns 5-7 for circuit breaker B are the same as those in columns 2-4.

Circuit breaker C is Rhode Island's four-threshold formula, which applies just one threshold percentage to the total income of each claimant, as discussed earlier, and thus differs from Maryland's implementation of its four-threshold formula. Rhode Island imposes a \$300 benefit limit (although it is scheduled to increase in stages to \$500). This slashes the relief available to both Brown and Green, but it has no effect on White, who qualifies for only \$200 relief under the formula. The limit drops Brown's relief from \$1,720 to \$300, which is sufficient only to cut the property tax from 28.6 percent of income to 24.3 percent, rather than to 4.0 percent when no benefit limit is imposed. For Green, with \$16,000 income, net tax is 10.6 percent of income with the limit imposed, rather than 6.0 percent with no limit. Application of the Rhode Island benefit level reverses the relative leveling effects of circuit breaker C compared to circuit breaker E. With no limits, circuit breaker C (threshold) provided net tax burdens that were much more nearly the same for all claimants than under circuit breaker E (sliding-scale), but the very low benefit limit allow tax differences among the three claimants to remain greater than under the sliding-scale example. Limits obviously can change the character of the threshold circuit breaker.

Circuit breaker D is the same as C, except the four threshold percentages are applied incrementally, as in the Maryland case. This example is purely illustrative, because with this change it is not a circuit breaker actually applied in any state. As noted in discussing the examples without limits, this change in application of the Rhode Island thresholds reduces net tax as a percentage of income for each of the income levels represented by the three claimants. However, imposition of the Rhode Island \$300 benefit limit wholly nullifies the effect of this change in threshold application for both Brown and Green (incomes of \$7,000 and \$16,000), and significantly offsets the effect even for White, at the \$30,000 income level. Because \$30,000 is the income ceiling for the Rhode Island circuit breaker, this means the progressive nature of the four-threshold approach, incrementally applied, is wiped out for nearly all claimants.

Circuit breaker E is the Connecticut sliding-scale program. It sets a limit on benefits for each of the income brackets/relief percentages, as shown in the details provided in Table 4. As it happens, the limits are not binding for any of the three combinations of income and property tax illustrated by the Table 4 examples, so the figures are the same in the two sets of columns.

Various arguments are made for limits, but political acceptability clearly is important. Some legislators (and their constituents) require assurance that subsidies will not go to people who, by some measure, are not deserving of subsidies. Often, this is a maximum income amount, but in some instances, it is a limit on home value or on net worth, or some combination of limits, as in the Maryland noted above. Another reason for limits is to control the cost of the program. If funds are tight, allowing more relief for higher-income people or people with more valuable homes can come directly at the expense of those felt to have greater need. Several states make pro-rata cuts in benefits or otherwise adjust the program to keep outlays within a set budgetary appropriation.

The rationale for less than complete relief of property tax above the threshold amount – i.e., for co-insurance – is, at least in part, different. While this is another way to reduce program costs, it also keeps people from having nothing at stake when supporting local tax increases. If a threshold circuit breaker relieves 100 percent of tax in excess of the threshold, a person already above the threshold can vote for or otherwise promote higher property taxes, secure in the knowledge that raising taxes will have no effect on his or her net tax bill; this is also true for a sliding-scale circuit breaker with a 100 percent relief bracket. Such a situation is said to diminish voter accountability and to create a bias in favor of higher taxes. If a community has a large concentration of low-income people who would bear no additional cost from increased local property taxes, from the state's perspective, this is inviting a raid on the state treasury via the state-funded circuit breaker.

4. Income Definition

In designing an income-targeted property tax relief program, the definition of income is important. When such programs began to take root 50 years ago, a very broad definition of income was adopted by the states that pioneered in this area, as noted in the earlier section on the history of residential property tax relief. To a very considerable extent, broad definition of income remains the order of the day, but this is another point at which special advantage can be sought, and there has been erosion in some quarters. Income-conditioned property tax relief generally is adopted for the purpose of directing, or targeting, the money to those most in need of property tax relief. Failure to define income very broadly – i.e., omitting some income sources – raises program costs and, more importantly, creates inequities among program beneficiaries and makes the relationship between benefits and total income more random.

If an eliminated income source accounted for the same portion of income for all potential tax relief claimants, omitting income would be equivalent to setting higher income ceilings. In fact, individual sources of income account for widely varying percentages of income for different individuals and households. Therefore, omitting one or more from the definition of income artificially changes the (considered) relative economic situations of claimants and causes some who truly have higher incomes to appear less well-off, and thus to qualify for larger amounts of tax relief. All dollars spend equally well, regardless of their source, and it is inappropriate to ignore some sources in calculating income for tax relief determination.

Although to a considerable degree a broad definition of money income remains the norm for states' programs that use income to determine eligibility for and amount of property tax relief, there are some notable exceptions. Among the 35 circuit breaker states, for example, about a fifth exclude all or a portion of Social Security benefits, as discussed in the next section. Because of the monetary significance of Social Security, its exclusion is the most important departure from a broad definition of money income. This exclusion seriously undermines the equity of such property tax relief programs, even if they are restricted to the elderly; it is even worse when Social Security income is excluded in a property tax relief program for all ages. Excluding Social Security favors the elderly as a group because most of the benefits go to the elderly. For example, in 2004, approximately 90 percent of aged (65 and over) income units received some Social Security income, compared to just 13 percent for those 55-61 (SSA 2006a, Table 1.1).

Income of Those 65 or Older

Every two years, the Social Security Administration issues *Income of the Population Age 55 or Older*, a detailed report on the size and composition of income in this age group; the latest, for 2004, was issued in 2006. In general, the Social Security Administration (SSA) report presents information for "aged income units" rather than for households. Here the focus is on those 65 and over, the major age group for Social Security benefits. An aged income unit counts the income of either an unmarried person 65 years of age or more, or of both spouses for a married couple in which at least one spouse is 65 or more, whether living alone in a household headed by the aged person or in a household headed by a younger person, such as an adult child. As a result, SSA data for 2004 show 26,865,000 income units, compared to the Census Bureau's 23,135,000 households with an elderly head in that same year (SSA 2006a, p. 3). Unless otherwise noted, the information used below is for "all units" (rather than just married units, just Social Security beneficiaries' units, just black units, etc.) of people at least 65 years old.

While it is useful to focus on the income positions of the elderly units whatever their living arrangements, the SSA data are not ideal for this study because elderly people living in the homes of their adult children would not be eligible for property tax relief. As expected, the income distribution of elderly units is somewhat different from that of the family units of which the elderly are a part (SSA 2006a, Tables 2.1 and 3.1). For example, 18.0 percent of aged income units had less than \$10,000 income, compared to 12.3 percent for the family units with aged members; at the other end of the income distribution, 4.9 percent of aged income units had at least \$100,000 income, compared to 7.5 percent of the family units with aged members.

The elderly population derives income from a large variety of sources (SSA 2006a, Table 1.1). In 2004, earnings income from current employment was received by 24 percent of the income units of people 65 and over, while 92 percent received some form of retirement benefits. The major source of retirement income was Social Security, received by 89 percent of the income units; this was followed by private pensions or annuities (29 percent) and government pensions of one sort or another (14 percent). Income from assets was received by 55 percent of the income units (interest, 52 percent of units;

dividends, 20 percent, rent or royalties, 9 percent). Public assistance payments (Supplemental Security Income) were received by 4 percent of the aged income units, which matched the portion receiving veterans' benefits. Unemployment compensation was received by just 1 percent of the age 65 or older income units.

Equity Effects of Excluding Social Security Income

The large percentage of aged income units receiving some Social Security income³⁷ tends to suggest more uniformity in the importance of this income source than actually exists. First, the flip side of the fact that nearly 90 percent of the elderly income units receive some Social Security income is that income from this source is zero for over 10 percent of the group, who get no benefit from excluding such income. Moreover, the share of total money income accounted for by Social Security income differs substantially among its recipients. As shown in Table 5, each money income quintile for income units age 65 and over has some members who receive no Social Security income, some who receive all their income from Social Security, and many units spread widely between zero and 100 percent. In general, reliance on Social Security decreases as total money income rises. For example, the median income unit in each of the first two quintiles is in the group getting 80-100 percent of total money income from Social Security, while the median for quintiles 3, 4, and 5 are in the 60-79 percent, 40-59 percent, and 20-39 percent ranges, respectively. In considering potential inequity from ignoring Social Security income in targeting property tax relief, the great variation in the significance of Social Security in total money within each income quintile is quite interesting.

Percent of Income from Social Security	Total	Quintiles of Total Money Income*				
		1 st	2 nd	3 rd	4 th	5 th
0	9	15	4	5	8	12
1-19	9	1	1	2	5	35
20-39	15	1	3	8	22	37
40-59	16	4	7	22	33	13
60-79	14	7	14	24	23	2
80-100	38	72	72	38	10	1
Total units	100	100	100	100	100	100
<i>Exhibit 1: Upper limits</i>		<i>\$10,399</i>	<i>\$16,363</i>	<i>\$25,587</i>	<i>\$44,129</i>	<i>**</i>
<i>Exhibit 2: Selected Ranges</i>						
50 or more	60	81	90	76	48	7
90 or more	31	65	61	28	5	1
100	20	50	37	12	1	1

Source: Social Security Administration (2006a, Table 6.A2).
 * Details may not add to totals due to rounding.
 ** Open-ended; however, Table 3.1 in the report shows 4.9% of income units for the 65 and over age group had \$100,000 or more income, and 0.8% had \$200,000 or more.

Above-Average Income Made to Seem Below Average

Another perspective on the matter is provided by Table 6. It shows the concentration in several broad ranges of total money income of income units age 65 or more, for all such units and selected subsets. In particular, the subsets are elderly units that have no Social Security income and those with Social Security income; for those with such income, the percentages for each income range are shown both with Social Security benefits included and with those benefits excluded. This reveals to some extent how much relative income positions are changed, within the population 65 and over, by the exclusion of Social Security income from consideration. The income ranges selected for the table (summed from more detailed information in the source tables) are less than \$15,000, \$50,000 and over, \$100,000 and over, and \$200,000 and over.

The elderly who do not receive Social Security benefits are a disparate group. Over half (53.3 percent) have total money income below \$15,000, but 19.5 percent have at least \$50,000 income, and 1.4 percent have at least \$200,000 income; the comparable percentages for all elderly income units, regardless of Social Security beneficiary status, are 35.9 percent, 17.1 percent, and 0.8 percent. Thus, those not receiving Social Security benefits are more concentrated in both tails of the income distribution.

Social Security beneficiaries make up the majority of the 65 and over age group, and the percentages of them in each of the four selected income ranges are relatively close to those for the age group in total: under \$15,000, 32.0 percent for Social Security beneficiaries (35.9 percent for all); at least \$50,000, 16.4 percent (versus 17.1 percent); at least \$100,000, 4.5 percent (versus 4.9 percent); and at least \$200,000, 0.7 percent (versus 0.8 percent). Social Security recipients have smaller-than-average concentrations in each tail of the income distribution.

Table 6. Percentages of Aged Income Units in Selected Ranges of Total Money Income, by Social Security Benefit Status Categories, 2004				
Social Security Benefit Status Category	Less than \$15,000	At Least		
		\$50,000	\$100,000	\$200,000
All units	35.9	17.1	4.9	0.8
Units with no Social Security benefits	53.3	19.5	6.3	1.4
Units with Social Security benefits				
Including Social Security benefits	32.0	16.4	4.5	0.7
Excluding Social Security benefits	67.7	10.2	3.2	0.5
Source: Social Security Administration (2006a, p. 3 and Tables 3.1, 3.2, and 4.1).				

The final row of Table 6 shows the percentages of Social Security recipients in each of the four income ranges if their Social Security benefits are ignored, as they are in some states' income-targeted property tax relief programs. The numbers are strikingly different from those just considered for Social Security recipients when all their income is taken into account. Ignoring Social Security income more than doubles the percentage of Social Security recipients who appear – due solely to definitional shenanigans – to

have less than \$15,000 of total money income; specifically, the percentage in this income range jumps from 32.0 percent to 67.7 percent. Moreover, the portion of Social Security beneficiaries with at least \$50,000 income falls rather sharply, from 16.4 percent to 10.2 percent; their representation in the \$100,000 and over and \$200,000 and over income groups also drops noticeably.

In short, by simply pretending that Social Security income does not exist, the elderly who are Social Security recipients are transformed from a group that is better off than the average in terms of their concentration at low income levels, and close to the average in terms of upper-income concentrations, into a group that seems to be much worse off than average for their age group; this definition-based transformation enables Social Security recipients to reap larger property tax relief benefits. The situation calls to mind a statement made nearly 35 years ago by Mason Gaffney, in addressing the use of AGI as a measure of income for evaluating the weight of the property tax in relation to income: “. . . tax economists have long been up in arms against loopholes, and the public is, if anything, ahead of them. . . . AGI has gotten so bad, any public policy based on AGI is a fraud” (Gaffney 1973, p. 71). Whether it is AGI or some other definition of income, when significant pieces of income are omitted, the result is the same.

The consequences of ignoring Social Security benefits are objectionable on equity grounds because of both horizontal and vertical inequities that result. Horizontal inequities exist when households whose economic circumstances are essentially the same are treated very differently under tax (or tax relief) laws. This clearly happens when some or all of the income of some people is defined away while others with the same total income have to be considered for relief on the basis of their true total income amounts. In fact, given the degree to which the importance of Social Security income varies among even Social Security beneficiaries, ignoring this source of income undermines the basic philosophy of circuit breakers. Instead of property tax relief being predictably lower at higher levels of actual income, it will be distributed in a much more random fashion.

Increased Subsidies Inversely Related to Poverty Incidence

Vertical inequity results when people with higher incomes are provided larger tax relief benefits than people with lower incomes. Thus, vertical inequity results when Social Security income is ignored. This is shown by the dramatic increase in the percentage of Social Security recipients appearing to have income under \$15,000 if Social Security is ignored, already noted. It is further illustrated by Table 7, which shows poverty rates for the population age 65 and over, in total and by Social Security beneficiary status. The poverty rates are provided for the population 65 and over in the aggregate and also for each of four age groups within this broader one. For all people 65 years of age or more, the 2004 poverty rate is 9.8 percent; for Social Security beneficiaries it is 7.7 percent, and it is 25.4 percent for non-beneficiaries – over three times as high for those not receiving Social Security! Similar differences in poverty rates are shown for each of the constituent age groups, as well. For those 75-79, for example, the overall poverty rate is 9.1 percent, compared to 6.7 percent for Social Security beneficiaries and 31.1 percent

for non-beneficiaries. The group favored by excluding Social Security from the definition of income used to direct property tax relief has a poverty rate less than one-third as high as that for the subset of the elderly that the exclusion cannot benefit, and likely harms.

Age Group	All Elderly People	Social Security Beneficiary Status	
		Beneficiaries	Non-Beneficiaries
All, 65 or more	9.8	7.7	25.4
65-69	9.2	6.9	20.2
70-74	9.6	7.6	26.2
75-79	9.1	6.7	31.1
80 or more	11.3	9.5	30.3

Source: Social Security Administration (2006a, Tables 8.1 and 8.2).

Poverty rates in Table 7, and the data in Table 6 on changes in the distribution of Social Security beneficiaries across income ranges when Social Security benefits are ignored, make it clear that ignoring Social Security benefits redirects property tax relief benefits to the group within the elderly population that already is better off. It increases their benefits substantially by the political gimmick of simply defining away a major portion of their income. The group already worse off gets no benefit from this exercise, and very possibly ends up worse off. Unless funding of property tax relief is essentially unlimited over the relevant range of program costs, running up program costs by making Social Security recipients look poorer than they really are will have a suppressing effect on benefit levels in general, and this would hurt most those who have no Social Security benefits and have gotten no boost from defining them away.

Equity Effects of Ignoring Social Security Income – Circuit Breaker Examples

This section uses two circuit breaker examples in Table 4 to illustrate potential effects of ignoring Social Security income in determining circuit breaker benefits. The two Table 8 circuit breakers are simple threshold and sliding-scale examples (circuit breakers A and E in Table 4).

Constructing Hypothetical Claimant Examples

Five hypothetical claimants were developed drawing on information regarding the distribution of total money income and Social Security benefits among the population, or income units, at least 65 years old (SSA 2006a, Table 5.A4). Each claimant represents one of the five quintiles of total money income in 2004. The upper ends of the first four quintiles are \$10,399, \$16,363, \$25,587, and \$42,129; the fifth quintile is, of course, open-ended. The income levels for the claimants in Table 8 are the mid-points of the range between quintile boundaries for the middle three quintiles, rounded to the nearest \$100 dollars, plus essentially arbitrary amounts for the first and fifth quintiles, resulting in the following five income levels: \$8,000, \$13,400, \$21,000, \$34,900, and \$60,000.

For each money income quintile, the Social Security income is the median amount reported in the SSA data for the quintile, also rounded to the nearest \$100: \$7,400, \$11,600, \$14,400, \$17,100, and 18,300. The property tax amount for each claimant in Table 8 is the same as in Table 4, \$2,000.

A caveat is appropriate. The five claimants are illustrative rather than representative. As already noted, each total money income quintile has income units that derived none of their income from Social Security and some that got all of their income from Social Security; between these extremes, the Social Security income units in each quintile were scattered widely. Thus, almost any Social Security income amount could be selected for the examples of how income exclusion affects circuit breaker benefit determination. Using median benefit amounts may make construction of examples seem more scientific than it is; mostly, it assures that examples do not represent extremes. The median benefit amount for the fifth quintile, for example, is \$18,278 (rounded to \$18,300), but over 20 percent of the income units in that income quintile received \$25,000 or more – perhaps about \$50,000 in some instances, given the individual maximum Social Security benefit of nearly \$25,000 in 2004. In this connection, it is useful to note again the differences in income distribution for Social Security beneficiaries between actual income and income minus Social Security benefits, given in Table 6.

Moderate Examples of Effects on Circuit Breaker Benefits

Prior to tax relief, the \$2,000 property tax bill assigned to the claimants in Table 8 ranged from 25.0 percent of income to 3.3 percent. Application of circuit breaker A, the 3.5 percent threshold formula, reduces net property tax burden for each of the first four claimants (Hill, Rivers, Stone, and Waters) to 3.5 percent of income; Woods, representing the fifth income quintile, had too much income to qualify for relief – or not enough property tax to get above the relief threshold – so his property tax remains at 3.3 percent of income. The benefit limits used by Michigan for this circuit breaker (which happens to be for non-elderly claimants) are not applied; the effects of limits would be similar to those discussed in connection with Table 4, and that is not the focus of this section.

Table 8. Effects of Excluding Social Security Benefits from Income for Circuit Breaker Benefit Determination: Threshold and Sliding-Scale Examples for Claimants 65 or Older					
Income & Tax Elements	Claimants, Five Quintiles of Money Income for Aged Income Units				
	Hill	Rivers	Stone	Waters	Wood
Income	\$8,000	\$13,400	\$21,000	\$34,900	\$60,000
Social Security	\$7,400	\$11,600	\$14,400	\$17,100	\$18,300
Adjusted income	\$600	\$1,800	\$6,600	\$17,800	\$41,700
Property tax	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Property tax/income	25.0%	14.9%	9.5%	5.7%	3.3%
<i>Circuit Breaker A – Actual Income</i>					
Threshold amount	\$280	\$469	\$735	\$1,222	\$2,100
Excess tax	\$1,720	\$1,531	\$1,265	\$779	\$0
Relief	\$1,720	\$1,531	\$1,265	\$779	\$0
Net tax	\$280	\$469	\$735	\$1,222	\$2,000
Net tax/income	3.5%	3.5%	3.5%	3.5%	3.5%
<i>Circuit Breaker A – Income Minus Social Security</i>					
Threshold amount	\$21	\$63	\$231	\$623	\$1,460
Excess tax	\$1,979	\$1,937	\$1,769	\$1,377	\$541
Relief	\$1,979	\$1,937	\$1,769	\$1,377	\$641
Net tax	\$21	\$63	\$231	\$623	\$1,460
Net tax/income	0.3%	0.5%	1.1%	1.8%	2.4%
<i>Circuit Breaker E – Actual Income</i>					
Relief percentage	50%	50%	30%	10%	0%
Relief	\$1,000	\$1,000	\$600	\$200	\$0
Net tax	\$1,000	\$1,000	\$1,400	\$1,800	\$2,000
Net tax/income	12.5%	7.5%	6.7%	5.2%	3.3%
<i>Circuit Breaker E – Income Minus Social Security</i>					
Relief percentage	50%	50%	50%	40%	0%
Relief	\$1,000	\$1,000	\$1,000	\$800	\$0
Net tax	\$1,000	\$1,000	\$1,000	\$1,200	\$2,000
Net tax/income	12.5%	7.5%	4.8%	3.4%	3.3%
Source: Author's calculations. Five claimants' income and Social Security benefit amounts based on Social Security Administration (2006a, Table 5.A4); see text. For details of circuit breakers A and E, see Table 4.					

The second example in Table 8 is the same as the first, except that the measure of income used is net of Social Security. Subtracting the median Social Security benefit amount for each quintile from total income for the quintile's claimant example results in larger benefit amounts for each of the five claimants. Pretending that Woods (quintile 5) did not have \$18,300 of his income dropped the threshold amount low enough that he qualifies for \$541 in property tax relief, which dropped net property tax to just 2.4 percent of income. Note that net tax amounts still are compared to total income; a benchmark is necessary for making comparisons, and this is the appropriate one.³⁸ Effective rates of net property tax with respect to income display a progressive pattern across the five quintiles, ranging from 0.3 percent in the first quintile to 2.4 percent in the

fifth; this outcome is misleading and results from the nature of the examples – use of median Social Security amounts. Real-world effective property tax rates with respect to total money income would vary widely within each quintile, because the importance of Social Security income varies widely. While a simple threshold formula, applied without benefit limits, leads to proportional net property taxes in relation to income (first example), leaving out a major source of income drops those effective rates well below the threshold level (second example).

The third example of Table 8 (circuit breaker E) is of the basic sliding-scale sort. Given the particulars of the Connecticut formula used here, the two claimants with the lowest incomes (Hill and Rivers) both qualify for the maximum 50 percent property tax reduction because of the width of the first income bracket, and the other claimants receive reductions of 30 percent, 10 percent, and zero. The pattern of effective net property tax rates relative to income is regressive, ranging from 12.5 percent to 3.3 percent, but less so than before the relief (25.0 percent to 3.3 percent). Disregarding Social Security income doesn't change anything for the two lowest-income claimants; the lowest income bracket, which provides 50 percent relief, is \$14,300 wide and both Hill and Rivers already were in that bracket based on their total incomes; ignoring Social Security income provides no added benefits for them. However, the claimants in the third and fourth quintiles (Stone and Waters) benefit handsomely from having a chunk of their income defined away. Stone's reduction percentage jumps from 30 percent to 50 percent, which increases property tax relief by \$400 and reduces net property tax from 6.7 percent of income to 4.8 percent. Waters is affected even more strongly. The relief percentage goes from 10 percent to 40 percent, tax relief rises from \$200 to \$800, and tax the net property tax load relative to income falls from 5.2 percent to 3.4 percent. Woods, in the top income percentile, still gets no tax relief because the Connecticut sliding-scale structure drops the relief percentage to zero at an income level lower than even his artificially-reduced level.

The net result in this instance is increased regressivity of the pattern of effective property tax rates with respect to income. Given the details of the examples and of the Connecticut sliding-scale circuit breaker structure, ignoring Social Security benefits helps only Stone and Waters, in quintiles 3 and 4; both ends of the income distribution are unaffected.

Summing Up

A legislative committee setting out to design a system of residential property tax relief to target relief based on need probably would restrict the relief to households below some level of income, and they might well choose the circuit breaker form of relief. Ostensibly, that is what a majority of states have done. But imagine a planning session of a legislative committee in which the following exchange occurs.

- Legislator A: “Let’s divide households into two groups and provide property tax relief to only the group with the lower incidence of poverty.”

- Legislator B: “Fine idea! But within that group, we should provide a break for those who are relatively better off – maybe exclude from consideration a source of income that those worse off lack; let the ones who have that income pretend to be at least as poor as those who lack it.”
- Legislator C: “I’m happy to see that we’re all on the same wave-length here.”

Wittingly or not, several states have developed essentially programs such as the one suggested by the exchange in this imaginary committee meeting. As discussed more fully later, most states with circuit breakers either provide their benefits only for the elderly or provide more generous relief for the elderly, when all age groups are included. This is consistent with the proposal by legislator A. At the time income-targeted relief in general and circuit breakers in particular were first taking root, the incidence of poverty among the elderly was considerably greater than for the population as a whole; however, that has not been the case in the last quarter-century, and social security is a major reason for the change (SSA 2006b, p. 11). In about a fifth of the circuit breaker states, the idea set forth by legislator B also has been implemented by adopting income definitions that exclude either part or all of Social Security benefits.

Perhaps legislator A and like-minded colleagues are just unaware of the shift in the relative poverty status of the elderly and non-elderly, and of the difference within the elderly cohort between those who receive Social Security benefits and those who do not. Another possibility is that the provisions are what they are because the elderly are a large, attentive, and politically-active group; this assures that the desires of the elderly population will be presented to legislative bodies.³⁹ Moreover, because Social Security is almost wholly an income source for the elderly and because most of the elderly receive some such income, it is not surprising that efforts have been made to secure special preferences for Social Security recipients. Although it was used earlier in this paper, the following quote bears repeating: “The universal truth about taxation is that people want government without paying for it. The history of taxation is the story of a struggle among individuals and groups intent upon achieving that goal for themselves or for their groups” (Fisher 1996, p. 187).

So far, attention has gone to the treatment of Social Security income, largely because of its magnitude. However, several states also exclude Supplemental Security Income (SSI) when defining income for property tax relief programs. A graph for February 2006 shows guaranteed SSI income was \$7,236 for an individual and \$10,848 for a couple, and the accompanying text explains that the graph “. . . shows that SSI recipients⁴⁰ with little or no income may receive the full SSI Federal benefit, which is 73.8 percent of the Federal poverty level for an individual and 82.2 percent for a couple. The portion of the poverty gap not filled by Federal SSI may be filled by State SSI supplemental payments” (SSA 2006b, p. 11).

In a system that purports to base benefits on income, the obvious explanation for ignoring income from some sources is the political nature of such decisions. Some of the actors in this endeavor may be well-intentioned. It is not hard to imagine legislators reasoning, for example, that people who receive SSI are not very well off and deserve help. However,

that is not a sound reason for ignoring the income they do receive. If further help is thought desirable, it should be provided through the expenditure side of the budget – state SSI supplements, for example – rather than being tucked into a property tax relief program where the results are uncertain. Some in the intended benefit group may qualify for little or no property tax relief (for example, they may live in housing for which no property tax is paid, and thus be ineligible for property tax relief); of those eligible for property tax relief, some may already be at the maximum tax relief level, as in some of the Table 8 examples, and thus get no further help from the changed income definition. But because the change in definition would benefit some of those receiving SSI income, it would cause inequity between those people and others who may be equally deserving.

Some of the results of ignoring Social Security income might surprise some of the supporters of this gimmick, whether the particular source of income under consideration is Social Security or something else. Table 8 examples showed that claimants in the lowest two income quartiles derived no benefit from the change in income definition under the Connecticut sliding-scale circuit breaker, but some at higher income levels did. Such an outcome may be fitting, given that the overall effect of the practice, as shown by relative poverty rates, is to favor those who are relatively better off to begin with; but it may also be surprising. Moreover, it is not an outcome unique to the Connecticut circuit breaker structure. The same result would obtain for the Maryland multiple-threshold circuit breaker (circuit breaker B in Table 4), if it were used in Table 8. It has a zero-threshold bracket that is \$8,000 wide, so Hill, the claimant from the first income quartile in the Table 8 examples, would be unaffected by the change in income definition under that program, as well. Clearly, the structure of a circuit breaker program is of critical importance in determining who gains from defining away Social Security income.

Losers, however, are likely to be those already worse off – those with no Social Security income. Ignoring this important source of income obviously means higher program costs for any given circuit breaker structure. If the cost goes too high and benefits have to be scaled back, those who got no boost from the change in income definition are bound to be losers. Even without a general scaling back, they are relative losers. This could be the result from excluding income sources other than Social Security, as well, but the problem is likely to be worst for large income sources that are of varying importance across the claimant population.⁴¹

5. Circuit Breakers

An earlier section of this paper has noted some discrepancies between other studies in their counts of property tax circuit breakers. Some programs I believe are circuit breakers are omitted from one or more lists, and some programs on other lists I do not believe qualify as circuit breakers. Although starting from scratch to build a list of circuit breakers by seeking out information on such programs has required more time than estimated at the outset, it was unquestionably quicker than it would have 25-30 years ago, for example. Then, instead of looking for lists of property tax relief on state revenue or taxation department websites, doing Google searches, and the like, it would have been necessary to have access to a set of the Commerce Clearinghouse loose-leaf state tax

service volumes, or its equivalent, and look through the volumes for each state, make phone calls to the states, and so forth. The Internet has made finding information more convenient in many ways.

It is not always easy to find what one is looking for on the Internet, however. State tax or revenue department websites are quite uneven in terms of the amount of information to which they provide access and the ease of that access when information is available in this way. Some states have summary lists of property tax relief programs, with links to more detailed information, but search generally is not this easy. Tax codes sometimes are accessed through a link on the home page of the agency, and when the link is opened the sections are laid out in a way that makes it easy to find the information being sought; at the other extreme, it may not be possible to locate the tax code on line. Experiences pretty much cover the range between these extremes.

A further complication, of course, is that sometimes the tax agency and tax code are the wrong places to look for information on property tax relief. Other possible locations are in code sections and/or agencies dealing with problems or issues of the elderly or of local government. When attempts to locate information in what had seemed the most logical places produced little or nothing, broader searches were necessary. In some cases, old-fashioned telephone calls finally enabled location of needed information. Of course, such calls seldom are old-fashioned; modern, automated telephone systems often make resort to the telephone a frustrating experience. This, coupled with some uncertainty as to where in state government information on property tax relief the institutional home of information on property tax relief made the Internet the first place to look. The list of sources has a section for each state with sources specific to that state.

The information assembled is to be verified by someone in each state, but this is an ongoing effort. Some of the problems just alluded to pertain to this effort, of course. And when an appropriate person is located, responses are not always prompt. Affected portions of the report will be revised as needed when more information will be revised when available as it is obtained.

States with Circuit Breakers

Thirty-four states have circuit breakers that are funded at the state level and the District of Columbia also has circuit breakers; by the usual reckoning, this means state-funded circuit breakers are found in 35 states.⁴² In two states where there is no state-level circuit breaker – Hawaii and Virginia – there are local circuit breakers; these are discussed at the end of this section on circuit breaker provisions. Virginia is notable in this regard because there is no state circuit breaker; indeed, no real property tax relief is provided statewide in Virginia. Hawaii, on the other hand, has a statewide homestead exemption and a classified property tax system that taxes homes at a favorable rate. There are local-option circuit breakers in some other states, as well, including Connecticut and Maryland, but these essentially are add-ons to the state programs.

State-funded circuit breakers are found in all states but the following: Alabama, Alaska, Arkansas, Delaware, Florida, Georgia, Hawaii, Indiana, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia. The striking thing about this list is its geographic concentration. Except for Alaska, Delaware, Hawaii, and Indiana, the states without state-funded circuit breakers are southern states; because Indiana borders Kentucky, there are 13 contiguous states that lack state-funded circuit breakers; when Ohio's circuit breaker ends after 2007, the total will rise to 14 contiguous states. It would be interesting to know just why this pattern exists. Part of the explanation might be relatively low property taxes and/or classified systems that put a light load on residential property (e.g., Alabama, Louisiana). Lack of a state income tax also could be a factor in Florida, Tennessee, and Texas.⁴³

What Is – and Is Not – a Circuit Breaker?

Circuit breakers vary in a number of ways, and establishing boundary lines between what is and what is not a property tax circuit breaker is sometimes difficult. The principal criterion for considering a program to be a circuit breaker, stated previously, is this: For a given property tax amount, an inverse relationship between income and tax relief amounts is exhibited over a significant range of income. Examples have been given in Part 3, and more state circuit breaker structures are discussed in this section.

Examples That Are Not Property Tax Circuit Breakers

Some examples of what is not a circuit breaker can help to clarify the concept as applied in this paper. There are several examples of programs to which others have attached the circuit breaker label that are not so classified here. Three examples come from Indiana, one of 16 states listed above as lacking a circuit breaker. The first example is recent and is described by the Indiana Department of Local Government Finance in a "2 Percent Circuit Breaker Fact Sheet" (Indiana DLGF 2006d).⁴⁴ As described therein, the 2006 law creating the program was "... aimed at helping Hoosiers by ensuring that they don't pay more than 2 percent of their property value in taxes." It goes into effect in 2007 (tax bills payable in 2008) for residential property and in 2009 (payable 2010) for other types of property. Credits are applied to tax bills for any amount of tax in excess of 2 percent of estimated market value. The Fact Sheet further states, "The impact the Circuit Breaker may have on local governments and taxpayers will not be fully known until the annual adjustments of assessed values are completed later this year." Or year-to-year, presumably, with annual market valuation adjustments.

This program obviously is cap on the amount of tax relative to assessed value. This may prevent a "property tax overload" as John Shannon said of Wisconsin's original circuit breaker, but it defines overload in relation to property value rather than income. Income of the property owner is not a consideration. Over the course of about 40 years, when used in connection with property taxation, the circuit breaker name has come to be associated with income-conditioned property tax relief. Whatever one may think of the use of the name in this connection, it has provided a shorthand reference to a particular sort of property tax relief that has a reasonably clear meaning to people involved with

property taxation and property tax relief. Indiana's use of the circuit breaker name for a tax cap muddies the waters and makes easy communication in this field more difficult. If the name were not already associated with a different sort of tax relief, calling a cap a circuit breaker would be as defensible as using the name for programs that relate tax relief to income. But the circuit breaker name has taken a different meaning, and it would be nice to have consistent use of it.

Another example of what is not a circuit breaker also comes from Indiana. The "unified tax credit for the elderly" is a refundable credit against the state income tax for residents at least 65 years old that is structured like a sliding-scale circuit breaker. Consider, for example, the schedule of credits for married couples living together if both are at least 65: if income (federal AGI) is under \$1,000, the credit is \$140; if income is at least \$1,000 but less than \$3,000, it is \$90; and if income is at least \$3,000 but under \$10,000, the credit is \$80.⁴⁵ Married couples must file jointly, and there can be only one claim per household. Deciding this is not a residential property tax circuit breaker was a bit closer call than the 2 percent tax cap. This same program (adopted in 1982 and not amended since 1985) was considered a property tax circuit breaker by the Advisory Commission on Intergovernmental Relations (ACIR 1994, Table 39). I dissent, and so do other recent surveys of property tax relief.⁴⁶ Although structured as a sliding-scale circuit breaker, there is no property tax connection. The statute does not mention property tax or rent and, although there can be only one claim per household, this does not limit claims to heads of household, who would have to pay either property tax or rent. Neither statute nor claim form has any provision that would rule out claims by elderly people living with adult children in the children's houses and paying neither property tax nor rent. The unified credit is a form of assistance for low-income (as measured by AGI) elderly residents of Indiana.

Two other state programs on the ACIR list of property tax circuit breakers for 1992 (ACIR 1994, Table 39) also do not pass muster. One is a Hawaii refundable income tax credit for renters who have AGI below \$30,000 and pay at least \$1,000 in rent for occupancy of living quarters that are not exempt from property taxation.⁴⁷ The credit is \$50 per "qualified exemption" on the state income tax return (\$100 per exemption if the taxpayer is at least 65 years old). This may be considered property tax relief because of the stipulation that the rented accommodations cannot be in a facility wholly or partially exempt from property taxation, but it is not a circuit breaker. The credit is a flat amount per person and does not decline as income rises; if AGI is below \$30,000 the full benefit is available, but at or above that level there is no benefit.

The other program on the ACIR circuit breaker list that fails the circuit breaker test is a Tennessee program for eligible elderly or disabled homeowners that reimburses the property taxes on ". . . the first twenty-five thousand dollars (\$25,000), or such other amount as set forth in the general appropriations act, of full market value . . ."⁴⁸ As with the Hawaii renters' credit, this Tennessee program does not phase out relief as income rises; those below the income ceiling qualify for reimbursement and those above it do not.

The last example of what is not a circuit breaker finds us back home again in Indiana.⁴⁹ It is a refundable income tax credit for Lake County owner-occupants of homestead properties, equal to the lesser of \$300 or property taxes paid, if earned income is under \$18,000. Between \$18,000 and \$18,600, the maximum credit of \$300 is reduced by \$0.50 for each dollar of earned income above \$18,000, reducing the credit to zero at \$18,600 of earned income. Over that \$600 range, relief is inversely related to income, and the program is a property tax relief program. But is it a circuit breaker? No; it is a homestead credit that is phased out over a comparatively small range of income to avoid a notch problem. An inverse relationship between income and property tax relief is not exhibited over a large enough range of income to qualify as a circuit breaker. The distinction is important, but the criterion is admittedly imprecise; the boundary between what is and is not a significant range of income has not been specified.

Example of What Is a Property Tax Circuit Breaker

The Wyoming circuit breaker included in Table A-1 and tables later in this part of the report is a borderline case placed in the circuit breaker group, but not without some discomfort. It is a tax rebate for elderly and disabled homeowners and renters structured as a circuit breaker; a maximum benefit is reduced by the percentage by which actual income exceeds \$12,500 for married claimants or \$8,000 for single ones. It thus is similar to the Indiana unified tax credit for the elderly discussed above, and it further resembles the Indiana program by not considering the actual amount of property tax or rent paid. In short, a case can be made for the position that the Wyoming program is another example of a general relief program for the low-income elderly population. Unlike the Indiana program, however, the Wyoming circuit breaker establishes at least some connection to property taxes. There is some provision for coordinating it with other programs clearly linked to property taxes and providing property tax relief; further, the statute includes the requirement that the refund checks for this particular program be accompanied by a letter stating, in part, “. . . that each payment represents an allowance for sales and use tax refund, property tax refund and a refund for utility or energy costs; . . .” (Wyoming Statutes 39-11-109(c)(iv)). Presumably something in the legislative history of this program would show it replaced an earlier property tax relief program.⁵⁰ Is this enough connection to the property tax to make this a property tax circuit breaker? It was a close call that could have gone either way.

More generally for now (but discussed more, below), several states’ circuit breakers do not use actual property tax or rent payments in calculating relief, except that tax or rent payments establish maximum relief. This link to the property is rather slight, but it is a link, and it is a bit stronger than in the Wyoming program. In addition, these programs generally require that the claimant be the head of a household and the owner or renter of the homestead property.

It is hoped these examples that I consider not to be residential property tax circuit breakers help clarify the nature of circuit breakers. Discussion of some specific circuit breakers in a later part of this section will provide additional insight into the nature of

these programs, which really are quite varied. First, however, circuit breaker beneficiary groups under state circuit breakers are discussed.

Circuit Breaker Beneficiaries

One of the differences among circuit breakers is the groups of people for whom they provide benefits. Some include homeowners and renters while others are for owners only or renters only; whatever the housing tenure status group(s), eligible members may be restricted to just the elderly or include all age groups.⁵¹

The idea of extending circuit breaker property tax relief to renters has been embraced by more states than has the idea of providing relief regardless of age (Table 9). The number of states restricting their programs to the elderly is nearly twice as large as the number extending circuit breaker tax relief to people of all ages: 23 elderly only, 12, all ages.⁵² By comparison, renters are covered by circuit breakers in 28 states; 18 cover elderly renters and 10 include renters of all ages.⁵³ Homeowners are covered by circuit breakers in 34 of the 35 states; the Oregon circuit breaker is for elderly renters only. Recapitulating these totals in a slightly different way, the number of circuit breaker states by beneficiary group is as follows:

- States with circuit breaker programs for homeowners, 34
 - States in which elderly homeowners are covered, 34
 - States in which the only homeowners are covered are elderly, 22
 - States in which homeowners of all ages are covered, 12
- States with circuit breaker programs for renters, 28
 - States in which elderly renters are covered, 28
 - States in which the only renters covered are elderly, 18
 - States in which renters of all ages are covered, 10

In the summary statistics, Kansas is counted as a state with circuit breaker coverage of only elderly homeowners and renters, but it is a special case. While several states that essentially limit coverage to the elderly also include non-elderly with certain types or degrees of disability, such provisions tend to extend coverage into the younger age group to just a small extent. Kansas, on the other hand, includes non-elderly homeowners and renters who have a dependent child under the age of 18; this opens the Kansas circuit breaker to a considerable number of non-elderly households.

States that include renters as well as homeowners in their circuit breakers do not always provide the same benefits to both groups. Similarly, programs that include non-elderly as well as elderly homeowners and/or renters do not always provide the same benefits to both age groups. Universality and uniformity are not necessarily the same thing. Additionally, some programs differentiate between married and single claimants, or other measures of household size. Table A-1 provides some details, and some examples are discussed later, after the overview of various features of circuit breaker programs.

Table 9. State Residential Property Tax Circuit Breakers by Eligible Population Groups and Minimum Ages for Elderly Benefit Status, 2007		
	All Ages*	Elderly Only (age threshold)
Homeowners & renters	District of Columbia (62)* Maine (62; 55)* Maryland (60)* Michigan (65)* Minnesota (65)* New Jersey (65)* New York (65)* Rhode Island Vermont Wisconsin	Arizona (65) California (62) Colorado (65) Connecticut (65) Illinois (65) Iowa (65) Kansas (55)** Massachusetts (65) Missouri (65) Nevada (62) New Mexico (65) North Dakota (65) Pennsylvania (65; 50)* Utah (65) West Virginia (65)** Wyoming (65)
Homeowners only	Montana** New Hampshire	Idaho (65) Nebraska (65) Ohio (65)** Oklahoma (65) South Dakota (65) Washington (61; 62)*
Renters only		Montana (62)** Oregon (58; 65)*

Source: Table A-1 and state source materials.

* Providing benefits for all ages does not always mean providing the same benefits; seven of the 10 states in this category enhance their programs in some way for some claimants at or above the indicated ages; similarly, some states differentiate within the elderly group, indicated by a second age that is less generally applicable. It is not shown here, but eligibility requirements and/or benefits for renters sometimes differ from those for homeowners. More information on these differences are provided in Table A-1.

** Notes for indicated states:

Kansas program is available to younger homeowners and renters with a dependent child under 18.

Montana has a program for homeowners and renters age 62 and over and one for owners of all ages, so it is shown in the elderly renters and all owners boxes.

Ohio revised its homestead exemption effective July 2007, removing income-targeting – and thus taking it out of the circuit breaker category; starting with taxes payable in 2008, Ohio exempts a flat \$25,000 of market value for all homeowners 65 and over (and disabled, as well).

West Virginia's program for elderly owners and renters is dormant, but still in the statutes; a new program for homeowners of all ages was adopted in 2007 and becomes effective in 2008.

The discussion below considers various ways in which states distinguish among various beneficiary groups in providing circuit breaker benefits. Differences are illustrated by examples from specific states. Summary tables to show similarities and differences in the

states' circuit breaker programs accompany the text. In addition appendix Table A-1 is a large table that provides some detail for each circuit breaker.

Differences Based on Age: Elderly and Non-Elderly

Where age matters, the elderly are preferred over the non-elderly. In the 24 states that provide circuit breaker relief for just the elderly, the advantage of that designation is being able to participate in the program at all. In the 12 states with circuit breakers for either homeowners and renters of all ages or just homeowners of all ages, the advantage – if any – of being classed as elderly is more favorable treatment of one sort or another, such as a higher level of benefits or a lower income ceiling. “Elderly” is an indistinct term; a specific minimum age must be defined at which benefits restricted to the elderly become available. Table 9 is a matrix with a column for all ages and one for elderly only and rows for occupancy status (homeowners and renters, homeowners only, renters only); the age in parentheses following the name of a state covering all ages is the minimum a claimants must attain to qualify for either coverage (in states covering only the elderly) or more favorable treatment (for states covering all ages).

Of the 10 states that include homeowners and renters of all ages, seven treat the elderly more favorably: District of Columbia, Maine, Maryland, Michigan, Minnesota, New Jersey, and New York. The three that do not distinguish among claimants on the basis of age are Rhode Island, Vermont, and Wisconsin. Among the 24 states that provide circuit breaker coverage for only the elderly, 18 set 65 as the age at which coverage becomes available, in three others it is 62, and ages 61, 58, and 55 are each found in one of these states. For the seven states that cover all ages of homeowners and renters, but with some age-based differences, the minimum age for improved treatment is 65 in four, 62 in two, and 60 in one. In addition, a few states make some distinction within the elderly group.⁵⁴ Overall, the most common minimum age for elderly status and benefits is 65 (22 states), followed by 62 in a distant second place (five states).

The District of Columbia has the same maximum benefit (\$750) and the same income ceiling (\$20,000) for both elderly (62 and over, or disabled) and non-elderly circuit breakers. The advantage for the elderly is that they can reach the maximum benefit at a lower income level for two reasons. First, the threshold formula for the elderly has four brackets and threshold percentages that range from 1 percent of the first \$4,999 of income to 2.5 percent of the amount of income between \$15,000 and \$20,000; by comparison, the circuit breaker for the non-elderly has six brackets with threshold percentages ranging from 1.5 percent of the first \$2,999 of income to 4 percent of the income between \$15,000 and \$20,000. The \$15,000 lower boundary for the highest bracket is common to both circuit breaker formulas; at that income level, the cumulative threshold amount – the amount of property tax that has to be borne before any relief is available – is \$225 for the elderly and \$400 for the non-elderly; at the maximum qualifying income level, \$20,000, the two threshold amounts are \$350 and \$600. In addition to different thresholds to be cleared before any property tax relief can be gotten, relief for tax amounts above the threshold also differs. For the elderly, the full amount of tax above the threshold amount is relieved (subject, of course, to the \$750 maximum);

while for the non-elderly, there is a 5 percent co-payment, or coinsurance, requirement in the first bracket and a 25 percent co-payment in each of the next five brackets.⁵⁵

Similarly, in Michigan the non-elderly (under 65) have relief calculated under a 3.5 percent threshold formula and relief is 60 percent of the excess of property tax over the threshold amount; for the elderly, there are five thresholds that range from 0 percent of the first \$3,000 of income to 3.5 percent of income over \$6,000, and tax relief is the full amount of property tax in excess of the threshold amount. The maximum relief for both age groups is \$1,200, and the maximum qualifying income is \$82,650.

New York takes a simpler approach to favoring the elderly. For homeowners and renters of all ages, the income ceiling is \$18,000, relief is calculated under the same seven-threshold formula, and tentative relief is 50 percent of the amount by which property tax exceeds the threshold amount. However, the state sets a maximum relief amount for each of the eighteen \$1,000-wide brackets, with a different set for each of the two age groups. For claimants with no more than \$1,000 income, maximum relief is \$375 for the elderly but just \$75 for the non-elderly; as income falls so do maximum relief amounts, and the relative gap between the two ages narrows; in the highest bracket (\$17,001-\$18,000), the maximum amounts are \$86 and \$41.

Differences Based on Occupancy Status: Homeowners and Renters

Nine states with circuit breakers for both homeowners and renters treat owners more favorably, as shown in Table 10 (Table A-1 provides some details for each state). Included are four of the 10 states covering homeowners and renters of all ages (Maryland, Minnesota, New Jersey, and Vermont) and five states with circuit breaker coverage for only elderly homeowners and renters (California, Connecticut, North Dakota, Pennsylvania, and Utah).

Examples of Homeowner-Renter Differences

Differences in some states are considerable. Pennsylvania provides relief to elderly owners and renters, but the income ceiling for owners is \$35,000 while the ceiling for renters is \$15,000. The New Jersey circuit breakers for homeowners of all ages has a \$250,000 income ceiling and an implicit relief limit of \$2,000; only the first \$10,000 of property tax is considered and the maximum relief provided by the three-bracket sliding-scale formula is 20 percent. Two circuit breaker programs, or formulas, are used for renters of different ages and neither is the same as for owners. For all renters the income ceiling is \$100,000; the maximum benefit is \$860 for those at least 65 years old and \$350 for younger renters.

North Dakota circuit breaker property tax relief is for the elderly only but, as in New Jersey, formulas and limits are different for owners and renters. Renters get relief for the amount by which 20 percent of rent for occupancy exceeds 4 percent of income, up to a \$240 relief maximum. Homeowners' relief is based on a five-bracket sliding-scale formula that removes (exempts) 20 percent to 100 percent of taxable value from the tax

base, subject to a limit in each bracket that translates to amounts of market value ranging from about \$13,500 to \$67,500. All claimants are subject to an income ceiling of \$14,500 (the limit rises to \$17,500 in August 2007); at the same time, the limits on exempt value also increase, to a maximum of \$75,000.

Table 10. States That Differentiate in Some Way Between Circuit Breaker Claimants on Selected Bases Other Than Age, 2007	
Bases for Differentiation	States
Homeowners vs. renters, in programs including both	California, Connecticut, Maryland, Minnesota, New Jersey, North Dakota, Pennsylvania, Utah, Vermont
Household size	Arizona, Colorado, Connecticut, Illinois, Maine, Maryland, Massachusetts, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, South Dakota, Wisconsin, Wyoming
Disability – elderly programs	Arizona, California, Colorado, Connecticut, Idaho, Illinois, Iowa, Kansas, Missouri, Nebraska, New Jersey, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Washington, Wyoming
Disability – all-ages programs	District of Columbia, Maine, Michigan, Minnesota
Other*	Idaho, Montana, Pennsylvania, Washington
Source: Table A-1 and state source materials.	
* Notes: <i>Idaho</i> – Program for elderly homeowners also includes non-elderly widows and widowers, former prisoners of war, and some others. <i>Pennsylvania</i> – Programs for elderly homeowners and renters also include widows and widowers 50 and over. <i>Montana</i> – Besides programs for all homeowners and elderly renters, there is a program for disabled veteran homeowners. <i>Washington</i> – Besides a program for elderly homeowners, there is a supplemental program for un-remarried surviving spouses of veterans who died in certain circumstances.	

Vermont has two circuit breakers; both apply to homeowners of all ages but only one applies to renters. The one just for homeowners applies to only the education tax, but that is the major portion of the property tax;⁵⁶ it is available for any owner of property used as his or her principal residence, regardless of income. For a homeowner with income of \$90,000 or more, however, only the tax on the first \$200,000 of home value is considered, but there is no cap on value for owners with less income. The formula for the education tax circuit breaker applies a single threshold percentage, but the percentage varies across localities with the level of local school spending. If a locality chooses to spend more than the state’s basic grant per pupil, both its education tax rate and the threshold for the education tax circuit breaker are increased; a 10 percent increase in school spending level, for example, raises the threshold 10 percent, to 2.2 percent. The second circuit breaker applies to property taxes net of any education tax relief under the circuit breaker just described, and is available to all homeowners and renters of homestead property with incomes no higher than \$47,000. Relief in this second program is calculated using a three-bracket threshold formula (2 percent for the first \$10,000 of income, 4.5 percent of the next \$15,000, and 5 percent of next \$22,000). Because renters

are excluded from the first circuit breaker, they are subject to a lower income ceiling and a higher threshold level for any relief they may get from the education tax.

Determining Renters' Property Tax Payments (Or Not)

When renters are included in a circuit breaker, some estimate of property taxes has to be made, or the issue has to be dodged in some way. The most common approach is for the state to stipulate that some percentage of rent is taken to be property tax; 23 states do this. Percentages of rent defined as property tax payments range widely, from under 10 percent in two states (6 percent in New Mexico, 8.5 percent in Nevada) to over 25 percent in one state (Connecticut, 35 percent). The most common figure is 20 percent, found in eight states: Colorado, Kansas,⁵⁷ Maine, Michigan, Missouri, North Dakota, Pennsylvania, and Rhode Island; next-most common is 25 percent, the figure used in four states: Illinois, Massachusetts, New York, and Wisconsin.

A logical question concerns the rent to which the percentage applies. Many states address this directly, typically stipulating that it is rent "for the right of occupancy only" or other wording to exclude utilities, furnishings, and other extras. Some states explicitly allow residents of nursing homes or other adult care facilities to claim circuit breaker relief, but set the portion of total monthly payments considered to represent property taxes at a much lower percentage; for example, Kansas considers only 25 percent of total payment to be rent for right of occupancy, then the property tax percentage of rent applies to the reduced figure. Other states, however, have adopted a bit looser approach, providing no stipulation as to what is or is not included in rent. Wisconsin falls in between, stating that 25 percent of rent is considered property tax if heat is not included, 20 percent if it is; it is counted among the four states using 25 percent of rent as property tax.

Another approach, used by two states (Arizona and Vermont), asks the landlord to report the actual property tax payment and information that can be used to allocate a portion of the tax to the claimant's rental unit. Nonetheless, Vermont is among the 23 states that stipulate a percentage of rent as property tax; in case the requisite information is not available from the landlord, 21 percent of rent for right of occupancy is used as the property tax figure. Finally, some formulas do not work with actual property tax or rent amounts, except as an upper limit on the amount of relief, if that. As already discussed, the Wyoming circuit breaker as it now exists does not consider the amount of property tax or rent at all; California's treatment is similar, but with the stipulation that the housing is subject to California property tax. Oregon and Utah both work directly with the amount of rent paid, rather than taking the intermediate step of defining a portion of rent to be property tax. In Oregon, for example, one of the two alternative relief formulas sets a 20 percent threshold and provides relief for rent in excess of 20 percent of income. The alternative formula is similar to California's approach, defining a large number of income brackets (20 in Oregon, 38 in California) and setting dollar amounts of relief for the brackets that fall as income rises.

Differences Based on Household Size

Several states set higher income ceilings for married couples than for single individuals while some others base the distinction on family or household size rather than marital status. In any event, states differ in both the degree of differentiation across households of different sizes and the manner in which it is brought about. Table 10 lists 17 states with at least one circuit breaker that in some way differentiates among claimants based on household size. Examples are given below to help illustrate this; Table A-1 provides some information for each state.

Colorado sets higher income ceilings for married claimants than for single ones; the respective overall ceilings for married and single overall claimants are \$14,700 and \$11,000; in addition, there is a ceiling for receipt of the \$600 maximum benefit, and that also is higher for married claimants – \$8,700 versus \$5,000 for single claimants. The benefit is reduced by 10 percent of the amount by which income exceeds these second ceilings. Thus, for single claimants, $\text{relief} = \$600 - 0.1(\text{income} - \$5,000)$; the same formula applies for married claimants, except \$8,700 is substituted for \$5,000 inside the parentheses.

New Jersey also has more generous provisions for households with two or more people in one of its three circuit breakers, but the degree of differentiation is greater than in most programs making such a distinction. In the New Jersey program for renters at least 65 years old, the overall income ceiling is \$100,000 for all claimants and the maximum benefit is \$860; however, the benefit drops to \$160 at \$35,000 of income for a single person, compared to \$70,000 for a claimant living with at least one other person. Below those secondary income ceilings, relief is determined by a 5 percent threshold formula.

Maine also sets a lower income ceiling for single-person households. As in New Jersey, the income levels are high, but the degree of differentiation is less. In Maine, as is more commonly the case, the absolute ceilings are different: \$77,000 for a claimant who lives alone and \$102,000 for one living with a spouse or dependents.

Generally speaking, the Kansas circuit breaker is for homeowners and renters 55 and over, but younger households can participate, as well, if they have at least one dependent child under the age of 18.⁵⁸ Similarly, the Maryland circuit breaker for renters under 60 years of age⁵⁹ is available only for households with at least one dependent child under age 18. Discrimination by family size continues in this program through different income limits for different numbers of household members, from two to nine or more; those limits range from \$13,461 to \$40,288.

The Illinois circuit breaker, which is for homeowners and renters 65 and over, does not go as far as the Maryland program for elderly renters just noted, but it uses a similar approach in discriminating among claimants with different numbers of people in their households. Illinois sets different income limits for claimants who live alone, those in two-person households, and those with three or more people in the household. The limits are, respectively, \$21,218, \$28,480, and \$35,739.

Another way to differentiate on the basis of household size is through allowances for dependents or other household members. Allowances are subtractions from income, which effectively raise the income ceilings for claimants entitled to allowances. For example, after a claimant adds up income from all sources, Wisconsin allows a \$250 subtraction, or allowance, for each dependent, but not for the claimant and spouse. Minnesota likewise has allowances for dependents and not for claimant and spouse, but they – and the overall income ceiling – are of a different order of magnitude than those in the Wisconsin. For one, two, three, four, or five dependents, the allowances are, respectively, \$4,620, \$8,910, \$12,870, \$16,500, and \$19,800. The stated income ceiling for non-elderly homeowners is \$91,120 (\$49,160 for renters), but a homeowner with five dependents (excluding spouse) could have \$110,920 before subtraction of the allowances.

At least up to a point, as noted in Part 4, adjustment for income by subtracting dependent allowances has been found to improve the targeting efficiency of a circuit breaker when it is evaluated as an instrument for combating poverty (Bendick 1974).

Differences Based on Disability

Most states provide some special treatment for certain disabled people. Nineteen of the 24 states with circuit breakers that generally exclude households headed by non-elderly people make the benefits available to disabled younger people, and four of the 10 states providing benefits for all ages have some special provisions for disabled claimants; the states are listed in Table 10. What qualifies as disabled differs across states, as do the benefits from being so classified. Arizona uses qualification for Supplemental Security Income Title XVI benefits as the test, and requires a copy of the letter from the Social Security Administration certifying the claimant for benefits. California's test of disability is inability to work – not only at the claimant's old job, but at any job – for a period expected to last at least 12 months. The test in Pennsylvania is similar, except permanent disability and inability to work are cited, and a claimant who has been denied Social Security disability benefits is unable to qualify for the property tax relief based on disability. Michigan also lists permanent and total disability under Social Security guidelines as one basis for qualifying as a disabled claimant, but it lists these other qualifying disabilities, as well: deaf, blind, hemiplegic, paraplegic, and quadriplegic.

Permanent and total disability often is the requirement. However, some states list specific sorts of disability. Nebraska provides an example (*Nebraska Homestead Exemption*, p. 2). To qualify, “an individual must:

- “Have a permanent physical disability and have lost all mobility such as to preclude locomotion without the regular use of mechanical aid or prostheses, or
- “Have undergone amputation of both arms above the elbow, or
- “Have a permanent partial disability of both arms in excess of seventy-five percent.”

Consider just the last of these provisions. This is an all-or-nothing proposition; disability above 75 percent in both arms opens the door to property tax relief before attainment of elderly status, but only 70 percent disability, for example, does not. (One can imagine, however, medical people might be pressured to alter their assessment somewhat if someone were close to the line.) Likewise, complete loss of one arm and 50 percent disability of the other apparently doesn't qualify for disability. Any such list necessarily involves arbitrary decisions regarding the specific sorts and degrees of disabilities listed; many other situations in which some help might also be appropriate are omitted. Considering the disability categories above, it is obvious that many sorts of disability are ignored – all mental disability and many sorts of physical disability, such as blindness. (A bigger issue, of course, is whether property tax relief is the appropriate vehicle for extending assistance to disabled people.)

In a state with a circuit breaker for the elderly and disabled, there generally is advantage in being considered disabled only for people under the minimum age to qualify for property tax relief as an elderly person; tax relief benefits typically are the same whether age or disability is the basis for qualifying. In the four states with circuit breaker property tax relief for all ages that discriminate among claimants on the basis of disability, the elderly are treated more favorably than the non-elderly, but a non-elderly person who is considered disabled can come under the same provisions that apply to the elderly. For example, in Minnesota, a \$3,300 allowance for either old age or disability reduces the income amount used to determine eligibility and the specific amount of tax relief.

Multiple Circuit Breaker Programs

In mid-2007, 35 states have circuit breakers⁶⁰ but there are many more than 35 circuit breaker programs; each “program” corresponds to a row in Table A-1.⁶¹ Multiple programs is one way different treatments are provided to different claimant groups. Twenty-two of the 35 states have more than one circuit breaker program. Fifteen have two programs: Arizona, California, Colorado, District of Columbia, Iowa, Michigan, Minnesota, New Hampshire, New York, North Dakota, South Dakota, Utah, Vermont, Washington, and Wyoming. Four states have three circuit breakers each: Maine, Maryland, New Jersey, and Pennsylvania. Connecticut and Nebraska are considered to have four programs each, and Montana has five. Some states may agree that they have the number of circuit breaker programs indicated, but some may not. Rather than going by how matters are presented by the states, program details have been considered and presented here as one, two, or more programs. Stated briefly, a state's circuit breaker provisions are considered to constitute two or more programs if provisions applicable to different claimant groups differ in more than income ceiling. Some examples will help to clarify the distinctions.

Arizona is considered to have two programs, one for claimants in a household of two or more, the other for claimants living alone. The maximum benefit (\$502) and the number of defined income brackets (21) for which tax relief amounts are given are the same for both sets of claimants, but the income ceilings are different (\$5,500 and \$3,750). In each

case, those in the lowest income bracket qualify for the \$502 maximum amount, but the bracket is the first \$2,500 of income for the larger households and only the first \$1,500 for individuals; at the top end of each income range, the relief amount is \$56, but the top income brackets are \$5,351-\$5,500 and \$3,651-\$3,750. Thus, above \$1,500 income, the benefits are different for different claimants with the same income – the relief schedules are different, and this is considered to constitute different relief programs.

Michigan is another example of a state with multiple programs. It Michigan provides circuit breaker coverage for homeowners and renters of all ages. Both the income ceiling (\$82,650) and the maximum benefit (\$1,200) are the same for all claimants. Relief for elderly and non-elderly claimants, however, is calculated under different formulas. For the non-elderly, there is a single threshold (3.5 percent) and only 60 percent of the tax above the threshold amount is relieved. For the elderly, a five-threshold formula produces a lower threshold amount at a given income level, and relief is 100 percent of the tax in excess of the threshold amount. The differences are great enough to say Michigan has two circuit breakers.

Nebraska is classed as having four circuit breakers, even though it provides circuit breaker property tax relief only for homeowners who are elderly or disabled. However, it distinguishes between claimants who qualify on the basis of age and those who qualify on the basis of disability; within each group, there is a distinction between those who are single and those who are married. Benefits in each case are determined in a six-bracket sliding-scale structure, but as in Arizona, the brackets are different for each claimant group because the income ceilings are different: \$37,201 for disabled married claimants, \$34,501 for elderly married, \$32,201 for single disabled claimants, and \$29,301 for single elderly claimants.⁶²

The sky isn't the only thing that is big in Montana; so are circuit breaker differences. With five programs by the reckoning in this paper, the state has more than any other. Circuit breaker formulas include both the threshold and sliding-scale varieties, the former with 12 thresholds, and the latter with three- and four-bracket variations. In addition, income definitions used in the various programs are rated very broad, broad, and narrow (more on this later in this part of the report). The beneficiary groups for the five programs are homeowners and renters 62 and over; married homeowners of all ages; single homeowners of all ages; married homeowners who are disabled veterans; and single homeowners who are disabled veterans. Disabled veterans have the narrowest income definition, so some claimants may have more income than is counted by the definition for the circuit breaker program, and the highest income ceiling (\$49,867) is for married disabled veterans. The lowest income ceiling (\$18,801) is for single homeowners of all ages, one of the groups for which the broadest income definition applies.

Not all states that favor one group of claimants over another are considered to have multiple circuit breaker programs. For example, Illinois is considered to have just one program, despite having three income ceilings: \$21,218 for people living alone, \$28,480 for two-person households, and \$35,739 for households of three or more. The income

ceilings are the only difference; maximum benefit is \$700 and relief up to that maximum is determined by application of the same formula – or, to be more precise, the same two alternative formulas. Relief is either the excess of tax over 3.5 percent of income or the \$700 relief maximum reduced by 4.5 percent of income, whichever is less. As a result, claimants with the same income qualify for the same benefit, although larger households remain eligible for benefits up to higher income ceilings.

Maine similarly has more generous circuit breaker provisions for one set of claimants than another within a single program. Three circuit breakers are shown for Maine in Table A-1; the one in question is listed first, the circuit breaker for homeowners and renters of all ages. It uses the same threshold formula, with 4 percent and 8 percent thresholds, for all claimants, and the maximum benefit for any claimant is \$2,000. However, the income ceiling for a claimant living alone is \$77,000 while that for larger households is \$102,000. The net result is the same as in Illinois.

What sets the single-program Illinois and Maine circuit breakers apart from the Arizona, Michigan, Nebraska, and Montana examples of multiple programs is that in Illinois and Maine, the more favored claimant group (which just happens to be larger household sizes in each case, but could just as well be older claimants) benefits by being able to receive property tax relief at higher levels of income, rather than by receiving more relief at a given income level. Each state uses the threshold approach. In the four multiple-program examples, benefits differ across claimant groups at a given income level. In three of the four, a sliding-scale sort of structure is used, but Michigan uses the threshold approach. Thus, the distinction is not formula type, but whether different formulas are applicable for different groups. Michigan achieves different benefits at a given income level using the threshold approach by using a different threshold formula for each group. In all the examples given, states using a sliding-scale sort of approach have more than one program. This results principally from their use of the same number of defined income brackets for each identified claimant group in a pair of such groups. Had different income ceilings been accommodated by simply grafting one or more additional brackets for the group with the higher income ceiling onto the bracket structure for the group with the lower income ceiling, the result would have been similar to that in Illinois and Maine and one less circuit breaker program would be counted.⁶³

Besides the examples just given, some of the examples in the following subsections further illustrate the multiple programs of some states.

Benefit Determination: Types of Circuit Breakers

Circuit breaker approaches are discussed in Part 3; this section considers choices among those approaches made by the states, giving some examples of each general type. The major formula types used to determine benefits are threshold and sliding-scale; formulas that do not fit either category comfortably are called hybrid or special formulas. Choice of formula type can have important implications for the distribution of benefits across claimants, but benefit limits can erode or even eliminate those differences, as shown in

Part 3 (Table 4). Throughout, discussions of property tax amounts in circuit breaker formulas include rent equivalent to property tax, as well as property tax payments per se.

Within the threshold approach, some formulas use a single threshold percentage while others use multiple thresholds; the latter can provide a more progressive pattern of effective net property taxes, if relief limits do not prevent this. Within the multiple-threshold group, in turn, the distinction between incremental and non-incremental application of the thresholds is important. Non-incremental application takes the threshold percentage for the bracket indicated by a claimant's total income and applies it to the total. By contrast, incremental application treats each bracket as a slice of a claimant's total income, calculating a threshold amount for each slice as the product of the number of dollars a bracket times the percentage for that bracket and determining the overall threshold amount as the cumulative sum of the amounts for all the brackets in which the claimant has income. Incremental application gives lower threshold amounts in the second and higher brackets and also avoids the notch problem. As discussed in Part 3, sliding-scale formulas produce notch effects near bracket boundaries. Notch severity depends on the magnitude of the difference in the relief percentages between brackets; changes typically are smaller when more brackets are defined.

For each type of circuit breaker formula identified there, the rows of Table 11 list the states using it and show the total states for each type. Because several states have more than one circuit breaker, the numbers in Table 11 cannot be added to find the number of states in which two or more types are found; for example, the total number of states using threshold formulas cannot be found simply by adding the number in each of the three rows of the table showing threshold programs. Often, states with multiple circuit breakers use different formulas for them; as a result, the same state may appear in more than one row. The three threshold rows show that both Michigan and Vermont use both single- and multiple-threshold formulas; they would be double-counted if the three rows were summed. The sum of the numbers in the table also cannot be used to find the number of circuit breaker programs because some states with multiple programs use the same sort of formula for at least two programs but have just one entry to represent them.

Threshold Formulas

Threshold circuit breakers sometimes are called "classic" circuit breakers because this approach can level a property tax overload relative to income to the threshold percentage, if relief is 100 percent of the excess of tax over the threshold amount. Threshold circuit breakers are found in 17 states, as shown in Table 11 (Michigan and Vermont are in each of two rows).

Single Threshold

A single-threshold formula, the simplest of circuit breakers, is found in nine states, and the number will rise to 10 with implementation of the new West Virginia 4 percent threshold circuit breaker in 2008. Thresholds vary; the highest, at least at first glance, is the 20 percent formula in Oregon, but more than a first glance is required. The Oregon program is for elderly renters only, and there is no determination of what portion of rent

represents property taxes. Instead, relief is the amount by which rent exceeds 20 percent of income (up to the \$250 maximum relief amount). The modal portion of rent defined to be property tax is 20 percent, as noted earlier. If this percentage were applied to rent in Oregon to determine a property tax-equivalent amount and used in conjunction with a 4 percent threshold, the result would be the same. At the other extreme, the 1 percent threshold in Oklahoma, taken by itself, seems to indicate generous property tax relief; however, the maximum benefit is \$200. First impressions can be misleading.

Among the states with single-threshold formulas between the two extremes, the highest threshold percentage is in a Pennsylvania circuit breaker for “special cases” in which certain households can qualify for higher benefits than are provided by the basic programs; the threshold is 15 percent (see Table A-1). Massachusetts uses a 10 percent threshold in its sole circuit breaker program. Below that are thresholds of 5 percent (one of the New Jersey programs), 4 percent (North Dakota), 3.5 percent (Illinois and Michigan), and 2 percent (Vermont).

Vermont is a special case. In the circuit breaker that considers only education taxes, 2 percent is the base level circuit breaker threshold; although only one threshold is used in any locality, and thus for any tax relief claimant, the threshold level varies across localities in proportion to their levels of local education spending relative to the state’s basic education grant. If a locality decides to spend 20 percent more than the basic expenditure level, its education tax rate and circuit breaker threshold both are increased; the threshold becomes 2.4 percent, which is 20 percent above the basic threshold.

Formula Type	States
Threshold	NUMBER: 17
Single threshold ^b	Illinois, Massachusetts, Michigan, New Jersey, North Dakota, Oklahoma, Oregon, Pennsylvania, Vermont <i>Number: 9</i>
Multiple thresholds	
Applied incrementally	District of Columbia, Maine, Maryland, Michigan, Missouri, Montana, New Mexico, ^c Vermont, Wisconsin <i>Number: 9</i>
Not applied incrementally	Rhode Island <i>Number: 1</i>
Sliding-scale ^d	NUMBER: 11
3 brackets	Montana, New Jersey, Ohio ^e <i>Number: 3</i>
4-6 brackets	Connecticut, Iowa, Maine, Montana, Nebraska, New Hampshire, North Dakota <i>Number: 7</i>
19-25 brackets	Kansas, South Dakota <i>Number: 2</i>
Hybrid or special	Arizona, California, Colorado, Connecticut, Idaho, Illinois, Minnesota, New Jersey, New York, Oregon, Pennsylvania, Utah, Washington, West Virginia

Source: Table A-1 and state source materials.

Notes:

a – States that appear more than once generally have multiple programs or, as in Oregon, use two formulas used in one program; some with multiple programs appear only once because the programs use the same formula type.

b – The New West Virginia program that takes effect in 2008 is in this category.

c – Application of New Mexico’s threshold circuit breaker is modified by use of a table with brackets \$1,000 wide, providing all claimants within each band of income the same threshold amount of tax.

d – Nevada has a sliding-scale formula, but it is administratively determined.

e – Effective with taxes payable in 2008, changes to a flat homestead exemption regardless of income.

Multiple Thresholds

Table 11 shows 10 states with multiple thresholds. These range from as few as two in Maine and Wisconsin to about 40 in Missouri. In between, New Mexico and Vermont have three-threshold formulas, Maryland and Rhode Island each use four, Michigan uses five thresholds for its program for the elderly, the District of Columbia has formulas with four and six thresholds, and there are 12 thresholds in the Montana program for elderly owners and renters. Rhode Island does not apply its multiple thresholds incrementally; the Maryland and Rhode Island formulas are used as examples of the incremental and non-incremental approaches in Table 4 and the surrounding discussion in Part 3. Those examples and discussion indicate that, in brackets above the first one, incremental application of thresholds produces lower threshold amounts and a more progressive pattern of effective rates of net property tax relative to income – at least until relief limits are applied.

The Missouri circuit breaker uses so many more thresholds than the others that it warrants some consideration. Materials available on line do not present a formula or table, as such, but the statute includes a section entitled “formula for determining credits – table to be prepared by director of revenue – . . .” that spells out construction of a relief table (Missouri Revised Statutes 135.030). The threshold for the first \$13,000 of income is required to be zero and the maximum qualifying income is set at \$25,000; married couples are given a \$2,000 allowance, or exemption, so their stated income ceiling is \$27,000 but the same table works for married and single claimants. The statute further prescribes that the relief table be laid out with \$300 income increments between \$13,000 and \$25,000 and that the threshold rise by 1/16 of a percentage-point with each increment. This gives a threshold of about 2.5 percent at \$25,000, and about 40 thresholds to get there.

Sliding-Scale Formulas

Sliding-scale circuit breakers also differ in terms of the number of brackets that are defined. This is an important design feature, in part because it is an indication of the degree to which there will be a notch problem. In standard sliding-scale circuit breaker design, the starting point is the amount of property tax paid. The sliding-scale structure

determines the portion of tax that will be relieved for claimants at various levels of income, as a different relief percentage is specified for each defined income bracket. Suppose two programs each relieve as much as 90 percent of claimants' property taxes if income is under \$5,000 and as little as 10 percent if income is \$83,001-\$85,000, and then drops to zero above the \$85,000 income ceiling. One has 41 brackets and relief drops two percentage-points at a time, while the other has five brackets with relief percentages of 90 percent, 70 percent, 50 percent, 30 percent, and 10 percent. Notches will be much larger in the second program. Five brackets also could produce small notches, of course, if relief percentages ranged, for example, from 82 percent to 90 percent, or from 10 percent to 18 percent, but so small a range would not provide much of an inverse relationship between income and property tax relief. In addition to the number of brackets, notch severity is affected by the range of income over which relief is available and the magnitude of relief provided. However, holding constant the income ceiling (say \$85,000) and the extent of relief variation (say from 90 percent to 10 percent), a smaller number of income brackets means larger changes in relief in moving from bracket to bracket, and thus larger notches.

Programs with Six or Fewer Brackets

Table 11 shows 11 states with sliding-scale circuit breakers in mid-2007 (Montana appears twice in the list). Three states use three brackets. The Ohio circuit breaker structure determined the exemption percentages for its homestead exemption, but 2007 legislation converts the program to a flat homestead exemption for taxes payable in 2008. This will leave only Montana and New Jersey using so few brackets. The New Jersey program, which is for homeowners of all ages, is notable because of its high income ceiling (\$250,000) and narrow range of relief percentages, which apply to the first \$10,000 of property tax. (New Jersey has high property taxes, and this program was adopted in 2007 to replace an earlier property tax relief program for all homeowners.) Relief is 20 percent for homeowners with income up to \$100,000, 15 percent if income is \$100,001-\$150,000, and 10 percent if income is \$150,001-\$250,000. Because only the first \$10,000 of property tax is considered, the maximum tax relief amounts are \$2,000, \$1,500, and \$1,000.

Seven states have from four to six brackets, as shown in Table 11. Two programs in this group, like the Ohio circuit breaker just noted, determine exemption percentages for homestead exemption programs (Nebraska and North Dakota). The Maine program is an alternative for elderly homeowners and renters with low incomes, to be used if it provides more relief than the basic program for owners and renters of all ages. The attempt to target more favorable relief to those at low income levels explains the limits in this program, which are the lowest of the seven in the group under consideration. Specifically, the income ceilings in the Maine alternative program are \$12,700 for an individual living alone and \$15,700 for a household of two or more; these are far below the \$77,000 and \$102,000 limits in the basic program, which uses threshold formula with two thresholds (4 percent and 8 percent) and 50 percent coinsurance.

Aside from the Maine alternative program, the other six have many similarities. None imposes a benefit limit per se, six provide 100 percent relief for those at the lowest income levels (in Iowa this applies to homeowners, but the maximum relief for renters is 94 percent⁶⁴), and for five the lowest relief level is between 20 percent and 25 percent (it is 50 percent in Montana). Income ceilings are more varied, with the highest being in Montana (\$43,218 and \$49,867, for single and married claimants, respectively). In New Hampshire, the comparable numbers are \$20,000 and \$40,000; all the other states in the group have lower income limits, ranging between \$14,500 in North Dakota (increased to \$17,500 effective August 2007) and \$37,201 in Nebraska (disabled, married homeowners).

Programs with Large Numbers of Brackets

Kansas and South Dakota define many more brackets in their sliding-scale circuit breaker programs than other states. The Kansas program for elderly owners and renters (and younger households with at least one dependent child) defines 22 brackets, with relief ranging from 100 percent for claimants with up to \$6,000 of income to 5 percent for those in the top \$2,000 income bracket under the \$28,000 ceiling. The benefit limit is \$600 for tax year 2006 but it increases to \$700 for tax year 2007. South Dakota defines 25 brackets in its program for elderly homeowners living alone; as income rises, the relief percentages fall one just percentage-point from one bracket to the next. The maximum tax reduction is 35 percent (first \$3,750 of income) and the smallest is 11 percent (\$9,731-\$10,000). For households of two or more, 19 brackets are defined between zero and the \$13,000 income ceiling. The maximum reduction is 55 percent (first \$6,500 of income) and the minimum is 19 percent (\$12,638-\$13,000); the relief percentage drops by two percentage-points from one bracket to the next.

Hybrid or Special Formulas

Fourteen states have circuit breakers that use hybrid or special formulas. The hybrid approach combines elements of both the threshold and sliding-scale approaches in a single program. Special formulas typically use a sliding-scale structure, but instead of specifying relief percentages that decline in moving from lower to higher income brackets, maximum relief amounts are specified; a few special formulas use the threshold approach, but start from maximum relief rather than property tax payments.

Hybrids: Threshold and Sliding-Scale Elements

Minnesota provides examples of the first sort of hybrid with separate circuit breakers for homeowners of all ages and for renters of all ages. The basic structure of each program is a multiple-threshold formula (26 thresholds for owners, 23 for renters) with rising coinsurance percentages; this is overlaid by relief ceilings that decline as income rises, similar to a sliding-scale program. There really is no brief way to give the flavor of these programs. Minnesota has available through the Department of Revenue website PDF files showing details of property tax relief determination under the two programs.⁶⁵

Calculations combine rising threshold percentages (from 1.0 percent to 4.0 percent), rising co-payment, or coinsurance, percentages (from 15 percent to 50 percent), and declining maximum relief amounts (from \$1,700 to \$340). Changes in these three variables generally occur at different income levels, although two of the three sometimes change together; the table for homeowners takes 65 lines. The \$1,700 maximum benefit is for claimants with income of \$0-\$2,799. This income range occupies two lines in the relief-calculation table, with the first covering through \$1,399. The threshold for the first line is 1.0 percent, but it rises to 1.1 percent for the second row; the co-payment is 15 percent on both lines and the maximum benefit is \$1,700 for both. The third line covers income from \$2,800 through \$4,219; the threshold rises to 1.2 percent, co-payment remains at 15 percent, and maximum relief fall to \$1,660. The next 62 lines see continued small changes to the threshold percentage; after the 2 percent threshold level is reached (for income \$15,450-\$18,869) a specific threshold percentage typically remains the same for two or more lines, and the 4 percent threshold applies from \$70,230 on up (the last 15 lines of the table). Co-payment percentages increase 5 percentage-points at a time, rising from 15 percent to 20 percent at \$4,220 of income, then to 25 percent at \$9,840, 30 percent at \$14,050, and so on, until reaching the 50 percent maximum at \$63,210. Maximum relief amount at first drops only \$40 or \$60 at a time, but then the maximum begins to apply to more rows (wider income ranges) and to drop by larger amounts when it does drop; for example, the \$1,260 maximum applies between \$29,500 and \$42,139 (nine rows of the table), then drops to \$1,140, which is the maximum through \$56,189 of income (10 table rows). Maximum relief continues to drop \$100 or \$120 at a time, with each limit applying over a smaller income range as income rises; the \$340 maximum applies from \$87,710 through \$91,119.

The Minnesota table for renters is similar to that for homeowners, but smaller. Renters' circuit breaker relief ends when income reaches \$49,160, so the table consists of just 35 rows. Relief for renters is generally less generous than for owners. Renters' relief is less generous in that the income ceiling is much lower and, at \$1,400, the maximum relief also is lower; however, the co-payment percentage starts at 5 percent instead of 15 percent, and the 15 percent level is not reached until income reaches \$9,840 (where the co-payment escalates to 25 percent for homeowners). Threshold percentages top out at 3.5 percent for renters instead of 4 percent, but the 3.5 percent level is reached at a lower income level for renters: \$42,140, compared to \$63,210 for owners.

New York's circuit breakers are structured much like Minnesota's, complete with multiple-threshold formulas (seven thresholds, from 3.5 percent to 6.5 percent), coinsurance (but at the single rate of 50 percent), and a set of maximum relief amounts that decline as income rises, but are considerably smaller for non-elderly claimants than for the elderly. As indicated by the figures in parentheses, although similar in structure to the Minnesota programs, the New York program is simpler. It also is on a smaller scale. The income ceiling is \$18,000 and the maximum relief amounts, available only to claimants with no more than \$1,000 income, are \$375 for the elderly and \$75 for the non-elderly. Connecticut also employs a similar structure in its circuit breaker for elderly renters. It includes a threshold formula overlaid by maximum and minimum relief amounts for each of five brackets (four for single claimants) in a sliding-scale sort of

schedule. Because there is just one 5 percent threshold, no coinsurance factor, and fewer relief limits, this program is simpler than the ones in Minnesota. The dormant West Virginia program for elderly homeowners and renters likewise combines threshold and sliding-scale elements. There are 10 thresholds ranging from zero percent to 4.5 percent; each is for a \$500 slice of income, and the income ceiling is only \$5,000. This is overlaid by four relief percentages that decline from 75 percent to 30 percent as income rises.

Special Formulas

The more common sort of special circuit breaker formula uses a sliding-scale approach. Unlike a standard sliding-scale circuit breaker, though, the special approach sets a maximum relief amount – rather than a relief percentage – for each of the defined income ranges, or brackets. The only use of actual property tax amounts tends to be as an upper limit on the amount of relief a claimant can receive. Such programs generally establish a link to property taxation to justify considering them property tax relief; one such link is the stipulation that the claimant must occupy housing that is subject to property taxation. States having programs of this general sort include Arizona, California, Idaho, New Jersey, Oregon, Pennsylvania, and Utah.

California defines 38 brackets. Starting with the overall maximum relief amount, which is available in the lowest-income bracket, the maximum for each succeeding bracket is a smaller amount than for the bracket below it. For California homeowners, the maximum is 139 percent of a 1 percent tax on \$34,000 of home value (the rate and low value seem to reflect the influence of Proposition 13), which works out to \$472.60; for renters, maximum relief is \$347.50, 139 percent of \$250, which is said to be the rent equivalent of property tax. Claimants in the lowest-income bracket (the first \$10,691 of income) qualify for the maximum benefit for whichever group they are a part of. For claimants in the highest-income bracket (\$40,988-\$42,770), maximum relief amounts are \$20.40 for owners (6 percent of the tax on \$34,000) and \$15 for renters. Similar arrangements are found in several other states, although details such as income ceilings, relief ceilings, and number of brackets differ.

The Colorado circuit breaker, which also starts with a relief amount but uses a threshold approach rather than sliding-scale, is described in the earlier discussion of circuit breakers that differentiate among claimants based on household size. One of two alternative formulas in the Illinois circuit breaker also uses a threshold approach that starts from the maximum relief amount, rather than the amount of property tax.

The Washington State circuit breaker is unique. As in some other states, it is used in the context of a homestead exemption to determine benefits; claimants are homeowners at least 61 years old, and the income ceiling is \$35,000. All who qualify receive certain benefits, and claimants in the first two of three income ranges receive additional benefits. All who qualify for the circuit breaker are exempted from all excess levies – i.e., those outside the 1 percent rate limit that are approved in referenda – and also get an assessment freeze for the calculation of regular levies (those inside the 1 percent limit); value is frozen as of January 1 of the claimant's first year of participation or January 1,

1995, whichever is later. For claimants with no more than \$25,000 income, additional relief is exemption – for calculation of regular-levy taxes – of the greater of \$60,000 of assessed value and 50 percent of assessed value. For claimants with income of \$25,001-\$30,000 the added benefits over those granted all circuit breaker participants is exemption – for calculation of regular-levy taxes – of the greater of \$50,000 of assessed value or 35 percent of assessed value, but not more than \$70,000. Claimants with income of \$30,001-\$35,000 get no additional benefits. Thus, tax relief declines as income rises.

Concluding Comment on Formulas

It is clear by now that circuit breaker formulas differ in many ways; it is not clear how or why certain features came to be. In general, an advantage of the threshold approach over the sliding-scale method of circuit breaker property tax relief is that there is no notch problem in a threshold formula. However, an income ceiling produces a notch at the transition from relief eligibility to non-eligibility. This notch problem is addressed in the Michigan circuit breakers, which use a phase-out of the relief. The stated income ceiling is \$82,650, but the relief credit is reduced by 10 percent for every \$1,000 or portion thereof of income above \$73,650 so when the absolute ceiling is reached, relief is zero. Montana uses a similar phase-out in its circuit breaker for homeowners and renters 62 and older, between \$35,000 income and the absolute income ceiling of \$45,000. On the other hand, the sliding-scale sort of schedule of maximum relief amounts that overlies and constrains the basic threshold formula's calculated relief amounts in Minnesota and some other states with hybrid programs introduces notch effects at the points where maximum relief drops; as the Minnesota schedule for homeowners is laid out, at those points a \$1 increase in income decreases relief, for a claimant at or above the maximum, by anywhere from \$40 to \$120.

Limits on Benefits, Home Value, Wealth, and Income

Although in a technical sense limits outside the benefit determination formulas are not needed, in a political sense they seem to be, for limits of one sort or another are universal among circuit breaker programs.

Benefits

Specific benefit ceilings are not a necessary circuit breaker design element, except in what is called a “special” formula in this paper. Although people with more income generally spend more on housing than people with less income, the portion of income spent on housing falls as income rises. Therefore, benefits fall as income rises under a threshold circuit breaker, and a standard sliding-scale circuit breaker drops the percentage of property tax that will be relieved as income rises, reaching zero at some point. Moreover, setting benefit limits weakens the ability of circuit breakers to realize one advantage sometimes claimed for them, keeping rising property taxes (or a temporary drop in income) from forcing sale of the home. On the other hand, desire to assure that benefits are targeted to – or in some cases, away from – certain segments of the

population, and to control program costs, lead to benefit limits. Most states impose benefit limits, in addition to the income limits discussed below.

Benefit limits range widely, from under \$100 to \$2,000, as shown in Table 12. Some states appear more than once because they set different limits for different categories of claimants. The lowest benefit limit is \$75, the limit for non-elderly claimants of New York's circuit breaker, followed closely by West Virginia's now-inactive circuit breaker at \$93.80. These are even lower than they might seem in that they are amounts available only to claimants in the lowest defined income bracket of each program: \$1,000 and under in New York, \$500 and under in West Virginia. Low benefits likely contributed to the failure of the West Virginia program to attract claimants in recent years, but a \$5,000 income limit no doubt was a bigger factor. The highest benefit limits are in Maine and New Jersey, \$2,000 in each case. In Maine, the \$2,000 resulted from 2005 legislation that doubled the benefit limit and otherwise liberalized the circuit breaker program, and the New Jersey limit is new in 2007. The New Jersey and West Virginia limits are implicit. In New Jersey, for example, the maximum relief level is 20 percent of tax, but the amount of property tax considered is limited to \$10,000; that circuit breaker is available to homeowners with incomes up to \$250,000. More typically, benefit limits are explicit and somewhere between those in New Jersey and West Virginia; most are in the \$400-\$1,000 range.

Table 12. Limits on Benefits and Other Variables in State Circuit Breakers, 2007	
Limit Types	States and Benefit Limits
Benefit	
\$1,500-\$2,000	Maine \$2,000; Minnesota \$1,700; New Jersey* \$2,000
\$1,250-\$1,499	Connecticut \$1,250; Idaho \$1,320; Minnesota \$1,400
\$1,000-\$1,249	Connecticut \$1,000; Michigan \$1,200; Montana \$1,000; Wisconsin* \$1,160
\$800-\$999	Connecticut \$900; Massachusetts \$870; New Jersey \$860; Pennsylvania \$975; Wyoming \$900
\$600-\$799	Colorado \$600; Connecticut \$700; District of Columbia \$750; Illinois \$700; Kansas* \$600; Maryland \$750; Missouri \$750; Pennsylvania \$650; Utah \$798
\$400-\$599	Arizona \$502; California \$472.60; Maine \$400; Nevada \$500
\$200-\$399	California \$347.50; New Jersey \$350; New Mexico \$250; New York \$375; Oklahoma \$200; Oregon \$250; Rhode Island \$300
Under \$200	New York \$75; West Virginia* \$93.80
None**	Iowa, Maryland, Montana, Nebraska,* New Hampshire, North Dakota,* Ohio,* South Dakota, Vermont, Washington
Benefit limits differ by claimant group	California, Connecticut, Maryland, Minnesota, New Jersey, New York, Pennsylvania
Other limits	States
Value	California, Kansas, Maryland, Massachusetts, Nebraska,* New Hampshire, North Dakota,* Ohio,* Vermont, Washington*
Tax or rent	California, Iowa, Maine, New Hampshire,* New Jersey, Oregon, Vermont,* West Virginia,* Wisconsin
Wealth	Maryland, New York, North Dakota, Oregon,* Wyoming
Source: Table A-1 and state source materials.	

* State notes:

Kansas limit rises to \$700 for tax year 2007.

Nebraska circuit breaker is linked to a homestead exemption; limits are on exemption values.

New Hampshire circuit breaker considers only the statewide education tax.

New Jersey \$2,000 limit is implicit.

North Dakota circuit breaker is linked to a homestead exemption; limits are on exemption values.

Ohio circuit breaker is linked to a homestead exemption; limits are on exemption values.

Effective with tax year 2008, the income-targeting is gone and the program becomes a flat homestead exemption.

Oregon wealth limit applies to claimants 58-64 years old only, not to those 65 and over.

Vermont circuit breakers apply only to education taxes, except for claimants with no more than \$47,000 income; the limit on value of home applies only to claimants with income of \$90,000 or more.

Washington circuit breaker is linked to a homestead exemption; limits are on exemption values.

West Virginia \$93.80 limit is implicit; limit is for circuit breaker implemented in 1972, which is dormant.

Wisconsin \$1,160 limit is implicit.

** Lack of benefit limit applies to at least some claimant groups, but not necessarily to all, as table details show.

Another sort of benefit limit found in several states with threshold circuit breakers limits relief to less than 100 percent of the tax in excess of the threshold amount; this often is referred to a co-payment or coinsurance requirement, the rate of which is 100 minus the relief percentage; a co-payment requirement can help hold down program costs. As discussed in Part 3, however, another reason for such provisions is voter accountability – the desire not to have the costs of increased local property taxes be zero for many people. Among threshold circuit breakers, coinsurance requirements are found in the District of Columbia (5 percent and 25 percent), Maine (50 percent), Michigan (40 percent), New York (50 percent), and Wisconsin (20 percent). New York’s program is a hybrid, but the co-payment percentage is constant; the Minnesota and West Virginia hybrids include co-payment requirements that rise (i.e., relief percentages that fall) with income. All standard sliding-scale circuit breakers impose coinsurance requirements for all income brackets for which the relief percentage is less than 100; likewise, any hybrid or special program with relief percentages under 100 percent imposes a sort of co-payment. In a sense, any circuit breaker with a benefit limit that constrains the benefits received by some claimants is requiring a co-payment; the co-payment and coinsurance terms, however, are reserved for programs that impose a more structured, uniform co-payment requirement at benefit levels below the maximum.

Tax or Rent

As the example of the implicit \$2,000 benefit limit in New Jersey and the \$93.80 limit in West Virginia illustrate, an indirect way to limit benefits is to limit the amount of tax that is considered in the relief formula; while that limit is \$10,000 of tax in New Jersey, in West Virginia it is \$125. (Remember that throughout this paper, discussion of “property tax” amounts considered include rent equivalents, where applicable.) Table 12 shows a half-dozen other states also limit the amount of tax or rent considered. For example,

Wisconsin considers only the first \$1,450 of property tax; this, together with the 20 percent coinsurance rate, yields the implicit maximum benefit of \$1,160. New Hampshire and Vermont provide examples of a different sort of limit on taxes considered. Each has a circuit breaker that provides relief from education taxes only (although, as shown in Table A-1, Vermont also provides relief from other property taxes for claimants below a certain income level). Limits of this latter sort, based on the purpose for which the tax is imposed,⁶⁶ do not put an upper limit on the dollar value of tax considered. California also considers only a set amount of tax considered; as already noted, it is the tax on \$34,000 of home value. The Iowa circuit breaker considers no more than \$1,000 of rent, but there is no comparable limit on property taxes for claimants who are homeowners.

Although they are considered a separate sort of limit, benefit limits in general have the effect of not taking total tax paid into account in determination of the final relief amount.

Home Value

Some circuit breaker programs set no limit on benefits or the amount of tax potentially eligible for relief. States with no benefit limit for at least one claimant group are shown in Table 12, below the listing of specific ranges of maximum benefits; they number 10. In most of the states, however, the programs are not wholly unconstrained. Four states use circuit breaker structures to determine the amounts of value exempted for homestead exemption claimants (Nebraska, North Dakota, Ohio, and Washington), and they limit the dollar value of the exemption, rather than the amount of tax. Some other states limit value in one way or another. For example, Maryland's circuit breaker for homeowners allows an owner to participate regardless of the value of the home, but it limits the amount of tax considered for relief to the tax on the first \$300,000 of home value. Similarly, New Hampshire's circuit breaker considers only the tax on the first \$100,000 of home value. Vermont's circuit breaker for education taxes considers taxes on only the first \$200,000 of value if the claimant has at least \$90,000 of income. California, which does limit benefits, arrives at that limit through a limit on the amount of home value considered (\$34,000), as described above in the section on special circuit breaker formulas.

Another sort of home value limit might be grouped with wealth tests, but because it is restricted to the value of the home (or in the case of New York, of all real estate), it is considered here. New York limits current market value of all real estate owned by a claimant to \$85,000. Massachusetts excludes households with homestead property valued above \$684,000; this figure is for tax year 2006, and the amount is indexed. Effective with circuit breaker claims for tax year 2007, Kansas excludes from the program households whose homestead property is worth more than \$350,000.

Wealth

Home value is, of course, a form of wealth, often the major one. People with more wealth, everything else equal, are better off than people with less wealth. In addition to

current income, another source of funds to cover living costs, including paying property taxes, is drawing down accumulated wealth. Some argue, therefore, that wealth should be considered in determining circuit breaker benefits, not just income. No current state circuit breaker uses a wealth measure in a circuit breaker formula in the same way that income is used,⁶⁷ and Table 12 lists only five that set an upper limit on wealth for circuit breaker participants.

The restrictions vary widely, in terms of both the types of assets considered and the maximum value a circuit breaker claimant can have. The New York wealth limit, applicable to real estate only, already has been noted. Maryland limits the net worth of circuit breaker participants to less than \$200,000, but excludes the value of the homestead, IRAs, and most retirement accounts. North Dakota limits the total value of assets (savings accounts, life insurance cash value, real estate, personal property, etc.) to \$50,000, but excludes the first \$100,000 of “unencumbered” homestead property value from this restriction. Oregon claimants 58-64 years of age are ineligible if their household assets – both real and personal property, including cash, bank accounts, stocks, and accounts receivable – are worth at least \$25,000, but there is no wealth test for claimants at least 65 years old. Wyoming limits the net worth of various “resources” – real property and most personal property, including cash on hand, bank accounts, etc. – to no more than \$6,000, but there is a \$130,000 exclusion for the combined value of the principal residence, furnishings, other personal effects, including one motor vehicle.

One reason wealth tests are not more numerous is the difficulty they pose for program administrators, if the tests are taken seriously; they also make compliance more difficult for claimants, and likely are not popular with this group. There also is the consideration that one rationale for a circuit breaker is to help people avoid having to sell (or even encumber) their homes, and considering other assets, particularly illiquid ones, may seem incongruous. Whether this is a sound reason to omit wealth limits, considering that circuit breakers require some people to subsidize the property taxes of others, is another matter.

Income

Limits on income are much more common in circuit breaker programs than limits on wealth; indeed, income limits are almost universal. Every sliding-scale formula necessarily incorporates an income ceiling, the level at which the relief percentage drops to zero; the same is true of the special formulas that use a sliding-scale bracket structure but, instead of relief percentages, specify dollar benefits. In such circuit breakers, there is an income level at which the benefit drops to zero. Threshold circuit breakers, and hybrid circuit breakers with threshold formulas at their core, do not have to state an income ceiling, but most do.

As already noted, various circuit breaker programs distinguish among various population segments (claimant groups) in various ways. One of these is in the setting of income ceilings. While a number of circuit breakers have a single income ceiling for all claimants, many set different ceilings based on either age or on household size; the latter

limits are variously stated as provisions applying to married versus single people or an individual versus a household of two or more. To some extent, different income ceilings already have been noted in the section on distinctions among claimant groups.

Table 13 lists income ceilings in three columns: universal ceilings; ceilings for an individual; and ceilings for households of two or more; the rows give the income ranges into which the income ceilings fall. The table does not highlight differences based on age, although all limits are represented in the table. There are more entries in the first column than in either of the last two: 24, 16, and 20. The numbers are not the same in the last two columns because states often have multiple circuit breaker programs with different income ceilings, and the entries in Table 13 do not necessarily represent just one program. The ceilings for one household size in two programs might fall within the same range while those for the other household size do not. Additionally, the Maryland program with variable income ceiling for households of different sizes is for non-elderly renters, who can qualify for circuit breaker relief only if a dependent minor child is present in the household; there are no benefits for single-person households in this particular program. Similarly, the Minnesota entry in the variable-ceiling row is in only the last column because the variability, which results from allowances per dependent, affects only households that are larger than one (there are no allowances for claimant and spouse, just for the first five dependents).

The ceilings range widely. One extreme, of course, is the situation in which there is no ceiling, as in one Vermont program. Among specified ceilings, however, the highest is \$250,000, in a New Jersey circuit breaker for homeowners of all ages. New Jersey also has programs with a \$100,000 income ceiling, and Maine has a \$102,000 ceiling for homeowners in households of two or more. At the other end of the spectrum, Arizona ceilings for individuals and households of two or more are \$3,750 and \$5,500, respectively; West Virginia's old circuit breaker has a ceiling of \$5,000 for all claimants; Oregon sets a ceiling of \$9,999 in its program; and South Dakota's income ceiling for individuals is \$10,000. All other ceilings are above \$10,000 and below \$100,000 (except some household sizes under Minnesota's variable ceilings face income ceilings above \$100,000; the base ceiling for one or two people is \$91,120). The various ceilings are, as shown by Table 13, scattered broadly between \$10,000 and \$100,000, but most fall below \$60,000.

Table 13. States by Circuit Breaker Income Ceilings, 2007

Ranges for Income Ceiling	Universal Ceiling	Ceilings That Vary with Household Size ^a	
		Single or One Person	Married/Two or More
\$5,000 or less	West Virginia	Arizona	
\$5,001-\$10,000	Oregon	South Dakota	Arizona
\$10,001-\$15,000	North Dakota, ^b Oklahoma, Pennsylvania	Colorado, Maine, Wyoming	Colorado, South Dakota
\$15,001-\$20,000	District of Columbia, Iowa, New Mexico, New York	Montana, New Hampshire	Maine
\$20,000-\$25,000	Wisconsin	Illinois, Missouri	Wyoming
\$25,001-\$30,000	Idaho, Kansas, Nevada, Ohio, Rhode Island, Utah	Connecticut, Nebraska	Illinois, Missouri, Montana
\$30,001-\$35,000	Washington	Nebraska	Connecticut, Nebraska, Pennsylvania
\$35,001-\$40,000	Washington		Illinois, Nebraska, New Hampshire
\$40,001-\$50,000	California, Montana, Vermont	Massachusetts, Montana	Montana
\$50,001-\$60,000	Maryland		Massachusetts
\$70,001-\$85,000	Michigan	Maine	
\$85,001-\$100,000	New Jersey	Minnesota	
\$100,001 or more			Maine
Based on poverty line			
Varies with number ^c			Maryland, Minnesota
No ceiling ^d	Maryland, Vermont		

Source: Table A-1 and source materials.

Notes:

a – Some states that vary income ceilings with household size state the difference as being between single people and married couples.

b – North Dakota income ceiling increases from \$14,500 to \$17,500 effective August 1, 2007.

c – Ceilings in Maryland program for non-elderly renters vary with household size, from \$13,461 for claimant and one dependent child to \$40,288 for households of nine or more.

Minnesota – “Allowances” for up to five dependents (not claimant and spouse) effectively increase the income limit and range from \$4,620 to \$19,800.

d – The West Virginia circuit breaker for homeowners of all ages that begins in 2008 has no income ceiling.

Income Definitions

Income limits provide some information on how broadly circuit breaker benefits are available – alternatively, how narrowly they are targeted – but the information is less complete than often recognized. Income definitions differ across states, and sometimes even within a state. Differences are in two areas, the sources of income included or excluded, and the people whose incomes are to be counted in determining basic eligibility and benefit level.

Summarizing Income Definitions

Making detailed comparisons across states of the way income is defined is difficult, at best, because there are so many possible sources of income to consider. A Michigan list of income sources included in and excluded from household income, as defined for its circuit breakers, runs seven pages.⁶⁸ It might be nice to have a list of this sort, with a column for each circuit breaker program in each state (one column for each state unless more than one income definition is used), with a checkmark for each item included in the definition for each circuit breaker. Constructing such a list would be a huge challenge. It is difficult, perhaps impossible, to find such a list for most states; research for this paper generally has not produced such detailed lists. In part, this is because of different approaches to defining what is included in the income definition. A state may start very broadly, defining income as total receipts from all sources, whether or not taxable, and then list some specific exclusions; or it may follow the general definition with an illustrative list of sources included by the definition, along with the statement that sources included by the definition are not necessarily limited to those on the list. Do sources not mentioned belong on or off the list?

Alternatively, a state may start with a narrow income definition, such as adjusted gross income, and add to that income measure some of the sources it excludes; this may be done by stating a general category, such as retirement income or annuities, which may or may not be accompanied by specific examples – but which, if provided, are just examples. Questions of definition and interpretation remain. There tend to be varying rules for some general items that appear on several lists, causing the item to be omitted in some circumstances. For example, gifts are included in several income definitions, but some lists seem to call for including every dollar of cash received as a gift while others exclude some amount (e.g., the first \$300) or gifts from some sources (e.g., from parents to children and the reverse). Payments from life insurance policies sometimes are included, but in some cases only if the amount exceeds a certain level (e.g., \$5,000) or if the deceased was not a spouse or a dependent child.

Given such definitional variety and complexity, this paper makes no attempt at a comprehensive list of income sources. However, because each program's income definition has to be made operational with at least reasonably straight-forward instructions, it has been possible to determine how certain major sources of income are treated. These include Social Security, and usually cash public assistance, to name some important categories. All definitions include wages, salaries, self-employment income,

and the like, and retirement income typically is included as well, although Social Security benefits sometimes are excluded in whole or in part. As discussed in Part 4, omitting Social Security benefits is a major omission with important consequences for program costs and equity among claimants.

A thumbnail summary of the income definition for each circuit breaker state is provided in Table A-2. Each state occupies a row, but where more than one definition is in use, there is more than one row for that state. Besides the column listing state names, the table has three columns. Column 2 lists major exclusions, if any, from a very broad, comprehensive definition of money income; these include Social Security, cash public assistances, and deductions (sometimes referred to as exemptions or allowances) for additional household members beyond some base number. Column 3 provides a summary assessment of how broadly income is defined, reflecting the omitted items; in most instances, this assessment reflects omitted *sources* of income, but allowances also are considered because even if no source of income is left out, a large subtraction from the total leaves a narrower income base. Five ratings are used: very broad, broad, moderately broad, rather narrow, and narrow. If there are no major exclusions, income is said to be defined very broadly; in a few instances, an exclusion is listed that does not keep the definition from being considered very broad, as in the case of the subtraction of homestead property taxes up to \$400 in South Dakota. Exclusion of all or a significant portion of Social Security benefits drops the rating to rather narrow. The last column indicates whose income is included – claimant and spouse only, all members of the household, or something in between, such as all adults, or all household members with ownership interest in the property. The thumbnail ratings in the preceding column are not based on this information, but instead are based on the income sources included or excluded. Some characterizations were difficult to decide, and some readers may think different summary assessments more appropriate in some instances. Reference is to money income, and the ratings of definitional breadth are in terms of money income, because income in kind is almost universally ignored.

Table 14 is derived from the last two columns of Table A-2; the more compact size and layout of Table 14 make it easier to size up the overall status of income definition. There is a row for each of the five summary assessments of the breadth of income definition: very broad, broad, moderately broad, rather narrow, and narrow. The columns present the four groupings to indicate whose income is considered: all members of the household, all adults in the household, claimant and spouse, and other. The states are listed in the cells formed by the intersections of the rows and columns, which show the combinations of income definition and people whose incomes are considered. The last column presents the sum across the columns in each row, giving the number of states that define income very broadly, broadly, and so on; similarly, the last row of the table sums each column down across the rows, giving the number of states that consider the incomes of all household members, all adults, and so on.

The 38 entries in the cells of Table 14 are more than the number of states with circuit breakers but less than the number of circuit breaker programs. This result reflects the fact that some states use different definitions of income in different circuit breaker programs

while others use the same definition in multiple programs. The listings indicate the number of states using a particular definition of income, not the number of circuit breaker programs in which it is found. A state appears in the list more than once, no matter how many circuit breakers it has, only if it uses more than one definition of income in its circuit breaker programs. More often than not, income definitions used for circuit breaker programs are very broad (21 of 38) but include only the incomes of the claimant and spouse (20 cases).

Table 14. Definition of Income for Circuit Breaker Property Tax Relief: States by Breadth of Definition and Inclusiveness of Household Members, 2007					
Definition of money income	People Whose Income Is Included				Exhibit: Sum of Rows
	All members of household	All adults in household	Claimant and spouse	Other	
Very broad	District of Columbia, Maine, New Mexico, New York, Oklahoma, Rhode Island, South Dakota, Utah, Vermont		Colorado, Connecticut, Illinois, Iowa, Missouri, Montana,* Nevada, West Virginia,* Wisconsin, Wyoming	California, Maryland	21
Broad	Montana*	Michigan	Idaho, Massachusetts, Oregon	Washington	6
Moderately broad			Minnesota, West Virginia*	Nebraska, North Dakota	4
Rather narrow	Arizona	Kansas	Ohio,* Pennsylvania		4
Narrow		New Hampshire	Montana,* New Jersey		3
Exhibit: Sum of columns	11	3	20	5	38
Source: Tables A-1 and A-2 and state source materials.					
* Notes: <i>Montana</i> has five circuit breaker programs, as defined in this paper, with income definition in three of the five categories defined here: very broad for homeowners of all ages, broad for homeowners and renters 62 and over, and narrow for disabled veterans who are homeowners. <i>Ohio's</i> circuit breaker will be gone after 2007. <i>West Virginia's</i> program with very broad income definition is old and inactive; a new program adopted in 2007 to be operational in 2008 uses a moderately broad income definition.					

Summarizing the information in Table 14 more fully, of the 38 income definitions, 21 are considered very broad, six broad, four moderately broad, four rather narrow, and three narrow. Income of just the claimant and spouse (for married claimants) is considered in 20 cases (rows); in the other 19 cases, income considered is that of all household members (11 cases), all adults residing in the household (three cases), or some other set

of people (five cases). The combination that is most inclusive, of course, is a very broad income definition together with consideration of the incomes of all members of the household. This is found in nine of the 38 cases: District of Columbia, Maine, New Mexico, New York, Oklahoma, Rhode Island, South Dakota, Utah, and Vermont. The other extreme is the combination of narrow income definition and consideration of the income of only the claimant and spouse, which is found in two cases: New Jersey and the Montana circuit breaker for disabled veterans. The other narrow-definition state, New Hampshire, considers the incomes of all adults residing in the household.

The Rule: Money Income, Defined Broadly

The summary statistics show that property tax circuit breakers generally work with very broad definitions of income that include essentially all money income. Income in kind, including food stamps, is almost never included. This is an important exception, as alternative poverty definitions show. Whereas the official definition of poverty ignores essentially all transfers in kind, broader definitions of income can cut the poverty rate by more than half (Weinberg 2005).

Some of the categorizations in Table 14 require comment. For example, readers who refer to the underlying Table A-2 will see that in column 3 Vermont is said to define income very broadly, but column 2 shows that the first \$6,500 of income of each dependent in the household is excluded, and that state payments for foster care and some difficult-care situations are excluded. With regard to income of dependents, it is important to remember the thumbnail characterization of income definition in column 3 concerns the sources of income included or excluded, not which household members' incomes are considered. Vermont considers income of all household members in determining circuit breaker eligibility and benefits, while most states consider only the income of the claimant and spouse (for married claimants). The fact that Vermont provides partial exclusion of the income of dependents – but not that of the claimant or spouse – does not diminish the breadth of its income definition based on sources included. The exclusion of income for foster care and difficult care, possibly important for some individuals, is not likely to be a major factor for many people and therefore is not considered enough of a departure from definitional comprehensiveness to warrant downgrading the rating.

Both Minnesota and Wisconsin define income very broadly, but then provide subtractions from income – allowances – for dependents, yet Minnesota's income definition is considered to be broad while Wisconsin's is considered very broad. Two important differences between the two states account for this rating difference. First is the size of the dependent allowances. In Wisconsin, they are \$250 per dependent, and they are not available for the claimant and spouse. The Minnesota allowances are larger, by several orders of magnitude: \$4,620 for one dependent, and up to \$19,800 if there are five dependents (the maximum number considered). In addition, Minnesota has a \$3,300 allowance if either the claimant or spouse is at least 65 or is disabled; with five dependents, the total allowances can be as much as \$23,100.⁶⁹ These are on top of a basic income ceiling of \$91,120; the comparable figure for Wisconsin is \$24,500.

Some Exceptions: Exclusions from Income

Exclusion of Social Security benefits from the definition of income is of major concern, as discussed in Part 4, because of their size and variable importance among potential circuit breaker claimants, but all exclusions are of concern. Exclusions create inequities – and not just among circuit breaker beneficiaries, but between some who qualify because they get to pretend to be poorer than they are while others, who may actually have less total income, are denied coverage because they are not lucky – or politically influential – enough to get such preferences.

Social Security Benefits

As of mid-2007, seven states exclude all or part of Social Security benefit from income as defined for their circuit breaker programs. This count includes the 50 percent exclusion adopted by Kansas in 2007 but also includes the Ohio circuit breaker, which 2007 legislation ends after 35 years; beginning with tax year 2008 the Ohio homestead exemption disregards income.

- Arizona excludes all Social Security benefits in defining income for its circuit breaker programs, which are for people 65 and over;
- Kansas, under changes adopted in 2007, will exclude half of Social Security benefits from the definition of income for its circuit breaker, which is for people 55 and over, but also includes younger people with a dependent child in the household;
- Montana includes only the portion of Social Security that is included in federal AGI in its programs for disabled veterans, which account for two of five circuit breakers there;
- New Hampshire includes only the portion of Social Security that is included in federal AGI in its circuit breaker for homeowners of all ages;
- New Jersey excludes all Social Security benefits from the definition of income used for its three circuit breaker programs, which cover homeowners and renters of all ages;
- Ohio ignores Social Security benefit increases after a claimant's initial qualification, starting in 1977; and
- Pennsylvania excludes half of Social Security benefits in defining income for its circuit breakers, which are for people 65 and over.

The Social Security change is one of several to the Kansas circuit breaker adopted in 2007 (Courtwright 2007). A press release from the office of Governor Kathleen Sebelius announcing several signed bills stated, “. . . 50 percent of Social Security benefits will be excluded from the definition of income for the purpose of qualifying for the [Homestead Property Tax Refund circuit breaker] program, resulting in additional property tax relief for seniors” (Corcoran 2007, p. 314). True, additional property tax relief will result, and program costs will be higher. Of course, additional relief could have been provided by raising the income limits and/or otherwise enhancing benefits in a manner that would have been fairer. This change just lets Social Security recipients appear poorer than they

are and collect higher benefits than other people whose total incomes are the same, or lower.

With Kansas's defection from the ranks of states with broad definitions of income, a fifth of the circuit breaker states exclude all or part of Social Security benefits (but with the end of Ohio's circuit breaker after 2007, only six states will be on this list). It is mind-boggling that ignoring an income source of widely varying importance for possible claimants seems reasonable to so many; circuit breakers supposedly target tax relief to those most in need of it, as measured by income. More equitable ways exist for providing "additional property tax relief for seniors."

As discussed in Part 4, equity is diminished by excluding Social Security, even in a program available only to people 65 and over; when younger people also are included in the program, even greater inequities are created. As noted above, the Kansas, New Jersey, and New Hampshire circuit breakers all include some people of all ages.

All Social Security benefits are ignored by Arizona and New Jersey, half by Kansas and Pennsylvania, and varying portions by the other states. In Montana and New Hampshire, such benefits are included to the extent they are included in federal AGI. The benefits are not taxable if the sum of taxable-source income plus tax-exempt interest and half of Social Security benefits is \$32,000 or less for a married couple or \$25,000 or less for an individual; depending on the amount of other income, then, the taxable portion of Social Security may be zero, 50 percent, or 85 percent (Commerce Clearing House 2007). In other words, in the states following federal taxability rules, inclusion of Social Security benefits in the income definition for circuit breakers is uneven. It also is uneven in Ohio, which includes all such benefits at the time of initial qualification but then ignores subsequent increases.

This Ohio policy has been in effect for a quarter-century. Based on the cost of living adjustments for Social Security benefits over that period (Social Security Administration 2007c), the portion of benefits excluded can be quite large for long-term participants. Going all the way back to 1977, a \$100 benefit then would have grown to be a \$316.80 benefit in 2006 (the last year's income used for the Ohio circuit breaker) and \$327.25 in 2007; ignoring benefit increases after 1977, the portion of benefits included in 2006 income would be 32 percent ($\$100/\316.80). Social Security is not a "fixed income" source, as is so often suggested.⁷⁰ Because anyone who qualified for the Ohio circuit breaker in 1977 based on being 65 or more would now be at least 95, not many circuit breaker claimants could exclude as much as 68 percent of their Social Security benefits from counted income. The excluded portions of 2006 Social Security benefits for people first qualifying for the Ohio program in 1982, 1987, 1992, and 1997 are, respectively, 50 percent, 44 percent, 30 percent, and 20 percent – smaller, but hardly insignificant exclusions.

Moreover, because the year in which the included Social Security benefit amount was frozen varies across claimants, ignoring benefit increases creates inequities even among circuit breaker claimants who all have Social Security benefits. New claimants can

exclude nothing while other claimant can exclude portions ranging up to more than two-thirds. Qualifying earnings records are adjusted for inflation when a person first starts to draw Social Security benefits, and the benefits are indexed to keep up with inflation after a person starts to draw them. These features of the Social Security system are intended to promote equity among the retirees of different ages. By definitional fiat, Ohio swept away the equity within the system and created inequities among claimants with Social Security income, as well as between such claimants and those who do not have such income. Some other sources of income also have been ignored within the Ohio circuit breaker (see Table A-2). Loss of the program after 2007 is not as big a loss as it would have been if income had been defined in a more reasonable, less-flawed manner.

Other Exclusions

Many sources of income included the income definition in some states apparently are not included by some other states. Besides Social Security benefits, the list includes Supplemental Security Income benefits, other cash public assistance, food stamps, payments for volunteer work in certain federal programs, disability income, workers' compensation, unemployment compensation, alimony, support payments, gifts, bequests, proceeds from some insurance policies, scholarships and fellowships, grants, awards, gambling winnings, among others. A few items considered income by one or more states thankfully are not included by many; the one that comes first to mind is income tax refunds. A refund that represents payments such as an earned income tax credit is new income, and circuit breaker benefits paid as refundable income tax credits can be placed in this same category. While there are some instances in which refunds representing these refundable tax credits are to be included in income by circuit breaker claimants, there also are instances where tax refunds are listed without such qualification. The latter are inappropriate, as the refunds do not represent new income to the claimant. All receipts that represent new income, however, should be included.

Some concessions may need to be made based on administrative feasibility and administrative and compliance costs. For example, trying to include all monetary gifts is not likely to be wholly successful. Some may genuinely be forgotten or overlooked, and keeping exact records of them may be an unreasonable burden on the claimant. (Open birthday cards, log in cash or checks received, etc.) Even if a claimant kept fastidious records, could he or she prove their accuracy to a questioning auditor? Reversing the situation, can auditors reasonably be expected to identify omitted gifts, particularly if individually they are small and/or numerous? Requiring this source of income to be reported is likely to penalize honest and conscientious claimants but would not get more dishonest ones into any difficulty. Even though gifts are a source of money, and all money spends equally well regardless of its source, a source such as gifts has a low probability of uniform application. Although they certainly may be important for some, it seems unlikely that gifts make up a large part of income for many circuit breaker claimants. They are not among the income sources of the elderly listed by the Social Security Administration (2006a, Tables 1.1-1.9).⁷¹

For most income sources there should be no overriding administration or compliance problems to keep them from being included in income defined for circuit breakers; this surely is the case for the sorts of sources shown as major exclusions by one or more state in Table A-2 –Social Security benefits, SSI benefits, other cash public assistance, pension income, annuity payments, and so on. Absent a compelling case for exclusion, income from all sources should be included. Equity across individuals and households requires it.

How Claimants Receive Their Benefits

A final feature of circuit breaker programs to be considered is how benefits are gotten to claimants. This is an important matter, in part because of a tendency in some quarters to equate circuit breaker property tax relief with a particular benefit payment method, or to exclude a certain method from the possibility of being considered a circuit breaker. More specifically, some tend to think of circuit breakers as providing property tax relief through refundable income tax credits and to resist calling homestead exemptions circuit breakers, even when the homestead exemption benefits are determined by circuit breaker formulas or structures. Both tendencies are exhibited in a 2007 Washington State Budget and Policy Center report that includes discussion of possible property tax relief in that state. Consider two statements from that report:

- “Five states, including Washington State have homestead exemptions that phase out as income rises” (Chapman 2007, p. 25).
- “There is a key disadvantage of creating a circuit breaker in Washington. Its benefits would only be available to homeowners who are aware of, and apply for, the credit. If a state income tax existed, application for the circuit breaker could be part of filing an income tax return. Given that annual returns are not part of the tax system in Washington State, in order to take advantage of the circuit breaker homeowners would have to fill out a separate application providing the necessary information about income and property taxes” (Chapman 2007, p. 27).

The first statement is in a boxed list that is divided into two parts, one for homestead exemptions and credits and the other for circuit breakers and renter credits, and it appears in the former. This is in spite of the fact that the source for the lists is a report by David Baer, which lists the Washington homestead exemption – and homestead exemptions in other states in which exemption amounts are determined within a circuit breaker framework – in both the circuit breaker and homestead exemption tables and explains why (Baer 2003, pp. 8, 17-21, and 25-29).⁷² The second statement furthers the impression that the author does not believe Washington already has a circuit breaker, and that an income tax – although not essential – is a desirable vehicle for extending property tax circuit breaker benefits.

As noted in the discussion of income tax credits in Part 3 of this paper, Wisconsin experience casts considerable doubt on the desirability of setting up a property tax circuit breaker as an income tax credit, for two reasons. First, nearly all circuit breaker claimants have to be issued a refund check because they do not have to file an income tax

return or have too little tax liability to use up the circuit breaker credit, and second, paying the property tax relief benefits through the income tax made it hard for many people to understand that they really had been given property tax relief. In addition, because equity requires a broader definition of income than AGI, broader definitions are used with most circuit breakers; even if applying for circuit breaker property tax relief is part of filing income tax returns, more income information is needed for the circuit breaker than for the income tax.

The principal test of whether property tax relief is circuit breaker relief, noted elsewhere in this paper, is whether, for a given property tax amount, the program provides tax relief that is inversely related to income over a significant range of income. Such relief can be, and in fact is, provided in a variety of ways. In addition to refundable income tax credits (14 states) and separate refund programs (20 states), relief also is provided by direct reduction of property tax bills (11 states). This can be done by either a property tax credit (seven states) or a homestead exemption (four states; three after Ohio's circuit breaker approach ends). Table 15 shows the states using each of these approaches. As discussed in Part 3, exemptions and credits can be made wholly equivalent. The number of states that reduce property tax bills directly, by either an a partial exemption or a property tax credit, is nearly as large as the number of states using an income tax credit. When direct property tax bill reduction is used by a state that includes renters, it is of course necessary to extend relief to renters in some other fashion.

Table 15. Methods Used by States to Get Circuit Breaker Benefits to Claimants, 2007		
Payment Method	States*	Number
Property tax bill reduced		11
Credit	Connecticut, Idaho, Iowa, Maryland, Montana, Utah, Vermont	7
Exemption	Nebraska, North Dakota, Ohio,* Washington	4
Refundable income tax credit	Arizona,* District of Columbia, Massachusetts, Michigan, Missouri, Montana, New Jersey, New Mexico, New York, Oklahoma, Rhode Island, Vermont, West Virginia,* Wisconsin	14
Separate refund process	Arizona,* California, Colorado, Connecticut, Illinois, Iowa, Kansas, Maine, Maryland, Minnesota, Nevada, New Hampshire, New Jersey, North Dakota, Oregon, Pennsylvania, South Dakota, Utah, West Virginia, Wyoming	19

Source: State source materials.

* Notes: Some states appear more than once because they have more than one circuit breaker program, as defined in this paper, and sometimes use different payment methods for different claimant groups; for example, Iowa uses a property tax credit for homeowners and a separate refund process for renters.

Arizona – Benefits paid as a refundable income tax credit, but claimants who do not need to file an income tax return file the circuit breaker claim form separately and receive a refund.

Ohio – Income-targeting of homestead exemption ends as of the 2008 tax year, under 2007 legislation.

West Virginia – A new circuit breaker adopted in 2007, to be operational in 2008, will pay benefits in the form of a refundable income tax credit.

Local-Option Property Tax Relief

Discussion up to this point has concerned statewide property tax relief programs. Several states allow localities to provide some residential property tax relief, but often the local relief is a supplement to a statewide program; examples include Maryland (Department of Assessments and Taxation, Tax Credit and Exemption Information) and Connecticut (Lohman 2006). This section provides some information on local property tax relief, with an emphasis on Virginia, partly because there is no statewide property tax relief program, which makes the local programs more important; also because local relief programs are quite widespread in Virginia and most are of the circuit breaker variety, a fact that seems little known. Moreover, Virginia localities exhibit a great deal of variety in their approaches to targeting property tax relief within the elderly and disabled homeowner groups for which the state authorizes local-option relief, including several instances of using wealth as well as income in such targeting. Additionally, information on the local programs is readily available, through an annual survey undertaken by the Weldon Cooper Center for Public Service at the University of Virginia, in cooperation with the Virginia Association of Counties and the Virginia Municipal League.

Virginia⁷³

Although residential property tax relief in Virginia is not statewide, it is widespread. Virginia local government structure is somewhat unusual, in that cities are independent of counties; there are 95 counties and 39 independent cities, and together they cover the whole of the state. All have authority to provide property tax relief to elderly and/or disabled homeowners. There also are many incorporated towns, which lie inside counties and also have property tax – and property tax relief – authority. The latest University of Virginia report, for 2006, shows that residential property tax relief programs had been adopted in 85 of the 95 counties, 38 of the 39 cities, and in 57 towns, as well, for a total of 180 local jurisdictions (Knapp, Shobe, and Kulp 2007, pp. 25-42).

Elderly and Disabled Homeowners

Because Virginia property tax relief has been fashioned by so many localities, it is varied, as well as widespread. Localities are constrained in important respects by the state enabling law, but they have significant latitude regarding several of the particulars (Virginia Code 58.1-3210 – 58.1-3219). The state restricts relief to homeowners who are 65 and over, or disabled. There are income and net worth limits in the state statute, but with some local option. Another restriction that functions in part as a wealth restriction is that the home for which relief is granted must be a claimant's only dwelling. The upper limit on income-eligibility had been \$50,000, but recent changes have allowed some higher-income, higher-cost local areas to set income ceilings as high as \$72,000 (increased to \$75,000 by SB 1265, passed in 2007) and, more generally, allowed any local government to substitute the median adjusted gross income (AGI) on state income tax returns filed from its area. The general net worth ceiling to which local governments could go had been \$200,000 for a husband and wife, but recent state law changes have allowed indexation of this ceiling, and other changes have allowed certain local

governments to set a ceiling as high as \$350,000 and others as high as \$540,000. State law excludes the value of the dwelling from the net worth limit, including up to 10 acres of land.

At the time of the 2006 Cooper Center survey, cities' income ceilings ranged from \$15,000 to \$72,000, with a median of \$31,250; their net worth ceilings were from a low of \$25,000 to a high of \$340,000 and the median was \$95,000. For counties, income ceilings ranged from \$7,500 to \$77,404 and the median was \$26,000, while their net worth ceilings were from \$30,000 to \$340,000, with a median of \$75,000 (Knapp, Shobe, and Kulp, p. 25). In short, the Virginia localities are not unlike the several states in exhibiting a great deal of variety in the limits imposed for property tax relief claimants.

Local choices extend to the form that the relief takes, either homestead exemptions or deferrals. Moreover, for either of these approaches, one option is to relieve changes in tax liability after the claimant turns 65 or becomes disabled. Finally, within the state-prescribed limits on income and wealth, localities have a good deal of latitude in setting their own limits. As it happens, no locality has yet adopted just a deferral program under this local-option authority, and a circuit breaker approach is the most common for determining the amount of exemption a claimant can receive, whether that relief is an exemption or a combination of exemption and deferral (Knapp, Shobe, and Kulp 2006, pp. 27-42). Some localities, of course, do not use a circuit breaker but instead set a single income ceiling above which no tax relief is provided and below which the full amount of whatever relief the locality allows is available. An example is James City County, which adjoins Williamsburg. It sets a \$35,000 income ceiling (but excludes the first \$6,500 of income of any relative other than the spouse) and a \$200,000 net worth ceiling; eligible homeowners get a 100 percent exemption of the first \$100,000 of assessed value (Knapp, Shobe, and Kulp 2006, p. 34).

Among localities using a circuit breaker approach, there is a good deal of variety in how they fashion it. Some define only a few income brackets while others use many. For example, Alexandria sets a net worth ceiling of \$340,000 (excluding up to \$240,000 of home value) and an overall income ceiling for deferral or exemption at \$72,000; within that income range, however, the city defines three bands, or brackets, of income. Claimants with income up to \$40,000 qualify for 100 percent exemption, those with income of \$40,001-\$55,000 get a 50 percent exemption, and those with income of \$55,001-\$72,000 get a 25 percent exemption; however, the tax on the non-exempt portion of value can be deferred (Knapp, Shobe, and Kulp 2006, p. 27). The city of Richmond, to give another example, defines seven income brackets between zero and \$50,000 and six net worth brackets between zero and \$200,000, which are set out as a matrix. Relief is 100 percent in four cells of the matrix – those for claimants in the two lowest income brackets and two lowest net worth brackets (income up to \$12,000 and net worth up to \$37,000). At the other end of the scale, the relief is just 10 percent for claimants in both the highest income bracket (\$40,001-\$50,000) and the highest net worth bracket (\$150,001-\$200,000) (Knapp, Shobe, and Kulp 2006, p. 29).

A different approach is taken by the city of Hampton. Its net worth and income ceilings, respectively, are \$200,000 and \$50,000 (excluding the first \$7,000 of income of each relative other than the spouse). Three tiers of benefits are provided, based on income. The first tier benefit is 100 percent exemption, for claimants with combined income of \$16,000 or less. If income is between \$16,001 and \$25,000, partial exemption is granted; the taxable percentage is given by $(\text{income} - \$16,001) / \$9,000$. This phases the exemption down smoothly, whereas defined brackets of income with relief percentages that change by several percentage points from one bracket to the next create a so-called notch problem, which means that a small difference in income near the boundary between two brackets causes a difference in tax relief that is larger than the difference in incomes (Knapp, Shobe, and Kulp 2006, p. 28). The last benefit tier, for those with income in the \$25,001-\$50,000 range, is deferral rather than exemption.⁷⁴

Relief for Homeowners of All Ages

A newer stage of local property tax relief in relief includes homeowners who are neither elderly nor disabled. Two cities, Alexandria and Charlottesville, provide tax reduction for homeowners of all ages who meet certain eligibility requirements (Knapp, Shobe, and Kulp 2006, p. 7; Bowman 2006, p. 730), and Norfolk provides a general property tax deferral (Messina 2006). Unlike the general authority for property tax relief for the elderly and disabled, authority for these expanded relief programs is specifically for these cities.

Alexandria led the way in 2004 and liberalized the benefits in 2006. Relief is a property tax credit and the program is fashioned as a sliding scale circuit breaker. Maximum relief ranges from is \$1,200 for the lowest income bracket (\$40,000 or less) to \$200 for incomes above \$72,000; for incomes between \$72,000 and \$100,000, the size of the household also is a factor. There is a \$50,000 net worth ceiling, but this excludes the home, its furnishings, motor vehicles, and qualified retirement accounts. Charlottesville's program, adopted in 2006, provides a flat \$250 to any homeowner with less than \$50,000 income if the assessed value of the home is under \$238,200. The Norfolk deferral, also new in 2006, is for homeowners with less than \$100,000 income whose homes have received assessed value increases of more than 10 percent.

Selected Other States

Localities provide direct property tax relief in a number of states, but local circuit breakers are less common than homestead exemptions or credits. A few states in which local circuit breakers have been identified are discussed briefly below.

Hawaii

As in Virginia, there is no statewide property tax circuit breaker in Hawaii. Property tax policy is, to a large extent, local policy, although there is a homestead exemption statewide. Five counties are identified by the Census Bureau. Honolulu, with 905,276 residents, accounts for 71.0 percent of the state's 2005 population; the other counties and

their population shares are Hawaii, 13.1 percent; Kalawao, 0.1 percent; Kauai, 4.9 percent; and Maui, 11.0 percent. With only 111 residents, Kalawao has no property tax.⁷⁵ Internet searches found circuit breaker information for Honolulu and Maui.

The circuit breaker of the City and County of Honolulu was adopted in 2006 to provide additional property tax relief to homeowners of all ages who have been granted a homestead exemption and who have no more than \$50,000 income; all owners' incomes are included in the limit. A broad definition of income is used, such as those found in a great many state circuit breakers. Starting from federal AGI, other sources of income are added to include Social Security benefits, Railroad Retirement benefits, pensions, annuities, veterans' benefits, disability benefits, workers' compensation, unemployment benefits, strike benefits, cash public assistance, interest, IRA contributions, alimony, support payments, and so on. A further restriction is that no owner of the property can own any other real property, anywhere, during the tax year for which the benefit is sought. Relief is calculated using a 4 percent threshold circuit breaker formula, so relief is the amount of property tax in excess of 4 percent of the owners' combined incomes, except that the net tax bill cannot fall below the city/county minimum tax of \$100. Relief is provided as a credit against the property tax bill.

The County of Maui circuit breaker also is for homeowners of all ages and also requires that the property has been approved for a homestead exemption. However, the income is that of the claimant and spouse and the definition of income, federal AGI, is narrower. A threshold circuit breaker formula is used to determine relief, with the threshold set at 2.5 percent. Neither the claim form nor the instructions for it indicates an income ceiling or a benefit ceiling, but the net property tax bill cannot fall below the county's \$60 minimum.

*Connecticut*⁷⁶

The Connecticut statewide circuit breaker for elderly and disabled homeowners is a state-mandated, state-reimbursed property tax relief program. Localities (towns) have authority to adopt additional property tax relief for elderly, but they must bear the costs of such tax relief. Towns have wide latitude with regard to local-option tax relief.

“State law allows towns to provide tax relief to elderly homeowners who are at least 65 and who have been taxpayers in the town for at least a year. It imposes no income criteria and does not require towns to adopt any. . . .

“The law allows towns to provide tax relief to homeowners already receiving tax relief under the Circuit Breaker Program as well as to those who do not meet that program's income criteria. The relief can take any form, including freezing tax payments at specified levels” (Lohman 2006, p. 2).

In addition, “Towns' legislative bodies can vote to abate property taxes for any homeowner regardless of age, if the tax exceeds 8% of the owner's income for a given year. The owner must agree to reimburse the town for the abated amount plus interest when he dies or the property is sold. . . .” (Niesz 2006, p. 2).

A 2006 Connecticut Office of Legislative Research survey of 19 towns with populations between 9,000 and 12,500 and three other towns based on their location in a geographic area of interest found that half had adopted some form of local-option property tax relief. Of the 11, seven provided property tax credits, three had adopted deferral programs, and one combined tax reduction (termed “abatement”) with deferral.

Given the discretion towns enjoy in crafting local tax relief, it is not surprising that there is variety in what has been adopted. Several of the towns tie their local relief to the state circuit breaker. Some towns simply enrich the benefits for resident homeowners who have qualified for the state-funded circuit breaker while others extend relief to homeowners with higher incomes than the state program allows. In addition, some of the local programs depart from the state policy of setting different income ceilings for single and married claimants. Some examples are given to provide an idea of the range of policies.

- East Granby gives circuit breaker recipients a local credit equal to the state-reimbursed credit. However, the state circuit breaker credit ranges between 10 percent and 50 percent of the tax bill, and East Granby limits total tax reduction to 75 percent. The effect of this provision is to reduce the degree of income-targeting of combined state and local circuit breaker tax relief. Married recipients in the lowest-defined income bracket get 50 percent tax relief from the state program⁷⁷ but get only half again as much from the local add-on; those in the next-lowest income bracket get 40 percent state-funded property tax relief and the town adds another 35 percent; finally, those in the three highest income brackets have their state-funded relief of 30 percent, 20 percent, or 10 percent doubled by the local program.
- Granby also piggybacks on the state circuit breaker and limits total relief to a maximum of 75 percent, but it accomplishes this in a different way and also extends relief to higher income levels. The information from the ORS survey is for 2006, when the state circuit breaker’s income ceilings (which are indexed to inflation) were \$27,700 for single claimants and \$33,900 for married ones; Granby raised those limits to \$34,900 and \$46,400, respectively. The town’s add-on property tax credits range from four percent to 35 percent of tax for married claimants and 5 percent to 45 percent for single claimants; the state program relieves a smaller percentage of the tax for single claimants than for married ones, and Granby’s policy seems to narrow the difference.
- Prospect adds a flat \$200 to the credits of town residents who receive state-funded circuit breaker credits.
- Woodbridge extends income-eligibility to \$57,630 in 2006 for both single and married claimants, which more than doubles the ceiling for single people. In addition, the local credits in Woodbridge are large. For local homeowners receiving state circuit breaker property tax credits the town adds another \$1,400 credit (maximum credits in the state program range from \$250 to \$1,250); for those with incomes above the state program’s ceilings, the maximum credit is \$1,120, but this declines as income rises. If funds are insufficient to cover the

scheduled credits for all claimants, benefits to those in the income range beyond state circuit breaker ceilings receive proportionate reductions in their benefits.

Among the surveyed Connecticut towns that provide deferral of property taxes, Coventry uses the circuit breaker approach; it allows circuit breaker claimants to defer an amount equal to their state-funded circuit breaker property tax credit, which is from 10 percent to 50 percent for married claimants and from 10 percent to 40 percent for single claimants. The town of Weston combines tax reduction and deferral, setting an overall income ceiling of \$125,000 in 2006. Those with incomes up to \$49,000 get tax reductions (abatements) of up to 75 percent of the tax due (which presumably is net of the circuit breaker credit). Claimants with higher incomes can defer a portion of tax due for up to 15 years, the portion being determined in a three-bracket sliding-scale circuit breaker structure: \$49,000-\$75,000, 75 percent; \$75,000-\$100,000, 50 percent; and \$100,000-\$125,000, 25 percent.

*Maryland*⁷⁸

Local tax credit programs for homeowners can supplement the state's circuit breaker (Homeowners' Property Tax Credit); six counties (Anne Arundel, Calvert, Charles, Frederick, Howard, and Montgomery) and one city (Rockville) are listed on the Maryland Department of Assessments and Taxation website as having such programs. It is possible to be eligible for a local credit without being eligible for the state credit, due to different income limits.

No information was found for Charles County, either following the link from the state agency's website or searching the county's website. The link to Frederick County likewise led to nothing, but a search of the website found a June 16, 2007, letter from a county commissioner to the editor of the local newspaper expressing disagreement with the county commission's decision to repeal the credit in favor of a reduction in the real estate tax rate (Gardner 2007). The credit had been a flat \$100 in addition to the state-funded credit for each county homeowner who qualified for the state's program.

The five localities for which information was found take different approaches to augmenting the state program.

- City of Rockville augments the credits for city claimants under the state program.
- The counties change one or more of the limits compared to those in the state program:
 - State income ceiling is \$60,000
 - Lower in Calvert (\$50,000)
 - Higher in Howard (\$68,450, which is indexed), Montgomery (\$64,000)
 - State net worth limit, \$200,000 excluding home and most retirement accounts; it is higher in Howard (\$500,000).
 - State limit on home value considered for taxes subject to relief is \$300,000; it is higher in Calvert (\$400,000).

- State covers homeowners regardless of age
 - Elderly only in Howard (70 and over)
 - Additional credit for elderly in Montgomery (those 70 and over get an additional credit equal to 25 percent of the combined state and county credits, starting in 2007)

The nature of local credit calculation is considered for the local programs homeowners' credit programs.

- Anne Arundel County extends the zero threshold from \$8,000 in the state program to \$12,000 of income. The overall progressivity of the program is increased by the changes, which decreased the threshold (increased the credit) in the lower income ranges, and from \$22,000 to the \$60,000 income ceiling added a constant \$380 to the credit amount. When the combined state-local program is compared to the state program alone, the multiple-threshold formula's cumulative threshold amounts (beyond which property taxes are relieved) are lower for the combined program at all income levels, but relative declines are largest at lower income levels. For example, at the \$10,000 and \$12,000 income levels, respectively, declines are from 0.8 percent and 1.3 percent of income to zero in each case. At the other end of the income-eligibility range, drops of 0.8 percentage-point, 0.7 percentage-point, and 0.6 percentage-point occur at incomes of \$50,000, \$55,000, and \$60,000, respectively.
- Calvert County's credit extends the circuit breaker to the taxes on up to an additional \$100,000 of home value (the state's limit is \$300,000) for claimants with no more than \$50,000 income.
- Montgomery County's basic credit program (not the additional one for those 70 and over) reportedly is identical to the state program but doubles the amount of assessed value considered in calculating credit. At first, this seems inconsistent with the statement that only the taxes on the first \$300,000 of value are considered, but apparently double the tax on that amount is considered. If the threshold amount of tax to be borne before there is any relief is subtracted just once, this would more than double the credit for homeowners with a threshold greater than zero.
- Howard County, which restricts its credit to homeowners 70 and over, gives a credit equal to 25 percent of county property tax, after all other property tax relief has been netted out.
- Rockville gives an additional 35 percent credit against city taxes for claimants under the state program.

*New York*⁷⁹

Since 1966, New York has given localities the option of adopting homestead exemptions, known as the Senior Citizens' Exemption. The option is available to each county, city, town, village, and school district. The base option is a flat 50 percent exemption for homeowners at or below a locally-set income level that can be from \$3,000 to \$26,000; however, the allowable upper limit rises by \$1,000 per year for three years on July 1 in

2007, 2008, and 2009, reaching \$29,000 on the last of those dates. The exemption can be extended to income levels above the ceiling for the base program, but reduced exemption percentages apply; such expansion must use one of three state-defined options, which are in the nature of a sliding-scale circuit breaker; the exempt percentage declines as income rises. The first option adds six additional income brackets for which the exemption levels decrease 5 percentage-points at a time, from 45 percent for the first bracket beyond the basic 50 percent exemption to 20 percent for the sixth additional bracket. A second option encompasses the first, but adds two more brackets with 15 percent and 10 percent exemption levels. The third option encompasses the second and adds a final bracket with a 5 percent exemption level. Exemptions under this local-option program are to be calculated after any other partial exemptions have been subtracted from assessed value, except for the School Tax Relief (STAR) exemption.

Bracket widths are specified by the state statute for all but the first, the income level that is the ceiling for the 50 percent basic exemption. Each of the first three brackets beyond the basic program is \$1,000 wide; thus, if the basic exemption's income ceiling is \$25,000, the next three brackets are \$25,001-\$26,000, \$26,001-\$27,000, and \$27,001-\$28,000. The width of each additional bracket is \$900. Thus, as of July 1, 2007, a locality could set the base exemption ceiling as high as \$27,000 and, by adopting the most extensive circuit breaker terms (option 3), make the exemption program available to elderly homeowners with incomes as high as \$35,400.

Income is defined for this program to include Social Security and other retirement benefits, all interest and dividend income, and capital gains (offset by capital losses in the same year, only), but it specifically excludes SSI benefits, all welfare benefits, income received from participation in the Foster Grandparents program, gifts, inheritances, and some other sources. Thus, the definition is moderately broad.

No information is available from the New York Office of Real Property Services on the number of local adoptions and the options selected by the adopting units.⁸⁰ The number of localities with such exemptions, however, seems likely to be high, based on inferences from ORPS data on exemptions on the 2005 assessment rolls (the latest available in summer 2007) and Census Bureau data on population, housing, and income.⁸¹ Statewide, 4,172,496 residential property tax exemptions removed \$212.1 billion from New York local tax rolls in 2005, and the elderly exemptions discussed here (exemption code 4180) accounted for 219,026 exemptions (5.2 percent of all residential exemptions) that totaled \$17.5 billion (8.2 percent of the equalized value exempted by various categories of residential exemption). By comparison, 1,958,502 exemptions removing \$97.1 billion from taxation were recorded for the basic STAR (School Tax Relief) program, which is available to homeowners of all ages and income (ORPS 2007c). People 65 and over were 13.1 percent of the New York population in 2005, so the elderly exemption count seems relatively small. However, the low income ceilings available for the senior citizen exemption very likely restrict the number of claimants significantly. In 2005, the median money income of all U.S. householders 65 and over was \$23,787, and for those 65-69 it was \$32,706 (Census Bureau 2005, pp. 100-101). If these numbers are applicable to New

York State, a large percentage of the elderly are ineligible for the local-option senior exemptions, even at the highest income ceilings allowed.

Without such basic information as the number of adopting localities, it certainly cannot be clear to what extent the circuit breaker provisions available under the three options beyond the basic 50 percent exemption are in place. But while a large percentage of local governments probably have adopted one of the options for senior citizen exemptions, it seems reasonable to conclude that circuit breaker programs do not account for many of the exemptions under these programs. Circuit breaker options extend tax relief to higher income levels but at exemption percentages below 50 percent – potentially as low as 5 percent – but for the 219,026 exemptions, the average portion of value exempted in 2005 is 49.75 percent. Advanced STAR exemptions for school tax relief are available statewide for the primary residences of homeowners 65 and older with income less than an amount that is adjusted annually through indexing; in summer 2007, the level is \$70,650. Adjusting this amount for inflation, the 2005 equivalent would be \$67,143, still well above the ceilings for local-option senior citizen exemptions. The number of local-option exemptions is 35.2 percent of that for Advanced STAR exemptions in 2005.

6. Summary and Conclusions

Residential property tax relief programs have mushroomed in the past fifty years. After taking root in the Great Depression, when less than a third of the states adopted homestead exemptions for homeowners of all ages and income levels, the movement faltered a bit, then was redirected. The redirection reflected criticisms of the homestead exemptions, including their squandering of money on people who did not need the tax relief. The second wave of residential property tax relief is dated from 1957, when New Jersey adopted a homestead credit for elderly homeowners with incomes below a specified level. Thus, the relief was narrowed – or targeted – in two ways, compared to the 1930s homestead exemptions. First, age was used as a proxy for relative need and tax relief was granted just for the elderly. In addition, within the elderly group, only those below a given level of income were eligible for the new, income-targeted variety of homestead exemption or credit.

Other relief forms developed in the same general time period, including deferral, but one that spread rapidly is the circuit breaker. Because of their emphasis on income-targeting, circuit breakers are a particular focus of this paper.

Circuit Breakers Issues

Circuit breaker property tax relief often is considered essentially synonymous with income-targeted property tax relief. In fact, several forms of property tax relief sometimes are made available only to people below some specified level of income; these include homestead exemptions and credits, assessed value or tax freezes, and deferrals.

What the circuit breaker adds to the earlier, but still common, approach of a single income ceiling for a given set of potential claimants, such as elderly homeowners or married owners, is a finer gradation of income targeting; instead of full property tax relief benefits being available to claimants below a given income level and none to claimants above it, circuit breakers phase out the tax relief over a fairly wide income range.

Tax Relief Varies Inversely with Income

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There is some confusion about what a circuit breaker is. The notion that circuit breakers must be refundable income tax credits sometimes is encountered. From the negative perspective of what a circuit breaker is not, some seem to think a homestead exemption cannot be a circuit breaker. This paper argues that the circuit breaker approach is more a philosophy of tax relief than a specific form of relief. That philosophy starts from the notion that income – if defined broadly – is a reasonable measure of ability to pay property taxes and extends that notion to conclude that the need for property tax relief declines as income increases. Another view expressed at times is that circuit breakers are state-funded. In most states, they are, but that is not an inherent feature of circuit breakers. This paper covers supplements to state circuit breakers in some states, and also provides information on stand-alone local circuit breakers in Hawaii and Virginia. Although typically omitted from lists of circuit breaker states, Virginia local circuit breakers outnumber state circuit breakers by a considerable margin and exist in local government units that account for very large percentages of the state’s population and land area.

Sometimes-fuzzy thinking and writing about circuit breakers contribute to confusion. Two recent studies provide nearly identical definitions of the circuit breaker approach to relief:

- National Conference of State Legislatures: “Property tax circuitbreaker programs prevent property taxes from “overloading” the taxpayer. When property taxes exceed a certain percentage of the taxpayer’s income, states provide a rebate” (NCSL 2002, pp. 15-16).
- Center on Budget and Policy Priorities: “Property tax circuit breakers, like the electrical devices that shut off electric power to prevent circuits from overloading, prevent property taxes from “overloading” a family’s budget by “shutting off”

property taxes once they exceed a certain share of the family's income" (Lyons et al. 2007, p. 2).

It is somewhat surprising, therefore, that the two studies come up with very different numbers of states with circuit breakers. The NCSL count was 33 states and the District of Columbia (NSCL 2002, Tables 1, 4, and 5), while the Center on Budget and Policy Priorities lists only 17 states and the District of Columbia (Lyons et al. 2007, p. 1 and Table 1).

Why the difference? Did 16 states abandon circuit breakers between 2002 and 2007? The answer is that the CBPP (Lyons et al.) study counted programs that fit its definition of a circuit breaker while the NCSL study's list was not constrained by its definition. The critical element of the definitions given above is the idea that circuit breaker relief is provided, or kicks in, only when the property tax bill exceeds some percentage of income. This is the essence of the threshold approach, but not of the sliding-scale approach for various hybrid or special formulas used by several states. Even the threshold approach does not fit the definition if limits are placed on the overall benefit amount or on the portion of property tax above the threshold amount that is relieved (i.e., if there is "coinsurance").

The definition also is more restrictive than one put forth at least 32 years ago by the Advisory Commission on Intergovernmental Relations:

"Property tax circuit-breakers are tax relief programs designed to protect family income from property tax 'overload' the same way that an electrical circuit-breaker protects the family home from current overload.

"When the property tax bill (or the tax equivalent for renters) exceeds a set percentage of household income, the circuit-breaker goes into effect and relief is granted from the 'excess' taxes. A number of states use a somewhat different approach by granting tax relief equal to a given percentage of the property tax bill, whether large or small, with the percentage depending upon the household income level" (ACIR 1975, p. 2).

While both CBPP and NCSL obviously were familiar with the ACIR definition, each stopped short of the second sentence of the second paragraph, which encompasses sliding-scale and hybrid or special programs. NCSL proceeded as if that sentence had been included, but CBPP meant what it said and counted only threshold circuit breakers.

The broader count seems more appropriate, but the definition used should bear a closer resemblance to the programs counted. This paper defines circuit breakers as property tax relief programs that provide relief that, for a given property tax bill, is inversely related to income over a significant range of income.

Definition of Income Is Important

Anyone who has considered property taxes carefully knows it is not very informative to compare the level of taxation, whether across taxing units at a given time or within a single unit over time, based on only nominal (statutory) property tax rates. It is important to know, as well, the definition of the legal base to which the rates apply – what property is taxable, what measure of value is used, and what percentage of value is taxable. It is one thing to have a 5 percent statutory tax rate when the assessment level is 10 percent of market value and a homestead exemption removes 25 percent of assessed value from the tax base before statutory rates are applied. It is quite another when the same nominal tax rate applies to assessed values that are 100 percent of market value with no homestead exemption.

Similarly, two property tax relief programs for homeowners 65 and who have less than \$15,000 income are not equally generous (or non-generous) if one defines income to include all money income while the other excludes Social Security benefits. Social Security retirement benefits for an individual can exceed \$25,000, and for a married couple, much more. Thus, excluding Social Security is a major departure from comprehensive income definition. If all potential property tax relief claimants derived essentially equal shares of income from this source, the exclusion would be tantamount to an increase in the overall income ceiling. But this is far from the case; in 2004 about 10 percent of the income units 65 and over received no Social Security benefits, 20 percent received 100 percent of their income from this source, and between these extremes reliance on Social Security varied widely, and averaging 60 percent (SSA 2006a, p. 109). Income definitions that exclude income from certain sources are a source of inequity within property tax relief programs ostensibly intended to promote equity. The problem is especially important for a source such as Social Security, which is both large and of quite varied importance across potential property tax relief claimants. Even so, most lists of circuit breaker programs give only income amounts, not income definitions. The same is true for other forms of income-targeted property tax relief, as well.

As discussed in this paper, income definitions used to determine property tax relief eligibility and benefit levels differ in many respects. One of the ironies is that New Jersey pioneered the income-targeting approach 50 years ago with a very broad definition of income for its homestead property tax credit, but the income definition for the current credit (discussed in Part 6) is less broad and the state has one of the narrowest income definitions found around the country for circuit breaker property tax relief programs (discussed in Part 4).

Happily, New Jersey's defection has not been as widely emulated as was its lead in defining income broadly for targeting property tax relief. As we have seen, a very broad definition of income still is the norm for circuit breaker programs, and a number of states also define income broadly for other property tax relief measures. Still, the degree to which narrowing of the definition of income has occurred is of concern to those interested in the internal equity of property tax relief programs.

Some Recent Changes

Property tax relief is a dynamic, fluid field. New proposals constantly are being floated by groups seeking to get the benefits of government services without paying for them (as Glenn Fisher so aptly put it) and by politicians seeking votes from such people. This is not to deny the desirability of some property tax relief, but it is meant to suggest that not all such relief is meritorious.

Within the area of circuit breaker property tax relief, 2007 brought major changes in several states. Ohio abandoned the approach, after 35 years, eliminating the income-targeting provisions from its homestead exemption program, which now becomes a flat \$25,000 exemption of market value for all elderly homeowners.⁸² Neighboring West Virginia seemingly forgot about its already-dead circuit breaker of the same vintage (which has been unused in years, although still in the statutes) and adopted a new circuit breaker; the new one is for homeowners of all ages and is of the threshold variety, whereas the old program was for elderly homeowners and renters and used a hybrid formula. In addition, the new program defines income less broadly than the old one but has no income ceiling, while the old one was limited to those with no more than \$5,000 income (a rather obvious reason for the program's disuse).

New Jersey replaced its FAIR program in 2007 (which itself had replaced the SAVER program in 2004) with a new circuit breaker (Homestead Credit/Rebate); reflecting the high property taxes in New Jersey, the new program has the distinction of having the highest income ceiling (\$250,000 for homeowners) of any circuit breaker with a ceiling, and the highest benefit ceiling of any program with such a ceiling. A \$2,000 maximum benefit is implicit in the maximum 20 percent relief percentage applied to the \$10,000 maximum amount of property tax considered for relief.

Also in 2007, Kansas adopted legislation changing the circuit breaker by increasing the maximum benefit from \$600 to \$700, reducing the percentage of rent considered to be property taxes from 20 percent to 15 percent, and excluding half of Social Security benefits from consideration. North Dakota increased its circuit breaker income ceiling from \$14,500 to \$17,500 effective August 1, 2007.

In 2006, Pennsylvania adopted changes to its circuit breaker for elderly homeowners and renters that include raising the maximum benefit from \$500 to \$650 and, for owners only, increasing the income ceiling from \$15,000 to \$35,000.

Vermont has made many property tax, property tax relief, and school finance changes in the last decade (Saas 2007). A 2005 law expanded circuit breaker relief to apply to education taxes on the first \$200,000 of market value for homeowners with more than \$85,000 in 2006 or \$90,000 in 2007 and allowed homeowners with incomes at or below those levels to opt to pay education taxes through a tax based on income rather than through the property tax. Also, the threshold for the education tax circuit breaker was changed; starting at 2 percent, the threshold is increased by the same percentage that the chosen level of local school spending exceeds the basic state grant. Thus, in a locality

spending 20 percent above the basic level (and facing a higher education tax rate), the threshold also is 20 percent higher, at 2.4 percent. For households with up to \$47,000 income, a three-threshold circuit breaker is applicable for all property taxes, net of circuit breaker relief from the education tax circuit breaker.

Maine also made substantial changes in 2005, most notably doubling the maximum circuit breaker benefit to \$2,000 and raising the income ceiling substantially, as well; a Maine household of two or more can have over \$100,000 income and still qualify for circuit breaker property tax relief. Local-option circuit breakers also were authorized. In addition, the homestead exemption amount was increased to a flat \$13,000 for each Maine homeowner's primary residence, up from a previous maximum of \$7,000 at local option.

Diverse Provisions

Property tax relief programs, as noted at various points in this paper, vary widely in many respects. Among circuit breakers, for example, a number of states provide relief for homeowners and renters or all ages, but many provide relief for elderly homeowners only. More states include renters than do not (28 and seven in 2007), but more include only elderly than include non-elderly, as well (23 and 12). Where homeowners and renters both are included, it is not uncommon to find benefits are better for owners; this may come about through higher income ceilings, higher maximum benefit amounts, and/or different benefit formulas. Similarly, when people of all ages are covered by a circuit breaker, the elderly often receive preferential treatment. One form of preference that benefits the elderly as a group is exclusion of all or part of Social Security income; however, this does not benefit some elderly claimants at all, and in general creates significant inequities between the elderly and non-elderly claimant groups as well as within the elderly group. Income definitions for circuit breaker programs differ in terms of sources are included and also in terms of which household members' incomes are considered.

Circuit breakers also differ in terms of maximum benefits. They range from under \$100 to \$2,000. Some states do not limit benefits as such, but most of these limit the amount of property tax or rent that can be considered, and a few exclude people whose homes are worth more than a specified amount. Income ceilings, of course, are intended to filter out some claimants, and these are found in most circuit breaker programs; limits on net worth or some other measure of wealth also can serve this purpose, but they are much less common.

In part, different circuit breaker provisions may reflect different objectives. A program such as the New Jersey homeowners' circuit breaker described above seems designed to provide some property tax relief to most homeowners, but with the maximum relief being 20 percent of tax liability its ability to deal with some hardship cases is limited. States with few other property tax relief programs may provide more generous circuit breaker relief. Conversely, some circuit breakers are not well suited to achieve certain objectives. For example, it would be possible to deal with a number of situations with a circuit

breaker that often are addressed through other approaches. An example is caps on increases in assessed values or tax amounts, increasingly used to address homeowner unrest when property values increase rather rapidly. A circuit breaker could take care of the instances in which such increases create what might be considered real financial hardship or strain, but it would not spread benefits as widely as assessment or tax caps. Therefore, it would not be as popular with many homeowner-voters or politicians.

Concluding Comments

Although generally advocated on equity grounds, property tax relief produces some inequity in the distribution of property tax burdens because relief causes property taxes relative to property value to differ – i.e., relief causes effective property tax rates to vary across property owners. This is true for any form of property tax relief – e.g., agricultural land assessed on the basis of use value in an otherwise market-value system; a general homestead exemption that removes a constant percentage of assessed value or a constant amount of assessed value from the value of every house that is an owner-occupied principal residence; or a circuit breaker that relieves property taxes in excess of some percentage of income (or declining percentages of property tax for rising levels of income).

Some loss of uniformity in effective property tax rates is the inescapable cost of providing property tax relief; the tradeoff must be accepted if relief is to be provided. Some prefer that the ad valorem principle of the property tax be rigidly adhered to. Whatever one thinks the merits of this position are, this is a cause that seems long lost. In some quarters, any hope of attempting to minimize or even restrain the loss of property tax uniformity seems slight, if not gone. But some trends can be moderated or even reversed. Property tax changes over time have been likened to swings of a pendulum, rather than inexorable movement in one direction. Effort to limit erosion of the ad valorem principle seems worth making. An important part of such effort can be property tax relief that is targeted rather narrowly to cases of greatest need.

As already noted, a major concern in going too far with residential property tax relief is equity. Another concern, however, is economic efficiency, sometimes stated as taxpayer accountability. This paper has noted more than once Glenn Fisher's statement that the history of taxation is a history of people trying to get government services without having to pay for them. In general, he views with favor the various departures from property tax uniformity, seeing them as adaptations necessary to keep the property tax a viable, vibrant source of local government revenue; he believes the end, meaningful local government, is important enough to accept this means to its achievement. The danger is that homeowners, who make up the majority of voters in most local jurisdictions, can end up bearing (or at least being aware of bearing) little enough of the added taxes required to fund additional local services that the meaning of "taxing ourselves" to provide the services we want is seriously eroded.

Do all roads lead to Rome – or to the same conclusion? This brings me back to a topic explored in my doctoral dissertation (Bowman 1974) and later in a paper that was an

outgrowth of work on one of the state tax studies I worked on (Bell-Bowman 1987). Both studies provided support for the hypothesis that the portion of the local property tax borne by local residents (or that they logically might believe they bear) is inversely related to the level of property taxes they are willing to support. Successfully getting others to bear the costs of one's public service consumption has implications for real resource use, as well as for property tax equity.

Endnotes

¹ This adjustment was accomplished by the expedient use of the CPI-linked “inflation calculator” on the website of the Federal Reserve Bank of Minneapolis, rather than, for example, the state and local purchases deflator from the National Income and Product Account.

² Between 1956 and 1986, the last year for which Census Bureau data permit calculation, locally-assessed real property rose from 75 percent to 85 percent of the property tax base, and it is likely to have increased since 1986 due in part to decreased taxation of personal property (Bowman 1995).

³ The term burden as used here refers to the legal responsibility to pay the tax. This is what public finance economists commonly call tax impact; it differs from the economically more important notion of tax incidence, which affect the distribution of real income – those whose real incomes are reduced by a tax are said to bear the incidence of the tax, even if they are not legally liable for making the payments to the taxing governments. An example of divergence between tax impact and tax incidence a comparatively heavy property tax on the property of a firm that responds to the tax by announcing it will relocate, but that stays put after workers who do not wish to lose their jobs offer to take pay cuts (or forego future pay increases for a time) if the firm will remain where it is. Although tax incidence is very important to anyone who cares how taxes affect economic well-being, it is difficult to determine in many instances. In contrast, tax impact is visible and often arouses impassioned debates.

⁵ Information on indirect property tax relief was calculated from a published 1967 Census of Governments report (Census Bureau 1969, Table 4-6) and the Census website (State and Local Government Finances).

⁶ General revenue as defined by the Census Bureau is revenue from all sources other than government-operated liquor monopolies, government-operated utilities, and insurance trust operations, such as retirement funds.

⁷ This statement is true at least in the first instance – i.e., in terms of tax impact. The incidence of relief could end up being somewhat different. For example, it is possible that generous relief for residential property could increase the demand for housing and stimulate new housing construction, which could increase demand for land for housing developments, which could benefit farmers – and other sorts of businesses – owning such land.

⁸ If the land is zoned for farm use and the zoning designation is not easily changed, it could be argued there is no need for use-value assessment because a common rationale for such assessment is preservation of farm use (even if the evidence doesn’t support it). Also, if the zoning really is strictly enforced and the standard basis of assessment is highest and best probable use, rigid zoning makes any non-farm use improbable; this means the owner of the land has diminished rights, which should translate into diminished value, and therefore diminished assessed value, even without use-value assessment.

⁹ A recent account says Utah adopted the first property tax relief for senior citizens in 1898 (Reutter 2007, citing Meyer).

¹⁰ A recent University of Illinois press release on a faculty member’s article on tax relief states that Utah adopted the first homestead exemption, in 1898 (Reutter 2005). No homestead exemption movement developed until the 1930s.

¹¹ I talked with some people involved in the Census of Governments about this around the time I prepared my 1986 paper (Bowman 1987) and before, but did not persuade them to change their definition of classification.

¹² Both Chen and Stocker list the Wisconsin circuit breaker, which provided relief to all ages or both owners and renters, not just elderly homeowners. Stocker’s list also includes homestead exemptions in seven states, a homestead property tax credit in one state, deferral in one state, and a tax freeze in yet another. The ACIR list of states with property tax relief for the elderly likewise includes various forms of such relief.

¹³ Between 1950 and 1970, the time when homestead property tax relief for the elderly became a front-burner issue for state legislatures, the labor force participation rate for men 65 and over declined from 45.8 percent to 26.8 percent, and most of that drop occurred in the 1950s (Fullerton 1999, p. 4). Also see Gruber and Wise (1998).

¹⁴ The 2005 poverty rates for people under 18 years of age, those 18 to 64, and those 65 and over were, respectively, 17.6 percent, 11.1 percent, and 10.1 percent (Census Bureau 2006, p. 14-15).

¹⁵ ACIR reports over the years gave 1964 as the date of adoption of the Wisconsin circuit breaker, but a report of the Wisconsin Legislative Reference Bureau says the program was created by Chapter 566, Laws of 1963, and amended six months later (to change the purposes from “provide property tax relief” to “provide relief”) by Chapter 580, Laws of 1963. The altered statement of purpose apparently was important in helping the new program withstand a legal challenge that it violated the requirement of tax uniformity (Stark 1992, pp. 35-36). This source further indicates that non-elderly homeowners and renters were first brought into the program by a 1973 legislative change.

¹⁶ Dates of circuit breaker adoption were 1971 (Oregon), 1973 (Indiana and Michigan), and 1974 (Maryland).

¹⁷ A recent Norfolk, Virginia, program is a case in point. Homeowners wanted tax relief, the city responded with a deferral for which an estimated 84 percent of all homeowners were eligible, but on the eve of the deadline, only 18 applications had been received, despite widespread publicity of the program (Messina 2006). This is not an uncommon situation. Consider the following recent report from Washington State: “Even though the eligibility requirements are broader for the deferral program than for the exemptions, only 1,041 people took advantage of the available tax deferral for 2005, compared to 115,801 receiving exemptions” (Washington Senate 2007, p. 7).

¹⁸ Appendix Table B-1 and B-2 summarizes the findings of earlier studies for circuit breakers (B-1) and for homestead exemptions and credits (B-2), enabling comparison of similarities and differences.

¹⁹ Examples are Ohio (Ohio Department of Taxation 2007b) and Tennessee (Tennessee Code 67-5-702). Because market values cannot be observed for each and every home, they must be estimated; converting assessed values to market values requires use of an equalization factor (assessment-sales ratio), and the same factor must be used for all homes within the geographic area for which it was calculated, such as a county.

²⁰ In 2002, the income ceilings found in the many Virginia cities, counties, and towns ranged from a low of \$5,000 (a town) to a high of \$75,000 (also a town); for both cities and counties, the high was \$62,000, the low was \$15,000 for cities and \$7,500 for counties, and the city and county medians were \$25,000 and \$22,000, respectively (Knapp and Kulp 2002, p. 23).

²¹ AARP has a higher count for homestead exemptions or credits and for circuit breakers in part because it counts five states in both lists because Nebraska, New York, North Dakota, Ohio, and Washington homestead exemptions are structured as circuit breakers (Baer 2003, p. 3). By comparison, NCSL incorrectly reports no circuit breaker for Nebraska or Ohio but includes the other three states in its circuit breaker count (NCSL 2002, pp. 17-20).

²² Many states include some categories of disabled persons, regardless of age, in programs for the elderly; these provisions are not summarized here. It is noted, though, that who is considered to be disabled and therefore eligible for circuit breaker benefits differs rather widely, so satisfactory coverage of this group of potential claimants would add considerably to the volume of this paper.

²³ Choice among the three alternatives might be important in other contexts, however; for example, if local debt limits are set as a percentage of net taxable assessed value, reducing assessed value also reduces debt capacity.

²⁴ Some states and localities provide full exemption for homesteads of select groups; an example is a Florida 100 percent exemption for the homesteads of honorably-discharged veterans with service-connected permanent and total disability (Florida Department of Revenue 2007a).

²⁵ The coefficient of dispersion (COD) is a common measure of assessment uniformity, or non-uniformity. It is generally determined by calculating the ratio of assessed value to sales price for individual properties sold in arm’s-length market transactions, subtracting the median ratio from the ratio for each property to find absolute deviations from the median ratio, determining the mean absolute deviation from the median-parcel ratio, and then expressing that mean absolute deviation as a percentage of the median-parcel ratio; this percentage figure is the COD. If all parcels are assessed at exactly the same percentage of market value, there is no dispersion, and the COD value is zero. The greater the difference in assessment levels across properties, the higher the value of the COD.

²⁶ The important consideration here is the assessed value actually used as a starting point in computing tax bills. A state with assessment caps no doubt would ignore the effects of those caps in calculating coefficients of dispersion for evaluating assessor performance by using gross assessed values before application of caps; this is because non-uniformities due to caps imposed by law are not the fault of the assessor – they are legislated non-uniformities. But they are non-uniformities, nonetheless.

²⁷ These are not equivalent solutions. The former would allow exemption up to the maximum amount for a home of any value, while the latter would allow no exemption for homes worth more than the maximum amount set by the exemption law. Cutting off all exemption benefits when a home rises above a given assessed value (remember, there is no good source of market values for individual homes other than the assessors' estimates) might lead to some under-assessment of homes near the value cut-off to help their owners qualify for partial exemption; the incentive to under-assess at the upper end presumably would be greater with a state-funded homestead exemption than with one that had to be absorbed locally. Absent any cap on the exemption amounts, any incentive to under-assess is presumed to be greater with a state-funded flat-dollar exemption because of its greater percentage value when property is under-assessed.

²⁸ Income limits are much more common than limits on wealth, or net worth. A net worth limit arguably is important in targeting property tax relief; a household with \$100,000 in the bank but a very low current income is in a different economic circumstance than a household with the same current income but no financial reserve. Such a limit also is a relatively large step, in terms of additional levels of administrative and compliance effort. At the policy level, consideration of net worth entails choices of what to include or exclude. Some home value might be excluded; after all, one rationale for a circuit breaker program is to protect homeownership, recognizing the illiquid nature of the home as a financial asset. Trying to protect homeownership might imply ignoring home value, regardless of amount. What is the comparable treatment for renters, though, if they also are included in the circuit breaker? Retirement accounts might also be excluded from consideration, but this means the acceptable, or protected, forms of retirement savings must be defined. Should one or more motor vehicles be excluded, in recognition of the importance of a car in our society? Once such decisions have been made, forms and administrative procedures must be developed to ascertain the net worth positions of the applicants, and to verify them at least to some extent, if they are to be meaningful.

²⁹ The qualifying phrase, "over a significant range of income," is included to remove from the circuit breaker category programs that basically set a ceiling for qualifying income, but then – to avoid the notch problem – scale down benefits quickly as income rises, phasing the relief down to zero over just a few hundred dollars. As an example of this approach, a \$300 credit available to all claimants with less than \$25,000 income could be reduced to zero at \$25,600 by reducing the amount of the credit \$0.50 for each additional dollar of income. Technically, this phase-out provides relief that declines as income rises, but it is better viewed as a notch-avoidance feature because the range of income over which the inverse relationship occurs is so small.

³⁰ This is the Rhode Island structure for households of two or more; for single-person households, the boundary between the 5 percent and 6 percent thresholds is \$12,000 rather than \$15,000 (see Table 4).

³² As we will see in the section summarizing states' circuit breaker provisions, some variants of the sliding-scale approach do not use relief percentages.

³³ Given this definition, I nonetheless come up with a somewhat different list from that produced by the authors of the CBPP report.

³⁴ Drawing this hard line between what constitutes a circuit breaker and what doesn't pass muster also seems not to recognize the fact that application of the benefit limits found in most circuit breakers greatly reduces the difference between the threshold and sliding-scale approaches, as shown later in this section of this paper.

³⁵ This is discussed by ACIR (1975, pp. 9-10), Bowman 1980 (pp. 367-69), Gold (1976; 1979, pp. 63-65). In the interest of full disclosure, I was principal author of the 1975 ACIR report (see ACIR 1975, p. iii); some of the views expressed there also are presented in a later article on circuit breakers (Bowman 1980). Although his paper does not discuss the relative merits of the two basic circuit breaker types as such, Bendick (1974) evaluated the Wisconsin circuit breaker, which used multiple thresholds, as a tool for combating poverty. He concluded it worked rather well for this, although it was not as well-targeted after being expanded in 1973 to include non-elderly owners and renters as it had been when only the elderly were eligible; a significant reason for this is that household size differs more among the non-elderly, and the Wisconsin program made no adjustment in income for different numbers of household members.

³⁶ Despite this difference, both basic approaches establish an inverse relationship between tax relief and the income of the claimant – under either approach, if there are not limits and for a given property tax bill, as a claimant's income increases the amount of relief decreases. But there are differences. Even a small income change will cause some property tax relief change under the threshold approach, but income changes within a defined income bracket under the sliding-scale approach will have no effect (bracket

widths vary among these programs). Moreover, the threshold approach establishes an inverse relationship between income and property tax relief for all claimants, but the sliding-scale approach does not; because all sliding-scale claimants within a given income range get the same percentage relief, those with higher gross taxes will have higher net taxes.

³⁷ Included in Social Security income, as used in the SSA report, are “retired-worker benefits, dependents' or survivors' benefits, disability benefits, transitionally insured benefits, and special age-72 benefits” (Table I.1, and elsewhere).

³⁸ Effective tax rates routinely use a broad base measure as a benchmark, in part because it is useful in determining the effects of preferences.

³⁹ Internet searches for information on property tax relief turn up many AARP reports and releases concerning their efforts on behalf of the elderly.

⁴⁰ The Social Security Administration website (<http://www.ssa.gov/notices/supplemental-security-income/>) provides this summary statement: “Supplemental Security Income (SSI) is a Federal income supplement program funded by general tax revenues (not Social Security taxes): It is designed to help aged, blind, and disabled people, who have little or no income; and It provides cash to meet basic need for food, clothing, and shelter” (the bulleted format of the two points is omitted here).

⁴¹ Many property tax relief programs, including some that are income-conditioned, are found at the local level. Excluding military pensions, for example, could have effects at the local level similar to those for Social Security exclusion show in this paper, in a locality with an significant concentration of military retirees but with many non-military claimants, as well.

⁴² Although the District of Columbia is not a state, neither is it a locality within a state, and while its land area makes Rhode Island look large, the population of the District is somewhat larger than that of Wyoming and not a lot smaller than those of Alaska, North Dakota, and Vermont. The District’s tax structure is much more like those of the states than of cities.

⁴³ State taxes are a below-average percentage of the state-local total in Texas (47.4 percent compared to the national average of 59.1 percent) and, to a lesser degree, Florida (56.6 percent). On the other hand, Alaska and Tennessee, which also lack both individual income taxes and state-funded circuit breakers, raise an above-average portion of state-local taxes at the state level (63.1 percent and 62.6 percent, respectively) (Census Bureau state and local finances data for 2004-2005).

⁴⁴ The web heading is “2 Percent Circuit Breaker Fact Sheet”; the printer-friendly version drops the “2 percent” part. In the Indiana Code, it is called a “credit for excessive residential property taxes.” <http://www.in.gov/legislative/ic/code/title6/ar1.1/ch20.6.html>

⁴⁵ Indiana Code 6-3-3-9(h); for individuals or couples with only one spouse at least 65 years old, the credits are \$100, \$50, and \$40. The program is administered by the Department of Revenue and can be claimed on Form SC-40 (Indiana Department of Revenue 2006b) without filing an income tax return – with a July 2, 2007 filing deadline for tax year 2006 – if income is less than \$5,000 for a married couple with both spouses at least 65 (lower cut-offs for other classes of filers).

⁴⁶ Neither NCSL (2002) nor AARP (2003) lists Indiana among circuit breaker states.

⁴⁷ The same credit described by ACIR for 1992 remains available (Hawaii State Legislature 2006). The renters’ credit is provided at HRS 14-235-55.7; at 14-235-55.85 another refundable income tax credit is provided for all individual income tax filers with under \$20,000 AGI, and to residents who do not have to file an income tax return. This credit also is a specified amount per qualified exemption, but the amount declines as income rises, in circuit breaker fashion: \$35 if AGI is under \$10,000; \$25 if AGI is at least \$10,000 but under \$15,000; and \$10 if AGI is at least \$15,000 but less than \$20,000. However, this variable credit has no link to property taxation and is not considered a property tax circuit breaker.

⁴⁸ Tennessee Code 67-5-702 and 703 (Tennessee General Assembly). The \$20,000 income limit was a legislated increase for tax year 2006 (application in 2007), after which it will be indexed using the Social Security cost of living percentage adjustment.

⁴⁹ Although an Indiana resident for four years in the late 1970s, I am not picking on the state; it simply offers a lot of fodder for an exercise such as the current one. The Indiana Department of Local Government Finance (2006b) lists 14 residential property tax relief programs, and that list does not count the “2 Percent Circuit Breaker” tax cap discussed above, income deductions of up to \$2,500 of either rent or property tax (Indiana Department of Revenue 2006a), the Lake County credit noted here – or the unified elderly tax credit, noted above, which is not property tax relief. This is not the only state with a dozen or more residential property tax relief programs. As an aside, being able to deduct up to \$2,500 of residential

property tax may not sound like a big deal to people in many states, but the Indiana income tax has neither standard nor itemized deductions (Russell and Hanson 2007, pp. 10-11).

⁵⁰ In this connection, the circuit breaker for elderly homeowners listed by AARP (2003, p. 15) is not among the property tax relief programs listed by the Wyoming Department of Revenue (2006a), but this tax rebate is.

⁵¹ A great many states provide benefits to the elderly and to non-elderly disabled persons; qualifying disabilities vary considerably. Focus here is on more generally applicable programs, and the specifics of disability coverage are not considered. Similarly, a number of programs for the elderly or disabled allow a surviving spouse of a deceased claimant to continue in the program; if there is an age restriction for the surviving spouse, it typically is lower than that for other claimants – e.g., 58 if the general age threshold is 65 – but this is another area of variety across the states, and sometimes within a single state.

⁵² New Jersey, which has programs for homeowners of all ages and for elderly renters, is counted in the all-ages group on the basis of the former programs.

⁵³ The number of states with coverage for elderly renters includes West Virginia; as a practical matter, that is not the case. While there is statutory provision for a circuit breaker for elderly owners and renters that took effect in 1972 (West Virginia Code 11-25 through 11-25-11), in the intervening 35 years it has not been changed. The maximum income for claimants is \$5,000 from essentially all money income and the maximum benefit is under \$100. The program reportedly is dormant, with no claimants and no forms for some years, but a new circuit breaker – this one for homeowners of all ages – was adopted in 2007 and takes effect in 2008 (Amburgey 2007; West Virginia Legislature 2007a and b; WVC 11-21-23). It uses a 4% threshold formula with a \$1,000 benefit limit and is an alternative to a refundable homestead credit that supplements the homestead exemption for certain elderly homeowners (WVC 11-21-21). The new program will increase the number of states with circuit breaker relief for younger homeowners, but the dormant status of the old program means there actually is one less program available to elderly owners and renters, and the new program will not provide any relief for renters.

⁵⁴ Maine, which covers all ages of owners and renters, has an alternative formula for elderly (62 and over) or elderly disabled (55 and over) owners and renters that is used if it results in higher benefits. In Oregon, a wealth test for claimants 58-64 years of age does not apply to those 65 or over. Pennsylvania sets 65 as the minimum qualifying age, generally, but allows widows and widowers 50 and older to participate. In Washington State, 61 is the standard minimum age, but homeowners 62 and older may qualify for supplemental benefits.

⁵⁵ The District of Columbia provides other property tax benefits for the elderly, besides the circuit breaker. For discussion of other programs, as well as fuller discussion of the circuit breaker, see Bowman (2006).

⁵⁶ Reflecting centralization of school finance, state government levied over 70 percent of all property taxes in Vermont in fiscal 2005, the latest year for which Census Bureau data on state and local government finance are available.

⁵⁷ Legislation adopted in 2007 lowers the figure to 15 percent in Kansas, beginning with filings for tax year 2007.

⁵⁸ As noted elsewhere, younger disabled owners and renters also may be eligible in Kansas.

⁵⁹ This is just one of three Maryland circuit breakers.

⁶⁰ It probably would be more accurate to reduce the number to 34 for 2007, in recognition of the fact that the West Virginia circuit breaker implemented in 1972 has been dormant for a number of years and the new circuit breaker in that state, adopted in 2007, is not operational in 2007. However, this paper deals with circuit breaker provisions, rather than the number of claimants, so West Virginia is counted among circuit breaker states in 2007.

⁶¹ The second row for West Virginia is for a new circuit breaker that does not become operational until 2008, so it is not counted among the programs in mid-2007.

⁶² In Nebraska, the circuit breaker structure determines the size of homestead exemption to which the claimant is entitled; tax savings depend on this and the tax rate applicable to a claimant's property.

⁶³ The Montana situation, with so many programs identified, makes the choice of words for indicating where lines are drawn between programs both more difficult and more important. Reference is made to pairs of claimant groups, and the temptation is to say “within a single program” – but each part of the pairing is considered to have a separate program. The pairings in the Montana cases are married and single; circuit breakers for married homeowners of all ages and for single homeowners of all ages each

have three brackets, and circuit breakers for married disabled veterans and single disabled veterans both have four brackets.

⁶⁴ Iowa program details can be varied administratively from year to year to keep the program's costs within the amount appropriated. Claims for 2006, filed in 2007, provide a perfect example. Both homeowner and renter claim forms were due by June 1 (unless extended); initially the schedule of relief percentages was the same for both groups, but a revised Form 54-001b – the second page of the homeowners' claim form – dated May 15, 2007, changed the percentages for homeowners. Two months later, there still is no change for renters; Form 54-130b (dated 10/19/06) still is on the website

(<http://www.state.ia.us/tax/forms/prop.html>).

⁶⁵ They are under "Tax Table Algorithms" at http://www.taxes.state.mn.us/taxes/prop_refund/forms.shtml. The ones used for this paper are for 2006 taxes, for which applications are filed in 2007.

⁶⁶ Similar limits also are found in homestead exemption plans of some states, including Georgia, which has exemptions applicable to the levies of different sorts of government, such as county, municipal, and school district, rather than a single exemption covering all taxes levied on a claimant's property (Georgia Department of Revenue, Property tax guide).

⁶⁷ The qualifying word "state" is used deliberately, for several local-option circuit breakers in Virginia do use matrices that consider both income and net worth. The Virginia programs are discussed briefly at the end of this part of the report; information on all individual programs of counties and cities, and some towns as well, is provided in Knapp, Shobe, and Kulp (2006, pp. 27-42).

⁶⁸ Michigan Department of Treasury, "Income and Deductible Items." The list has four columns; the first lists the items and the others are for three income definitions, household income, AGI, and taxable income.

⁶⁹ These allowances are in addition to the basic income ceiling of \$91,120 for homeowners and \$49,160 for renters. By comparison, the Wisconsin income ceiling, before consideration of dependent allowances, is \$24,500.

⁷⁰ For example, when the Kansas change noted above occurred, it was reported that the AARP of Kansas "... hailed the legislation, . . . , telling the press it provides overdue relief for seniors on fixed incomes" Courtwright 2007, p. 314).

⁷¹ Several of the SSA tables cited include a "personal contributions" source, without explanation; searching the entire report did not turn up a definition, or even another use of the term aside from in those tables. They may be gifts. Whatever they are, "personal contributions" are a source of income for only 1 percent of the "income units" age 65 or older, according to Table 1.1. As explained in Part 4, an income unit is an individual or a married couple; for a married couple to be considered 65 or older, only one spouse needs to have attained that age.

⁷² It was heartening to see the Baer-AARP presentation, acknowledging that homestead exemptions can be circuit breakers. Apparently this view is shared by the National Conferences of State Legislatures, as well, although –based on looking for Ohio's program, I had thought it did not. Of the four states identified in this paper with homestead exemptions structured as circuit breakers, NCSL includes North Dakota and Washington among circuit breakers but does not list the similar Nebraska and Ohio programs there (NCSL 2002, pp. 17-18). The Ohio program, at least, was well-established by the time of the NCSL report.

⁷³ Thanks are due John L. Knapp for comments on a draft of this section and to Stephen C. Kulp for clarifying information on some of the local relief programs summarized below.

⁷⁴ The deferral of the third tier of relief is not noted in the source given for the Hampton program; this was clarified in an e-mail exchange with Stephen C. Kulp on June 7, 2007. Information current as of that date shows the boundaries between benefit tiers to be \$21,000 and \$30,000, rather than \$16,000 and \$21,000.

⁷⁵ Although the Census Bureau lists Kalawao as a county, there apparently is some debate about this status. According to information on the website of the University of Hawaii Ham Club, an organization of ham radio operators that apparently tries to make contact with people in every county of the country ("Hawaii's 4 (or 5) Counties"). Information attributed to Dr. Joseph R. Morgan, in the Geography Department of the University of Hawaii at Manoa says that the county, formed initially as a leper colony, was absorbed into the County of Maui before publication of a 1983 map. Information on the same site from a Larry Cahoon, however, says the County of Kalawao still exists but it lacks the powers of other counties, including property taxation. According to Cahoon, "The state constitution as amended and in force on January 1, 1997 in Article VII section 3 says – 'the taxing power shall be reserved to the State, except so much thereof as may be delegated by the legislature to the political subdivisions, and except that all functions, powers and duties relating to the taxation of real property shall be exercised exclusively by the counties, with the

exception of the county of Kalawao.’” Cahoon further reports that Kalawao County is under the jurisdiction of the state Department of Health., which refers to it as a county. Moreover, he reports, certain state tax forms refer to the County of Kalawao.

⁷⁶ The description of Connecticut local-option property tax relief is based on three analyses by the Connecticut Office of Legislative Research, apparently in response to requests for information (Lohman 2006, McCarthy 2006, and Niesz 2006). The fact that a special survey had to be conducted to determine what relief measures certain towns had adopted, if any, indicates such information is not regularly compiled by the state; examples in the text are from that survey, presented in Lohman, pp. 3-4.

⁷⁷ Maximum relief for single claimants in the state program is 40 percent (see Table A-1).

⁷⁸ Maryland local-option homeowners’ property tax credit information is summarized from homeowners’ and renters’ tax credits information available on the website of the Maryland Department of Assessments and Taxation (<http://www.dat.state.md.us/sdatweb/taxcredits.html#htcrtc>).

⁷⁹ Information in this section is drawn from the New York State Office of Real Property Services materials on the elderly exemption option (ORPS 2007e) and summary statistics on exemptions (ORPS 2007f). The exemption is available to localities under Section 467 of the New York State Real Property Tax Law, and the exemption code is number 4180.

⁸⁰ In a July 17, 2007 e-mail exchange between the author and Jim Dunne in ORPS it was learned that local governments apparently are not required to submit to ORPS information on ordinances adopted pursuant to the authorizations in Section 467 of the Real Property Tax Law.

⁸¹ Information is principally from the State and County QuickFacts and American FactFinder sites of the Census Bureau, but also from a recent report on the status of the elderly population (Census Bureau 2005, chapter 4).

⁸² Bowman (2007) discusses the changes in both Ohio and West Virginia, and some lessons to be drawn from them.

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Table A-1. State Circuit Breaker Programs, Information for Applications in 2007 (Generally for Tax Year 2006)

State	Beneficiary Groups	Relief Formula Type	Income Definition ¹	Income Ceiling	Other Limits ²
Alabama	--				
Alaska	--				
Arizona ³	Homeowners and renters 65 and over or disabled, households of 2 or more (spouse or dependents)	Special formula: 21 income brackets, maximum relief falls from \$502 (income under \$2,500) to \$56 (income \$5,351-\$5,500)	Money income, defined rather narrowly; claimant, spouse, & others in dwelling unit	\$5,500	Maximum benefit, \$502
Arizona	Homeowners and renters 65 and over or disabled, individuals living alone	Special formula: 21 income brackets, maximum relief falls from \$502 (income under \$1,500) to \$56 (income \$3,651-\$3,750)	Money income, defined rather narrowly	\$3,750	Maximum benefit, \$502
Arkansas	--				
California ⁴	Homeowners 62 and over, or disabled	Special formula: 38 income brackets; maximum relief is 139% of 1% tax on a \$34,000 home, \$472.60 (income \$0-\$10,691) to \$20.40, 6% of that tax (income \$40,988-\$42,770). 38 brackets same as below	Money income, defined very broadly; claimant, spouse, and other adults in the household except renters and full-time students under 24	\$42,770	Maximum benefit, \$472.60; T, V
California	Renters 62 and over, or disabled	Special formula: 38 income brackets; maximum relief is 139% of \$250 (defined as rent equivalent to property tax, above), \$347.50 (income \$0-\$10,691) to \$15, 6% of that rent (income \$40,988-\$42,770). 38 brackets same as above	Money income, defined very broadly; claimant, spouse, and other adults in the household except renters and full-time students under 24	\$42,770	Maximum benefit, \$347.50; R

Colorado ⁵	Homeowners 65 and over, or disabled – married	Special formula: relief is the \$600 maximum reduced by 10% of income above \$8,700 <i>Married relief = \$600 – 0.1(income - \$8,700)</i>	Money income, defined very broadly; claimant & spouse	\$14,700	Maximum benefit, \$600
Colorado	Renters 65 and over, or disabled – single	Special formula: relief is the \$600 maximum reduced by 10% of income above \$5,000 <i>Single relief = \$600 – 0.1(income - \$5,500)</i>	Money income, defined very broadly; claimant & spouse	\$11,000	Maximum benefit, \$600
Connecticut ⁶	Homeowners 65 and over, or disabled – married	Sliding scale, 5 brackets; relief falls from 50% (first \$14,300 income) to 10% (income \$28,801-\$35,300)	Money income, defined very broadly; claimant & spouse	\$35,300	Maximum benefit, \$1,250
Connecticut	Homeowners 65 and over, or disabled – single	Sliding scale, 4 brackets; relief falls from 40% (first \$14,300 of income) to 10% (income \$24,001-\$28,800)	Money income, defined very broadly	\$28,800	Maximum benefit, \$1,000
Connecticut ⁷	Renters 65 and over or disabled – married	Hybrid – threshold formula constrained by a 5-bracket sliding scale of maximum and minimum relief amounts Threshold – relief is 35% of renter expenses minus 5% of income	Money income, defined very broadly; claimant & spouse	\$35,300	Maximum benefit, \$900

Connecticut	Renters 65 and over or disabled – single	Hybrid – threshold formula constrained by a 4-bracket sliding scale of maximum and minimum relief amounts Threshold – relief is 35% of renter expenses minus 5% of income	Money income, defined very broadly	\$28,800	Maximum benefit, \$700
Delaware					
Dist. of Columbia ⁸	Homeowners and renters 62 and over or disabled	Threshold; 4 brackets and thresholds, from 1% (first \$4,999 of income) to 2.5% (income \$15,000-\$20,000); 100% of tax over threshold amount is relieved	Money income, defined very broadly; all members of household	\$20,000	Maximum benefit, \$750
Dist. of Columbia	Homeowners and renters under age 62	Threshold; 6 brackets and thresholds, from 1.5% (first \$2,999 of income) to 4% (income \$15,000-\$20,000); relief is 95% of excess tax in lowest bracket, 75% of excess tax for each of the other 5 brackets	Money income, defined very broadly; all members of household	\$20,000	Maximum benefit, \$750
Florida					
Georgia					
Hawaii ⁹					
Idaho ¹⁰	Homeowners 65 and over, disabled, widows or widowers, and certain others	Special formula: 36 income brackets with maximum relief amount falling from \$1,320 (first \$11,720 of income) to \$150 (income \$27,491-\$28,000); relief is lesser of bracket maximum and actual tax paid	Money income, defined very broadly; claimant & spouse	\$28,000	Maximum benefit, \$1,320

Illinois ¹¹	Homeowners and renters 65 and over or disabled	Threshold; relief is lesser of amounts given by two alternative formulas Formula 1: $relief = tax - (0.035 * income)$ Formula 2: $relief = \$700 - (0.045 * income)$	Money income, defined very broadly; claimant & spouse	\$21,218 living alone, \$28,480 two people, \$35,739 more people	Maximum benefit, \$700
Indiana					
Iowa ¹²	Homeowners 65 and over, or disabled	Sliding scale – details can change year-to-year, based on funding; for 2007 filing, 6 income brackets with relief from 100% (income up to \$9,724) to 25% (income \$16,588-\$18,876)	Money income, defined very broadly; claimant & spouse	\$18,876; indexed	
Iowa	Renters 65 and over, or disabled	Sliding scale – details can change year-to-year, based on funding; for 2007 filing, 6 income brackets with relief from 94% (income up to \$9,724) to 24% (income \$16,588-\$18,876)	Money income, defined very broadly; claimant & spouse	\$18,876; indexed	R
Kansas ¹³	Homeowners and renters who are 55 and over, or disabled, or have a dependent child under 18 present in the home	Sliding scale; 22 income brackets with relief of tax from 100% (first \$6,000 income) to 5% (income \$26,001-\$28,000)	Money income, defined rather narrowly; all members of household	\$28,000; all members of the household	Maximum benefit, \$600 (\$700 as of tax year 2007); V
Kentucky					
Louisiana					
Maine ¹⁴	Owners and renters, all ages	Threshold; relieves 50% of tax above 4% of income and 100 percent of tax above 8 percent of income	Money income, defined very broadly; all members of household	\$77,000 living alone, \$102,000 living with spouse or dependents	Maximum benefit, \$2,000 (doubled in 2005); R, T

Maine ¹⁵	Elderly (62 and over) and disabled elderly (55 and over) owners and renters with very low incomes – living with spouse or dependents	This alternative to general program is used if it gives claimant more relief. Sliding scale; 4 brackets – relief drops from 100% (income up to \$13,800), to 75%, 50%, and to 25% (\$15,201-\$15,700)	Money income, defined very broadly; all members of household	\$15,700	Maximum benefit \$400; R, T
Maine	Elderly (62 and over) and disabled elderly (55 and over) owners and renters with very low incomes – living alone	This alternative to general program is used if it gives claimant more relief. Sliding scale; 4 brackets – relief drops from 100% (income up to \$11,500), to 75%, 50%, and to 25% (\$12,301-\$12,700)	Money income, defined very broadly; all members of household	\$12,700	Maximum benefit \$400; R, T
Maryland ¹⁶	Owners, all ages	Threshold; 4 brackets and thresholds: 0% (first \$8,000 of income), 4%, 6.5%, and to 9% (income over \$16,000)	Money income, defined very broadly; applicant, spouse, and all others in household who are not dependents or paying rent	\$60,000	V, W
Maryland	Renters, 60 and over	Threshold; 4 brackets and thresholds: 0% (first \$8,000 of income), 4%, 6.5%, and to 9% (income over \$16,000)	Money income, defined very broadly; applicant, spouse, and all others in household who are not dependents or paying rent		Maximum benefit, \$750; W
Maryland	Renters, under 60 and with at least 1 dependent child under 18	Threshold; 4 brackets and thresholds: 0% (first \$8,000 of income), 4%, 6.5%, and to 9% (income over \$16,000)	Money income, defined very broadly; applicant, spouse, and all others in household who are not dependents or paying rent	Varies with household size from \$13,461 (renter & 1 dependent child) to \$40,288 (at least 9 in household)	Maximum benefit, \$750; W

Massachusetts ¹⁷	Homeowners and renters 65 and over	Threshold; relief is tax or equivalent in excess of 10% of income	Money income, defined broadly; claimant & spouse Exemptions for dependents, blindness, and age	\$46,000 (single), \$58,000 head of household, \$70,000 married	Maximum benefit, \$870; V
Michigan	Homeowners and renters under 65	Threshold; relief is 60% of tax in excess of 3.5% of income (60% relief = 40% co-payment or coinsurance)	Money income, defined broadly; all adults in household	\$82,650 (but credit is reduced 10% for each \$1,000 or portion of \$1,000 of income above \$73,650)	Maximum benefit, \$1,200
Michigan	Homeowners and renters 65 and over, or disabled	Threshold; 5 thresholds from 0% (first \$3,000) to 3.5% (income over \$6,000); credit is 100% of excess tax or rent above the thresholds	Money income, defined broadly; all adults in household	\$82,650 (but credit is reduced 10% for each \$1,000 or portion of \$1,000 of income above \$73,650)	Maximum benefit, \$1,200
Minnesota	Homeowners of all ages	Hybrid: Threshold formula constrained by rising coinsurance percentages and overlying sliding scale of maximum relief amounts 26 income brackets and threshold percentages, from 1.0% (first \$1,399) to 4.0% (income \$70,230 & over) 8 co-payment rates, from 15% (income up to \$4,220) to 50% (\$63,210 & over) maximum benefit falls from \$1,700 (income to \$2,800) to \$340 (\$87,710 & over)	Money income, defined moderately broadly; claimant & spouse Allowances (subtractions) for old age or disability of a spouse (\$3,300) and for each dependent (NOT claimant and spouse), up to five (from \$4,620 for one to \$19,800 for five)	\$91,120, claimant & spouse (\$94,420 if a spouse is 65 or over, or disabled) Allowances (at left) effectively increase income ceilings, up to \$110,920 with five or more dependents (\$114,220 if a spouse is elderly or disabled)	Maximum benefit, \$1,700

Minnesota	Renters of all ages	Hybrid: Threshold formula constrained by rising coinsurance percentages and overlying sliding scale of maximum relief amounts 23 income brackets and threshold percentages, from 1.0% (first \$5,619) to 3.5% (income \$42,140 & over) 10 co-payment rates, from 5% (income up to \$4,220) to 50% (\$43,550 & over) maximum benefit falls from \$1,400 (income to \$39,329) to \$140 (\$47,760 & over)	Money income, defined moderately broadly; claimant & spouse Allowances (subtractions) for old age or disability of a spouse (\$3,300) and for each dependent (NOT claimant and spouse), up to five (from \$4,620 for one to \$19,800 for five)	\$49,160 Allowances (at left) effectively increase income ceiling, up to \$68,960 with five or more dependents (\$72,260 if a spouse is elderly or disabled)	Maximum benefit, \$1,400
Mississippi					
Missouri ¹⁸	Homeowners and renters 65 and over, or disabled	Threshold variant; in effect, over 40 thresholds that rise from 0% at \$13,000 income to about 2.5% at \$25,000 income, rising steadily through \$300 increments to income over \$13,000	Money income, defined very broadly; claimant & spouse \$2,000 exclusion (allowance) for a spouse	\$25,000 single, \$27,000 married Ceiling for married claimants reflects allowance at left	Maximum benefit, \$750
Montana ¹⁹	Homeowners and renters 62 and over	Threshold; 12 thresholds, from 0% (first \$1,999) to 5% (income \$12,000 or more)	Money income, defined broadly; all people in the household Standard \$6,300 exclusion	\$45,000 (but credit is reduced in 5 steps for incomes between \$35,000 and \$45,000, from 40% of formula amount to 0%)	Maximum benefit, \$1,000

Montana	Homeowners, all ages – married, or head of household	Sliding scale; 3 brackets with tax reduction from 80% (income up to \$10,027) to 30% (income \$17,549-\$25,068)	Money income, defined very broadly; claimant & spouse	\$25,068	
Montana	Homeowners, all ages – single	Sliding scale; 3 brackets with tax reduction from 80% (income up to \$7,521) to 30% (income \$11,533-\$18,801)	Money income, defined very broadly	\$18,801	
Montana ²⁰	Homeowners who are disabled veterans – married	Sliding scale; 4 brackets with tax reduction from 100% (income to \$39,894) to 50% (income \$46,544-\$49,867)	Money income defined narrowly – federal AGI; claimant & spouse	\$49,867	
Montana	Homeowners who are disabled veterans -- single	Sliding scale; 4 brackets with tax reduction from 100% (income to \$33,245) to 50% (income \$39,895-\$43,218)	Money income defined narrowly – federal AGI	\$43,218	
Nebraska ²¹	Homeowners 65 and over (part of same program as disabled) – married	Sliding scale; 6 brackets, exemption from 100% (income up to \$27,201) to 25% (income \$33,101-\$34,501)	Money income, defined moderately broadly; all owner-occupants	\$34,501	V, X
Nebraska	Homeowners 65 and over (part of same program as disabled) – single	Sliding scale; 6 brackets, exemption from 100% (income up to \$23,201) to 25% (income \$28,101-\$29,301)	Money income, defined moderately broadly; all owner-occupants	\$29,301	V, X
Nebraska	Disabled homeowners (part of same program as elderly) – married	Sliding scale; 6 brackets, exemption from 100% (income up to \$29,901) to 25% (income \$35,701-\$37,201)	Money income, defined moderately broadly; all owner-occupants	\$37,201	V, X

Nebraska	Disabled homeowners (part of same program as elderly) – single	Sliding scale; 6 brackets, exemption from 100% (income up to \$26,101) to 25% (income \$31,001-\$32,201)	Money income, defined moderately broadly; all owner-occupants	\$32,201	V, X
Nevada ²²	Homeowners and renters 62 and over	Sliding scale; 100% relief if household income is below the federal poverty line for a household of one (single) or two (married); as income rises beyond that, relief is a declining percentage of tax, but details are determined administratively	Money income, defined very broadly; claimant & spouse	\$26,714	Maximum benefit, \$500
New Hampshire ²³	Homeowners, all ages – married	Sliding scale; 4 brackets, relief falls from 100% (income below \$25,000) to 20% (income \$35,000-\$40,000) <i>Brackets twice as wide as for single claimants</i>	Money income defined narrowly – federal AGI; if property held by income-earning trust, trust income also is included; all adults residing in the homestead	\$40,000	V
New Hampshire	Homeowners, all ages – single	Sliding scale; 4 brackets, Relief falls from 100% (income below \$12,500) to 20% (income \$17,500-\$20,000) <i>Brackets half as wide as for married claimants</i>	Money income defined narrowly – federal AGI; if property held by income-earning trust, trust income also is included; all adults residing in the homestead	\$20,000	V

New Jersey ²⁴	Homeowners, all ages	Sliding scale; 3 brackets relieve from 20% of first \$10,000 of tax (income to \$100,000) to 10% (income \$150,001-\$250,000)	Money income defined narrowly – sources taxable by state, after exclusions but before deductions and personal exemptions – excludes Social Security, welfare, etc. ; claimant & spouse	\$250,000	T Maximum benefit, \$2,000 (implicit)
New Jersey	Renters, under 65 and not disabled	Special formula; 4 income brackets, maximum relief drops from \$350 (income up to \$20,000) to \$80 (income \$50,001-\$100,000)	Money income defined narrowly – sources taxable by state, after exclusions but before deductions and personal exemptions – excludes Social Security, welfare, etc. ; claimant & spouse	\$100,000	Maximum benefit, \$350
New Jersey	Renters, 65 and over or disabled	Threshold, up to an income limit, then a flat amount: <i>Income not over \$70,000 (\$35,000 if single)</i> 5% threshold; relief = rent – (income * 0.05) <i>Income over \$70,000 (\$35,000 if single)</i> , relief is \$160	Money income defined narrowly – sources taxable by state, after exclusions but before deductions and personal exemptions – excludes Social Security, welfare, etc. ; claimant & spouse	\$100,000	Maximum benefit, \$860
New Mexico ²⁵	Homeowners and renters, 65 and over	Modified threshold; tax must exceed \$20 before there is any relief (threshold amount is \$20 for income \$0-\$1,000); 3 thresholds follow: 0.5% (to \$9,000), 1.5% (to \$15,000), and 3% (\$15,001-\$16,000)	Money income, defined very broadly; taxpayer & all members of the household	\$16,000	Maximum benefit, \$250

New York ²⁶	Homeowners and renters, 65 and over	<p>Hybrid: Threshold formula constrained by a sliding scale of maximum relief amounts</p> <p>7 income brackets and threshold percentages from 3.5% (income \$0-\$3,000) to 6.5% (income \$14,001-\$18,000); thresholds <i>not</i> applied incrementally; 50% coinsurance rate</p> <p>maximum relief falls from \$375 (income \$0-\$1,000) to \$86 (\$17,001-\$18,000)</p>	Money income, defined very broadly; claimant and all members of the household, whether or not related	\$18,000	Maximum benefit, \$375; W
New York	Homeowners and renters, under 65	<p>Hybrid: Threshold formula constrained by a sliding scale of maximum relief amounts</p> <p>7 income brackets and threshold percentages – same formula as for those 65 and over, but relief limits are lower:</p> <p>maximum relief falls from \$75 (income \$0-\$1,000) to \$41 (\$17,001-\$18,000)</p>	Money income, defined very broadly; claimant and all members of the household, whether or not related	\$18,000	Maximum benefit, \$75; W
North Carolina					

North Dakota ²⁷	Homeowners, 65 and over or disabled	Sliding scale; 5 brackets reduce taxable valuation from 100% (income to \$8,500) to 20% (income \$13,001-\$14,500); ceilings on reductions range from \$67,500 to \$13,500 of market value	Money income, defined moderately broadly; applicant, spouse, & any dependents	\$14,500 (\$17,500 as of August 1, 2007)	V, W
North Dakota	Renters, 65 and over or disabled	Threshold, 4%	Money income, defined moderately broadly; applicant, spouse, & any dependents	\$14,500 (\$17,500 as of August 1, 2007)	Maximum benefit, \$240; W
Ohio ²⁸ As of 7/2/07 (pay 2008) circuit breaker is replaced by flat exemption of \$25,000 of MV	Homeowners 65 and over, or disabled	Sliding scale; 3 brackets exempt from 75% of value (up to \$16,000 of market value) for income to \$13,500, to 25% (up to \$2,857 of market value) for income \$19,801-\$26,200.	Money income, defined rather narrowly; claimant & spouse	\$26,200	V
Oklahoma ²⁹	Homeowners 65 and over, or disabled	Threshold, 1%	Money income, defined very broadly; all persons in the household	\$12,000	Maximum benefit, \$200
Oregon ³⁰	Renters, 58 and over	Relief, higher of 2 amounts: Threshold, 20% (for rent, not tax): <i>relief = rent - (0.2 * household income)</i> Special formula: 20 income brackets, maximum relief drops from \$250 (income \$0-\$499) to \$18 (\$9,500-\$9,999); dollar drop varies from bracket to bracket	Money income, defined broadly; claimant & spouse	\$9,999	Maximum benefit, \$250; R; also W, if under 65

Pennsylvania ³¹	Owners 65 and over, widows or widowers 50 and over, or disabled persons 18 and over	Special formula: 4 income brackets, maximum rebate falls from \$650 (income \$0-\$8,000) to \$250 (\$18,001-\$35,000) <i>See special cases PA row</i>	Money income, defined rather narrowly; claimant & spouse	\$35,000	Maximum benefit, \$650
Pennsylvania	Renters 65 and over, widows or widowers 50 and over, or disabled persons 18 and over	Special formula: 2 income brackets, maximum rebate falls from \$650 (income \$0-\$8,000) to \$500 (\$8,001-\$15,000) <i>See special cases PA row</i>	Money income, defined rather narrowly; claimant & spouse	\$15,000	Maximum benefit, \$650
Pennsylvania	Homeowners and renters 65 and over, widows or widowers 50 and over	<i>Special cases:</i> 50% higher rebates for residents of: (1) Philadelphia, Pittsburgh, or Scranton; or (2) other areas, and property tax is over 15% of income – threshold formula	Money income, defined rather narrowly; claimant & spouse	\$30,000	Maximum benefit, \$975 total (50% above basic benefits, above)
Rhode Island ³²	Homeowners and renters of all ages	Threshold; 4 thresholds, from 3% (first \$6,000 of income) to 6% (\$12,001-\$30,000 if one person, \$15,001-\$30,000 for larger households) <i>Boundary between 5% and 6% thresholds is the only difference for different household sizes</i>	Money income, defined very broadly; all members of the household	\$30,000	Maximum benefit, \$300 (scheduled to rise, in stages, to \$500)
South Carolina					

South Dakota ³³	Homeowners 65 and over or disabled, in households of 2 or more	Sliding scale: 19 brackets; relief from 55% (first \$6,500 of income) to 19% (\$12,638-\$13,000)	Money income, defined very broadly; all members of the household	\$13,000	Benefits may be pro-rated if too little money is appropriated for the program
South Dakota	Homeowners 65 and over or disabled, living alone	Sliding scale: 25 brackets; relief from 35% (first \$3,750 of income) to 11% (\$9,731-\$10,000)	Money income, defined very broadly	\$10,000	Benefits may be pro-rated if too little money is appropriated for the program
Tennessee					
Texas					
Utah ³⁴	Homeowners 65 and over	Special formula: 7 brackets, maximum relief drops from \$798 (income \$0-\$9,159) to \$98 (\$24,247-\$26,941) Relief is lesser of maximum credit and actual tax on 35% of value	Money income, defined very broadly; all members of the household	\$26,941	Maximum benefit, \$798; T
Utah	Renters 65 and over	Special formula: 7 brackets, maximum relief drops from \$798 (income \$0-\$9,159) to \$98 (\$24,247-\$26,941) Relief is lesser of maximum refund and a portion of rent that declines from 9.5% to 2.5% as income rises	Money income, defined very broadly; all members of the household	\$26,941	Maximum benefit, \$798

Vermont ³⁵	Homeowners, all ages	<p><i>Applies to education taxes.</i></p> <p>Threshold; 2% times percentage increase in local education spending over state base expenditure level; an alternative tax on income is optional for incomes up to \$90,000.</p>	Money income, defined very broadly; all members of the household		T; also V (if income is \$90,000 or more)
Vermont ³⁶	Homeowners and renters, all ages	<p><i>Applies to property tax net of education tax circuit breaker reductions.</i></p> <p>Threshold, 3 brackets; from 2% (income up to \$10,000) to 5% (\$25,000-\$47,000)</p>	Money income, defined very broadly; all members of the household	\$47,000	
Virginia ³⁷					
Washington ³⁸	Homeowners 61 and over, or disabled	<p>Special, sliding-scale, variant: 3 income brackets</p> <p>All claimant exempt from “excess” levies outside 1% limit, with assessed values frozen for regular levies</p> <p>Income up to \$25,000, exempt from regular levies on greater of \$60,000 or 60% of assessed value</p> <p>Income \$25,001-\$30,000, exempt from regular levies on greater of \$50,000 or 35% of assessed value (but not over \$70,000)</p>	Money income, defined broadly; claimant & spouse, and any other household member with an ownership interest in the property	\$35,000	

Washington ³⁹	Homeowners 62 and over or disabled, who are un-remarried spouses of veterans who died in under certain conditions	Supplement to basic circuit breaker, above; together, they relieve all special levies, and all regular levies on \$50,000 of assessed value (\$35,001-\$40,000 of income) to \$100,000 (up to \$30,000 income)	Money income, defined broadly; claimant & spouse, and any other household member with an ownership interest in the property	\$40,000	V
West Virginia ⁴⁰	Homeowners and renters 65 and over	Hybrid: threshold formula constrained by overlying sliding scale of maximum relief amounts 10 \$500-wide income brackets, thresholds rising from 0%, 0.5%, 1%, . . . 4%, 4.5% (applied incrementally); 4 relief percentages, from 75% (first \$1,000 of income) to 30% (income \$3,001-\$5,000)	Money income, defined very broadly; claimant & spouse	\$5,000	T, R Maximum benefit, \$93.80 (implicit)
West Virginia ⁴¹ (new as of 2008)	Homeowners of all ages	Threshold; relief is tax in excess of 4% of income	Money income, defined moderately broadly; claimant & spouse	None	Maximum benefit, \$1,000
Wisconsin ⁴²	Homeowners and renters age 18 and over	Threshold, 2 brackets: 0%, first \$8,000 of income, and 8.788% on income over \$8,000; credit is 80% of the calculated relief – i.e., a 20% co-payment applies	Money income, defined very broadly; claimant & spouse Deduct \$250 per dependent (NOT claimant & spouse)	\$24,500	Maximum benefit, \$1,160; T, R
Wyoming ⁴³	Homeowners and renters 65 and over, or disabled if at least 18 – married	Special formula: maximum refund of \$900 is reduced by the percentage by which income exceeds \$12,500	Money income, defined very broadly; claimant & spouse	\$22,000	Maximum benefit, \$900; W

Wyoming	Homeowners and renters 65 and over, or disabled if at least 18 – single	Special formula: maximum refund of \$800 is reduced by the percentage by which income exceeds \$8,000	Money income, defined very broadly	\$13,500	Maximum benefit, \$800; W
State	Beneficiary Groups	Relief Formula Type	Income Definition	Income Ceiling	Other Limits

Source: State source materials and Table A-2.

Limits other than income and benefit (tax relief) include the following: maximum rent payments considered (R), maximum property tax considered (T), maximum home value considered (V), wealth or net worth ceiling (W), maximum exemption value (X), other (O) – e.g., Maryland’s requirement that qualifying renters under 60 have at least one dependent under age 18.

Endnotes for T1

¹ Differences in income definitions are too numerous to capture well in a summary table; additional information is provided in Table A-2, especially in the notes for the individual states, but even that is summary in nature.

² If there is an explicit upper limit on the amount of benefit – tax relief – it is indicated in this column; in some instances, implicit ceilings are reported, as in the Wisconsin case where a limit on the amount of tax that can be considered and a maximum relief percentage translate readily into a maximum benefit amount. Where relief takes the form of all or some taxes levied against a certain amount of assessed value, however, and the state sets no upper limit, there is no benefit maximum to report. Limits on wealth, eligible home value, amount of tax or rent considered, and so forth, are indicated by symbols in this column (see explanation, above).

³ Arizona is one of several states in which actual property tax or rent paid does not affect the circuit breaker benefit, except to set a ceiling on relief.

⁴ California’s circuit breaker parameters seem to reflect Proposition 13, which limits property tax to 1% of value and restricts taxable value growth from an acquisition date that now can be over 30 years ago. California is one of several states in which actual property tax or rent paid does not affect the circuit breaker benefit, except to set a ceiling on relief.

⁵ Colorado is one of several states in which actual property tax or rent paid does not affect the circuit breaker benefit, except to set a ceiling on relief. The relief formula is essentially a threshold formula, but the fact that it does not take actual property taxes into account (except rebate cannot exceed actual property tax or rent equivalent) makes it not fit this category comfortably.

⁶ The basic structure of the Connecticut homeowners’ circuit breaker is the same as that for renter, including the brackets used in determining relief, but there are important differences in the calculation of benefits and in the benefit limits, as shown in the body of the table. The sliding-scale benefit structure defines five income-eligible brackets (four for unmarried applicants); applicants in those brackets qualify for 50 percent, 40 percent, 30 percent, 20 percent, or 10 percent property tax reduction (40 percent to 10 percent for unmarried claimants), subject to maximum and minimum benefit limits. The bracket boundaries, but not the relief limits, are indexed using the Social Security cost-of-living percentage change.

⁷ The basic structure of the Connecticut renters’ circuit breaker is the same as that for owners, including the brackets used in determining relief, but there are important differences in the calculation of benefits and in the benefit limits, as shown in the body of the table. Renter expenses are rent for occupancy plus payments for basic utilities (excluding telephone, cable TV, Internet access); relief is extended through a separate refund process.

⁸ The maximum relief under either District of Columbia circuit breaker is \$750; claimants in the program for the elderly and disabled reach the maximum at a lower income level due to lower thresholds and the higher relief percentage for the excess tax in that program. See Bowman (2006) for discussion.

⁹ Hawaii property tax is largely a local matter, aside from the (basic) homestead exemption. Honolulu (which accounts for over 70 percent of the state’s population) and Maui (11 percent) have circuit breakers; see text of Part 5.

¹⁰ The Idaho circuit breaker (Property Tax Reduction Program) has some unusual entries in the list of possible claimants, including “fatherless or motherless” minor children, widows and widowers, and former prisoners of war or hostages. Relief approach is sliding scale, but instead of specifying percentages of actual property tax that will be relieved in each income bracket, a maximum amount of relief is set for each bracket, and the tax reduction is the lesser of actual property tax and the relief-bracket maximum. After tax year 2006, the \$28,000 maximum income is indexed – i.e., it rises to 185% of the federal poverty threshold for a two-person household if that is more than \$28,000, and all relief-bracket boundaries are changed proportionately to the change in maximum qualifying income; relief amounts are not indexed.

¹¹ Illinois Department on Aging instruction booklet includes a table that can be used to “estimate” the amount of circuit breaker relief; the tabular data indicate that no more than \$1,375 of property tax is considered, but effectively even less is considered for taxpayers with less than \$20,000 household income because the maximum amount of tax relief is reached when actual property tax reaches \$725. Relief is through a separate refund process.

¹² Iowa circuit breaker defines six income brackets that are eligible for relief; the relief percentages can change administratively year-to-year, depending on the amount appropriated to fund the program. Two weeks before the June 1, 2007, filing deadline, the relief percentages for homeowners were increased (Form 54-001b, dated 5/15/07), but the schedule for renters’ relief was not changed – as of July 14, Form 54-130b dated 10/19/06, was still posted on the website; before the change for homeowners, the Iowa circuit breaker had been classed as one program. Renters’ relief is based on consideration of no more than \$1,000 of rent equivalent to property tax. A companion program, using the same sliding-scale income brackets, provides reduction of the mobile home tax rate for people at least 23 years of age living in mobile homes located in mobile home parks.

¹³ The Kansas maximum benefit (refund) of \$600 rises to \$700 effective for tax year 2007; at the same time, income will exclude half of Social Security benefits, the percentage of rent considered to be property tax payment will drop from 20% to 15%, and eligibility will be restricted to homes with a market value of under \$350,000. Bracket widths were changed recently; for 2004, first bracket was \$0-\$6,000 and highest bracket was \$24,001-\$25,000, compared to those shown in the body of the table.

¹⁴ The Maine circuit breaker (Property Tax and Rent Refund) program has a long lag; applications due May 31, 2007, are based on income received, rent paid, and property taxes assessed in 2005.

¹⁵ This sliding-scale program is an auxiliary Maine circuit breaker available only for the elderly (defined differently for those who are disabled and those who are not) whose household incomes are not above the income levels shown; otherwise, the threshold program on the previous line of the table applies to the elderly, as well; even with the refund limits, the relief is more generous than under the other formula.

¹⁶ The Maryland circuit breaker for homeowners (Homeowners’ Property Tax Credit), in addition to imposing an income limit, also limits the amount of wealth a claimant can have (net worth under \$200,000 excluding the principal residence, IRAs, and most retirement savings accounts) and the amount of taxes eligible to be considered for relief (those on the first \$300,000 of value – owners of more valuable homes can participate, but some of their taxes will not be considered). The program was revised in 2006, in part to reflect rising home values, but the information on it in the spring of 2006 did not indicate there was an income ceiling (see Bowman 2006).

¹⁷ Massachusetts indexes qualifying income, assessed valuation amounts, and benefit ceiling; the ceiling for tax year 2006 qualifying home value is \$684,000.

¹⁸ In arriving at income, a Missouri married claimant subtracts a \$2,000 “exemption” for the spouse; the effect is to give married couples more relief for a given property tax bill at any given income, rather than simply allowing some relief for married couples past the income ceiling for single claimants – the relief table stops at \$25,000 income; the maximum benefit is \$750.

¹⁹ Maximum benefit for the Montana circuit breaker is \$1,000, before application of the phase-out schedule for incomes of \$35,000 and above.

²⁰ The Montana Disabled American Veterans Exemption circuit breaker has a companion program for the un-remarried surviving spouse of a person killed in active duty or who died from injuries incurred in active duty; the details are the same except the income limits for the sliding-scale brackets are different, topping out at \$37,678.

²¹ Nebraska’s circuit breaker determines exemption amounts in the homestead exemption program; the exemption limit is the greater of \$40,000 or the countywide average single-family residential assessed value (\$50,000 or 120% of the countywide average for eligible disabled claimants). Maximum homestead

value is stated as \$95,000 or twice the countywide average single-family residential assessed value (\$110,000 or 225% of the countywide average for eligible disabled claimants), but these limits relate only to the schedule of exemption percentages shown in the tables of the instruction booklet; some exemption can be received for homes valued up to \$20,000 higher than the stated maximum – the exemption is reduced by 10% for each \$2,500 of value above the “maximum” value, up to \$20,000 above the stated maximum.

²² Nevada’s circuit breaker income ceiling is \$24,016 indexed by the percentage change in the CPI from December 2002.

²³ The New Hampshire circuit breaker applies to only the statewide school property tax. The tax considered is that on the lesser of actual assessed value of claimant’s property or \$100,000 (market value limit) times the most current equalization ratio for the area. Benefit is received as a rebate, or refund check.

²⁴ The New Jersey Homestead Credit/Rebate adopted in 2007 (replaces the FAIR Program) really is three circuit breakers; one is for owners, the other two for renters; benefit formulas, limits, and income ceilings differ across the three, making them separate programs with a common income definition.

²⁵ New Mexico defines rent equivalent to property tax as 6% of rent. Maximum benefit is \$250, provided via a refundable income tax credit.

²⁶ New York’s Real Property Tax Credit (circuit breaker) benefit formula is of the threshold variety, but the thresholds are not applied incrementally; instead, a single threshold applies to all of a claimant’s income. Thresholds range from 3.5% to 6.5%, rising as income rises. In addition, there is a 50% “co-payment” for gross relief determined by subtracting the threshold amount of income from qualifying tax or rent; there also is maximum benefit that falls as income rises. Maximum benefit for elderly claimants is \$375 for those with \$1,000 or less income and drops by \$17 for each additional \$1,000 of income, to a low of \$86; for non-elderly claimants, the maximum credit falls from \$75 to \$41, dropping \$2 for each additional \$1,000 of income. Owners are disqualified if the current market value of all real estate owned exceeds \$85,000. Including income of all household members is said to exclude essentially all occupants of nursing homes, for all residents are considered to be in one household.

²⁷ North Dakota’s Homestead Property Tax Credit (circuit breaker) income limit rises by \$3,000, to \$17,500, effective August 1, 2007, and the sliding scale schedule of homeowner relief changes at that time, as well. The circuit breaker determines exemption levels for the homestead exemption program; there is a ceiling on taxable value reduction for each of the five sliding scale relief brackets. Prior to August 2007, the limits range from \$2,430 of taxable value (\$67,511 of market value) in the 100% bracket to \$608 of taxable value (\$13,511 of market value) in the 20% bracket. Maximum relief in the 100% bracket goes to exemption of \$3,375 (\$75,000 of market value) in August 2007 under the terms of 2007 legislation. Renters are limited to a maximum refund of \$240. There is also a wealth limit that denies participation to applicants whose assets (excluding up to \$100,000 unencumbered home equity) have a value over \$50,000.

²⁸ Ohio’s circuit breaker determines exemption levels for the homestead exemption program. Maximum exemption amounts for 2006 are: for 75% bracket, \$5,600 (equivalent to \$16,000 of market value, given the 35% assessment standard); for the 60% bracket, \$3,400 (\$9,714 of market value); and for the 25% bracket, \$1,000 (\$2,857 of market value). Income ceiling, bracket widths, and maximum exemption amounts have been indexed since early in this decade. However, 2007 legislation eliminates the income-targeting; instead of a circuit breaker, Ohio will have a flat homestead exemption of \$25,000 of market value effective for taxes payable in 2008.

²⁹ Oklahoma Credit or Refund of Property Tax (circuit breaker) relief is via a refundable income tax credit or refund, if no income tax filing is required.

³⁰ The Oregon Elderly Rental Assistance Program considers no more than \$2,100 rent in determining benefits and limits the refund to a maximum of \$250. Subject to the \$250 limit, relief is the higher of the amounts given by a threshold relief formula and a sliding-scale table, which gives relief amounts that decline as income rises. Claimants 58-64 years of age are ineligible if their household assets – both real and personal property, including cash, bank accounts, stocks, and accounts receivable – are worth at least \$25,000, but there is no wealth test for claimants at least 65 years old.

³¹ Pennsylvania’s relief formula does not take actual property tax (or rent) payments into account, except as setting the upper limit when actual payments are less than maximum rebates; another exception is the case in which property taxes for seniors exceed 15% of income.

³² Rhode Island circuit breaker property tax relief is determined using separate threshold schedules for one-person households and for larger households, but they differ only in the dividing line between the 5% and 6% thresholds (\$12,001 for individuals living alone, \$15,001 for larger households). The four threshold percentages are not applied incrementally; a single percentage applies to the total income of each claimant. The maximum benefit is \$300, raised by 2006 legislation from the \$250 maximum that had been in place since 1997; starting in 2007, the maximum will be increased in stages over time until it reaches \$500.

³³ South Dakota's circuit breaker (Property Tax Refund for Aged and Disabled Persons) has two sliding-scale relief schedules, as noted in the body of the table. The one for claimants in households of two or more has 19 brackets, each about \$360 wide, and the relief percentages fall by 2 percentage-points from one bracket to the next-higher one; the schedule for individuals living alone has 25 income brackets, each \$260 wide (the last is \$270), and the relief percentage falls by 1 percentage-point going from one bracket to the next-higher one. There is no explicit limit other than income, but benefits have to be reduced if insufficient funds are appropriated, with available funds distributed pro-rata among approved applications that were filed on time.

³⁴ The Utah circuit breaker maximum benefit is \$798 but, as noted in the body of the table, the maximum declines as income rises. The circuit breaker considers taxes paid on 35% of market value while residential property is assessed at 55%; owners who qualify for the circuit breaker also qualify for an additional credit equal to the tax on the other 20% of market value that is subject to taxation – i.e., 65% of market value is then not taxed, and the tax on the remaining 35% can be fully or partially offset by the circuit breaker credit. The income brackets and maximum credit amounts are indexed annually, based on the CPI.

³⁵ Vermont has a complicated set of circuit breaker (Homestead Property Tax Income Sensitivity Adjustment) provisions. The largest program applies to education taxes, most of which are levied at the state level; as of 2007, a single threshold is applicable for any claimant but the threshold varies across localities; it is 2% increased in proportion to the local school system's increase in expenditure level over the state's base level of support (e.g., a 20% increase in spending would increase the threshold for relief by 20%, to 2.4%). This applies to all income levels. However, three different income levels are identified and treated differently. Those with income of \$90,000 or more can receive a reduction equal to the amount by which the education tax on the first \$200,000 of equalized home value exceeds the threshold percentage for the local school system. Those with income from \$47,001 to \$89,999 receive relief calculated in the same manner, but without a cap on home value; in addition, they receive \$10 per acre for up to five additional homestead acres in excess of two acres. Those with income of \$47,000 or less receive the same excess-acreage add-on just described and the circuit breaker relief for non-education taxes (on the next line in the body of the table); their relief for education taxes is gross education tax reduced by the lesser of the threshold amount of income (as for those with incomes of \$47,001-\$89,999) *and* the education tax calculated after subtracting a \$15,000 exemption from the equalized home value; the income-based adjustment is the more favorable for most homeowners, the exception being those with low home values. In all cases, relief is extended by directly reducing property tax bills.

³⁶ This second Vermont circuit breaker is presented in the statutes as a supplemental benefit under the first (Homestead Property Tax Income Sensitivity Adjustment), but is treated here as a second program because (a) it applies to non-education taxes; (b) it includes renters as well as owners; and (c) relief is extended via a refundable income tax credit. As noted in the body of the table, this program considers a claimant's total taxes after any reductions under the education-tax circuit breaker; there are no other limits to the program. The rent equivalent of property tax is either a portion of the landlord's actual property tax or 21% of the claimant's rent payments for right of occupancy.

³⁷ Virginia has no statewide circuit breaker, or other property tax relief, but there are local-option homestead exemptions for elderly and disabled homeowners in a large number of localities, many of which use the circuit breaker approach – i.e., the exempt amount declines as income rises. See the discussion at the end of Part 5 of the text of this report.

³⁸ Washington's circuit breaker (Property Tax Exemption for Senior Citizens and Disabled Persons) determines benefits within a homestead exemption program. It provides different benefits to claimants in three defined income brackets (\$0-\$25,000; \$25,001-\$30,000; and \$30,001-\$35,000). All participants receive these two benefits: (a) complete exemption from "special" levies approved in referenda to override a limit of 1% of market value, which accounted for over 35% of all property taxes in 2005; and (b) a freeze of assessed value used to calculate regular tax amounts, at the level when the participant first was approved for the program (or, if later, January 1, 1995). Participants in the lowest two income brackets receive the additional benefits shown in the body of the table.

³⁹ This second Washington circuit breaker supplements the basic one in the previous row of the table for elderly or disabled claimants who are the un-remarried spouses of certain deceased veterans. The threshold for age-eligibility is one year greater (62 rather than 61), the \$40,000 income ceiling is \$5,000 higher, and the benefits are otherwise more generous, as can be seen from the body of the table.

⁴⁰ This West Virginia circuit breaker took effect in 1972 but has been unused for several years, probably due to the very low ceiling for broadly-defined income. The low level of benefits may also be a factor: the maximum tax or rent equivalent to tax that can be considered is \$125, the threshold amount of income to be offset against the tax rises from zero on the first \$500 of income to \$112.50 for \$4,501-\$5,000 of income, and the relief percentage falls from 75% to 30%

(viewed alternatively, the co-payment or “co-insurance” percentage rises). The threshold amounts of income are determined by 10 threshold percentages; these start at 0% for the first \$500 of income of all claimants, rise to 0.5% for the next \$500 of income of all claimants, and so on in 0.5 percentage-point increments to 4.5% for income in the \$4,501-\$5,000 range (cumulative threshold income of \$112.50 in this last bracket, which is just half what 4.5% of \$5,000 would be. The net result is that the maximum relief available ranges from \$93.80 for the first \$500 of income to \$3.80 for incomes of \$4,501-\$5,000. When there are – or were – claimants, relief is extended through a separate refund process. As noted on the next line of the table, a new circuit breaker will take effect next year that is quite different from this one, which apparently will remain on the books.

⁴¹ West Virginia Senate Bill 541, adopted in 2007, creates a new circuit breaker for homeowners as a refundable income tax credit. Effective in 2008, the new program (Refundable Credit for Real Property Taxes) is an alternative to an existing credit for taxes on \$20,000 of assessed value (Senior Citizens’ Tax Credit – see Table 4) that is available to low-income senior citizens, whereas the new circuit breaker has no income limit and is not restricted by age; the taxpayer is to choose whichever credit provides more tax relief, and either is in addition to a \$20,000 homestead exemption for senior citizens. Maximum relief under the new program is \$1,000.

⁴² Wisconsin’s Homestead Tax Credit (circuit breaker) program allows relief on the first \$1,450 of property tax or rent equivalent to property tax; this, along with the 20% “co-payment” or “co-insurance” means the maximum credit or refund is \$1,160 ($0.8 * \$1,450$). The program is not indexed; the maximum income was last changed in 2001; the maximum property tax amount, in 1991; and the upper end of the 0% threshold income bracket, in 1990. Renters use 25% of rent as the property tax equivalent, or 20% if heat is included in rent.

⁴³ Wyoming limits the total value of various “resources” – real property and most personal property, including cash on hand, bank accounts, etc. – to no more than \$6,000, but (a) the excess of market value over legal debts against the property is what is limited, rather than the market value, and (b) there is a \$130,000 exclusion for the combined value of the principal residence, furnishings, other personal effects, and one motor vehicle.

Table A-2. State Definitions of Income for Circuit Breaker Property Tax Relief¹

State	Major Exclusions	Summary Assessment	Whose Income?
Arizona ²	Social Security benefits, cash public assistance, certain disability benefits	Money income, defined rather narrowly	Claimant, spouse, & others in dwelling unit
California ³		Money income, defined very broadly	Claimant, spouse, & all others in household except minors, full-time students under 24, & renters
Colorado ⁴		Money income, defined very broadly	Claimant & spouse
Connecticut ⁵		Money income, defined very broadly	Claimant & spouse
District of Columbia ⁶		Money income, defined very broadly	All members of household
Idaho ⁷	Medical expenses, prepaid funeral expenses, military disability benefits	Money income, defined broadly	Claimant & spouse
Illinois ⁸		Money income, defined very broadly	Claimant & spouse
Iowa ⁹		Money income, defined very broadly	Claimant & spouse
Kansas ¹⁰	Social Security benefits (half), as of tax year 2007; disability benefits	Money income, defined rather narrowly	All adults in household
Maine ¹¹		Money income, defined very broadly	All members of household
Maryland ¹²		Money income, defined very broadly	Claimant, spouse, & all others in household except dependents & renters
Massachusetts ¹³	Exemptions for dependents, blindness, & age; medical and health savings account contributions, self-employed health insurance	Money income, defined broadly	Claimant & spouse
Michigan ¹⁴	Payments into IRAs; medical insurance and HMO premiums,	Money income, defined broadly	All adults in household
Minnesota ¹⁵	Substantial allowances for old age or disability of a spouse, also for first 5 dependents (NOT claimant & spouse)	Money income, defined moderately broadly	Claimant & spouse
Missouri ¹⁶	\$2,000 exclusion for a spouse; certain military disability benefits	Money income, defined very broadly	Claimant & spouse
Montana ¹⁷ – elderly	Standard \$6,300 exclusion	Money income, defined broadly	All people in household
Montana ¹⁸ – all ages		Money income, defined very broadly	Claimant & spouse
Montana ¹⁹ – veterans	Non-taxable Social Security, cash public assistance, interest, etc.	Income defined narrowly: federal AGI	Claimant & spouse

Nebraska ²⁰	Medical expenses in excess of 4% of income; cash public assistance	Money income, defined moderately broadly	All owner-occupants
Nevada ²¹		Money income, defined very broadly	Claimant & spouse
New Hampshire ²²	Non-taxable Social Security, cash public assistance, interest, etc.	Income defined narrowly: federal AGI plus trust income of claimant	All adults residing in homestead
New Jersey ²³	Social Security, cash public assistance, & other non-taxable sources of income	Income defined narrowly: sources taxable by state, after exclusions, before deductions & personal exemptions	Claimant & spouse
New Mexico ²⁴		Money income, defined very broadly	All members of household
New York ²⁵		Money income, defined very broadly;	All members of household
North Dakota ²⁶	Medical expenses; certain disability benefits	Money income, defined moderately broadly	Claimant, spouse, & dependents
Ohio ²⁷	Social Security increases after initial qualification; some disability income; public assistance benefits	Money income, defined rather narrowly	Claimant & spouse
Oklahoma ²⁸		Money income, very broadly defined	All persons in household
Oregon ²⁹	Medical and health savings account contributions, self-employed health insurance, payments into IRAs	Money income, defined broadly	Claimant & spouse
Pennsylvania ³⁰	Social Security (half), SSI including state supplementary payments, certain disability benefits	Money income, defined rather narrowly	Claimant & spouse
Rhode Island ³¹		Money income, defined very broadly	All members of household
South Dakota ³²	Property tax on homestead, up to \$400	Money income, defined very broadly	All members of household
Utah ³³		Money income, defined very broadly	All members of household
Vermont ³⁴	\$6,500 of each dependent's income, payments by state for foster care or difficult care situations	Money income, defined very broadly	All members of household
Washington ³⁵	Medical insurance premiums, medical care expenses	Money income, defined broadly	Claimant & spouse, & any other owner-occupants
West Virginia ³⁶ – old		Money income, defined very broadly	Claimant & spouse
West Virginia ³⁷ – new	Public assistance, non-taxable pensions & annuities – non-taxable income except Social Security, interest, & workers' compensation)	Money income, defined moderately broadly (or rather narrowly?)	Claimant & spouse

Wisconsin ³⁸	\$250 allowance per dependent, NOT claimant & spouse	Money income, defined very broadly	Claimant & spouse
Wyoming ³⁹		Money income, defined very broadly	Claimant & spouse
Source: Table A-1 and state source materials.			

¹ Differences in income definitions are too numerous to capture well in a summary table, as explained in Part 4 of the text; the notes for the states provide some details, but cannot include all relevant information. All states include wages, salaries, commissions, and other forms of compensation for employment, so these are not listed among the sources shown in footnotes for individual states. The notes seek to give a better feeling for the breadth of income definitions than is provided by the thumbnail sketches in the third column of this table. They focus on significant income sources that are specifically included or excluded.

² Arizona household income excludes Social Security and Railroad Retirement benefits while including benefits from other pensions and IRA distributions; also excluded are workers' compensation, unemployment benefits, veterans' disability payments, welfare benefits, gifts from non-governmental sources, etc.

³ California defines income broadly to include at least most sources of money income, including Social Security and Railroad Retirement benefits, all interest and dividends, pensions, annuities, IRA distributions, disability income, SSI payments and state supplemental payments, unemployment compensation, veterans' benefits, life insurance proceeds in excess of last medical expenses and funeral cost, non-taxable military compensation, scholarship and fellowship grants, gifts (cash and non-cash) in excess of \$300 (excluding gifts from other members of the household), alimony received, etc. Income considered is that of claimant, spouse, and all other members of the household except minors, full-time students under age 24, and renters.

⁴ Colorado defines income broadly to include Social Security and other pension benefits, veterans' benefits, dividends and interest, capital gains, workers' compensation, disability insurance settlements, life insurance benefits less funeral expenses, inheritances, lottery and gambling winnings, alimony, public assistance benefits less amounts designated for dependent children.

⁵ Connecticut states that all money received is to be counted unless specifically excluded; exclusions listed include Social Security benefits received for a dependent person, child support payments, gifts and inheritances (but interest earned on these is to be reported), income received for Foster Grandparents and certain other volunteer services, life insurance proceeds, grants for disaster relief, spouse's Social Security income if proof is provided that the spouse is confined to a nursing home or other care facility. Connecticut adjusts income limits annually using the Social Security cost-of-living percentage change.

⁶ The District of Columbia uses a very broad definition of income; the calculation worksheet on Schedule H, the circuit breaker claim form, instructs claimants to "Report the total income of every member of your household, including income not subject to DC tax." The last (21st) line for listing specific sources of income is "other"; sources on earlier lines include Social Security and Railroad Retirement benefits, taxable and non-taxable pensions and annuities, capital gains, unemployment benefits, workers' compensation benefits, disability income, cash public assistance, alimony and support money, scholarship and fellowship grant, non-taxable military compensation, life insurance proceeds, and cash distributions.

⁷ Idaho's definition of income includes Social Security and Railroad Retirement benefits, pensions, annuities, IRA distributions (except return of principal), military retirement benefits, VA pensions and compensation (except compensation for veterans with 40-100 percent service-connected disability and payments death benefits), SSI payments, taxable and non-taxable interest and dividends, child support, alimony, unemployment benefits, workers' compensation benefits, all disability income (except for VA compensation already noted), gambling winnings, etc. After tax year 2006, the \$28,000 maximum income is indexed – i.e., it rises to 185% of the federal poverty threshold for a two-person household if that is more than \$28,000.

⁸ Illinois includes the income of only the claimant and spouse but defines income broadly to include Social Security and Railroad retirement benefits, other pension benefits, IRA distributions, monthly insurance benefits, unemployment benefits, workers' compensation, lottery and gambling winnings, Black Lung benefits, veterans' benefits (federally taxable portion), long-term care insurance payments (federally taxable portion), proceeds from rummage sales and recycling, dividends and interest, and so on. After listing about 30 specific sources, the instructions for Form IL-1363 state, "Note: This is a nonexhaustive list of common examples."

⁹ Iowa includes Social Security benefits, all pensions and annuities, all interest and dividend income, disability income, money received from others living with claimant, cash public assistance, in-kind assistance for housing expense, alimony, child support payments, insurance proceeds, and “other income.”

¹⁰ Kansas includes Social Security received in 2006 for filing in 2007, but 2007 legislation excludes half of Social Security benefits starting with tax year 2007, for 2008 filing. Also included are SSI benefits, cash public assistance, unemployment benefits, workers’ compensation, veterans’ benefits, all interest and dividends, scholarship and fellowship grants, alimony, gambling winnings, Foster Grandparents payments and other foster care payments, etc. Only specifically-excluded items are to be omitted; these include disability income payments (Social Security, SSI, VA, etc.), child support, income of minor children, non-governmental gift, and a few other items. Kansas considers the income of all members of the household except minor children and incapacitated members of the household, unless the latter are owners of the property (or party to the rental agreement).

¹¹ Maine’s definition of income includes Social Security benefits, Railroad Retirement benefits, veterans’ compensation, annuities, pensions, IRA distributions, deferred compensation contributions, cash public assistance, all dividend and interest income, child support, etc.

¹² Maryland defines income to include Social Security benefits, SSI payments, Railroad Retirement benefits, other pensions, annuities, IRA disbursements, deferred compensation, all dividend and interest income, capital gains, unemployment benefits, workers’ compensation, gifts over \$300, etc.

¹³ Massachusetts’ definition of income includes Social Security benefits (before subtraction of Medicare premiums), pensions, annuities, cash public assistance, disability income, unemployment benefits, workers’ compensation benefits, all interest income, gains from sale of personal residence, etc. – even food stamps and fuel assistance (if paid directly to claimant); life insurance proceeds are specifically excluded. Massachusetts indexes qualifying income.

¹⁴ Michigan defines income to include Social Security benefits (including payments for a minor child), SSI payments, Railroad Retirement benefits, pensions, annuities, disability income, workers’ compensation, all interest income, alimony, child support, cash public assistance, cash gifts of more than \$300, gambling winnings (Bingo included) of more than \$300, tax-exempt gain on sale of residence, etc.; specifically excluded are income of a minor child, food stamps, energy assistance grants or tax credits, inheritances, life insurance benefits, and tax refunds. Certain deductions are allowed: medical insurance or HMO premiums paid for claimant and family, adjustments on federal Form 1040, line 36, or 1040A, line 20 (student loan interest deduction; certain business expenses; self-employment tax; payments to IRAs, medical savings accounts, alimony paid).

¹⁵ Minnesota defines income to include Social Security and Railroad Retirement benefits, pensions, annuities, disability income, workers’ compensation, contributions to IRAs and deferred compensation programs (add-back to AGI), public assistance (SSI, Minnesota Supplemental Aid, general assistance, etc.), veterans’ benefits, all interest and dividends, strike benefits, non-taxable military pay, housing allowances for military or clergy, rent reduction for care-taking or other duties, gain from sale of home, income of people residing in home who are not dependents or renters, etc. Exclusions include child support, dependents’ income, food stamps, Holocaust settlement payments, gifts, inheritances, and life insurance proceeds. Allowances for up to five dependents (from \$4,620 for one to \$19,800 for five) and for old age or disability of a spouse (\$3,300) are subtracted from total income.

¹⁶ Missouri’s circuit breaker income definition starts from Missouri AGI and adds Social Security, all other private pensions and annuities, VA benefits, public assistance payments, tax-exempt interest, and unemployment benefits. It excludes VA benefits paid because of 100 percent disability related to military service and subtracts \$2,000 as an exemption for the spouse of a married claimant; additions do not include gifts, inheritances, scholarships and fellowships, and insurance benefits.

¹⁷ This circuit breaker for homeowners and renters 62 and over is one of five Montana circuit breaker programs, as defined in this report. Income is defined to include Social Security and other public and private retirement benefits, pensions, annuities, IRA distributions, veterans’ disability benefits, cash public assistance, alimony, unemployment benefits, all capital gains, dividends, and interest income, state and federal income tax refunds, and circuit breaker credits allowed. There is a standard \$6,300 subtraction from income for all applicants.

¹⁸ The Montana circuit breaker for homeowners of all ages encompasses two (differentiated by household size) of five programs in the state. Income definition is essentially the same as in the preceding program for elderly homeowners and renters, except there is no subtraction from income for this circuit breaker.

¹⁹ The Montana circuit breaker for disabled veterans encompasses two (differentiated by household size) of the five Montana circuit breaker programs. The income definition used is federal adjusted gross income.

²⁰ Nebraska's income definition includes Social Security and other pension income, unemployment compensation, tax-exempt interest from state-local obligations, and some other sources; however, cash public assistance, gifts, gambling winnings, and some other sources commonly included for circuit breakers are not listed. Finally, medical expenses exceeding 4% of income prior to medical expense subtraction are deducted.

²¹ Nevada's circuit breaker income definition starts from federal AGI, expanded to include Social Security, other untaxed pensions and the untaxed portion of IRA distributions, tax-exempt interest, SSI, public assistance including allowances for shelter, unemployment compensation, disability benefits, alimony, support payments, life insurance proceeds above \$5,000, gifts in excess of \$300 if not from family members, bequests and inheritances, etc.; the income ceiling is indexed by the percentage change in the CPI.

²² New Hampshire uses federal AGI as the measure of income for its circuit breaker. AGI of all adult members of the household is to be included; if some members are not required to file a federal income tax return, their income still is to be included but no Social Security benefits are includable for such people. If the property is in the name of an income-bearing trust, the income of the trust is also to be included.

²³ New Jersey defines income for its circuit breakers as income from sources taxable by the state after exclusions (e.g., pension and retirement income) but before deductions and personal exemptions; it excludes Social Security, public assistance, child support, etc.

²⁴ New Mexico has one of the broadest income definitions, which includes not only Social Security and other pensions, cash public assistance, SSI, workers' compensation, unemployment compensation, and other often-included sources of income, but also scholarships, capital gains before offsetting losses, insurance settlements, and inheritances; moreover, there are no subtractions from the sum of these income sources.

²⁵ New York's income definition includes Social Security and other pension income, annuities, workers' compensation, SSI, cash public assistance, support payments, strike benefits, interest on other states' state and local securities, etc., but excludes payment to victims of Nazi persecution, scholarships, grants, food stamps, and other in-kind assistance. Including income of all household members is said to exclude essentially all occupants of nursing homes, for all residents are considered to be in one household.

²⁶ North Dakota's income definition includes many sources of money income, including Social Security retirement benefits and other retirement income, SSI, unemployment compensation, alimony, etc. It excludes workers' compensation, child support, stipends from VISTA and some other federal government programs. From the sum of income sources counted, a deduction is allowed for all non-reimbursed medical expenses paid, including insurance premiums (other than Medicare) and mileage at a rate higher than allowed for federal income tax mileage related to medical care.

²⁷ Ohio's "total income" starts from federal AGI and adds tax-exempt interest and retirement, pension, and annuity income not part of AGI, including Social Security and Railroad Retirement benefits; however, Social Security and Railroad Retirement benefit increases after claimant's initial qualification for the exemption program are ignored. In addition, up to \$5,200 of disability income taxable by the federal government is deducted, and all disability benefits from the Veterans' Administration or a branch of the military service are excluded. Public assistance and several other income sources also are not added in. Income ceiling and bracket widths have been indexed since early in this decade.

²⁸ Oklahoma employs a very broad definition of money income; in the instructions for the claim form, claimants are told to include ". . . the amount of income of every type, regardless of the source (except gifts) received by ALL persons living in the same household, . . ."

²⁹ Oregon's definition of income includes Social Security and Railroad Retirement benefits, SSI, cash public assistance, unemployment benefits, veterans' benefits, scholarships, grants, gifts, support help from family members, alimony, child support, disability benefits, workers' compensation, personal injury damages, life insurance proceeds, strike benefits, total inheritances, except property received from death of spouse. The definition allows a total of \$500 in gifts, grants, scholarships, and family support to be excluded; also excluded are medical care payments and supplies, medical savings accounts, IRA contributions, moving expenses, alimony, etc.

³⁰ Pennsylvania's income definition excludes one-half of benefits from Social Security, Railroad Retirement tier 1, SSI, and State Supplemental Payments, and also excludes payments for certain cases of permanent disability, such as Black Lung; losses on sale of home can offset other income. The definition includes all retirement and pension income, including IRA distributions (other than the excluded sources already noted), cash public assistance; alimony; inheritance; life insurance benefits except first \$5,000; loss-of-time benefits; gifts worth over \$300; etc.

³¹ Rhode Island defines income broadly to be receipts by all members of the household from all sources, taxable and non-taxable. Examples of sources included include Social Security benefits, all pension and annuity income, non-taxable military compensation, cash public assistance, unemployment benefits, workers' compensation, etc.; the only specific exclusions are gifts not from government sources, surplus foods, and other in-kind assistance.

³² South Dakota defines income broadly to include essentially all money income, but excludes gifts from non-governmental sources, Foster Grandparent income, and property taxes on the principal residence, up to \$400, as well as a few other items.

³³ Utah considers the income of all household members and includes essentially all sources of money income, with the exception of gifts and bequests. The income ceiling and brackets are indexed annually, based on the CPI (as is the maximum benefit).

³⁴ Vermont considers income from essentially all money-income sources, and for all members of the household; however, it allows several exclusions from income. These include the first \$6,500 of gifts; the first \$6,500 of income of a dependent who is a full-time student; the first \$6,500 of income of a dependent who is a parent or disabled adult child of the claimant; all payments for certain foster care; all income of a household member whose presence in the household enables a disabled or elderly (at least 62) claimant to remain in the home rather than be institutionalized.

³⁵ Washington's income definition adds the following to federal AGI: capital gains; amounts deducted for capital loss; pension and annuity receipts; military pay and benefits, other than attendant-care and medical-aid payments; veterans benefits, other than attendant-care and medical-aid payments; Social Security and Railroad Retirement benefits; dividends; and interest on state and municipal bonds; the statute makes no mention of gifts, scholarships and other awards, insurance benefits, etc.. Deductions are allowed for various non-reimbursed medical expenses.

³⁶ The original, 1972 West Virginia circuit breaker, defines income very broadly; the only money income exclusion listed is gifts from non-government sources. However, the income ceiling is \$5,000 and the program is inactive.

³⁷ West Virginia defines income for the new circuit breaker less broadly than for the original one. It starts from federal AGI, adds West Virginia income tax code modifications that increase AGI and some other amounts, including interest on government securities (other than those of West Virginia governments), non-taxable Social Security benefits, workers' compensation benefits, loss-of-earnings insurance, withdrawals from medical savings accounts, and a few other items. It does not add income from several sources, including cash public assistance and gifts.

³⁸ Wisconsin includes essentially all money income in its definition of income for the circuit breaker program, but subtracts \$250 for each dependent (but not for the claimant and spouse). Note that as added assurance that certain major sources of non-taxable income will be reported, the claim form (Schedule H or H-EZ) asks the age of the claimant and whether the spouse was 65 or over; if at least one spouse is 65 or older and no Social Security benefits or similar income is reported, a statement is to be attached affirming that, in fact, no income from those sources was received.

³⁹ Wyoming defines income to include Social Security benefits, other pensions and retirement income, annuities, trusts, all dividend and interest income, veterans' benefits, disability payments, unemployment benefits, cash public assistance, alimony, support payments, Native American per capita payments, etc.; there is no mention of workers' compensation, scholarships, and gifts.

Table B-1. Comparison of State-Level Circuit Breaker Counts by Various Studies, 1992-2007

State	ACIR 1992	IAAO 2000*	NCSL 2002	AARP 2002	CBPP 2007	This Study
Alabama						
Alaska		S	SR			
Arizona	SH		SHR	SHR		SHR
Arkansas	SH	S				
California	SHR		SHR	SHR		SHR
Colorado	SHR		SHR	SHR		SHR
Connecticut	SHR	S	SHR	AHR		SHR
Delaware						
Dist. of Columbia	AHR		AHR	AHR	AHR	AHR
Florida						
Georgia						
Hawaii	AR	S	AR	SH		
Idaho	SH	S	SH	SH		SH
Illinois	SHR	S	SHR	SHR	SHR	SHR
Indiana	SHR	A				
Iowa	SHR		AHR	SHR		SHR
Kansas	SHR	A	SHR	SHR		SHR
Kentucky		A				
Louisiana						
Maine	AHR	S	AHR	AHR	AHR	AHR
Maryland	AH,SR	A	AHR	AH,SR	AHR	AHR
Massachusetts		S	SHR	SHR	SHR	SHR
Michigan	AHR	A	AHR	AHR	AHR	AHR
Minnesota	AHR	A	AHR	AHR	AHR	AHR
Mississippi						
Missouri	SHR	S	SHR	SHR	SHR	SHR
Montana	SHR		AH,SR	AH,SR	SHR	AH,SR
Nebraska		A		SH		SH
Nevada	SHR	S	SHR	SHR		SHR
New Hampshire				AH		AH
New Jersey	AHR		AHR	SHR	AH,SR	AHR
New Mexico	SHR		SHR	SHR	SHR	SHR

State	ACIR 1992	IAAO 2000	NCSL 2002	AARP 2002	CBPP 2007	This Study
New York	AHR	A	AHR	AHR	AHR	AHR
North Carolina						
North Dakota	SH	S	SHR	SHR		SHR
Ohio	SH	S		SH		SH
Oklahoma	SH	S	SH	SH	SH	SH
Oregon	SR		SR	SR	SR	SR
Pennsylvania	SHR	S	SHR	SHR	SHR	SHR
Rhode Island	SHR	S	SHR	SHR	AHR	AHR
South Carolina						
South Dakota	SHR		SH	SH		SH
Tennessee	SH	S				
Texas						
Utah	SHR	S	SHR	SHR		SHR
Vermont	AHR	A	AHR	AHR	AHR	AHR
Virginia						
Washington	SH		SH	SH		SH
West Virginia	SHR	S	SHR	SHR		SHR**/AH08
Wisconsin	AHR		AHR	AHR	AHR	AHR
Wyoming	SHR		AH	AH		SHR
Total	36	27	34	36	18	35
Seniors only, O&R	26	18	21	24	8	23
Owners	25	*	19	23	7	22
Renters	19	*	18	19	7	18
All ages, O&R	10	9	13	12	10	12
Owners	9	*	12	12	10	12
Renters	9	*	11	10	9	10

Note: A = all ages, S = senior citizens only, H = homeowners, and R = renters.

* The 2000 IAAO survey did not ask questions in sufficient detail to allow the reader to discern whether a circuit breaker applies to homeowners only, renters only, or both homeowners and renters; age restrictions are noted in yes/no fashion and are assumed to limit programs to senior citizens only.

** The 1971 West Virginia circuit breaker, with an income limit of \$5,000 and a maximum benefit of under \$100, is dormant; a new program adopted in 2007 will take effect in 2008.

Source: AARP (Baer) 2003; ACIR 1992; CBPP (Lyons et al.) 2007; IAAO 2000; NCSL 2002; and author's research for this paper.

Table B-2. State Homestead Exemption and Credit Programs in 2002 As Identified by AARP and National Conference of State Legislatures Studies* [r: 9/4/07]

State	AARP	NCSL	Studies Differ	Comment
Alabama	A; E; E\$	A; E\$	E	
Alaska	A; E	A; E		
Arizona	A	A		
Arkansas	A	A		
California	A	A		
Colorado	E	E		
Connecticut	E	E		
Delaware	E; E\$	E	E	\$\$
Dist. of Columbia	A; E\$	A; E\$		
Florida	A; E\$	A; E\$		
Georgia	A; E\$	A; E\$		
Hawaii	Y; E	A; E		
Idaho	A	A		
Illinois	A; E	A; E		
Indiana	A; E\$	A; E\$		
Iowa	A	A		
Kansas	A	A		
Kentucky	E	E		
Louisiana	A	A		
Maine	A	A		
Maryland		A	A	
Massachusetts	E; E\$	E	E	\$\$
Michigan				
Minnesota	A	A		
Mississippi	A; E	A	E	
Missouri				
Montana		A	A	
Nebraska	E\$	E\$		
Nevada				
New Hampshire	E\$	E\$		
New Jersey	E; A\$; Y\$; E\$	A; E\$	A, E, Y	\$\$
New Mexico	A	A		
New York	A; E\$	A; E; E\$	E	
North Carolina	E\$	E\$		
North Dakota	E\$		E	\$\$
Ohio	A; E\$	A; E\$		
Oklahoma	A; A\$	A; A\$		
Oregon				
Pennsylvania	A	?	?	
Rhode Island		?	?	
South Carolina	A; E	A; E		

Table B-2, State Homestead Exemption and Credit Programs, continued				
States	AARP	NCSL	Studies Differ	Comment
South Dakota				
Tennessee	E\$	E\$		
Texas	A; E; Y	A; E	Y	
Utah	E\$	A	A, E	\$\$
Vermont				
Virginia	E\$	E\$		
Washington	E\$	E\$		
West Virginia	E	E		
Wisconsin	A	A		
Wyoming		A	A	
<i>Exhibit: Numbers of states by program combinations.</i>				
States	41	44	14	5 – DE MD MA NJ ND UT
E\$	8	6		
E	4	6		
E; E\$	2	0		
A; E\$	6	7		
A; E	4	5		
A	12	16		
A; A\$	1	1		
Other**	4	2		
Source: Baer 2003 (AARP report) and NCSL 2002				
Key: A = all ages; E = elderly only; Y = non-elderly only; \$ = income-targeted				
* Focus is on generally-applicable homestead credit or exemption programs; those restricted to veterans, certain categories of disabled persons, etc., are omitted.				
** AARP – AL, HI, NJ, and TX; NCSL – NY, PA, and RI				