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THE COST OF A PROPERTY TAX CIRCUIT BREAKER PROGRAM IN TENNESSEE

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EXECUTIVE SUMMARY

This report describes the existing property tax relief programs in Tennessee and their limitations, discusses the key elements of a true property tax circuit breaker program, and estimates the cost of various minimal circuit breaker programs in Tennessee that would provide property tax relief in a consistent and equitable manner to low-income Tennessee households. The results show that even a modest circuit breaker program designed to provide tax relief to low-income household owners and renters can be a very expensive proposition.

Thirty-three states and the District of Columbia provide some type of property tax circuit breaker relief to their residents. Most of these states provide circuit breaker relief through credits or rebates as part of the administration of their state income tax program. A few administer stand-alone rebate programs. Most, but not all, extend tax relief to both property owners and renters.

Tennessee currently provides two separate property tax relief programs, both restricted to only homeowners: (1) a state-financed property tax relief program for low-income elderly, certain low-income disabled residents, and disabled veterans, and (2) the newly authorized (2007) locally-financed senior tax freeze program. For the most part, these two property tax relief programs target the same group, namely low-income elderly homeowners. Neither program provides any benefits to renters. The two programs are not well integrated with one

IN THIS REPORT

The property tax is the single most important source of tax revenue for most Tennessee local governments. Its relative importance continues to grow as more and more local governments "max out" their local option sales tax rate at the statutory maximum of 2.75%.

At some point, local governments will be forced to raise property tax rates if they are to maintain services. Property tax relief programs are meant to provide some assistance to taxpayers facing an excessive burden. Existing programs in Tennessee provide no assistance to most Tennessee households.

As taxpayer resistance to rising property tax rates grows, calls for a broader type of property relief will increase. This report focuses on the major type of property tax relief that is currently not available in Tennessee, namely a property tax circuit breaker program.

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another, and neither is a true "circuit breaker" program designed to channel aid to those whose measured tax burden is "excessive." Existing programs provide no benefits to the vast majority of Tennessee households that are neither seniors nor handicapped nor veterans, and often more burdened by property taxes than those eligible under the existing programs.

The report describes the elements required of a true circuit breaker program and then simulates the impact of a hypothetical circuit breaker program in Tennessee. Such a program considers homeowners and renters (cost estimates provided for both), actual property tax burdens as measured by property taxes in relation to income, and eligibility criteria that includes income, reasonable housing values for owners, and reasonable rental payments for renters.

The results of the simulations show that the cost of an "entry level" circuit breaker program in Tennessee can vary from as little as $60 million per year to over $200 million per year (for seniors only, $18 million to $52 million). The cost of a program can be decreased through a number of actions:

- Decreases if poor non-seniors are excluded
- Decreases if renters are excluded
- Decreases if the tax burden threshold is increased[1]
- Decreases if the maximum housing value considered in the program is reduced[2]

[1] Tax burden threshold is the percent of income all households are expected to shoulder themselves before tax relief is provided.

[2] Tax relief is only provided for tax burdens on reasonably priced housing units.

INTRODUCTION

Thirty-three states and the District of Columbia provide some type of property tax circuit breaker relief to their residents.[3] Most of these states provide circuit breaker relief through credits or rebates as part of the administration of their state income tax program. Most, but not all, extend such relief to both property owners and renters.[4]

This report describes the existing property tax relief programs in Tennessee and their limitations, discusses the key elements of a true property tax circuit breaker program, and estimates the cost of various minimal circuit breaker programs in Tennessee that would provide property tax relief in a consistent and equitable manner to low-income Tennessee households. The results show that even a modest circuit breaker program designed to provide tax relief to only low-income household owners and renters is a very expensive proposition.

Two separate property tax relief programs currently exist in Tennessee, both restricted to homeowners:

1. A state-financed property tax relief program for low-income elderly, certain low-income[5] disabled residents,[6] and disabled veterans[7]
2. The newly authorized (2007) locally-financed senior tax freeze program

[3] Langley 2009, 1.

[4] Twenty-five state programs provide benefits to both owners and renters. Source: Langley (2009).

[5] Income ceiling for both senior and disabled applicants was $24,790 (total income in 2007) for the fiscal year 2008 program.

[6] Certified as permanently disabled by Social Security Administration.

[7] No income restrictions apply in the disabled veteran relief program.

For the most part, these two property tax relief programs target the same group, namely low-income elderly homeowners.[8] Neither program provides any benefits to renters. The two programs are not well integrated with one another, and neither is a true "circuit breaker" program designed to channel aid to those whose measured tax burden is "excessive." The limited amount of state aid provided in the state property tax relief program reflects the absence of a dedicated tax source large enough to fund a significant circuit breaker program.[9]

Neither program considers the relationship between a household's actual property tax liability and a household's income, and neither program provides a phase-out of tax relief in an orderly and rational fashion; an elderly household is fully eligible for one or both of the programs if its income is below each program's income ceiling or threshold,[10] and fully ineligible if its income is one cent above the respective income ceilings. The existing programs provide no relief to senior households that rent[11] despite the fact that rental properties are generally assessed at 40% of value rather than the lower 25% assessment ratio that applies to residential property. No benefits are provided to the vast majority of Tennessee households that are neither seniors nor handicapped nor veterans, and often more burdened by property taxes than those eligible under the existing programs.

In addition to these limitations, both programs interfere with the proper measurement of local government fiscal capacity that is part of the state's Basic Education Program. This is especially true of the senior tax freeze program. This program freezes taxes for eligible senior households, but does not freeze the assessed value of properties eligible for the program. Over time, as assessed values grow, the measured fiscal capacity of local governments (as partly measured by assessments per student) will grow. In locations where senior tax freeze properties are significant, or grow to be significant, the potential tax increases from such "growth" are absent or very limited, and the measure of fiscal capacity is distorted.

EXISTING PROGRAMS

ELDERLY HOMEOWNER TAX RELIEF

During fiscal year 2008-2009, senior households with income (from all sources in 2007) less than $24,790[12] were eligible for a tax credit financed by the state equal to local property taxes on the first $6,250 of assessed value.[13] The value of this tax relief varied by location since tax rates vary by location. In Nashville, the value of this credit in fiscal 2007-2008 on a primary residence appraised at $25,000 or more would have been $293.[14] The average statewide tax relief granted in 2007 to elderly claimants was only $142.[15] The program is

[8] Seventy percent of the cost of the 2008 state-financed tax relief program represents relief to low-income elderly homeowners; source: Division of Property Assessments 2008.

[9] Total cost of the 2008 program was $19.3 million ($13.4 million for the low-income senior portion of the program).

[10] The income limits differ between the two programs.

[11] It is well recognized that homeowner constituencies tend to dominate property tax relief issues and programs; see Back and Waters (2008), 3.

[12] Data from the *Annual Report* of the Division of Property Assessments. The income limit is generally increased each year by the Legislature to reflect inflation.

[13] The tax credit is actually limited to taxes due on the first $25,000 of market value of a primary residence. This equates to the tax due on the first $6,250 of assessed value (since residential properties are assessed at 25%).

[14] The product of an assessment of $6,250 times a tax rate of $4.69 per $100. Properties valued at less than $25,000 (i.e. mobile homes) would receive less than this amount.

[15] The average payment to disabled claimants was $135, to disabled veterans $670, and widow(ers) of disabled veterans $667. See Division of Property Assessments 2008, 6.

administered through county trustees with the actual funding provided by the state.

SENIOR TAX FREEZE PROGRAM

The senior tax freeze program was first authorized in 2007.[16] Local governments are authorized to adopt the program at their own expense. As of April 2009, 20 counties and 20 cities have adopted the program. The program offers a tax freeze to senior households with incomes lower than income limits established each year by the state Comptroller's Office. The income limits are estimated each year for each county and are designed to reflect the median income of senior households in each county. The minimum income limit in any year cannot be lower than the statutory maximum income limit in the senior tax relief program. During fiscal year 2007-2008, the income limits varied from a low of $24,790 in 52 counties to a maximum of $44,570 in Williamson County. In 2009, the minimum was raised to $25,360 in 52 counties, and reached a maximum of $45,600 in Williamson County.

Since the program is relatively new, the cost of the program to local governments that have authorized the program is low. Only eight counties and 19 cities authorized the program in 2007. Since no centralized reporting requirements are contained in the state statutes, there is no estimate of the current cost of the program. The potential impact of the program varies by location (county and city) and was analyzed only for counties by TACIR in early 2007.[17] The cost of the program will clearly increase over time as a result of both ongoing reappraisal programs and actual tax rate increases.

[16] In November 2006, voters approved an amendment to the State Constitution that authorized the Legislature to pass a law that gives local governments the option of providing a senior tax freeze.

[17] *Senior Tax Freeze Report*, working paper TACIR 2007.

PROBLEMS WITH THE EXISTING PROGRAMS

Both relief programs represent well-intentioned programs that provide a small segment of the senior household population with a very basic form of property tax relief. While catering to seniors is common among the states, seniors do not represent the major demographic group with high property tax burdens. The traditional senior property tax program in Tennessee provided benefits to 94,873 households[18] in 2007-2008, equal to approximately 18.4% of all senior households.[19] The average credit was $142.

The senior tax freeze program itself suffers from an absence of state funding; local governments have to opt into the program and bear the impact of whatever tax losses result. The program becomes problematic in counties and cities that can't afford the luxury of granting their senior citizens a permanent tax freeze.

Recent legislation (HB 1177 of 2009) has lessened problems in both programs that resulted from some married couples placing ownership of a home in only one name, generally in the name of the person with the lower income. This had the potential of abusing the spirit of the original legislation that sought to limit eligibility to both programs to low-income household families. The new legislation requires that the income

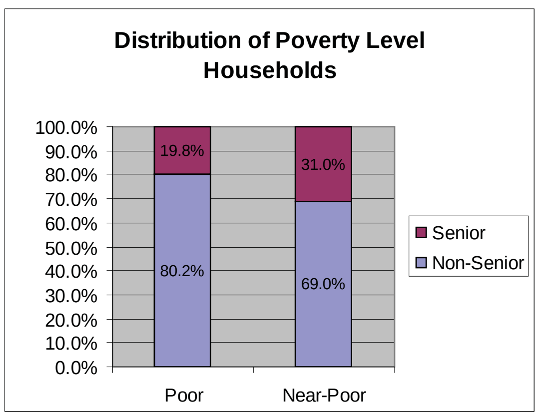
[18] The number of households is assumed equal to the number of claimants.

[19] Equal to 22.1% of all senior owner-occupied households. There were an estimated 515,812 senior households in Tennessee in 2007 of which 428,590 were in owner-occupied housing and 87,222 in rental housing. For purposes of this study, any household that was headed by a senior or where the spouse of the householder was a senior is categorized as a senior household. Source of data: U.S. Census, 2007 American Community Survey (ACS) sample data.

of a spouse be included in the measure of an applicant's income if an applicant and spouse file a federal joint tax return.

This change, while improving the program, still has the potential for abuse in situations involving nontraditional households where total household income is more than sufficient to pay taxes as well as other household expenses. The current program provides no benefits to renters, young or old, who generally have lower incomes than homeowners, and indirectly pay property taxes through their rent payments. In prime rental property locations, renters can pay as much or more per square foot of living space as those who own their own housing.

Since any new circuit breaker program will likely redefine who is and who is not deserving of the benefits of a new tax relief program, some discussion on the issue of poverty and near poverty is appropriate. While there is an understandable tendency for legislatures and everyday citizens to assume that the elderly are in greater need of assistance than others, this is not necessarily the case. Available data "indicates that old age in particular is a poor proxy for need."[20]



The accompanying chart shows the distribution of poverty level households in Tennessee between senior[21] and non-senior households. Poor households are those with incomes at or below the official poverty threshold. Near-poor are households with incomes at or below 200% of the official poverty threshold (see Appendix for poverty thresholds for various households).

Senior households represent 19.8% of poor households and 31% of near-poor households in Tennessee. They represent 21.4% of all households.

CIRCUIT BREAKER PROGRAM FEATURES[22]

Most state circuit breaker programs provide property tax relief that is based primarily on a family's tax burden as measured by the ratio of tax liability to income. Each state's circuit breaker is unique, but generally includes some combination of the following:

1. Tax burden is measured by the ratio of tax liability to total family income. While households, regardless of income, are generally expected to pay some property taxes for local government services, at some point, the tax burden is considered excessive. When the ratio (tax burden) reaches a predetermined or threshold level (differs by state), the tax burden is considered excessive and the circuit breaker kicks in with the state absorbing any excess tax burden. If a program threshold is set at 3% and a family's income is $10,000, then the household itself is responsible for property taxes up to the first $300 (3% of its income). If property taxes exceed $300, then the state absorbs the difference subject to any other limitations that may exist in the program. A program with a single tax burden threshold is categorized as a single-threshold

[20] Bowman et al 2009, 13.

[21] Any household in which the household head or spouse is 65 or over.

[22] For a more detailed discussion of property tax relief programs, including circuit breaker programs, see Chervin 2007.

program.[23] The simulations reported later in this study are based on a single-threshold program (an example of a multiple-threshold program is presented in the Appendix). Administration of circuit breaker programs in a majority of states is through an income tax credit or rebate and less often through a stand-alone credit or rebate program (six states).

2. Most states phase out the circuit breaker program assistance as household income rises above some set level. This avoids the problem of a cliff or notch effect[24] that occurs when a family's income rises by a small amount and results in the sudden loss of all or most benefits. The simulations performed in this report avoid the notch effect.

3. Most states limit the value of a home considered in calculating circuit breaker relief. This prevents households that may be income poor but home rich from full participation in what amounts to a subsidy. An example of a value cap would be a program that only considers property taxes (in relation to income) on the first $150,000 of a home's value when calculating an excess tax burden. A similar limitation is placed on reasonable rents that are considered when the program also includes renters.

[23] Of the 34 states (inclues D.C.) with circuit breaker programs, five employ a single threshold. Multiple-threshold programs contain multiple income brackets with rising thresholds as income rises. Multiple-threshold programs tend to make a program more progressive (less advantageous to higher income families). See Bowman 2009, 15-16 for more details.

[24] Refers to any program or tax policy that has income caps or thresholds that result in the sudden loss of eligibility or benefits from small changes in income. See Bowman 2009, 34-35 for a full discussion.

DATA

The data source used to estimate the various circuit breaker-programs analyzed in this report is the same as used in both of two prior TACIR studies,[25] the American Community Survey (ACS). The ACS is part of the Census Bureau's decennial census program. The ACS is conducted each year. Data for this report reflect information gathered from the 2007 ACS conducted between January 2007 and December 2007. The data provide estimates of various demographic, economic, social, and financial aspects of American housing and population. Annual data is available by state, and for certain geographic areas (cities and counties with populations of at least 65,000, and smaller areas, called PUMAs[26] with combined populations of at least 100,000). The data for the 2007 ACS was based on a national survey of approximately 3 million housing units. The 2007 Tennessee ACS sample data consisted of 28,772 housing units, of which 1,524 represented group quarters[27] (information on group quarters was excluded from analysis) and 1,864 represented vacant units (also excluded from the analysis). The balance of 25,384 represented owner-occupied or renter-occupied households and 61,704 persons.[28]

There were an estimated 2,407,765 households in Tennessee in 2007.[29] The number of owner-occupied housing units was 1,683,930 (69.9%);

[25] Chervin May 2007 and August 2007.

[26] Public Use Microdata Areas consist of geographic areas that include populations of at least 100,000. The more detailed PUMA data (2005 ACS survey data) was used in both 2007 studies.

[27] A group quarters "is a place where people live or stay, in a group living arrangement," that includes correctional facilities, barracks, dormitories, long-term care facilities, etc. For more detail see material at U. S. Census website http://www.census.gov/acs/www/Downloads/2007_ACS_GQ_Definitions.pdf.

[28] The ACS data provides weights (for households and persons) with which to properly develop state-wide estimates.

[29] Estimates from 2007 American Community Survey.

the number of renter-occupied housing units was 723,835 (30.1%). Of the 1,683,930 households in owner-occupied units, 24.3% were headed by a senior (65 or older); of the 723,835 households in renter-occupied units, 11.6% were headed by a senior. The circuit breaker programs analyzed in this report will consider various combinations of these groups and subgroups as part of the eligible population for tax relief.

CIRCUIT BREAKER PROGRAM SIMULATIONS

All circuit breaker programs reflect two primary forces, a desire to reduce excess property tax burdens on certain segments of the population and a budget constraint that limits the tax relief that can be funded. Circuit breaker programs can be very costly, and this limitation goes a long way in explaining the limited aid provided in many states.[30]

The circuit breaker programs considered in this report, while including elements common to many programs already in place in other states, reflect only a few of an infinite number of programs that could be designed. All programs reflect value judgments made by program designers (often state legislatures) that determine what subgroups of the population are eligible for tax relief, and how much tax relief will be granted. Circuit breaker relief in Tennessee could be provided either through tax rebates or tax credits.

[30] Data on the cost of circuit breakers among the states is available in Bowman 2009, chapter 4.

CIRCUIT BREAKER SIMULATION PROCEDURE: ALL LOW-INCOME HOUSEHOLDS[31]

The first order of business of any program designed to identify an excess property tax burden that deserves "circuit breaker" tax relief is to identify what constitutes household income and what constitutes "excess burden and deserving of tax relief." Tennessee's two programs provide benefits to certain senior households based on a single income figure. For several reasons, a single income figure does not fare well in identifying "deserving" households.

The U. S. Census Bureau defines a household as all the persons (one or more) in a housing unit, family related or not.[32] There are many household configurations: a single person household, a traditional married-couple family, with or without children, an unmarried household head with children, a primary family with a secondary family also present (i.e. the primary family's brother/sister with their family), a primary family with grandchildren present, unmarried and unrelated individuals living together, and various other combinations.[33]

Given the large variety of household types that can occupy any given housing unit, and the separate and distinct types of property ownership that can exist,[34] this report focuses on three criteria: (1) a broad measure of income, namely the total income of all members

[31] Households include married-couple households, male family households (no spouse present), female family households (no spouse present), and nonfamily households (single persons living alone, and households that consist of unrelated people).

[32] A housing unit "is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied or if vacant, is intended for occupancy as separate living quarters." See definitions at: http://factfinder.census.gov/home/en/epss/glossary_h.html.

[33] See Census definitions in Appendix.

[34] For example, joint tenancy, tenancy in the entirety, tenancy in common, joint ownership, and others.

of the primary family aged 15 and over in a household,[35] (2) the number of children in a household, and (3) the type of household (senior versus non-senior). In a majority of households, the household consists of a single individual or a single primary family (of various sizes). This focus is consistent with measures currently used in establishing official poverty levels and eligibility to various federal social programs (see 2007 poverty threshold tables A1 and A2 in Appendix).

GENERAL GUIDELINES FOR SIMULATION

1. Relief is provided when the effective tax rate exceeds 2%-5% of household income (four options simulated).[36]
2. Tax relief for owner-occupied households is only available for taxes due on the first $120,000, $140,000, $160,000, $180,000, and $200,000 (5 options simulated) of value.[37]
3. Renters are included in the program with their property tax payments estimated at 15% of rent payments. The maximum annual rents considered in the simulation for renters are $4,200, $4,800, $5,400, $6,000, and $6,600.[38] For a full discussion of the problem of deciding on the appropriate percent of rent that represents property tax payments, see Bowman (2009), 32-33.
4. The relief is only available to households with poverty level and near-poverty levels of income. See Appendix Tables A1 and A2 for poverty threshold levels for 2007 (U. S. Census) and 200% of poverty levels.
5. The relief is phased out as the ratio of a family's income to the family's poverty threshold for 2007 rises above 100% and approaches 200% of the poverty level for the family.
6. The maximum circuit breaker relief is capped at $1,000 to assist in controlling the cost of the program.
7. Relief is funded by the state, not by local governments.

All of the above guidelines or parameters are arbitrary in one way or another. The great variation in program characteristics among the states makes this very clear. They reflect general features found in many programs, but not all programs. Difficult decisions are required in establishing:

- when a property tax burden becomes excessive
- what constitutes a reasonable maximum home value and rental cap in the program
- at what income level subsidies should end
- how much of rental payments should be considered property tax equivalent payments

Program exclusions

- Households (renters or owners) consisting of students who are claimed as dependents on parents' federal tax returns

[35] Part of the reason for the somewhat young age of 15 and over relates to the availability of data for the total income of the primary family as defined.

[36] A recent study of county tax burdens for owner-occupied dwellings (Chervin, August 2007) showed county property tax burdens averaged 1%-2% of family income (based on data for three person families with incomes ranging between $20,000-$70,000. Lower income families generally had relative higher tax burdens. Excess burden thresholds vary by state; see Table 2 in Lyons et al (2007). For most states with single-threshold circuit breakers (as analyzed in this report), the critical thresholds ranged between 3.5% and 5% of income (Langley 2009, 134).

[37] The median statewide home value in 2007 was an estimated $138,000. Source: 2007 ACS data.

[38] These are comparable to the maximum home values for owner-occupied households.

- Renters living in public or other not-for-profit-owned housing of any type that does not pay property taxes
- Homes held in trusts when occupied by someone who is not a trustee and has no beneficial interest in property

PROGRAM OPTION: SENIORS ONLY

Despite the fact that there are more poor or near-poor, non-senior households in Tennessee than poor or near-poor senior households, both existing property tax relief programs now in place in Tennessee are limited to senior households.[39] Neither existing senior property tax relief program provides any relief to senior households that rent. Since Tennessee's existing programs are limited to seniors (and certain disabled and veteran households), a separate simulation was run that applies only to seniors (renters and owners).

RESULTS OF SIMULATIONS

The results of the simulations provide startling evidence of the potential high cost of even modest circuit breaker programs. Tables 1-3 (and Tables 3-5 in the Appendix for seniors only) provide ample evidence of some of the more obvious elements of any circuit breaker program. The estimated program costs do not reflect any adjustment downward resulting from the elimination of either of the two existing property tax relief programs. It should also be noted that many of those eligible for the existing programs would not be eligible for the minimal circuit breaker programs simulated in this report. The reported cost estimates in the tables that follow do not reflect any adjustments for low participation on the part of eligible households. Low participation will reduce the ultimate cost of any circuit breaker program. For a discussion of circuit breaker administration and participation problems, see Bowman (2009, Chapter 6).

Table 1. Cost of Program *(in millions)*
All Owner-Occupied Housing Units

Income Less than or Equal to
100% of Poverty Threshold (2007)

Max Housing Value	Threshold Percent			
	2%	3%	4%	5%
$ 120,000	$80.9	$61.6	$48.1	$38.2
$ 140,000	$86.6	$67.0	$53.0	$42.7
$ 160,000	$90.3	$70.5	$56.2	$45.6
$ 180,000	$92.8	$72.8	$58.4	$47.7
$ 200,000	$94.4	$74.4	$59.9	$49.1

Table 2. Cost of Program *(in millions)*
All Renter-Occupied Housing Units

Income Less than or Equal to
100% of Poverty Threshold (2007)

Max Annual Rent	Threshold Percent			
	2%	3%	4%	5%
$ 4,200	$69.5	$45.5	$30.2	$21.4
$ 4,800	$81.4	$55.6	$37.9	$27.2
$ 5,400	$91.5	$64.2	$45.1	$32.6
$ 6,000	$99.8	$71.5	$51.4	$37.7
$ 6,600	$106.3	$77.3	$56.3	$41.9

Note: Property tax equivalent payments estimated equal to 15% of net rent payments.

Table 3. Cost of Program *(in millions)*
Combined: All Owners and Renters

Income Less than or Equal to
100% of Poverty Threshold (2007)

Max Housing Value	Max Annual Rent	Threshold Percent			
		2%	3%	4%	5%
$ 120,000	$ 4,200	$150.4	$107.1	$78.3	$59.6
$ 140,000	$ 4,800	$168.0	$122.6	$90.9	$69.9
$ 160,000	$ 5,400	$181.8	$134.7	$101.3	$78.2
$ 180,000	$ 6,000	$192.6	$144.3	$109.8	$85.4
$ 200,000	$ 6,600	$200.7	$151.7	$116.2	$91.0

Note: Property tax equivalent payments estimated equal to 15% of net rent payments.

[39] The older program also provides benefits to certain veterans and disabled citizens.

There are several summary observations that can be made about a single threshold circuit breaker program:

- The larger the number of eligible households, the higher the cost.
- The inclusion of renters increases the cost.
- The higher the threshold percent (ratio of tax to income) that participants themselves are expected to absorb before being eligible for relief, the lower the cost of a program.
- The lower the home value ceiling that is eligible for tax relief, the lower the cost.
- The lower the annual rent ceiling considered in estimating renter property taxes, the lower the cost.
- The lower the assumed percent of rent payments that represent property taxes, the lower the cost.
- The faster the phase-out of benefits, the lower the cost of the program. Phasing-out the benefits at a poverty level of 150% (instead of at a poverty level of 200% of the poverty level used to develop the table data) would reduce program costs by 5%-10%.

DISCUSSION

The assumption that 15% of rent payments represents a reasonable measure of renter property tax burdens deserves further comment. The cost of providing circuit breaker property tax relief to renters is extremely sensitive to the ratio chosen to approximate renter property tax payments. In Table 2, the estimated cost of renter property tax relief is $64.2 million when (a) the critical burden ratio is 3%, (b) the maximum annual rent threshold is $5,400, and (c) the maximum benefit is $1,000. All the estimates in Table 2 are calculated using 15% of rent payments as a proxy for renter property tax payments.

If the maximum renter relief is reduced to $500, the cost of the same program is reduced to $59.2, a reduction of only 7.8%; however, if in addition to the reduction in the maximum benefit to $500, the 15% factor is reduced to 10%, the cost of this program falls from the initial cost of $64.2 million to only $25.3 million, a decrease of 61%. Clearly the tax equivalent rent factor is extremely important in the cost of any program that includes renters.

The tax equivalent rent factor for renters whose rent includes utilities may be reduced to reflect the fact that a portion of the rent does not represent any property taxes. The amount of the reduction in the rent focuses again on the difficulty of fairly estimating renter property tax payments. A more detailed discussion surrounding this problem is found in Bowman (2009), 32.

Limiting the program to seniors reduces the program cost by approximately 75% (see Appendix tables for seniors); however, such a program fails to address excessive property tax burdens for a majority of Tennessee households.

While current economic events do not favor any serious discussion of a state-financed circuit breaker program, the ultimate rising pressures on local property taxes will inevitably force the subject to the surface. Any serious discussion of a circuit breaker program will then hinge on the availability of a significant state revenue source with which to fund such a program.

BIBLIOGRAPHY

Bach, Victor and Tom Waters. 2008. Shorted renters: circuit breaker property tax relief for low-income renters. New York: Community Service Society. http://www.cssny.org/userimages/downloads/CB.NYSReport1208.pdf (accessed June 2009).

Bowman, John H., Daphne A. Kenyon, Adam Langley, and Bethany Paquin. 2009. Property tax circuit breakers. Cambridge: Lincoln Institute of Land Policy. https://www.lincolninst.edu/pubs/dl/1569_838_Property%20Tax%20Circuit%20Breakers%20Final.pdf (accessed May 15, 2009).

Chervin, Stanley. 2007. Good intentions lead to difficult decisions-the new senior property tax breeze program in Tennessee. TACIR working paper. Nashville: Tennessee Advisory Commission on Intergovernmental Relations.

Chervin, Stanley. 2007. Property tax reduction and relief programs. TACIR Research Brief Number 15, June 2007. Nashville: Tennessee Advisory Commission on Intergovernmental Relations.

Chervin, Stanley. 2007. Who pays more? Local tax burdens on Tennessee households by county. Nashville, TN: Tennessee Advisory Commission on Intergovernmental Relations.

Division of Property Assessments. 2008. 2008 annual report. Nashville: Comptroller of the Treasury.

Fisher, Gordon M. 1992. The development and history of the poverty thresholds, Social Security Bulletin, 55, no. 4:3-14.

Green, Harry A. and Stan Chervin. 2006. Local government property tax revisited, good news and bad news. TACIR Research Brief Number 13, July 2006. Nashville, TN: Tennessee Advisory Commission on Intergovernmental Relations.

Green, Harry A., Stan Chervin, and Cliff Lippard. 2002. The local property tax in Tennessee. Nashville, TN: Tennessee Advisory Commission on Intergovernmental Relations.

Langley, Adam. 2009. Estimated cost and distribution of state-funded circuit breakers. State Tax Notes April 13, 2009:131-145.

Lyons, Karen, Sarah Farkas, and Nicholas Johnson. 2007. The property tax circuit breaker: An introduction and survey of current programs. Washington D.C: Center on Budget and Policy Priorities.

Ruggles, Steven, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander. 2008. Integrated Public Use Microdata Series: Version 4.0 [Machine-readable database]. Minneapolis: Minnesota Population Center [producer and distributor]. See IPUMS site: http://usa.ipums.org/usa/

U. S. Census. 2007. Accuracy of the Data. http://www.census.gov/acs/www/Downloads/ACS/accuracy2007.pdf

APPENDIX

Table A1. Poverty Thresholds for 2007 by Size of Family and Number of Related Children Under 18 Years (in dollars)

Size of Family Unit	Weighted Average Thresholds	Related children under 18 years								
		None	One	Two	Three	Four	Five	Six	Seven	8 or more
One person (unrelated individual)	$ 10,590									
Under 65 years	10,787	10,787								
65 years and over	9,944	9,944								
Two people	13,540									
Householder under 65 years	13,954	13,884	14,291							
Householder 65 years and over	12,550	12,533	14,237							
Three people	16,530	16,218	16,689	16,705						
Four people	21,203	21,386	21,736	21,027	21,100					
Five people	25,080	25,791	26,166	25,364	24,744	24,366				
Six people	28,323	29,664	29,782	29,168	28,579	27,705	27,187			
Seven people	32,233	34,132	34,345	33,610	33,098	32,144	31,031	29,810		
Eight people	35,816	38,174	38,511	37,818	37,210	36,348	35,255	34,116	33,827	
Nine people or more	42,739	45,921	46,143	45,529	45,014	44,168	43,004	41,952	41,691	40,085

U.S. Census Bureau: website http://www.census.gov/hhes/www/poverty/threshld/thresh07.html

Table A2. 200% Poverty Thresholds for 2007 by Size of Family and Number of Related Children Under 18 Years (in dollars)

Size of Family Unit	Weighted Average Thresholds	Related children under 18 years								
		None	One	Two	Three	Four	Five	Six	Seven	8 or more
One person (unrelated individual)	$ 21,180									
Under 65 years	21,574	21,574								
65 years and over	19,888	19,888								
Two people	27,080									
Householder under 65 years	27,908	27,768	28,582							
Householder 65 years and over	25,100	25,066	28,474							
Three people	33,060	32,436	33,378	33,410						
Four people	42,406	42,772	43,472	42,054	42,200					
Five people	50,160	51,582	52,332	50,728	49,488	48,732				
Six people	56,646	59,328	59,564	58,336	57,158	55,410	54,374			
Seven people	64,466	68,264	68,690	67,220	66,196	64,288	62,062	59,620		
Eight people	71,632	76,348	77,022	75,636	74,420	72,696	70,510	68,232	67,654	
Nine people or more	85,478	91,842	92,286	91,058	90,028	88,336	86,008	83,904	83,382	80,170

Source: Twice numbers in previous table.

Excluding the “Weighted Average Threshold” column, there are 48 thresholds used in determining poverty thresholds. Since the data obtained in the ACS 2007 survey is obtained over the full 2007 calendar year, additional slight adjustment are made to sample data to adjust for price changes during each month in 2007. The ACS poverty data reflects the calculated ratio of total household income (primary family only) to the appropriate threshold level for the primary family.

Poverty measures were developed many years ago and are used to gauge changes in the economic wellbeing of households and as the basis for eligibility to various social programs such as the Supplemental Nutrition Assistance Program (SNAP) that replaced the food stamp program (in October 2008). Poverty thresholds measurement dates back to the 1960s (see Fisher, 1992).

Poverty Thresholds: The poverty thresholds for the United States are computed annually by the Bureau of the Census as a means for counting the nation's low-income population. The poverty thresholds form the basis for all other poverty levels used by the Federal Government.

SENIOR ONLY PROGRAM COST

Table A3. Cost of Program *(in millions)*
All Owner-Occupied Housing Units
Income Less than or Equal to
100% of Poverty Threshold (2007)

Max Housing Value	Threshold Percent			
	2%	3%	4%	5%
$ 120,000	$34.6	$26.8	$20.7	$16.1
$ 140,000	$36.9	$28.9	$22.8	$18.0
$ 160,000	$38.3	$30.3	$24.1	$19.2
$ 180,000	$39.3	$31.3	$25.0	$20.1
$ 200,000	$39.9	$32.0	$25.7	$20.8

Table A4. Cost of Program *(in millions)*
All Renter-Occupied Housing Units
Income Less than or Equal to
100% of Poverty Threshold (2007)

Max Annual Rent	Threshold Percent			
	2%	3%	4%	5%
$ 4,200	$9.2	$6.0	$3.6	$2.1
$ 4,800	$10.2	$7.0	$4.4	$2.8
$ 5,400	$11.0	$7.7	$5.2	$3.4
$ 6,000	$11.7	$8.4	$5.8	$4.0
$ 6,600	$12.2	$8.9	$6.3	$4.5

Note: Property tax equivalent payments estimated equal to 15% of net rent payments.

Table A5. Cost of Program *(in millions)*
Combined: All Owners and Renters
Income Less than or Equal to
100% of Poverty Threshold (2007)

Max Housing Value	Max Annual Rent	Threshold Percent			
		2%	3%	4%	5%
$ 120,000	$ 4,200	$43.8	$32.8	$24.3	$18.2
$ 140,000	$ 4,800	$47.1	$35.9	$27.2	$20.8
$ 160,000	$ 5,400	$49.3	$38.0	$29.3	$22.6
$ 180,000	$ 6,000	$51.0	$39.7	$30.8	$24.1
$ 200,000	$ 6,600	$52.1	$40.9	$32.0	$25.3

Note: Property tax equivalent payments estimated equal to 15% of net rent payments.

MULTIPLE-THRESHOLD CIRCUIT BREAKER PROGRAM

A variation of the single-threshold program simulated in the report would entail dividing the 100% poverty level threshold tables presented in the Appendix into brackets as shown in table below. The 100% poverty threshold for a four person family (with two children) is broken into four even brackets, each with an assumed income set at exactly the cutoff for the bracket. The property tax relief provided under the single-threshold program reflects the amount by which the actual property tax exceeds 3% of each family's income. The property tax relief provided under the multiple-threshold program is more complicated. The next lowest income family (income of $10,514) is subject to a tax cap of 3% on the first $5,257 of income (the same as the lowest income family) plus an additional tax cap of 4% on the next $5,257 of income, for a total cap of $368 (versus just $315 under the single-threshold program). The tax cap for the remaining two families is calculated in a similar manner. The net effect is to make the program more progressive by reducing the tax relief as income rises.

Table A6.
Married couple family with two children (four persons total)
100% Poverty Threshold in 2007 is $21,027 (see Poverty Threshold Table)
All families face a property tax bill of $1,000

	Family Income:			
	<=25% of Poverty Threshold	>25% but <= 50% of Poverty Threshold	>50% but <=75% of Poverty Threshold	>75% but <= 100% of Poverty Threshold
Assumed Income	$5,257	$10,514	$15,770	$21,027
No circuit breaker				
Property Tax Due	$1,000	$1,000	$1,000	$1,000
Property Tax Relief	$0.0	$0.0	$0.0	$0.0
Tax Burden (% of income)	19.0%	9.5%	6.3%	4.8%
Single-Threshold Program with 3% cap				
Property Tax Due	$1,000	$1,000	$1,000	$1,000
Property Tax Cap	$158	$315	$473	$631
Property Tax Relief	$842	$685	$527	$369
Net Tax Burden (% of income)	3.0%	3.0%	3.0%	3.0%
Multiple-Threshold Program: 3% cap on 1st $5,257, 4% cap on 2nd $5,257, 5% cap on 3rd $5,257, and 6% cap on income over $15,770.				
Property Tax Due	$1,000	$1,000	$1,000	$1,000
Property Tax Cap	$158	$368	$631	$946
Property Tax Relief	$842	$632	$369	$54
Net Tax Burden (% of income)	3.0%	3.5%	4.0%	4.5%

ADJUSTMENTS TO ACS DATA

Most of the following adjustments reflect those used by Langley (2009)[40] that are repeated in the Tennessee analysis.

1. Property taxes in the ACS survey are reported as categories (coded 1-68) whose ranges vary (i.e. category 1 is zero taxes, category 2 reflects property taxes in the range of $1-$49, category 3 reflects property taxes in the range of $50-$99, and so on). In the analysis, midpoint values (of each respective range) are used in place of the category codes. Category code 68 is an open-ended category of "$10,000 or more." This top code (68) was set equal to $15,000.[41]
2. The estimated value of owner occupied personal residences is also reported as a categorical value (24 category codes) in the ACS survey. Property value codes are:

    bb. N/A (GQ/rental unit/vacant, not for sale only)
    01. Less than $ 10000
    02. $ 10000 - $ 14999
    03. $ 15000 - $ 19999
    04. $ 20000 - $ 24999
    05. $ 25000 - $ 29999
    06. $ 30000 - $ 34999
    07. $ 35000 - $ 39999
    08. $ 40000 - $ 49999
    09. $ 50000 - $ 59999
    10. $ 60000 - $ 69999
    11. $ 70000 - $ 79999
    12. $ 80000 - $ 89999
    13. $ 90000 - $ 99999
    14. $100000 - $124999
    15. $125000 - $149999
    16. $150000 - $174999
    17. $175000 - $199999
    18. $200000 - $249999
    19. $250000 - $299999
    20. $300000 - $399999
    21. $400000 - $499999
    22. $500000 - $749999
    23. $750000 - $999999
    24. $1000000+

Midpoint values were used in place of the codes in the analysis. The top code of 24 was replaced with a value of $1,500,000.

[40] Similar adjustments were made in the previous reports that used ACS data.
[41] See Langley (2009) for a fuller discussion of adjustments used.

U. S. CENSUS HOUSEHOLD DEFINITIONS[42]

Household.

A household consists of all the people who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters. That is, when the occupants do not live and eat with any other persons in the structure and there is direct access from the outside or through a common hall.

A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of households excludes group quarters. There are two major categories of households, "family" and "nonfamily." (See definitions of Family household and Nonfamily household).

Household, family, or subfamily, Size of.

The term "size of household" includes all the people occupying a housing unit. "Size of family" includes the family householder and all other people in the living quarters who are related to the householder by birth, marriage, or adoption. "Size of related subfamily" includes the husband and wife or the lone parent and their never-married sons and daughters under 18 years of age. "Size of unrelated subfamily" includes the reference person and all other members related to the reference person. If a family has a related subfamily among its members, the size of the family includes the members of the related subfamily.

Household, nonfamily.

A nonfamily household consists of a householder living alone (a one-person household) or where the householder shares the home exclusively with people to whom he/she is not related.

[42] Current Population Survey (CPS) - Definitions and Explanations at website: http://www.census.gov/population/www/cps/cpsdef.html